APPENDIX FOR THE

PALM SPRINGS FULFILLMENT CENTER

DRAFT EIR

SCH #2023080091

Applicant:

PS Canyon Development, LLC
730 Arcady Road
Montecito, CA 93108

Lead Agency:

CITY OF PALM SPRINGS
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Preparer:

MSA CONSULTING INC.
34200 Bob Hope Drive
Rancho Mirage, California 92270

April 2024

Appendix A

Notice of Preparation

CITY OF PALM SPRINGS
3200 E. Tahquitz Canyon Way
Palm Springs, California 92262
Phone: (760) 323-8299

ENVIRONMENTAL INITIAL STUDY

Project Title:	Palm Springs Fulfillment Center
City Project No:	Case 3.4361 MDP & MAJ
Lead Agency Name and Address:	City of Palm Springs 3200 E. Tahquitz Canyon Way Palm Springs, CA 92262 Phone: (760) 323-8299
Applicant:	PS Canyon Development, LLC 730 Arcady Road Montecito, CA 93108
Representative:	MSA Consulting, Inc. Attn: Mike Rowe 34200 Bob Hope Drive Rancho Mirage, CA 92270
Contact Person: And Phone Number:	Glenn Mlaker, Associate Planner Phone: (760) 323-8245 ex. 8778
Project Location:	Northwest corner of Indian Canyon Drive and Avenue 19 Assessor's Parcel Number 666-320-018.
General Plan Designation:	Industrial with Wind Energy Overlay
Zoning Designation:	Manufacturing Zone (M-2)

PROJECT DESCRIPTION

The Palm Springs Fulfillment Center project ("project") is proposing to develop an industrial building on approximately 38 acres on the northwest corner of Indian Canyon Drive and 19th Avenue, in the City of Palm Springs. The project proposes a two-story industrial building with associated improvements such as paved parking spaces and drive aisles, a detention basin, and three gated access points. The two-story facility has a proposed building area of 739,360 square feet, with a building footprint of 727,360 square feet allotted to warehouse uses, and 12,000 square feet for offices on the second floor. The project proposes 419 parking for cars, 11 ADA spaces, and 306 stalls for trucks and trailers. The project proposes 110 docks along the northern and southern sides of the building. The docks will be elevated 48 inches above grade, to allow for efficient loading and unloading of materials. 33 pedestrian entrances are proposed to be located along the north, west, south, and east sides of the project building. Additionally, the proposed project will connect to existing offsite infrastructure to provide electricity, natural gas, water, and sewer services to the project along Indian Canyon Drive and 19th Avenue. The project's proposed connections to the existing offsite facilities are discussed below.

Project Location

The proposed project is situated on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, approximately 0.32 miles north of the Interstate 10 freeway in the City's industrial land use district. The project is surrounded by vacant land to the north, wind energy facilities to the west, 19th Avenue and existing commercial to the south, and Indian Canyon Drive and industrial uses to the east, within the City of Desert Hot Springs's jurisdiction. The location of the project can be described as a portion of Section 15, Township 3 South, Range 4 East, San Bernardino Meridian.

Surrounding Land Use and Setting

The project site is located on vacant land and surrounded by developed and undeveloped uses. The table below categorizes the land uses surrounding the project boundaries.

Table 1 Surrounding Land Use Setting

Direction	Setting	Jurisdiction	Land Use	Zoning
North	Vacant land	Palm Springs	Industrial with Wind Energy Overlay	Manufacturing Zone (M-2)
South	Existing Commercial Buildings	Palm Springs	Regional Business Center with Wind Energy Overlay	Manufacturing Zone (M-2)
East	Coachillin Business Park	Desert Hot Springs	Industrial with Industrial Cannabis Overlay	Specific Plan with Industrial Cannabis Overlay Zone
West	Existing Wind Turbines	Palm Springs	Industrial with Wind Energy Overlay	Manufacturing Zone (M-2)

Existing Conditions

The project site is currently vacant and undeveloped. The west boundary of the project is physically marked by the barbed wire fence of the neighboring wind turbine project. The project has remained vacant for over 70 years based on historical aerial imagery.

The site is relatively level, with uniform sandy terrain and scattered vegetation. Sparse small- to medium-sized boulders also exist onsite. Three north-south-trending dirt paths are distinguishable along the west edge, center, and east edge respectively. Soil disturbance and vehicle tracks are indicative of recent illegal dumping. The deposited debris consists of miscellaneous household, construction and demolition debris.

Project Objectives

The project evaluated engineering feasibility, water efficiency, General Plan goals, and compatibility with surrounding land uses during the planning process. In order to ensure the functional integrity, economic viability, environmental sensitivity, and positive aesthetic contribution of the project, the following project objectives were established:

- Promote quality development consistent with the goals and policies of the Palm Springs General Plan.
- Develop a well-maintained industrial fulfillment center in the Industrial designation that is consistent in use and appearance as the existing developments in the surrounding area.
- Provide employment opportunities and growth in the City's Industrial land use designation.

Project Entitlements

Approval of a Major Development Permit (MDP) will implement this project. The purpose of a Development Permit is to ensure that the proposed development is consistent with the General Plan, Zoning Code, and other adopted plans, regulations, and policies of the City; the location, height, massing, and placement of the proposed development is consistent with applicable standards; and that the necessary infrastructure is in place to serve the proposed development. (Section 94.04.01 of the Palm Springs Municipal Code).

As described in this Initial Study, the City has determined that the project will require an Environmental Impact Report (EIR) in conformance with CEQA Guidelines Section 15060 and 15064. This Initial Study and accompanying documents constitute the Notice of Preparation for the project.

Project Land Uses and Zoning

The land use designations currently in effect for the project site are Industrial with a Wind Energy Overlay, as established by the City of Palm Springs General Plan Land Use Map. Industrial uses typically include research and development parks, light manufacturing, laboratories, and industrial services. Retail commercial uses and offices are allowed as ancillary uses to the industrial use to encourage projects that are self-sustaining. New and expanded industrial uses within the City will expand the City's job base and are therefore important to the City's overall economic vitality and balance.

Wind Energy Overlays (WEO) permit the development of Wind Energy Conversion Systems (WECS) on lands that are compatible with the windmills. These areas are predominantly located within areas designated as Desert, Industrial, or Open Space-Water on the General Plan Land Use Map in wind-prone areas of the City, including the area on and surrounding the proposed project. Industrial and clean energy uses in these areas may occupy up to 15 percent of the entire acreage allotted to industrial and regional business center land uses within the City's Wind Energy Overlay designation (which occur in the northern-most extent of the City). No specific assignment for WEO uses has been made to the project site, and its use as a distribution facility will not affect the City's goal of having 15% of these lands used for WECS projects, since substantial additional vacant lands are currently vacant and could accommodate future WECS proposals.

The zoning designation for the project site is Manufacturing (M-2) zone. This zone is intended to "provide for the development of warehouse and distribution centers, and industrial uses which include fabrication, manufacturing, assembly or processing which do not in their maintenance, assembly, manufacture or plant operation create by-products which will adversely affect the resort-open space environment of the City."[1]

The proposed project is a compatible use within the Industrial land use and Manufacturing (M-2) zoning designations.

[1] Palm Springs Municipal Code Section 92.17.1.00, "M-2" Manufacturing Zone.

Circulation

Access to the project will be provided along Indian Canyon Drive and 19th Avenue. There are two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive (see Exhibit 4). The proposed full access driveway along 19th Avenue will be utilized by truck traffic only. Internal circulation will be provided by paved drive aisles surrounding the proposed buildings.

Utilities

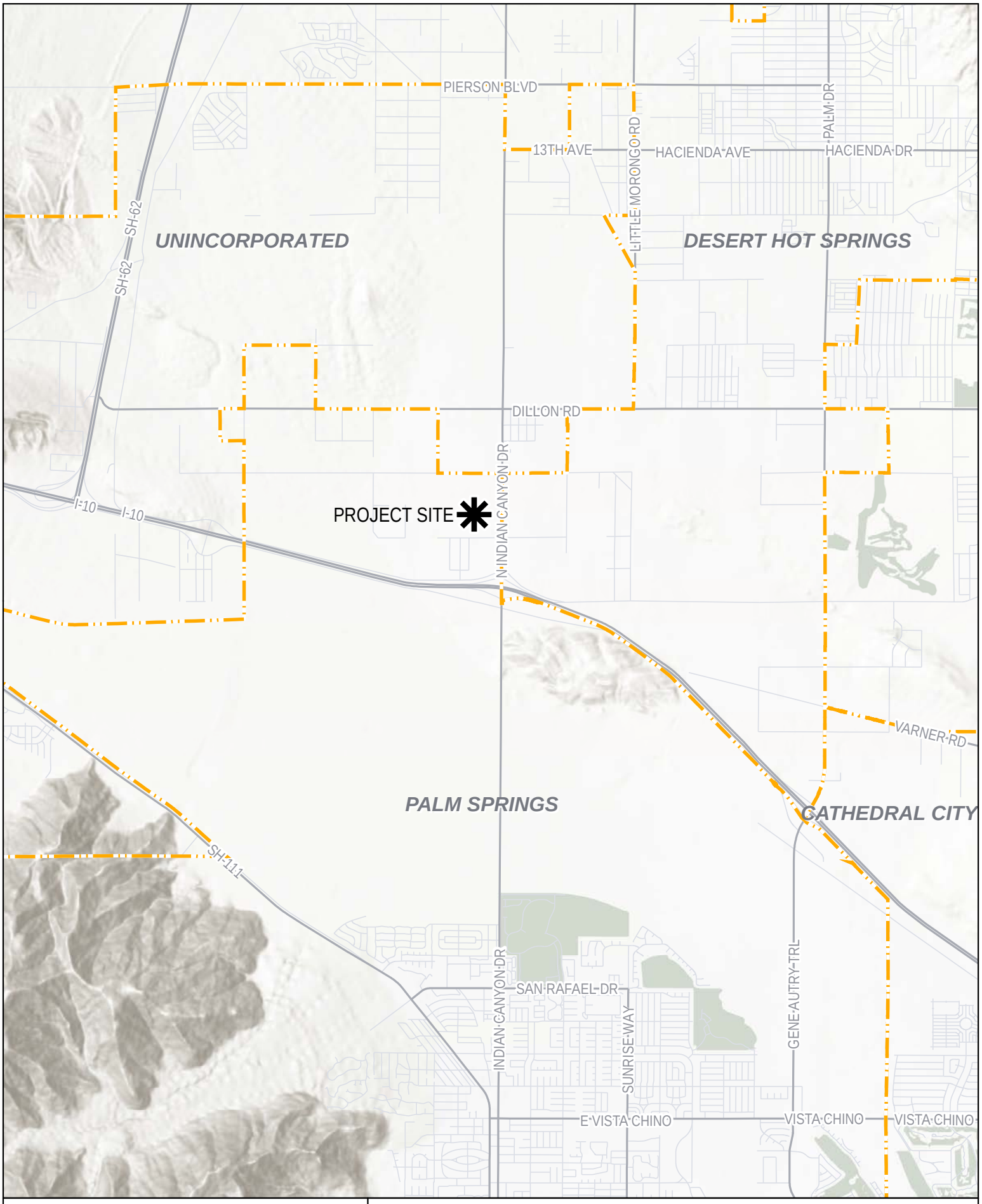
Domestic water and sanitary sewer service is provided to the project site by the Mission Springs Water District (MSWD). Existing infrastructure includes a network of water and sewer lines along 19th Avenue and Indian Canyon Drive.

Domestic Water – Mission Springs Water District will provide domestic water to the project site. The project proposes to augment the existing network of water lines within Indian Canyon Drive (east) and 19th Avenue (south). The existing water lines in Indian Canyon Drive includes 12-inch lines. The project proposes to connect to this water main with 12-inch lines, which will connect to the project's 12-inch fire line. The existing water line in 19th Avenue is 12 inches near the project's southwest corner, and increases to 16 inches towards the Indian Canyon Drive and 19th Avenue intersection. The project proposes to connect to this water main via 12-inch lines at the southwest and southeast corners of the project. The offsite improvement has been analyzed below and will be analyzed in the EIR.

Sanitary Sewer – The project proposes to extend existing sewer lines to accommodate new construction. The project will connect to an existing 6-inch sewer line located one half-mile west of the project in 19th Avenue, to be extended to the project site. This offsite improvement has been analyzed below and will be analyzed in the EIR. MSWD is currently developing a new Regional Water Reclamation Facility west of Little Morongo Road between 19th Avenue and 20th Avenue. The new facility will increase the District's total wastewater treatment capacity and alleviate a portion of existing wastewater flows currently going to the Horton Wastewater Treatment Plant. Construction of the new facility started in April 2022, and will be operational in fall 2023. The proposed project will connect to the new facility. If the new wastewater treatment plant is not complete by project operation, the project will connect to the temporary package plant located east of 19th Avenue and Calle de Los Ramos, until the new facility is ready.

Electricity – The project site is not currently served by electric facilities. The project will be required to connect to existing infrastructure provided by Southern California Edison (SCE) to accommodate new construction. The project will connect to existing electricity lines at the southeast corner of Indian Canyon Drive and 19th Avenue and connect to the site underground. This offsite improvement has been analyzed below and will be analyzed in the EIR.

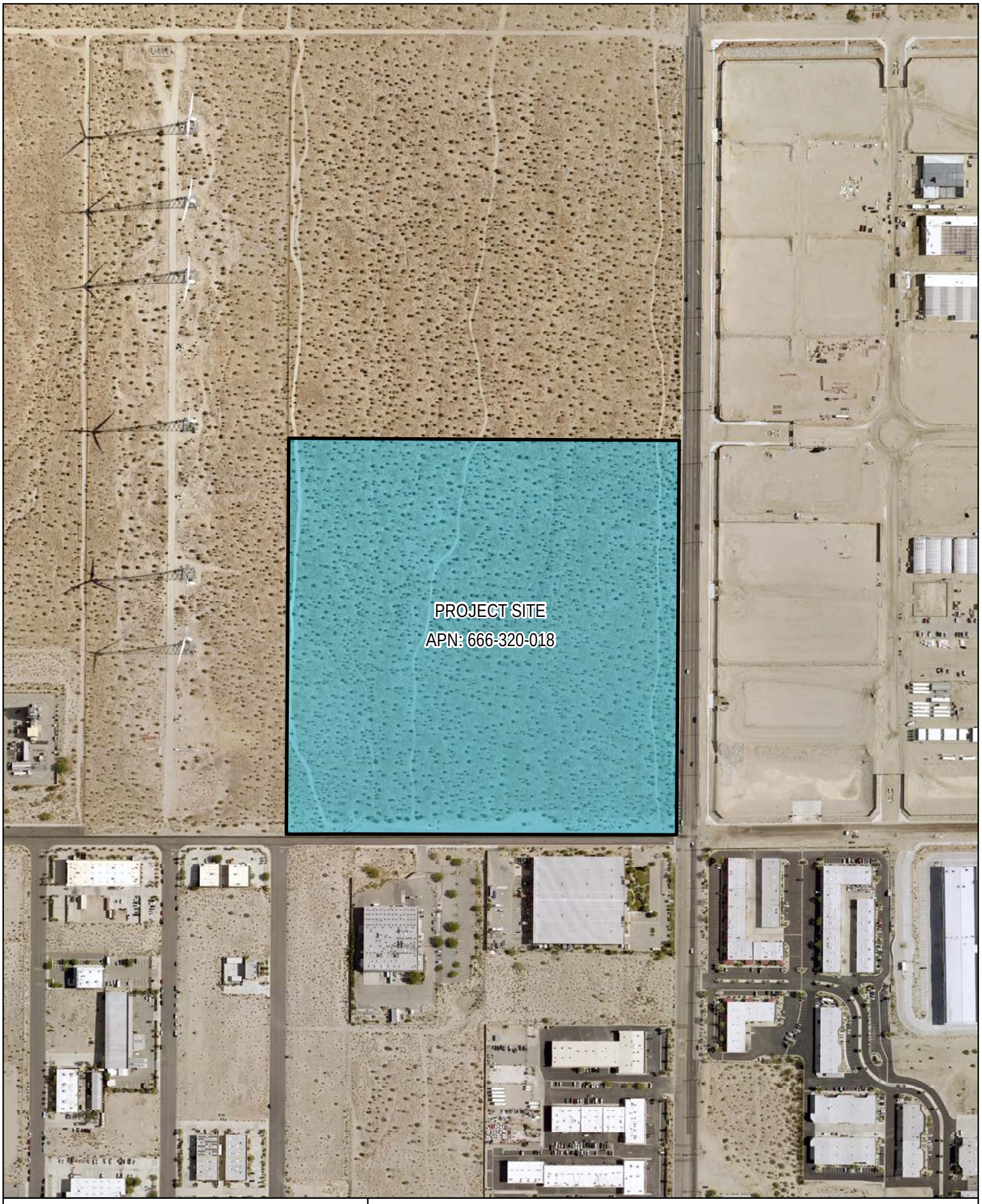
Natural Gas – The project is not currently served by natural gas facilities. Southern California Gas Company (SoCalGas) provides natural gas to the City of Palm Springs and surrounding areas. The project will be required to connect to existing natural gas infrastructure located approximately a half-mile west in 19th Avenue. This offsite improvement has been analyzed below and will be analyzed in the EIR.



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 5,000 FT

VICINITY MAP
PALM SPRINGS FULFILLMENT CENTER
EXHIBIT 1



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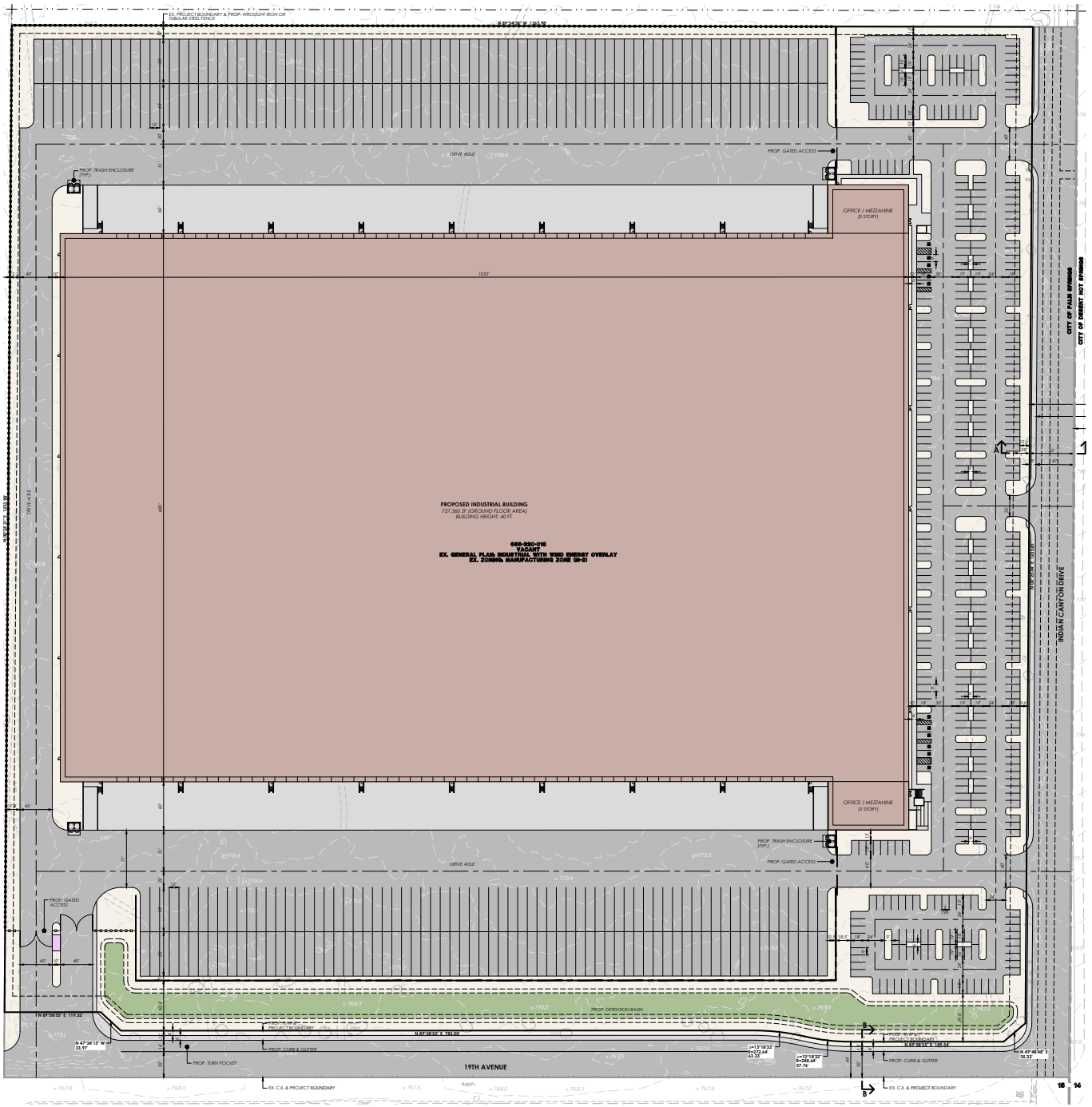
0 NORTH 400 FT

AERIAL PHOTOGRAPH
PALM SPRINGS FULFILLMENT CENTER
EXHIBIT 2



IN THE CITY OF PALM SPRINGS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TECHNICAL SITE PLAN

EXHIBIT DATE: JANUARY 12, 2023

REVISIONS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER:	SNIDER INTERESTS, LLC		
ADDRESS:	730 ARCADY ROAD MONTECITO, CALIFORNIA 93108		
CONTACT:	DAVID SNIDER		
EXHIBIT PREPARER:	MSA CONSULTING, INC.		
ADDRESS:	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT:	PAUL DEPALATIS, AICP	**TELEPHONE:**	(760) 320-9811
SOURCE OF TOPOGRAPHY:	INLAND AERIAL SURVEYS, INC.		
ADDRESS:	7117 ARLINGTON AVENUE, SUITE A RIVERSIDE, CALIFORNIA 92503		
DATE OF TOPOGRAPHY:	APRIL 13, 2022	**TELEPHONE:**	(951) 687-4252
ASSESSOR'S PARCEL NUMBER:	666-320-018		

LEGAL DESCRIPTION:

A PORTION OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 15, TOWNSHIP 3 SOUTH, RANGE 4 EAST, SAN BERNARDINO MERIDIAN.

LAND USE DESCRIPTION:	SF	AREA	PERCENTAGE
EXISTING GROSS ACREAGE	1,722,174 SF	39.54 AC.	-
PROPOSED RIGHT OF WAY DEDICATION (INDIAN CANYON ROAD & 19TH AVENUE)	144,550 SF	3.32 AC.	-
PROPOSED NET ACREAGE	1,577,624 SF	36.22 AC.	100%
PROPOSED BUILDING AREA	727,360 SF	16.70 AC.	46%
ACCESS ROADS, HARDSCAPE & PARKING	669,389 SF	15.37 AC.	42%
LANDSCAPE, OPEN SPACE & RETENTION AREAS	180,875 SF	4.15 AC.	12%

BUILDING DESCRIPTION:

INDUSTRIAL BUILDING

ONSITE PARKING DATA:	SF	PARKING RATIO	PARKING %	COUNT
PROPOSED INDUSTRIAL BUILDING	**727,360 SF** (1ST 100,000 SF) (2ND 100,000 SF) (REMAINDER)	- 1 STALL PER 800 SF 1 STALL PER 1,250 SF 1 STALL PER 5,000 SF	- - - -	- 125 STALLS 80 STALLS 106 STALLS
TOTAL PARKING REQUIRED	**727,360 SF**	-	-	**311 STALLS**
STANDARD STALLS PROVIDED	-	-	-	419 STALLS
HANDICAP STALLS PROVIDED	-	-	-	11 STALLS
TRUCK PARKING PROVIDED	-	-	-	306 STALLS
TOTAL PARKING PROVIDED	-	-	**100%**	**736 STALLS**

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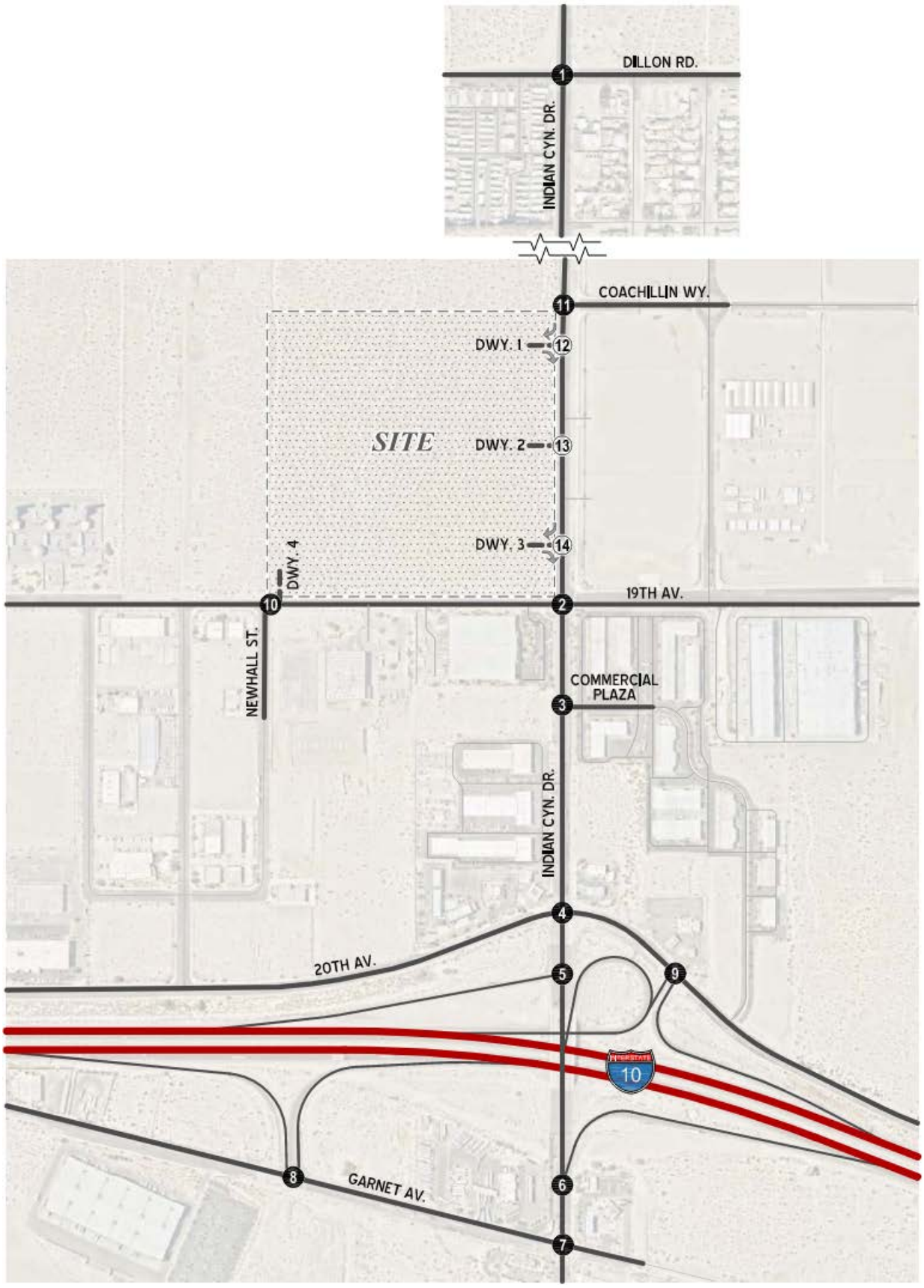
NORTH
NOT TO SCALE

SITE PLAN
PALM SPRINGS FULFILLMENT CENTER
EXHIBIT 3



LEGEND:

- 11 ▪ EXISTING ANALYSIS LOCATION
- 3 ▪ FUTURE ANALYSIS LOCATION
- ▪ RIGHT-IN/RIGHT-OUT ONLY
- ▪ FUTURE ROADWAY

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NORTH

CIRCULATION PLAN
PALM SPRINGS FULFILLMENT CENTER
EXHIBIT 4

EVALUATION OF ENVIRONMENTAL IMPACTS:

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☒	Energy
☒	Geology /Soils	☒	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials
☒	Hydrology / Water Quality	☐	Land Use / Planning	☐	Mineral Resources
☒	Noise	☒	Population / Housing	☒	Public Services
☐	Recreation	☒	Transportation/Traffic	☒	Tribal Cultural Resources
☒	Utilities / Service Systems	☐	Wildfire	☒	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☒	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: City of Palm Springs	8/1/23 Date:

Environmental Checklist and Discussion:

The following checklist evaluates the proposed project's potential adverse impacts. For those environmental topics for which a potential adverse impact may exist, a discussion of the existing site environment related to the topic is presented followed by an analysis of the project's potential adverse impacts. When the project does not have any potential for adverse impacts for an environmental topic, the reasons why there are no potential adverse impacts are described.

1. AESTHETICS -- Would the project**:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) **Potentially Significant Impact.** The project property is located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs' Industrial land use designation. The project is currently vacant and undeveloped. Scenic vistas in the City of Palm Springs include views of the surrounding mountain ranges. Views of these mountain ranges can be observed along Indian Canyon Drive, 19th Avenue, and the Interstate 10 freeway.

Views from the project site include the San Jacinto Mountains to the southwest, San Gorgonio Mountains to the northwest, Little San Bernardino Mountains to the north and northeast, and the Santa Rosa Mountains to the southeast. Views of the San Jacinto and San Gorgonio Mountains are relatively unobstructed apart from the existing structures and wind turbines that partially obstruct view of the mountain base. Existing developments, infrastructure, and landscaping obstructs the distant views of the Little San Bernardino Mountains and the Santa Rosa Mountains.

The project proposes the development of a 739,360-square-foot industrial warehouse, with 727,360-square-foot building area, and 12,000-square feet of offices on the second floor. Associated improvements include paved parking spaces and drive aisles, a detention basin, and three gated access points on approximately 38 acres. The overall architectural character will include modern design with straight lines, rectangular inset windows, and stone accents near the building entrances.

Development of the project could result in the obstruction of scenic vistas to motorists traveling along Indian Canyon Drive, 19th Avenue or Interstate 10. The Environmental Impact Report (EIR) will analyze the project's impact on scenic vistas.

b) **No Impact.** The proposed project occurs north of 19th Avenue and west of Indian Canyon Drive. The project site is currently vacant and undeveloped. The property does not contain any landmarks or scenic resources, such as trees, rock outcroppings, or historic buildings.

A review of the California State Scenic Highway Program determined that the project site is not located within a designated State Scenic Highway. State Route 62 is approximately 3 miles west of the project site and is a State designated Scenic Highway. The project site is not visible from SR 62. According to the Riverside County Western Coachella Valley Area Plan, the Interstate 10 freeway is a County Eligible Scenic Highway but is not officially designated. The Interstate 10 freeway is located approximately 0.32 miles south of the project. Therefore, the project will not impact scenic resources in the Interstate 10 right of way.

The project is not located adjacent to a State designated Scenic Highway or a Riverside County Scenic Highway. There will be no impact to scenic resources on a scenic highway. Therefore, no further analysis of this impact is required in the EIR.

c) **Less than Significant Impact.** The project property is located in an urbanized area, surrounded by vacant land to the north and west, a developing business park to the east, and commercial and industrial businesses to the south. Indian Canyon Drive delineates the project's eastern boundary, and 19th Avenue delineates the southern boundary. The project property and areas north and west of the project are located within the City's Industrial land use designation, areas south of the project are located within the City's Regional Business Center land use designation.

The project proposes the development of an approximately 739,360-square-foot industrial warehouse. Additional improvements include paved drive aisles and parking spaces, detention basin, and gated access points. As previously stated, the project is situated within the City of Palm Springs's Industrial land use designation with a Wind Energy Overlay, and Manufacturing (M-2) zoning designation.

According to the Palm Springs Municipal Code (PSMC), M-2 zoning designations support wholesale, warehouse, distribution, fulfillment, and import/export centers. According to Section 92.17.1.03, Property development standards, of the Palm Spring Municipal Code, buildings and structures shall have a height not greater than 30 feet, however, exceptions to building heights are included in Section 92.17.1.03(C)(2)(b), which permits buildings up to 60 feet in height, "provided that: (1) the building is located on a parcel of not less than one acre in size; and (2) the building or any portion thereof is set back one foot from any property line for every one foot of vertical height."[2]

The project is located on a parcel size greater than one acre and therefore complies with the first standard. The project proposes a building height of 49 feet 6 inches. Therefore, to comply with Section 92.17.1.03(C)(2)(b), the proposed building setback should be more than 50 feet from any property line. The project complies with this setback standard as indicated in the table below.

Table 1-I Building Setback from Property Line

Direction	Minimum Building Setback Per MC	Proposed Setback
North	50 ft	198 ft
East	50 ft	138 ft
South	50 ft	248.6 ft
West	50 ft	62.3 ft

[2] Palm Springs Municipal Code Section 92.17.1.03 (C)(2)(b), Property development standards.

Additionally, Section 92.17.1.03(C)(2)(d) states that "any buildings over 40 feet in height shall only be permitted within the area bounded by 18th Avenue on the north, Indian Canyon Drive on the east, 19th Avenue on the south, and the western boundary of the zone district on the west."[2] The project property is located within the defined boundary and therefore complies with the building height exception established in the Palm Springs Municipal Code.

The project is consistent with the property development standards, including Section 92.17.1.03 (D) regarding walls, fences, and landscaping, (F) regarding lot area coverage, and (G) regarding access. The project site plan will be reviewed by the City of Palm Springs to determine whether the site plan and design are consistent with the M-2 zoning designation and surrounding uses.

The project's compliance with the City's Zoning Code related to development standards within M-2 zones and scenic quality will be analyzed further in the EIR.

d) **Less than Significant Impact.** The proposed project occurs on vacant and undeveloped land and does not currently contribute to light or glare in the area. Existing sources of light in the area is include the industrial and commercial businesses east and south of the project. Vehicular traffic traveling along 19th Avenue and Indian Canyon Drive contribute to daytime and nighttime light and glare.

The project is located within the City's Industrial land use designation and Manufacturing (M-2) zoning designation. Development and operation of the proposed project will introduce additional light to the area. Lighting proposed for the project will comply with outdoor lighting standards established in Section 93.21.00 of the Palm Springs Municipal Code. Lighting proposed for the project will include overhead/downward oriented post mounted or wall mounted fixtures to illuminate parking areas, building frontages and entrances, and pedestrian pathways. Lighting fixtures shall be designed to avoid glare, light trespass onto surrounding properties, and light pollution into the sky. The project will not install unacceptable light fixtures, including unshielded floodlights, wall packs, wall mounted fixtures, streetlights, and security lights, per Figure 5 of PSMC Section 93.21.00. The building façade proposed for the industrial building will not involve materials or colors that generate glare. Concrete walls painted neutral colors (i.e., dark green, beige, brown, and white) and stone accents proposed for the building will not contribute to glare. Windows will be inset to reduce glare generated from the window's surface. The external shading provided by the inset architectural feature provides shading to the windows, reducing sunlight reflecting from the building surface. The proposed project impacts to light or glare will be analyzed in greater detail in the EIR.

2. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Sources: California Farmland Mapping and Monitoring Program, California Department of Conservation; Palm Springs General Plan, 2007.

a)-b) **No Impact.** The project property is classified by 2016 California Farmland Mapping and Monitoring Program (FMMP) as "Other Land". Other Land is defined as land not included in any other mapping category (i.e., Prime Farmland, Farmland of Statewide or Local Importance, Unique Farmland, or Urban and Built-Up Land).

Surrounding areas to the west, north, and east are also designated as Other Land, while areas south of the project include a mix of both Other Land and Urban and Built-Up Land. No areas within the City of Palm Springs are designated or zoned for agricultural use. Therefore, implementation of the project would not involve changes that would result in the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance to nonagricultural uses.

The General Plan land use designation for the project site is Industrial with Wind Energy Overlay. The zoning designation for the proposed project is Manufacturing (M-2). The proposed project is compliant with the land use and zoning designations established by the City of Palm Springs.

According to the Williamson Act 2014 Status Report, no portion of the project site is within or near a recognized Williamson Act Contract area.

Neither the project site nor any surrounding lands are designated or used for agricultural purposes. Agriculture is not a land use defined in either the General Plan or Zoning Ordinance. No impact to agricultural resources will result from implementation of the project. Therefore, no discussion is necessary in the EIR.

c)-e) **No Impact.** The project site is currently vacant and undeveloped. As stated in the previous discussion (b), Industrial with a Wind Energy Overlay classifies the property's land use designations. Forest land,

timberland, or timberland zoned Timberland Production does not occur on the project site or surrounding areas. The project would not result in the loss of forest land or conversion of forest land to non-forest use.

The project proposes the development of an approximately 739,360-square-foot industrial building within the City of Palm Springs's Industrial land use designation. The project will not convert forest land to a non-forestry use.

Project implementation will not involve changes that could result in the conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use since the project property is not designated as farmland or used as agricultural land. No impacts are anticipated, and no further discussion in the EIR is required.

3. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Source: Final 2022 Air Quality Management Plan (AQMP), by SCAQMD, 2022; Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP), by SCAQMD, August 2003; Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan, by the California Air Resources Board, February 2010.

a) **Potentially Significant Impact.** The project site and its Coachella Valley regional context are situated within the Riverside County portion of the Salton Sea Air Basin (SSAB), under jurisdiction of the South Coast Air Quality Management District (SCAQMD). Existing air quality in relation to the applicable air quality standards for criteria air pollutants is measured at established air quality monitoring stations throughout the SCAQMD jurisdiction. The three permanent monitoring stations in the Coachella Valley are located in Palm Springs (AQS ID 060655001), Indio (AQS ID 060652002), and Mecca (Saul Martinez - AQS ID 060652005).

To comply with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), SCAQMD has adopted an Air Quality Management Plan (AQMP), which is updated regularly with strategies to effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy. The most current version of the AQMP (2022 AQMP) was adopted in December 2022 to continue serving as a regional blueprint for achieving the federal air quality standards. The 2022 AQMP includes the most current strategies to meet the air quality standards and ensure that public health is protected to the maximum extent feasible. It also includes a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. Moreover, the 2022 AQMP provides guidance for the State Implementation Plans (SIP) for attainment of the applicable ambient air quality standards.

Furthermore, the Coachella Valley is currently designated as a serious nonattainment area for PM10 (particulate matter with an aerodynamic diameter of 10 microns or less). The U.S. EPA-approved Coachella Valley PM10 State Implementation Plan is in place with an attainment strategy for meeting the PM10 standard. Some of the existing measures include the requirement of detailed dust control plans from builders that specify the use of more aggressive and frequent watering, soil stabilization, wind screens, and phased development to minimize fugitive dust. Appropriate air quality measures to prevent fugitive dust are required by the City's Fugitive Dust Control ordinance and plan implementation requirements, which are consistent with SCAQMD Rules 403 and 403.1 that apply to the Coachella Valley strategy for reducing fugitive dust emissions.

The proposed development is consistent with the General Plan, Zoning Code, and other adopted regulations relevant to the City's growth. The proposed Project will be subject to the rules and guidelines under the 2022 AQMP and the applicable State Implementation Plan for PM10 and Ozone. The project-specific Air Quality Study quantitative findings will help determine whether the Project's emission levels will exceed any of the applicable thresholds and whether those levels have the potential to obstruct the attainment efforts of the 2022 AQMP. The Draft Environmental Impact Report (DEIR) will further elaborate on the Project's compliance with the applicable air quality plan and level of significance.

b) **Potentially Significant Impact.** The Coachella Valley portion of the Salton Sea Air Basin (SSAB) is in nonattainment for the 1997 8-hour ozone standard and PM10 standard. The attainment status of each standard is summarized below.

Particulate Matter (PM10):

The Coachella Valley is currently designated as a serious nonattainment area for PM10 (particulate matter with an aerodynamic diameter of 10 microns or less). In the Coachella Valley, the man-made sources of PM10 are attributed to direct emissions, industrial facilities, and fugitive dust resulting from unpaved roads and construction operations. High-wind natural events are also known contributors of PM10. The project is located within the designated Coachella Valley Blowsand Zone, which is a defined corridor of land extending two miles to either side of the centerline of the I-10 Freeway across a major portion of the Coachella Valley region. This area is known to be exposed to relatively higher seasonal winds and therefore is subject to additional Fugitive Dust Control Plan requirements that will be discussed in the EIR. The Air Quality Study for this project will quantify the potential construction and operational PM10 emission levels resulting from the project to determine compliance and feasible mitigation, as necessary.

Ozone and Ozone Precursors:

Furthermore, the Coachella Valley portion of the Salton Sea Air Basin (SSAB) is deemed to be in nonattainment for the 1997 8-hour ozone standard. Coachella Valley is unique in its geography due to its location downwind from the South Coast Air Basin (SCAB). As such, when high levels of nitrogen oxides (NOx), volatile organic compounds (VOCs) and ozone are produced in the South Coast Air Basin, they are transported to the Coachella Valley. The 2022 AQMP has found and established that the Coachella Valley does not have large sources of smog-forming emissions and therefore, local sources of air pollution have a limited impact on ozone levels compared to the transport of ozone precursors generated upwind in the SCAB. Based on the 2022 AQMP, the attainment date for the said ozone standard is August 2033. The Air Quality Study for this project will quantify the potential construction and operational ozone precursor emission levels resulting from the project to determine compliance and feasible mitigation, as necessary.

The emission levels of criteria air pollutants, including PM10 and Ozone precursors, resulting from construction and operation of a 739,360 square-foot facility and associated improvements will be determined by the Air Quality Study results and will be further analyzed in the Draft EIR.

c) **Less than Significant Impact.** A sensitive receptor is a person in the population who is particularly susceptible (i.e., more susceptible than the population at large) to health effects due to exposure to an air contaminant. Sensitive receptors and the facilities that house them are of particular concern if they are located in close proximity to localized sources of carbon monoxide, toxic air contaminants, or odors. Land uses considered by the SCAQMD to be sensitive receptors include residences, long-term health care facilities, schools, rehabilitation centers, playgrounds, convalescent centers, childcare centers, retirement homes, and athletic facilities.

The project site consists of undeveloped land situated at the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, approximately 0.32 miles north of the Interstate 10 freeway in the City's industrial land use district. In this context, the project site is not located in the local vicinity of

existing residential uses or other potential sensitive receptors. The nearest residential unit to the site is located approximately 0.37 miles to the north and upwind in terms of the prevailing wind direction. The second nearest residential property is located approximately 2.38 miles to the southeast in what is considered a downwind direction. The DEIR will analyze in further detail the location of the nearest sensitive receptors and will provide a Localized Significance Threshold (LST) analysis, per the SCAQMD methodology.

d) **Less than Significant Impact.** As previously introduced, the project's location is separated from residential uses and other land uses that may be considered sensitive receptors in substantial numbers. The proposed enclosed facility does not include the uses or activities typically recognized for generating odor impacts; therefore, less than significant impacts are expected for this aspect. The Air Quality Study will analyze the potential for impacts associated with odors.

4. **BIOLOGICAL RESOURCES** -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

a) **Less than Significant Impact with Mitigation**. The approximately 38-acre project site is vacant and undeveloped. The project is surrounded by paved streets and existing developments to the east and south, a fenced area with wind turbines to the west, and vacant land to the north. The four-lane roadway, Indian Canyon Drive, forms the eastern project boundary. The environment of the project site is typical of the desert scrub habitat of the valley floor as described in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). The project will eliminate 38 acres of this habitat. Off-road vehicle tracks and human refuse occur throughout the project site. Although the project property is located adjacent to existing roadways and developments, the site may provide suitable foraging habitat for migratory birds and small mammals.

Off-site improvements involve the project's connection to existing sewer, water, and electricity lines in the streets east and south of the project. The existing rights-of-way do not provide suitable habitat for biological resources; therefore, the project's connection to off-site infrastructure will not result in impacts to biological resources.

A biological resource study will be conducted by a qualified biologist to determine the site's existing biological resources and determine the presence of any sensitive species. The EIR will further analyze potential impacts to sensitive plant or animal species.

b) **No Impact**. As previously discussed, the site is vacant and undeveloped, and surrounded by developed and undeveloped properties. Off-site improvements involve the project's connection to existing sewer, water,

and electricity lines in the streets east and south of the project. There are no jurisdictional waters regulated pursuant to the Federal Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE) or the Regional Water Quality Control Board (RWQCB), and no lakes, rivers, or streambeds regulated pursuant to the California Fish and Game Code by the CDFW are present within the limits of the proposed project or the proposed off-site infrastructure. Since significant wash vegetation, riparian vegetation, or other sensitive natural communities (identified in local or regional plans, policies, and regulations, or by the CDFW or US Fish and Wildlife Service) does not occur at the project site or within the existing rights-of-way where off-site improvements will occur, the project will have no impacts on these resources. No further analysis is required in the EIR.

c) **No Impact.** The vacant and undeveloped project site does not contain federally protected wetlands, marshes or other natural drainage features. No blue-line stream corridors (streams or dry washes) are shown on U.S. Geological Survey maps for the project site and there are no botanical indicators of such corridors. As a result, implementation of the proposed project would not result in the direct removal, filling or other hydrological interruption to any of these resources. Off-site improvements involve the project's connection to existing sewer, water, and electricity lines in the streets east and south of the project. The existing rights-of-way are developed and the project's connection to off-site infrastructure will not result in impacts to protected wetlands.

No further analysis is required in the EIR since the project site or off-site improvements do not contain federally protected wetlands, marshes, or other natural drainage features.

d) **Less than Significant Impact with Mitigation.** The project's vacant and undeveloped condition may provide suitable habitat for wildlife species, however, the project's adjacency to the busy Indian Canyon Drive roadway and existing industrial and commercial businesses do not present ideal conditions for wildlife corridors or native wildlife nursery sites.

Off-site improvements involve the project's connection to existing sewer, water, and electricity lines in the streets east and south of the project. The existing rights-of-way do not provide conditions for wildlife corridors or wildlife nursery sites. Therefore, the project's connection to off-site infrastructure will not result in impacts to wildlife corridors or nursery sites.

A project-specific biological resources study will be prepared for the project site that will address potential project impacts regarding the movement of any native or resident wildlife species, migratory wildlife corridors, or wildlife nursery sites and provide mitigation measures, if necessary. The findings of the project-specific biological resources study will be further discussed in the EIR.

e & f) **Less than Significant Impact.** The project lies within the boundary of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) which outlines policies for conservation habitats and natural communities and is implemented by the City of Palm Springs. The project is consistent with the Goals and Policies set forth in the City of Palm Springs General Plan Land Use Element and will comply with the CVMSHCP. Additionally, the project site is not located within a Conservation Area under the CVMSHCP. As a result, implementation of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

In addition to the biological field survey to be conducted at the project site, the biological report and EIR will analyze the project's consistency with adopted habitat policies and plans, including the CVMSHCP.

5. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

a) **Less than Significant Impact with Mitigation.** The project site has remained in a vacant condition and no evidence of development has occurred on the project site. The site is located in the City's industrial land use district. A project-specific cultural resources report will be prepared by a qualified archaeologist to determine the likelihood for presence or absence of historical resources and the potential for any significant impacts thereto.

The results will be used as part of the analysis for the EIR to determine impacts to historic resources.

b) **Less than Significant Impact with Mitigation.** The Late Prehistoric period groups that occupied the Coachella Valley were the direct ancestors of the ethnographic Cahuilla. The Desert Cahuilla inhabited the lower area of the Coachella Valley and areas near the Salton Sea. Development of the proposed project would involve excavation, grading, and other earthwork activities across the entire site. A significant effect could occur if archaeological resources are disturbed during that process. The project site is vacant and undeveloped. A project-specific cultural resources report with a record search of archaeological resources will be prepared by a qualified archaeologist to determine the likelihood for presence or absence of archaeological resources and the potential for any significant impacts thereto.

The results of the cultural resources report will be used as part of the analysis for the EIR to determine impacts to archaeological resources.

c) **Less than Significant Impact**. As discussed throughout this document, the site is vacant and undeveloped. The surface of the project area exhibits general disturbance from off-highway-vehicle traffic and past construction activities. California Health and Safety Code, Section 7050.5, requires that in the event that human remains are discovered within a project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains are those of a Native American, he or she shall contact the Native American Heritage Commission by telephone within 24 hours. The proposed project would comply with existing law, and potential impacts to human remains would be less than significant. This issue will be addressed further in the EIR.

6. ENERGY – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

a) & b) **Potentially Significant Impact.** The project site is currently vacant and undeveloped and therefore does not consume energy. The project proposes the development and operation of an approximately 739,360-square-foot industrial warehouse with 12,000 square feet of office space. Associated improvements include paved parking and drive aisles, gated entry points, and a detention basin. Off-site improvements involve the project's connection to existing sewer, water, and electricity lines in the existing rights-of-way east and south of the project. Electricity and natural gas will be provided to the project site by Southern California Edison (SCE), and Southern California Gas Company (SoCal Gas), respectively.

The construction of the project will increase the amount of energy consumed at the project site. Therefore, construction and operational impacts of the project to energy resources, including electric, gas, and petroleum, will be analyzed in the EIR.

State and local plans have been established to set goals and guidelines to enforce the implementation of energy efficient building materials and features. The project will be analyzed in the EIR for compliance and consistency with state or local plans for renewable energy or energy efficiency to determine project impacts.

7. GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Source: Palm Springs General Plan; Palm Springs Municipal Code; Riverside County General Plan (2015)

a) i. **No Impact.** The City of Palm Springs, similar to most of Southern California, is susceptible to earthquakes due to the active faults that traverse the Coachella Valley. The potential for ground rupture due to fault movement is commonly related to the seismic activity of known fault zones on a property. Active faults are present along the northernmost reaches of the City, where the traces of the Garnet Hill and Banning faults have been mapped. These faults have the potential to generate surface rupture or ground deformation. According to Figure 6-1 in the PSGP, the Banning Pass Fault traverses the northern boundary of the City, and the San Gorgonio Pass Fault delineates a portion of the City's northern boundary. The Banning Pass and San Gorgonio Pass faults are designated Alquist-Priolo Earthquake Fault Zones. Under the Alquist-Priolo Earthquake Fault Zoning Act, the location of structures for human occupancy across the surface trace of an active fault is restricted. According to Figure 6-1 in the PSGP a fault does not traverse the project site. The closest fault to the project property is the Banning Pass Fault, which lies approximately 0.25 miles north of the project, while the San Gorgonio Pass Fault is located approximately 4 miles west of the project. The Garnet Hill Fault is located approximately 1 mile south of the project; however, this fault is not considered an Alquist-Priolo Earthquake Fault.

No known active or inactive faults traverse through the project site. The closest fault to the project or its off-site improvements is the Banning Pass Fault, located approximately 0.25 miles north of the project boundary. Due to the project's distant from the faults, rupture at the project site is not anticipated to occur. No impacts are anticipated, and no further study discussion in the EIR is required.

ii. **Less than Significant with Mitigation.** Seismically induced ground shaking is anticipated throughout the entire Coachella Valley due to the multiple faults that traverse the region. The Banning and Garnet Hill faults, which are capable of causing damage to the City have the potential to produce strong seismic shaking in the City (PSGP page 6-2). The strength of the ground shaking is tied to the distance from the fault, where the intensity decreases the further it is from the causative fault.

The Banning and Garnet Hill faults occur 0.25 miles north and 1 mile south from the project site. and proposed offsite improvements. Therefore, it is likely that the project will experience ground shaking during the life of the project. Impacts of seismically-induced ground shaking at the project site and offsite improvements will be analyzed further in the EIR.

iii. **No Impact.** The Safety Element of the Palm Springs General Plan indicates that liquefaction occurs when loose, soft, unconsolidated, or sandy soils that are saturated with water are subjected to ground vibrations during a seismic event. Significant ground shaking causes soil to lose strength and "liquefy," triggering structural distress or failure due to settling of the ground or loss of strength in the soils underneath structures. Per the PSGP, the northern and eastern areas of the City have a low possibility of being affected by liquefaction due to the deep groundwater depths (greater than 50 feet). Seismic Hazards Map (Figure 6-1) of the PSGP indicates that the project site is located in an area with fine-grained granular sediments susceptible to liquefaction with groundwater depths greater than 50 feet.

Due to the lack of shallow groundwater at and around the project site, impacts of seismically-induced liquefaction at the project property and offsite improvements are not expected to occur. No impacts are anticipated, and no further study discussion in the EIR is required.

iv. **No Impact.** Secondary effects of seismic ground shaking, such as slope failures, rockfalls and landslides may occur in the City, especially adjacent to and in elevated areas. Seismically induced landslides and rockfalls can be expected primarily in the western and southern portion of the City, including areas near the San Jacinto and Santa Rosa Mountains where the bedrock is intensely fractured or jointed. The project site is not located in an area with high and moderate susceptibility of being impacted by rockfalls and seismically induced landslides (Figure 6-2, Landslide Susceptibility).

Seismically-induced rockfalls and landslides are not anticipated to impact the proposed project as the project site and proposed offsite improvements are located on relatively flat land. Additionally, the project and offsite infrastructure are not located adjacent to a mountain or hillside area. Therefore, seismically-induced rockfalls and landslides will have no impact on the project, and will not be analyzed in the EIR.

b) **Less than Significant Impact with Mitigation.** Erosion is influenced by several factors including climate, topography, soil types, rock types, and vegetation. Natural erosion processes are often accelerated through human activities such as agricultural or land development through grading and the clearing of vegetation. Erosion is a concern in the Coachella Valley, including the City of Palm Springs, due to the negative affects it has on infrastructure and human health. Windborne, waterborne, and human activities can lead to soil erosion.

The project proposes the development of an approximately 739,360-square-foot industrial warehouse on approximately 38 acres of vacant and undeveloped land, as well as offsite connections to existing water, sewer, and electricity infrastructure along the east- and south-lying rights-of-way. Development of the

proposed project area will be impacted by windborne, waterborne and human generated erosion during project development. These impacts will be analyzed further in the EIR.

c) **Less than Significant Impact with Mitigation.** The project site, as stated throughout this Initial Study, is undeveloped and vacant. According to Figure 6-3 of the Palm Springs General Plan, surficial sediments at the project site consist primarily of stream channel gravel and sand. Additionally, the United States Department of Agriculture (USDA) soils survey of the project area claims that a majority of the project site is made up of Carsitas fine sand (0 to 5 percent slopes). Carsitas gravelly sand and Carsitas cobbly sand make up a small portion of the site. Each of the soil groups have a hydrologic soil group rating of A. Soils with this rating have high infiltration rate and low runoff potential when thoroughly wet.

The project will involve the development of a new structure and the movement of soil, through the grading and clearing the site. Currently, the soils underlying the site do not provide stable foundational conditions for the proposed development. Therefore, a geotechnical study will be completed for the project site to analyze the onsite soils and provide project-specific recommendations for development.

The project's connection to existing offsite water, sewer, and electricity infrastructure will occur along the existing rights-of-way east and south of the project. Testing for and the removal of unstable soils likely occurred during the development of Indian Canyon Drive and 19th Avenue, to reduce the potential hazards associated with unstable soils along the roadways. Therefore, unstable soils do not exist along the roadways, and will not impact the project's connection to the existing offsite infrastructure.

Based on the findings of the project-specific geotechnical report, the EIR will evaluate the potential for lateral spreading, subsidence, liquefaction, or soil collapse at the project site and provide mitigation measures based on the geotechnical recommendations.

d) **Less than Significant Impact with Mitigation.** Expansive soils, as defined by the Riverside County General Plan, have a significant amount of clay particles which can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils, making them potentially hazardous. These soils can also be widely dispersed, occurring in both hillside areas and low-lying alluvial basins. The surficial sediments at the project site consist of stream channel gravel and sand, with alluvium underlying the surface. The loose and granular nature of the onsite soils could result in expansion at the site. Therefore, a geotechnical study will be completed at the project site to analyze the expansion potential of onsite soils. Findings and recommendations provided by the geotechnical study will be evaluated and discussed in greater detail in the project EIR.

The project's connection to existing offsite water, sewer, and electricity infrastructure will occur along the existing rights-of-way east and south of the project. Testing for and the removal of expansive soils likely occurred during the development of Indian Canyon Drive and 19th Avenue, to reduce the potential hazards associated with expansive soils along the roadways. Therefore, expansive soils do not exist along the roadways, and expansive soils are not expected to impact the project's connection to the existing offsite infrastructure.

e) **No Impact.** Mission Springs Water District provides sewer services to the residents and businesses around the project property. The project site is not currently connected to sewer infrastructure; thus, the project proposes to augment the existing network of sewer lines to accommodate new construction. The project will connect to an existing 6-inch sewer line a half-mile east of the project in 19th Avenue. Therefore, no impacts are anticipated, and no further analysis is necessary.

f) **Less than Significant Impact with Mitigation.** Per the Riverside County Land Information System, the project site is recognized as having "low" potential for Paleontological Sensitivity following a literature search, records check and a field survey. Areas recognized for having "low" potential have a reduced

likelihood of containing significant non-renewable paleontological resources, including vertebrate or significant invertebrate fossils. The project site consists of alluvial sands, which are recent deposits and not conducive to the preservation of paleontological resources. Additionally, the project has no known unique paleontological features. However, deeper Pleistocene-age sediments and formations have a high potential for the presence of fossils. Therefore, the project EIR will analyze the project's potential impact to paleontological resources during construction of the site, and implement mitigation measures, if necessary.

8. **GREENHOUSE GAS EMISSIONS** -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Source: Final 2022 Air Quality Management Plan (AQMP), by SCAQMD, 2022; Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP), by SCAQMD, August 2003; Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan, by the California Air Resources Board, February 2010; California Greenhouse Gas Emissions for 2000 to 2017, Trends of Emissions and Other Indicators, 2019 Edition, California Air Resources Board; Release No. 18-37 & 19-35, California Air Resources Board Press Release, July 2018 and August 2019.

a) **Potentially Significant Impact:** To address the long-term adverse impacts associated with global climate change, California's Global Warming Solutions Act of 2006 (AB 32) requires California Air Resource Board (CARB) to reduce statewide emissions of greenhouse gases to 1990 levels by 2020. In 2016, Governor Jerry Brown signed Senate Bill 32 (SB32) that requires California to reduce GHG emissions to 40 percent below 1990 levels by 2030. With the passage of the California Global Warming Solutions Act of 2006 (Assembly Bill 32) in California, environmental documents for projects pursuant to CEQA are required to analyze greenhouse gases and assess the potential significance and impacts of GHG emissions.

The proposed fulfillment center project is anticipated to contribute to Greenhouse Gas Emissions from sources that include area, energy, mobile, waste, and water usage.

The EIR will evaluate the proposed development to describe and calculate the sources and amounts of greenhouse gas emissions resulting from project implementation. The findings will be based on a Greenhouse Gas Assessment undertaken for the project.

b) **Potentially Significant Impact:** The DEIR will evaluate the project's ability to comply with the established plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gases. As part of that assessment, the DEIR will review how the project complies with the Climate Change goals, policies and programs established in the Air Quality Element of the City's General Plan. Where necessary, project operations may be able to incorporate mitigation measures from the California Air Pollution Control Officers Association (CAPCOA). The extent to which GHG emissions are reduced will be documented and disclosed in the CalEEMod results, which is the platform for quantifying GHG emissions.

The EIR will assess the proposed development to determine the project's ability to comply with the state and local plans and policies adopted for the purpose of reducing GHG emissions by taking into account the applicable efficiency-based GHG reduction measures and conclusions of a Greenhouse Gas Assessment.

9. **HAZARDS AND HAZARDOUS MATERIALS** - - Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

a-b) **Less than Significant Impact with Mitigation**. The Code of Federal Regulations (CFR Title 40, Part 261) defines hazardous materials based on ignitability, reactivity, corrosivity, and/or toxicity properties. The State of California defines hazardous materials as substances that are toxic, ignitable or flammable, reactive and/or corrosive, which have the capacity of causing harm or a health hazard during normal exposure or an accidental release. As a result, the use and management of hazardous or potentially hazardous substances is regulated under existing federal, state and local laws. Hazardous wastes require special handling and disposal methods to reduce their potential to damage public health and the environment. Manufacturer's specifications dictate the proper use, handling, and disposal methods for the specific substances. In most cases, it is a violation of Federal or State law to improperly store, apply, transport, or dispose of hazardous materials and waste.

The project proposes to develop an approximately 739,360-square-foot industrial warehouse building on approximately 38 acres in the City of Palm Springs's industrial land use designation. Construction of the proposed project will include the temporary management and use of oils, fuels and other potentially flammable substances that power and lubricated construction equipment. The nature and quantities of these products would be limited to what is necessary to carry out construction of the project. Some of these materials would be transported to the site periodically by vehicle and would be stored in designated controlled areas on a short-term basis. Controlled storage areas for hazardous materials during construction is required by the Construction General Permit (CGP) administered by the Regional Water Quality Control Board, which requires the implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will also determine best management practices (BMPs) to be implemented during construction to

ensure the safe handling and storage of hazardous materials to prevent impacts of pollutants and hazardous materials to workers and the environment.

Operation of the proposed project will involve the sorting of packages (either manually or mechanically automated) for vehicle deliveries. Manufacturing and other chemical processing would not occur within the proposed project. However, operation of the proposed project would involve the use of materials common to commercial or industrial developments that are labeled hazardous (e.g., solvents and commercial cleaners, petroleum products, and other maintenance materials). There is the potential for routine use, storage, or transport of other hazardous materials, therefore, further analysis of project operational activities and the use, handling, and storage of hazardous materials will be provided in the project EIR. The EIR will analyze the project's potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the accidental the release of hazardous materials into the environment, and provide mitigation measures, if necessary.

c) **No Impact.** The project site is not located within a quarter mile of an existing or proposed school. The closest school to the project site is Two Bunch Palms Elementary School, located approximately 2.95 miles northeast of the project site.

Due to the project's distance from any existing or proposed school (approximately 2.95 miles), the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within a one-quarter mile radius of a school. No impacts to existing or proposed schools are anticipated, and further analysis is not required.

d) **No Impact.** As previously discussed, the approximately 38-acre project site is currently vacant and undeveloped. The project is located within the City's Industrial land use and is surrounded by industrial buildings and commercial businesses to the south and east. The project proposes an approximately 739,360-square-foot industrial warehouse.

Pursuant to the Cortese List Government Code 65962.5 and its subsections, record searches on the project property were performed within multiple database platforms. The resources consulted included GeoTracker, EnviroStor and the EPA Enforcement and Compliance History Online (ECHO). The search of all three databases revealed that the project site is not a hazardous materials release site, and therefore, development of the site would not create a significant hazard to the public or the environment.

However, for information disclosure purposes, the GeoTracker and ECHO databases listed sites within a mile radius of the project. The GeoTracker database mapped five registered Leaking Underground Storage Tank (LUST) Cleanup Sites within a mile radius of the project site. All the registered sites were located more than 0.24 miles from the project and included statuses of "Completed Case Closed." The EPA's ECHO database highlighted three facilities within a mile-radius of the proposed project. However, these facilities were located more than 0.20 miles from the project site and did not have any violations within the three-year recording period. Therefore, due to the sites' distance from the project and their current statuses of "completed case closed" and "no violation," they are not likely to impact the project site. The search results in the EnviroStor database did not identify any records of any site within a mile of the project property.

Pursuant to Government Code 65962.5 and its subsections, record searches on the project property determined that the vacant project is not located on a site which is included on a list of hazardous materials sites, and, as a result, would not create a significant hazard to the public or the environment. No impacts are anticipated, and no further analysis is required.

e) **No Impact.** The project is not located within an airport land use plan or private airstrip. The Palm Springs International Airport is located approximately 5 miles to the southeast and the Bermuda Dunes Airport is

located approximately 18.60 miles southeast of the project. As a result, the project is located outside each of the airports' influence and planning area. Flights approaching and departing the Palm Springs International Airport and Bermuda Dunes Airport may fly over the City and the project site with intermittent frequency; however, impacts are not anticipated.

Due to the project's distance from the regional airports, no impacts are anticipated and further discussion in the EIR is not required.

e) **Less than Significant Impact with Mitigation.** The Safety Element of the City's General Plan provides information on emergency response within the City. The City has also adopted a Multi-Hazard Functional Plan, which is continually updated, and addresses the planned response to extraordinary emergency situations associated with natural or human caused disasters, technical incidents and nuclear defense operations. Based on these resources, the two main evacuation routes in the City and region include Interstate 10 (I-10) and Highway 111, while the City's primary and minor arterial streets serve as secondary routes. The project is located approximately 0.32 miles north of the I-10 interchange at Indian Canyon Drive. Highway 111 is located approximately 3.30 miles southwest of the project.

The City of Palm Springs has developed and maintains an extensive roadway network. The project site is located north of 19th Avenue and west of Indian Canyon Drive. The segment of 19th Avenue along the project's frontage is considered a Secondary Thoroughfare (4-lane undivided), which serves through and local traffic, connecting various areas of the City and providing access to major thoroughfares. The segment of Indian Canyon Drive along the project frontage is designated as a Major Thoroughfare (4-lane divided), which serves mostly through-traffic with some local access allowed; and connects the City to regional highways and ties together different areas of the City.

Access to the project will be provided along Indian Canyon Drive and 19th Avenue. There are two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive. The proposed full access driveway along 19th Avenue will be utilized by truck traffic only. Gated access to the project will limit access to authorized personnel, trucks, and emergency vehicles. Vehicles accessing the street from the project will not interfere with evacuation routes or plans, insofar as the project will not alter any existing street used for these purposes. The project will be reviewed by City and Fire officials to ensure adequate fire service and safety as a result of project implementation.

The Palm Springs Fire Department, established in 1931, provides for fire, paramedic, and emergency services within the city limits and through mutual agreements in the City's sphere of influence. The Palm Springs Fire Department protects 96 square miles of the Palm Springs area, constantly monitors fire hazards in the City, and has ongoing programs for investigation and alleviation of hazardous conditions. Firefighting resources in the Palm Springs area include five fire stations throughout the City so that the response time to any resident is under five minutes, the standard used by the department for maximum first-response time. The Palm Springs Fire Department has an Insurance Services office (ISO) Class 3 rating.

The City may require a Construction Traffic Control Plan to ensure that emergency access is preserved during all construction activities. Project impacts to emergency access and routes will be analyzed in the EIR prepared for the project, and provide mitigation measures, if necessary.

g) **No Impact**. The project property, located at the northwest corner of Indian Canyon Drive and 19th Avenue is currently vacant and undeveloped. The project is proposing an approximately 739,360-square-foot warehouse within the City's Industrial land use designation. The project is surrounded by existing industrial and commercial facilities to the south and east, vacant land to the north, and wind turbines to the west. According to Cal Fire's Fire Hazard Severity Zone Maps, the project site is not located within or near a moderate, high, or very high fire severity zone. The closest established fire severity zone to the project is

located approximately 3.20 miles northwest of the project along State Route 62. The project site is not located in an area designated as moderate, high, or very high fire severity zone.

Impacts of wildfires are not anticipated at the project site. The project will not be impacted by wildfires and no further analysis in the EIR is necessary.

10. **HYDROLOGY AND WATER QUALITY** -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impeded sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:	☐	☐	☒	☐
i) Result in substantial erosion or siltation on- or offsite;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Source: Flood Insurance Rate Map No. 06065C0895G, Federal Emergency Management Agency, Effective August 28, 2008; Water Quality Control Plan for the Colorado River Basin Region, January 2019; 2020 Coachella Valley Regional Urban Water Management Plan, June 2021, Mission Creek Subbasin Alternative Plan Update, December 2021.

a) **Less than Significant Impact.** The design, construction, and operation of the proposed development is required to comply with the applicable CWA, NPDES, state, and local regulations designed to prevent violations or impacts to surface water quality standards and waste discharge requirements pertinent to surface or ground water quality. The project, as proposed, does not seek any permitting actions that would vary from the established regulations and required compliance plans.

During the period of construction, the project proponent must comply with the State's most current NPDES Construction General Permit (CGP), which involves the preparation of a Notice of Intent (NOI) and a project-specific Storm Water Pollution Prevention Plan (SWPPP), designed to prevent potential adverse impacts to surface water quality, including erosion and siltation, during the period of construction. The required SWPPP must be prepared concurrently with final engineering design and must meet all NPDES plan review elements with plan review by the City of Palm Springs. The City's review and approval process ensures that all responsible parties and compliance plan elements are properly demonstrated. Proper SWPPP implementation during construction will be regulated and enforced as part of the local agency site inspection protocols.

The project proponent is required to submit and obtain approval for a Project-Specific Water Quality Management Plan (WQMP) in accordance with the current standards of the Whitewater River Region Water Quality Management Plan for Urban Runoff, the Whitewater River Watershed MS4 Permit, and the City's engineering requirements. The WQMP is a compliance plan required to account for the stormwater

facilities and management conditions to be followed by the site operator during the life of the project (post-construction). Plan approval involves recording an agreement of the WQMP against the property to ensure that the City is allowed access and enforcement on this matter. A Preliminary WQMP has been prepared for this project in order to support the entitlement application requirements. The document takes into account the proposed preliminary grading and hydrology documents to demonstrate compliance via on-site stormwater retention. As currently proposed, the project runoff will be carried to the dedicated on-site retention facilities sized to adequately handle the controlling 100-year, 24-hour storm event and the WQMP stormwater quality design volume requirement. In terms of groundwater quality, the project does not involve the conveyance of non-stormwater or otherwise potential sources of pollutants associated with the project operations. All surface runoff directed to the proposed retention areas will be from rooftops, asphalt, hardscape, and landscaped areas, as required. The interior operations would not be connected to the storm drain system.

The EIR will assess in further detail how the proposed development will achieve compliance with Federal, State, and local regulations designed to prevent impacts to water quality standards and the beneficial uses assigned to local receiving waters, during construction and operation. The supported findings resulting from further assessment, along with any mitigation deemed necessary, will be provided in the EIR.

b) **Less than Significant Impact.** The Coachella Valley Groundwater Basin is the primary groundwater source for the project region, with Mission Springs Water District (MSWD) being the domestic water purveyor serving the project site. The Coachella Valley Groundwater Basin has an estimated storage capacity of 40 million acre-feet (AF) of water within the upper 1,000 feet and is divided into four subbbasins: Indio, Mission Creek, Desert Hot Springs, and San Gorgonio. The project site is specifically underlain by the Indio Subbasin, which is also known as the Whitewater River Subbasin.

The proposed development is consistent with the General Plan and Zoning designations. Although the proposed development is not expected to interfere with existing or planned recharge facilities in terms of location, the EIR will further assess in greater detail the expected water demand in relation to the regional groundwater resources, including the pertinent conservation and recharge strategies in the governing Urban Water Management Plan. As required by CEQA and the California Water Code, the City has requested that MSWD prepare a water supply assessment (WSA) to provide information on the adequacy of available water supplies, including local groundwater resources, to meet the Project demand.

Based on the available information, the proposed development will include on-site facilities designed to conduct stormwater runoff into designated retention facilities for on-site percolation, rather than producing urban runoff discharge. The project is also subject to various water conservation measures, including the use of low-flow fixtures, drought-tolerant outdoor landscaping, and water-efficient irrigation systems. As a standard condition for service connections, the project operators will be expected to furnish the appropriate rate payment to MSWD based on the meter size, ongoing flow charges, agency fees, and contribution to groundwater recharge fees. Therefore, with the validation from the WSA and incorporation of water efficient measures, the project is not expected to substantially decrease groundwater supplies or interfere substantially with the regional sustainable groundwater management of the Indio Subbasin. Less than significant impacts are expected.

c i-iii) **Less than Significant Impact.** The undeveloped project site's relatively level terrain has a prevailing gentle slope from north to south, consistent with the vicinity conditions. The project location in Palm Springs is covered by the U.S. Geological Survey 7.5-Minute Topographic Map for Desert Hot Springs, California, published in 2021. According to this source, the site does not have any drainage flow lines, such as those that may be associated with washes, streams, or rivers. Based on the USGS Web Soil Survey, the Site soils coverage is a composition of Carsitas fine sand, Carsitas cobbly sand, and Carsitas gravelly sand, corresponding to Hydrologic Soil Group A, which is characterized by USGS for having high infiltration rates and low runoff potential.

The entire project site is located within Zone X, corresponding to areas subject to a 0.2 percent annual chance flood hazard. The on-site sandy soils are categorized under the hydrologic soil group A, designated by USGS to be well-drained soils with low runoff potential. Combined with low annual precipitation, the site soils are not deemed to be prone to existing erosion or siltation. As a standard practice, erosion and siltation will be prevented during construction and operation through the required compliance plans. During construction, the required Stormwater Pollution Prevention Plan (SWPPP) will include best management practices to prevent erosion and siltation from being generated by the site clearing, grading, and construction activities through the use of various measures, such as perimeter containment, proper soil stabilization, and source controls per the California Stormwater Quality Association (CASQA) standards. Upon construction completion, all construction related soil disturbance shall be properly restored to a stabilized condition consisting of permanent project improvements (buildings, hardscape, pavement, and landscaping). During the life of the project, the ongoing maintenance and operation of the private storm drain facilities will ensure that all permanently improved ground surfaces are adequately maintained. Less than significant impacts are anticipated regarding substantial erosion or siltation, on- or off-site.

As a standard condition, the project is required to include the adequate improvements and site design features to handle the relevant hydrologic conditions in a way that prevents inundation to the proposed structures and facilities. The project will introduce impervious surfaces (buildings, hardscape, asphalt, etc.) with the appropriate storm drain system (catch basins, lines, outlets, and retention facilities) to adequately intercept, convey and retain the controlling storm event stormwater volume from the site into the designated retention systems, per the engineering plans to be submitted to the City. Following the City engineering review process, the proposed development is not expected to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

The traditional land development process generally results in the conversion of pervious ground surface (pre-development condition) into a setting with a higher impervious cover, occurring through the introduction of buildings, asphalt, and hardscape cover (post-development condition). This conversion generally leads to an increase in post-construction runoff volumes and rates compared to the pre-development condition. By complying with the local retention requirements and approved plans, the project will be prohibited from resulting in a condition of producing urban runoff capable of exceeding the MS4 capacity.

c iv) **Less than Significant Impact**. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) serve as the basis for identifying potential hazards and determining the need for and availability of federal flood insurance. Based on FEMA FIRM Panel Number 06065C0895G, effective August 28, 2008, the entire project is located within Zone X, corresponding to areas subject to the 0.2 percent annual chance flood hazard. By definition, the designation of Zone X is not considered a Special Flood Hazard Area (SFHA) or floodway. Rather, this flood zone is considered to be a moderate-to-low risk area where flood insurance is available, but not mandatory.

Being located outside of an Special Flood Hazard Area (SFHA), the project will not be implemented in a setting or condition that would impede or redirect flows. The final grading and hydrology plans for the proposed project will be subject to standard City review and approval. In doing so, the project will not be capable of, or permitted to impede or redirect flood flows, resulting in less than significant impacts.

d) **Less than Significant Impact.** The proposed project would introduce a fulfillment facility outside of any SFHA or floodway. The proposed storm drain system will be expected to meet the local MS4 and City requirements by including the properly sized conveyance systems and retention facilities.

Flood Hazard: The project is located within a Zone X designation corresponding to areas subject to the 0.2 percent annual chance flood hazard. By definition, the designation of Zone X is not considered a Special

Flood Hazard Area (SFHA) or floodway. Furthermore, this flood zone is considered to be a moderate-to-low risk area where flood insurance is available, but not mandatory.

Tsunami: The project is not located near any coastal areas and therefore is not prone to tsunami hazards. No impacts or further study is needed.

Seiche Zone: The project site is not located in any mapped seiche zones.

Risk release of pollutants due to project inundation: The project will be required to provide the necessary improvements to adequately handle the hydrologic conditions and stormwater management. As currently proposed, the project runoff will be carried to dedicated retention facilities sized to adequately handle the controlling 100-year, 24-hour storm event, and the WQMP stormwater quality design volume requirement. The project does not involve the conveyance of non-stormwater or otherwise potential sources of pollutants associated with the project operations. All surface runoff directed to the proposed retention areas will be from rooftops, asphalt, hardscape, and landscaped areas, as required. The interior operations will be adequately protected from flood conditions and would not be connected to the storm drain system, eliminating the risk of pollutants due to project inundation. Less than significant impacts are anticipated and will be thoroughly analyzed in the EIR.

e) **Less than Significant Impact.** The project proponent is required to implement a project-specific Water Quality Management Plan (WQMP) to comply with the most current standards of the Whitewater River Region MS4 Permit and with the City's on-site retention standards. The final form of the WQMP will be consistent with final engineering documents to incorporate the grading, hydrology, and other improvement plans to demonstrate how the site design, source controls, and operation and maintenance program will achieve compliance. The proposed preliminary hydrology plan and associated WQMP will not result in any considerable modification to such plan through any increases in stormwater runoff quantities or other factors capable of affecting the downstream storm drain system resources. Moreover, the project's storm water retention facilities will ensure that only stormwater runoff is recharged into the ground via infiltration. Therefore, project implementation is not expected to conflict with the regional groundwater management strategies or with the Indio Subbasin Sustainable Groundwater Management Plan. The aspect of stormwater management and water quality measures will be further studied in the EIR to result in supported findings. Less than significant impacts are expected.

11. **LAND USE AND PLANNING** - Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Source: Palm Springs General Plan, Land Use Element.

a) **No Impact**. The project property is currently vacant and undeveloped. The project's southern and eastern boundaries are delineated by 19th Avenue and Indian Canyon Drive, respectively. Existing industrial and commercial businesses are located south of 19th Avenue and east of Indian Canyon Drive. The property north of the project is vacant, while the property west of the project includes wind turbines. The surrounding properties operate separately from each other. The project is proposing the construction and operation of an industrial warehouse with associated parking, drive aisles, and landscaping. Therefore, project implementation is not anticipated to divide an established community. No impact is expected, and no further analysis is required.

b) **No Impact**. The project's General Plan land use is classified as Industrial with a Wind Energy Overlay (WEO). Industrial land use designations typically include research and development parks, light manufacturing, laboratories, and industrial services. Retail commercial uses and offices are allowed as ancillary uses to the industrial use to encourage projects that are self-sustaining. Wind Energy Overlay areas allow for the development of Wind Energy Conversion Systems (WECS) and clean energy uses within the northern portion of the City. As described in the Project Description above, the WEO is applied at the property owner's discretion, and assumes that all lands under the overlay would result in only 15 percent of the entire acreage allotted to industrial and regional business center land uses. The entire WEO extends from the edge of Miralon, west of Windy Point, and up to Dillon Road. The proposed project's use of the land as a distribution facility will reduce the total lands available for WECS projects by only 38 acres. Additionally, it is the intention of the City to concentrate the industrial and regional commercial land uses in the area around the Interstate 10 freeway, Indian Canyon Drive, and Gene Autry Trail. Therefore, the development of the proposed project will have no impact on the City's ability to reach its goal of implementing WECS projects within the WEO boundary.

The project's zoning designation is classified as Manufacturing (M-2). The M-2 Zone, per Section 92.17.1.00 in the Palm Springs Municipal Code, is intended to provide for the development of warehouse and distribution centers, and industrial uses. The M-2 zone is consistent with the General Plan Industrial land use designation.

The project proposes an approximately 739,360-square-foot industrial warehouse. The proposed industrial warehouse is an allowed use in the City's Industrial land use and M-2 zoning designations. The project will be consistent with the development standards provided by the City. Additionally, the project will be required to prepare and submit a Development Permit to the City of Palm Springs for review and approval. The Development Permit ensures that a proposed development is consistent with the General Plan, the Zoning Code, and other adopted plans, regulations and policies of the City. The Development Permit also ensures that the location, height, massing, and placement of the proposed development is consistent with applicable standards.

Goal LU3 of the Palm Springs General Plan Land Use Element aims to attract and retain high-quality industrial and business park developments. The following policies are relevant to the project:

LU3.2: Promote opportunities for expansion and revitalization of industrial uses within the City.

LU3.3: Ensure operation of industrial uses is unobtrusive to surrounding areas and prohibit the development of manufacturing uses that operate in a manner or use materials that may impose a danger on adjacent uses or are harmful to the environment.

Consistency: The project proposes the development of an industrial warehouse on approximately 38 acres at the northwest corner of 19th Avenue and Indian Canyon Drive. The project will expand the industrial uses within the City by developing the industrial warehouse. Additionally, the industrial project will not be obtrusive to surrounding areas since surrounding properties include industrial and commercial businesses.

The project is consistent with the Palm Spring General Plan and land use designation and policies, as well as zoning designation. Therefore, no impacts are expected and further study is not required.

12. **MINERAL RESOURCES** -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Source: Palm Springs General Plan.

a) **No Impact.** Mining activities have been seen in the Santa Rosa and San Jacinto Mountains, along with the high desert areas since the late 1800s. Established mining areas within Palm Springs include minerals such as: asbestos, beryllium, gold, limestone, tungsten, copper, garnet, and tourmaline. Limestone deposits, however, are the most common (Palm Springs General Plan 2007). To ensure the protection of important mineral resources, the Surface Mining and Reclamation Act of 1975 (SMARA) developed mineral land classification maps and reports to identify the presence or absence of suitable sources of aggregate (sand, gravel or stone deposits) into Mineral Resource Zones. Local agencies, including the City of Palm Springs, utilize the existing information on mineral classifications for land use and plan development and decision making.

According to the Palm Springs General Plan the project and its surroundings are located within Mineral Resource Zone 3 (MRZ-3), which applies to areas containing mineral deposits where the significance cannot be evaluated from available data.

The project is located in an existing service/manufacturing zone, surrounded by other manufacturing/commercial development which is incompatible with mining operations; therefore, project implementation would not result in the loss of any known mineral resources that are considered important to the Coachella Valley or residents of California. No impacts are expected related to the loss of availability of known mineral resources, and no further discussion of this issue in the EIR is required.

b) **No Impact.** Mineral resources that are known to exist in the Coachella Valley region primarily consist of sand and gravel (aggregate) typically deposited along and near local drainages. Aggregate material is deemed necessary to the local building industry as a component of asphalt, concrete, road base, stucco and plaster. Local or regional construction industries tend to be dependent on readily available aggregate deposits within reasonable distance to the market region. The project site is not recognized as a mineral resource recovery site delineated in the County of Riverside General Plan, City of Palm Springs General Plan or the resource maps prepared pursuant to SMARA. No impacts are expected as a result of project implementation and no further discussion of this issue in the EIR is required.

13. NOISE -- Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Source: Palm Springs General Plan, Palm Springs Municipal Code.

a) **Less than Significant Impact with Mitigation**. The project property is currently vacant and undeveloped. In its undeveloped condition, the project site does not contribute to the existing noise environment. The project proposes to develop an approximately 739,360-square-foot industrial warehouse, with associated improvements. Construction and operation of the proposed project could lead to some incremental increase in noise levels in the project vicinity, which include industrial and commercial land uses. Sensitive receptors (i.e., residential homes, schools, hospitals, etc.), are not located near the proposed project. The closest sensitive receptor is approximately 0.35 miles northeast of the project.

A project-specific Noise Study will be completed for the proposed project. The Noise Study will analyze project-related noise impacts, which will be further discussed in the EIR.

b) **Less than Significant Impact with Mitigation.** It is likely that development of the proposed project may lead to temporary increases of groundborne vibration during construction of the project. Construction activity can result in varying degrees of ground vibration, depending on equipment and methods used. Construction vibration is generally associated with pile driving and rock blasting, which are not proposed to occur at the project site. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc. generate little or no ground vibration. Vibration along existing roads from large trucks and vehicles during both construction and operation of the project could produce groundborne vibration along 19th Avenue and Indian Canyon Drive.

A project-specific Noise Study will be completed for the proposed project. The Noise Study will analyze project-related vibration impacts, which will be further discussed in the EIR.

c) **No Impact.** The closest airport to the project site is the Palm Springs International Airport, located at 3400 East Tahquitz Canyon Way, approximately 4.90 miles southeast of the project property. The project site is located outside of the 70, 65 and 60 CNEL noise contours associated with the airport facility. Furthermore, the Palm Springs Airport Land Use Plan does not identify the project as being located within its planning area. No impacts are expected, and no further discussion of this issue is required in the EIR.

14. **POPULATION AND HOUSING** – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) **Less than Significant Impact.** As previously discussed throughout this document, the project is proposing the construction and operation of a 739,360-square-foot industrial warehouse on approximately 38 acres of vacant land on the northwest corner of 19th Avenue and Indian Canyon Drive. The project is proposed to generate jobs in the area, thus increasing employment opportunities in the area.

According to the Department of Finance (DOF) the City of Palm Springs had a population of 44,165 people in 2022. The City has a large seasonal population that owns second homes and visits during the mild winter. The Palm Springs General Plan anticipates that the City population would increase to 94,950 residents at total buildout of the City. The proposed project would result in approximately 700 jobs. Per the Coachella Valley Economic Partnership's (CVEP) 2022 Economic Report, in 2022, unemployment rates throughout the Coachella Valley varied between 3.5 percent (Palm Springs) to almost 9 percent (Coachella). Thus, it is anticipated that project employees will come from the City of Palm Springs and surrounding cities, and would be within commuting distance and would not generate needs for any housing, thus, not resulting in a substantial increase in population. According to the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the employment forecast for Palm Springs in 2045 is approximately 42,500 employees. The project's estimated 700 employees would constitute less than 1.6 percent of the employment forecasted for 2045. Therefore, the project would not cause an exceedance of SCAG's employment projections or induce substantial indirect population or housing growth related to project-generated employment opportunities. However, the DEIR will further analyze the project's impact to employment.

The proposed project may encourage some limited relocation for employment; however, it is likely that most of the employee population will be existing residents of Palm Springs and surrounding cities. The project does not propose a residential component. No new extensions of roads will be associated with the project. The existing roadways, Indian Canyon Drive and 19th Avenue, located east and south of the project (respectively) would provide employee and truck access to the project. However, the project proposes to connect to existing sewer and water infrastructure and electricity infrastructure along existing roadways. Existing water lines in Indian Canyon Drive to the east include 12-inch lines. The project will connect to this water line with 12-inch lines. The existing water line in 19th Avenue is 12 inches at the project's southwest corner and increases to 16 inches towards the Indian Canyon and 19th Avenue intersection. The project will connect to this water line with 12-inch lines at the project's southwest and southeast corners. The project will connect to an existing 6-inch sewer line located one half-mile east of the project in 19th Avenue. The project will be required to connect to existing electrical infrastructure located at the southeast corner of Indian Canyon Drive and 19th Avenue via an underground system. The project's connection to the existing infrastructure will provide the necessary utilities for the proposed project.

The DEIR will further analyze the project's impact to direct or indirect growth in the area

b) **No Impact.** The proposed project will not displace existing housing, affordable housing, or people because the site is currently vacant and undeveloped and does not currently house anyone. No impacts are expected, and no further analysis will be provided in the EIR.

15. **PUBLIC SERVICES** –	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Source: City of Rancho Mirage Fire and Police Department Website, City of Rancho Mirage 2017 General Plan Update, U.S. Census Bureau Quick Facts, 2017 Rancho Mirage General Plan EIR Addendum, Fee Justification Study

a) **Fire**

Less than Significant Impact. The Palm Springs Fire Department, established in 1931, provides for fire, paramedic, and emergency services within the city limits and through mutual aid agreements in the City's sphere of influence. The Fire Department is authorized and directed to enforce the provisions of the Fire Code throughout the city. Its responsibilities also include plan reviews for new construction and additions, coordination with the City for disaster preparedness programs, vegetation management, high fire area inspections, and the Hazardous Materials Business Program.

The Palm Springs Fire Department protects 96 square miles of the Palm Springs area, constantly monitors fire hazards in the City, and has ongoing programs for investigation and alleviation of hazardous conditions. Firefighting resources in the Palm Springs area include five fire stations throughout the City so that the response time to any resident is under five minutes, the standard used by the department for maximum first-response time. The Palm Springs Fire Department has an Insurance Services office (ISO) Class 3 rating. The closest Palm Springs fire station to the project site is Station 3, located at 590 East Racquet Club, approximately 4.3 driving miles south of the project. The primary response area for Fire Station 3 includes east to Gene Autry Trail bordered to the south of Tachevah to the north at City limits and to the west at City limits. The second closest fire station to the project is Station 36, located at 11535 Karen Avenue in Desert Hot Springs, approximately 4.5 driving miles north of the project.

The project site is vacant and undeveloped. Fire services are provided to the surrounding area. The project proposes the development of a 739,360-square-foot industrial warehouse. Operation of the project will result in an incremental increase to the demand for fire services. Implementation of the proposed project would be required to adhere to the California Fire Code, as included in Section 8.04.510 of the Palm Springs Municipal Code. The project will also be required to construct specific fire suppression systems as prescribed by local, State, and federal standards for the warehouse operations. The project will include the installation of four fire hydrants, to be located at the northwest, northeast, southwest, and southeast corners of the project. The project also proposes a 12-inch fire line around the north, west, south, and east sides of the building. Emergency vehicle access to the project site will be provided from local and major roadways east and south of the project. The project would be in compliance with the Fire Code and any additional

access requirements of the Fire Department. Additionally, emergency access to the project will be maintained at all times. The project will be reviewed by City and Fire Department to ensure that the project plans meet the fire protection requirements.

The City also exacts a development fee on all new development within the City to finance public facilities which goes towards the funding of fire facilities and equipment. The project's payment of these fees, as well as the project's adherence to local Fire Department standards and the California Fire Code, impacts to fire services are expected to be less than significant, and will be analyzed in the EIR.

Police

Less than Significant Impact. The Palm Springs Police Department offers response service, criminal investigation, traffic enforcement, and preventive patrol for the City. The Police Department's two divisions, Operations and Support Services, employ 100 sworn and 49 civilian personnel. Operations include patrol, jail, and airport operations. Support services include investigation, records, animal control, and communications.

The Police Department is located at 200 South Civic Drive, approximately 8 driving miles from the proposed project. The desired response times for priority one calls (emergencies) and priority two calls (non-emergencies) are 5 minutes and 30 minutes, respectively. The Palm Springs Police Department has mutual-aid agreements with other local law enforcement agencies in the event of a major incident that exceeds the department's resources.

As previously discussed, the project proposes a 739,360-square-foot industrial warehouse on approximately 38 acres of currently undeveloped land. The project proposes chain-link fencing along the western and northern property boundaries, and masonry block retaining walls with 8-foot chain link fencing along the southern and eastern boundaries. Three gated access points will control truck ingress and egress to the building. The primary gated truck access on 19th Avenue at the southwest project corner will be manned during business hours. Wall- and post-mounted light fixtures are proposed along the building frontage and throughout the parking lot to provide illumination for pedestrians accessing parking lot areas and building entrances. Additionally, the project will be reviewed by City Building and Safety and Police Department to ensure that the project plans meet police requirements.

The City exacts a development fee on all new development within the City to finance public facilities which go towards the funding of police services. The project's payment of the development fee, as well as the perimeter fencing, gated entries, manned gate guard, and lighting throughout will reduce the project's need for police services by deterring trespassers and only allowing authorized personnel onsite. Therefore, impacts to police services are expected to be less than significant, and will be analyzed in the EIR.

Schools

No Impact. The City of Palm Springs, including the project site, is served by the Palm Springs Unified School District (PSUSD). The project proposes the development and operation of a 739,360-square-foot industrial warehouse. In 2022, The City of Palm Springs had a population of 44,165 people (DOF). The Palm Springs General Plan anticipates that the City population would increase to 94,950 residents at total buildout of the City. As discussed in the population and housing section of this document, the project is not anticipated to generate a new population, as employees needed to operate the project are anticipated to come from within the project region due to the unemployment rates throughout the Coachella Valley. Thus, the project would not result in a substantial increase of population in the City during construction or operation of the project, creating a substantial increase in school age children requiring public education.

Although the project will not create a direct demand for school services, Assembly Bill 2926 and Senate Bill 50 (SB 50) allow school districts to collect "development fees" for all new construction for residential/commercial and industrial use. At the time of this writing, developer fees are $0.304/sq.ft. for

industrial development. Monies collected are used for construction and reconstruction of school facilities, and have been designed to mitigate the impacts to school facilities. The project applicant will be required to contribute to these fees and there would be no impacts to schools. No further analysis is needed.

Parks

No Impact. The City of Palm Springs provides public parks, open space and multi-city recreational facilities with various amenities. As discussed in the Recreation Section of this document, the proposed fulfillment center project would not create additional demand for public park facilities, nor result in the need to modify existing or construct new park facilities.

Therefore, no impacts to parks would occur, and no further analysis is needed.

Other Public Facilities

No Impact. No increase in demand for government services or other public facilities is expected beyond those discussed in this section because the project will not result in substantial unplanned growth (see population and housing discussion). Additionally, the project shall pay development impact fees to support the demand for fire and police services, as discussed above. No further analysis is needed.

16. **RECREATION** –	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a-b) **No Impact**. Palm Springs owns and maintains 156 acres of developed parkland, 160 acres of City-owned golf courses open to the public, as well as miles of developed greenbelts along major accesses throughout the city. Privately owned golf courses are also a part of Palm Springs recreational uses, many of which are open to the public. The City of Palm Springs contains local parks, specialty parks, neighborhood parks, golf courses, greenbelts, public parkways, and state, federal, and tribal parks. Palm Springs requires a minimum of 5 acres of developed parks be available for every 1,000 residents, including 2.5 acres for neighborhood and community parks. For almost 44,165 residents, the city of Palm Springs currently has 316 acres of developed park area, or a ratio of 7.15 acres per 1,000.

As previously discussed, the project proposes to construct a 739,360-square-foot fulfillment center on approximately 38 acres of vacant land on the northwest corner of 19th Avenue and Indian Canyon Drive. No residential land uses are proposed. As discussed previously, the project is not anticipated to result in a substantial increase in population, since project-generated employees would likely be existing residents of the City or the surrounding area, due to the unemployment rate. No impacts related to the increased use of existing neighborhood and regional parks, or other recreational facilities are expected.

The project is not anticipated to increase the use of existing parks since the project is proposing an industrial warehouse, and the modest increase in jobs created by the project is not expected to attract any meaningful increase in residents to the City who would use the existing park facilities. Therefore, further study is not required.

17. **TRANSPORTATION** – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

a) **Potentially Significant Impact.** The project would generate traffic during both construction and operation. The traffic generated by the proposed industrial development would generate traffic that could affect the performance of the circulation system of the area.

The City of Palm Springs has adopted policies, ordinances and plans which address the performance of the circulation system including the General Plan Circulation Element, the 2020 Traffic Impact Analysis Guidelines, and the 2021 Climate Action Roadmap. The County of Riverside has adopted a Congestion Management Program (CMP) that includes performance standards for major transportation corridors in the County. The nearest CMP roadway is Interstate 10 (I-10). Truck traffic associated with the project has the potential to impact congestion related issues along I-10.

A detailed traffic impact analysis (TIA) will be prepared for the proposed project. The TIA will evaluate the impacts of the proposed project on the circulation system surrounding the project. The TIA and the EIR will discuss the analysis of this topic, including project impacts and any mitigation, if required.

b) **Potentially Significant Impact.** The Project would generate traffic during operation of the site that could increase the Vehicle Miles Travelled in the area (VMT). The State of California, the County of Riverside and the City of Palm Springs have adopted policies, ordinances and plans which address the reduction of VMT, including the 2020 Palm Springs Traffic Impact Analysis Guidelines, the 2020 Riverside County Transportation Analysis Guidelines for Level of Service/Vehicle Miles Traveled, the 2018 Governor's Office of Planning and Research (OPR) Technical Advisory Evaluating Transportation Impacts in CEQA.

A detailed traffic impact analysis (TIA) will be prepared for the proposed project. The TIA will evaluate the impacts of the proposed project on area VMT.

c-d) **Less than Significant Impact.** The Project would generate traffic during operations that could increase design and circulation related hazards onsite and in the vicinity. The City of Palm Springs (including the Palm Springs Fire Department and Police Department) has adopted policies, ordinances and plans which address the reduction of design hazards and impacts to hazard response reflected in the General Plan Circulation and Community Design Elements and the Municipal Code.

A detailed traffic impact analysis (TIA) will be prepared for the proposed project. The TIA will evaluate the potential impacts of the proposed project design on the surrounding area and on emergency services.

18. TRIBAL CULTURAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project cause a substantial Adverse change in the significance of a Tribal cultural resource, defined in Public Resource Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i)Listed or eligible for listing in the California Register of Historical Resources, or in a local Register of historical resources as defined in Public Resource Code Section 5020.1(k), or:	☒	☐	☐	☐
ii)A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☒	☐	☐	☐

a) **Potentially Significant Impact**. As previously discussed in the Cultural Resources discussion of this document, the City has a rich tribal cultural resources history, including sites, features, places, cultural landscapes, or sacred places. A project specific cultural resources report will be prepared by a qualified archaeologist to determine the likelihood for presence or absence of additional tribal cultural resources, as well as any potentially significant impacts on the previously identified sites. Part of the records search and literature review will involve contacting the Native American Heritage Commission (NAHC) for a list of traditional use areas or sacred sites within the project area and a list of specific Native American groups or individuals who could provide additional information regarding cultural resources within the project area. Moreover, Assembly Bill 52 (AB 52) requires lead agencies to notify their local tribes about development projects. It also mandates lead agencies consult with tribes if requested and sets the principles for conducting and concluding the required consultation process. The City will undertake tribal consultation for this project, and its results will be included in the EIR.

The EIR will evaluate potential impacts of the proposed project on tribal cultural resources.

b) **Potentially Significant Impact.** In order to determine whether the site contains tribal cultural resources, and in compliance with PRC Section 5024.1, the City will conduct tribal consultation with area tribal representatives. Additionally, a project specific cultural resources report will be prepared by a qualified archaeologist to determine the likelihood for presence or absence of any Native American resources and any potentially significant impacts thereto. The results of the tribal consultation and the cultural resources report will be analyzed in the EIR.

19. **UTILITIES AND SERVICE SYSTEMS** – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☒	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒	☐	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☒	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

a) **Less than Significant Impact.** The project site is currently characterized as a vacant and undeveloped lot. The project site is not currently connected to wastewater facilities, domestic water, electric, natural gas, or telecommunication facilities due to its vacant character. However, the project will be served by these facilities.

Water: The project site is located within the Mission Springs Water District service area (MSWD). MSWD provides domestic water service to northern portions of Palm Springs and the City of Desert Hot Springs. The project will be required to connect to the MSWDs water line along Indian Avenue and 19th Avenue for its irrigation and potable water supplies. The EIR will analyze and discuss water supply and infrastructure required for the operation of the project.

Sewer: The Mission Springs Water District provides sewer collection and treatment services in the project area. The proposed project will connect to the existing sewer infrastructure a half-mile east of the project, in 19th Avenue. The EIR will analyze and discuss in greater detail project-generated sewer and infrastructure required for the operation of the project.

Stormwater: The vacant and undeveloped project site does not currently have stormwater facilities. There are no regional flood control facilities in the vicinity of the project site. The proposed fulfillment center will be required to implement City and regional standards for the conveyance of storm flows. The EIR will analyze how the existing drainage occurs on the project site, and how the project's drainage design will be integrated to comply with these requirements.

Electric: The project site is not currently served by electric facilities. The project will be required to connect to existing infrastructure provided by Southern California Edison (SCE) along Indian Canyon Drive. The DEIR will discuss project-related electricity consumption, as well as analyze the project's potential impact to electric demand and infrastructure.

Natural Gas: The project is not currently served by natural gas facilities. Southern California Gas Company (SoCalGas) provides natural gas to the City of Palm Springs and surrounding areas. The project will be required to connect to existing natural gas infrastructure located approximately a half-mile west in 19th Avenue. The DEIR will discuss project-related natural gas consumption, as well as the potential impacts to natural gas demand and infrastructure.

Telecommunication: The site is not currently served by telecommunication facilities. Telecommunication is provided to the project area by Frontier Communications, while cable is provided by Spectrum. The DEIR will discuss and analyze the potential project impacts to telecommunication infrastructure.

b) **Less than Significant Impact with Mitigation.** Groundwater is the primary source of domestic water supply in the Coachella Valley. The Mission Springs Water District provides domestic water to the project area and surrounding area. Due to the project's undeveloped character, development and operation of the proposed project is expected to increase the demand of the property's existing water use. The EIR will quantify and analyze the impact and demand against the available water supplies in MSWD's Urban Water Management Plan. As required by CEQA and the California Water Code, the City has requested that MSWD prepare a water supply assessment (WSA) to provide information on the adequacy of available water supplies, including local groundwater resources, to meet the need for water for the project. The WSA will determine whether the public water systems total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water supply existing and planned future uses, including agricultural and manufacturing uses.

The proposed project's new development would increase the demand for water. The proposed project's potential impact on water supplies will be reviewed in the EIR.

c) **Less than Significant Impact with Mitigation.** The MSWD will provide wastewater services to the site. The project proposes to connect to the existing sewer infrastructure approximately one-half mile east of the project, in 19th Avenue. The DEIR will quantify and analyze the project's wastewater demand against the capacity of the District's existing sewer infrastructure. MSWD's new Regional Waste Water Treatment Plant (WWTP) is currently under construction and slated to be operational by fall/winter 2023. The new plant will allow the District to treat an additional 1.5 million gallons of wastewater per day and divert some of the wastewater to the existing Alan L. Horton Wastewater Treatment Plant. Wastewater would be diverted to the temporary package plant located east of 19th avenue and Calle de Los Ramos should the project be ready to develop ahead of the completion of the WWTP.

The proposed projects would increase wastewater generation and its potential impact on wastewater treatment will be reviewed in the EIR.

d) **Less than Significant Impact with Mitigation**. Solid waste disposal and recycling services for the City of Palm Springs is provided by Palm Springs Disposal Services. Solid waste and recycling collected from the proposed project will be hauled to the Edom Hill Transfer Station. Waste from this transfer station is then sent to a permitted landfill or recycling facility outside of the Coachella Valley. These include Badlands Disposal Site, El Sobrante Sanitary Landfill and Lamb Canyon Disposal Site. The EIR will quantify construction and operational waste generation associated with the project and analyze the capacity of these existing landfills and the potential solid waste generated by the project.

e) **Less than Significant Impact with Mitigation.** The project would be required to comply with all applicable solid waste statutes and guidelines. All development is required to comply with the mandatory commercial recycling requirements of Assembly Bill 341. The project will also comply with the recycling requirements of Cal Green and develop a waste management plan that will include diverting at least 50

percent of construction material fill from landfills. No impacts are expected relative to applicable solid waste statues and regulations.

Disposal of all solid waste generated by the project is expected to comply with the required federal, state, local statues and regulations related to solid waste. However, this issue will be further analyzed in the EIR.

20. **WILDFIRE –** if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structure to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Source: Palm Springs General Plan; California's Fire Hazard Severity Zones Map, Cal Fire.

a-d) **No Impact.** Wildfire risk is related to a number of parameters, including fuel loading (vegetation), fire weather (winds, temperature, humidity levels, and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazards by intensifying the effects of wind to make fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point.

The approximately 38-acre project site is vacant and undeveloped land with scattered, low-lying desert vegetation at the northwest corner of 19th Avenue and Indian Canyon Drive. The site is surrounded by vacant and undeveloped land to the north, an industrial development to the east (separated by Indian Canyon Drive), commercial businesses to the south (separated by 19th Avenue), and wind turbines to the west.

According to Cal Fire's Fire Hazard Severity Zones (FHSZ) in State Responsibility Areas (SRA) Map, the project is not located in an area classified as having a moderate, high or very high fire hazard severity zone (VHFHSZ). Additionally, the project property is not located in or near lands classified as moderate, high, or very high FHSZ. The closest designated area is located approximately 3.20 miles northwest of the project and is classified as being a moderate FHSZ. Due to the project's distance from SRAs and areas designated as VHFHSZ, no impacts are anticipated, and no further analysis is required.

The project site is not located near slopes. The project is not located in or near an SRA, or in an area classified as a VHFHSZ. Therefore, the project site is not expected to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires because the site and surrounding areas do not have dense vegetation or steep slopes. Therefore, the project would not expose people or structures to significant risks, including downslope, or downstream flooding, or landslides, as a result of runoff, post-fire slope instability, or drainage changes as a result of a wildfire. No impacts are anticipated and no further discussion of this issue is required in the EIR.

21. **MANDATORY FINDINGS OF SIGNIFICANCE**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) **Less than Significant Impact with Mitigation.** The project site, located on the northwest corner of Indian Canyon Drive and 19th Avenue, has remained in an undeveloped and vacant condition since before the 1940s. Areas north of the project are also vacant, while areas east and south are developed with industrial and commercial businesses. A property with wind turbines delineates the project's western boundary. The developed uses surrounding the project make the subject property an unlikely site to house sensitive wildlife and plant species, however, a project-specific biological resources study will be conducted for the project. Due to the undeveloped and vacant character of the site, there is a possibility that the project property contains cultural resources onsite. Therefore, a project-specific cultural (i.e., historical and archaeological) resources report will be conducted for the project.

The project-specific biological resources study will determine whether sensitive plant and wildlife species occur onsite, while the cultural resources report will determine the presence or absence of historical or prehistorical resources on the project site. Both reports will provide mitigation measures, if necessary, to reduce impacts to less than significant levels. The findings of these reports and the project's potential impact to biological and cultural resources will be analyzed in greater detail in the EIR.

b) **Potentially Significant Impact.** The project site is currently located on vacant and undeveloped land within the City's Manufacturing (M-2) zoning designation. Developed manufacturing and commercial uses are located south and east of the project, while vacant land is located north of the project. Although the project is located within the City's M-2 zoning designation, which promotes the development of industrial land uses, the project would result in the loss of approximately 38 acres of vacant land. Thus, construction and operation of the proposed project has the potential to have cumulative air quality, greenhouse gas, energy, noise, and traffic impacts. Therefore, project-specific technical reports will determine whether project impacts are significant and provide recommendations to reduce the potential impacts. The EIR will review the technical reports and analyze the project's potential to result in cumulative impacts.

c) **Potentially Significant Impact.** The project EIR will analyze the proposed project's impacts related to environmental effects that may cause substantial adverse effects on human beings. Project-specific technical reports will analyze the project's direct and indirect impact to air quality, greenhouse gas, energy, noise, and traffic. The EIR will discuss the findings and determine whether impacts can be reduced to less than significant levels.

CITY OF PALM SPRINGS

Notice of Preparation
Draft Environmental Impact Report
Palm Springs Fulfillment Center

LEAD AGENCY: City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Contact Person: Glenn Mlaker, AICP, Associate Planner
Phone Number: 760-323-8245 ext. 8778

Project Location: Northwest Corner of Indian Canyon Drive and 19th Avenue
Assessor's Parcel Number 666-320-018
Case 3.4361 MDP & MAJ

The City of Palm Springs (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Palm Springs Fulfillment Center Project (Project). The Project description and location, as well as the potential environmental effects proposed for study in the Draft EIR, are contained in the attached Initial Study. The project proposes a two-story industrial building with associated improvements (i.e., paved parking spaces and drive aisles, a detention basin, and gated access points) on approximately 38 acres on the northwest corner of Indian Canyon Drive and 19th Avenue. The two-story facility has a proposed building area of 739,360 square feet, with 727,360 square feet allotted to warehouse uses, and 12,000 square feet for offices.

The City needs to know the views of your agency as to the scope and content of the environmental information relevant to your agency's responsibilities in connection with the proposed Project. Your agency may need to use the EIR prepared by the City when considering any permits or other approvals for this Project. Comments are also invited from all other interested parties.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A scoping meeting will be held on August 22, 2023 starting at 1:00 PM in the Large Conference Room at City Hall. The meeting is to provide an opportunity to learn more about the proposed Project and provide comments on the possible environmental effects the City should study in the EIR.

Interested individuals and public agencies can submit written comments on the document. Any written comments on the Initial Study must be received at the above address within the public review period. In addition, you may email comments to the following address Glenn.Mlaker@palmspringsca.gov

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

03-004-2022-034

May 31, 2023

[VIA EMAIL TO:glenn.mlaker@palmspringsca.gov]
City of Palm Springs
Glenn Mlaker
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Re: Case No: 3.4361 Indian Canyon Warehouse and Distribution Center

Dear Glenn Mlaker,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Indian Canyon Warehouse and Distribution Center project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*Formal government to government consultion under California Assembly Bill No. 52 (AB-52).

*A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area.

*A copy of the records search with associated survey reports and site records from the information center.

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760) 883-1134. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Clarissa Durand

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

Claritsa Duarte
Cultural Resources Analyst
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

From: Tribal Historic Preservation Office
To: Glenn Mlaker
Cc: Ann Brierty; Laura Chatterton; Joan Schneider
Subject: Palm Springs Case 3.4361
Date: Friday, June 30, 2023 5:34:16 PM

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The Morongo Band of Mission Indians (Tribe/MBMI) Tribal Historic Preservation Office received your letter regarding the above referenced project on May 18, 2023. The proposed Project is not located within the boundaries of the ancestral territory or traditional use area of the Cahuilla and Serrano people of the Morongo Band of Mission Indians.

Thank you for notifying the MBMI about this project. MBMI encourages your consultation with tribes more closely associated with the lands upon which the project is located.

Respectfully,

Laura Chatterton
Cultural Resource Specialist
Tribal Historic Preservation Office
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220
O: (951) 755.5256
M: (951) 663.7570

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August 4, 2023

Glenn Mlaker
City of Palm Springs
3200 E Tahquitz Canyon Dr.
Palm Springs, CA 92262

Governor's Office of Planning & Research

Aug 07 2023

STATE CLEARINGHOUSE

Re: 2023080091, Palm Springs Fulfillment Center, Riverside County

Dear Mr. Mlaker:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).

2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.

3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).

4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:

- **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:

- **a.** If part or all of the APE has been previously surveyed for cultural resources.
- **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
- **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
- **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
- **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green @nahc.ca.gov

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

August 14, 2023

Via Email

RE: Public Records Act Request and Request for E-Mailed Notice of Public Hearings and Actions – Palm Springs Fulfillment Center Project- Indian Canyon Drive and 19th Ave

To Whom It May Concern,

CARE CA is writing to request a copy of any and all records related to the Palm Springs Fulfillment Center Project, located at Indian Canyon Drive and 19th Ave in Palm Springs in Riverside County. The project will be the construction of a 2-story, 739,360 sf warehouse with 12,000 sf of office space. We are also writing to request copies of all mailed notice of any and all hearings and/or actions related to the Project.

Our request for mailed notice of all hearings includes hearings, study sessions and community meetings related to the Project, certification of the MND (or recirculated DEIR), and approval of any Project entitlements. This request is made pursuant to Public Resources Code Sections 21092.2, 21080.4, 21083.9, 21092, 21108 and 21152 and Government Code Section 65092, which require local agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

Our request includes notice to any City actions, hearings or other proceedings regarding the Project, Project approvals and any actions taken, or additional documents released pursuant to the California Environmental Quality Act.

Our request for all records related to the Project is made pursuant to the California Public Records Act. (Government Code § 6250 et seq.) This request is also made pursuant to Article I, section 3(b) of the California Constitution, which provides a constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We will pay for any direct costs of duplication associated with filling this request up to $200. However, please contact me at (951) 540-1290 with a cost estimate before copying/scanning the materials.

Pursuant to Government Code Section 6253.9, if the requested documents are in electronic format and are 10 MB or less (or can be easily broken into sections of 10 MB or less), please email them to me as attachments.

My contact information is:

U.S. Mail

Jeff Modrzejewski

CARE CA

501 Shatto Place, Suite 200

Los Angeles, CA. 90020

Email

community@careca.org

Please call me if you have any questions. Thank you for your assistance with this matter.

Sincerely,

Jeff Modrzejewski

Executive Director

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL:
Glenn.Mlaker@palmspringsca.gov
Glenn Mlaker, AICP, Associate Planner
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

August 18, 2023

Notice of Initial Study for the Palm Springs Fulfillment Center (Proposed Project)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send a copy of the Draft EIR upon its completion and public release directly to South Coast AQMD as copies of the Draft EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, air quality modeling, and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

CEQA Air Quality Analysis

South Coast AQMD staff is concerned about potential public health impacts of siting warehouses within close proximity of sensitive land uses, especially in communities that are already heavily affected by the existing warehouse and truck activities. The South Coast AQMD's Multiple Air Toxics Exposure Study (MATES V), completed in August 2021, concluded that the largest contributor to cancer risk from air pollution is diesel particulate matter (DPM) emissions[1]. According to the MATES V carcinogenic risk interactive map, the area surrounding the Proposed Project has an estimated cancer risk of over 237 in one million[2]. Operation of warehouses generates and attracts heavy-duty diesel-fueled trucks that emit DPM. When the health impacts from the Proposed Project are added to those existing impacts, residents living in the communities surrounding the Proposed Project will possibly face an even greater exposure to air pollution and bear a disproportionate burden of increasing health risks.

In the event that implementation of the Proposed Project requires a permit from South Coast AQMD, South Coast AQMD should be identified as a Responsible Agency for the Proposed Project in the Draft EIR. The assumptions in the air quality analysis in the EIR will be the basis for evaluating the permit under CEQA and imposing permit conditions and limits. Questions on permits should be directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385.

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include

[1] South Coast AQMD. August 2021. *Multiple Air Toxics Exposure Study in the South Coast Air Basin V*. Available at: http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v.
[2] South Coast AQMD. MATES V Data Visualization Tool. Accessed at: MATES Data Visualization (arcgis.com).

South Coast AQMD's CEQA Air Quality Handbook,[3] South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2022 Air Quality Management Plan,[4] and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.[5].

Mitigation measures for operational air quality impacts from mobile sources that the Lead Agency should consider in the Draft EIR may include the following:

- Require zero-emissions (ZE) or near-zero emission (NZE) on-road haul trucks such as heavy-duty trucks with natural gas engines that meet the CARB's adopted optional NOx emissions standard at 0.02 grams per brake horsepower-hour (g/bhp-hr), if and when feasible. Given the state's clean truck rules and regulations aiming to accelerate the utilization and market penetration of ZE and NZE trucks such as the Advanced Clean Trucks Rule[6] and the Heavy-Duty Low NOx Omnibus Regulation[7], ZE and NZE trucks will become increasingly more available to use. The Lead Agency should require a phase-in schedule to incentive the use of these cleaner operating trucks to reduce any significant adverse air quality impacts. South Coast AQMD staff is available to discuss the availability of current and upcoming truck technologies and incentive programs with the Lead Agency. At a minimum, require the use of 2010 model year[8] that meet CARB's 2010 engine emissions standards at 0.01 g/bhp-hr of particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks. Include environmental analyses to evaluate and identify sufficient electricity and supportive infrastructures in the Energy and Utilities and Service Systems Sections in the CEQA document, where appropriate. Include the requirement in applicable bid documents, purchase orders, and contracts. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards, and make the records available for inspection. The Lead Agency should conduct regular inspections to the maximum extent feasible to ensure compliance.
- Limit the daily number of trucks allowed at the Proposed Project to levels analyzed in the Final CEQA document. If higher daily truck volumes are anticipated to visit the site, the Lead Agency should commit to re-evaluating the Proposed Project through CEQA prior to allowing this higher activity level.
- Provide electric vehicle (EV) charging stations or at a minimum, provide the electrical infrastructure and electrical panels should be appropriately sized. Electrical hookups should be provided for truckers to plug in any onboard auxiliary equipment.

[3] https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook

[4] South Coast AQMD's 2022 Air Quality Management Plan can be found at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan (Chapter 4 - Control Strategy and Implementation).

[5] Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocal.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.

[6] CARB. June 25, 2020. *Advanced Clean Trucks Rule*. Accessed at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks.

[7] CARB has recently passed a variety of new regulations that require new, cleaner heavy-duty truck technology to be sold and used in state. For example, on August 27, 2020, CARB approved the Heavy-Duty Low NOx Omnibus Regulation, which will require all trucks to meet the adopted emission standard of 0.05 g/hp-hr starting with engine model year 2024. Accessed at: https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox.

[8] CARB adopted the statewide Truck and Bus Regulation in 2010. The Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. More information on the CARB's Truck and Bus Regulation is available at: https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

Mitigation measures for operational air quality impacts from other area sources that the Lead Agency should consider in the Draft EIR may include the following:

- Maximize use of solar energy by installing solar energy arrays.
- Use light colored paving and roofing materials.
- Utilize only Energy Star heating, cooling, and lighting devices, and appliances.
- Use of water-based or low VOC cleaning products that go beyond the requirements of South Coast AQMD Rule 1113.

Design considerations for the Proposed Project that the Lead Agency should consider to further reduce air quality and health risk impacts include the following:

- Clearly mark truck routes with trailblazer signs, so that trucks will not travel next to or near sensitive land uses (e.g., residences, schools, day care centers, etc.).
- Design the Proposed Project such that truck entrances and exits are not facing sensitive receptors and trucks will not travel past sensitive land uses to enter or leave the Proposed Project site.
- Design the Proposed Project such that any check-in point for trucks is inside the Proposed Project site to ensure that there are no trucks queuing outside.
- Design the Proposed Project to ensure that truck traffic inside the Proposed Project site is as far away as feasible from sensitive receptors.
- Restrict overnight truck parking in sensitive land uses by providing overnight truck parking inside the Proposed Project site.

On May 7, 2021, South Coast AQMD's Governing Board adopted Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program, and Rule 316 – Fees for Rule 2305. Rules 2305 and 316 are new rules that will reduce regional and local emissions of nitrogen oxides (NOx) and particulate matter (PM), including diesel PM. These emission reductions will reduce public health impacts for communities located near warehouses from mobile sources that are associated with warehouse activities. Also, the emission reductions will help the region attain federal and state ambient air quality standards. Rule 2305 applies to owners and operators of warehouses greater than or equal to 100,000 square feet. Under Rule 2305, operators are subject to an annual WAIRE Points Compliance Obligation that is calculated based on the annual number of truck trips to the warehouse. WAIRE Points can be earned by implementing actions in a prescribed menu in Rule 2305, implementing a site-specific custom plan, or paying a mitigation fee. Warehouse owners are only required to submit limited information reports, but they can opt in to earn Points on behalf of their tenants if they so choose because certain actions to reduce emissions may be better achieved at the warehouse development phase, for instance the installation of solar and charging infrastructure. Rule 316 is a companion fee rule for Rule 2305 to allow South Coast AQMD to recover costs associated with Rule 2305 compliance activities. Since the Proposed Project consists of the development of a 727,360 square-foot warehouse, the Proposed Project's warehouse owners and operators will be required to comply with Rule 2305 once the warehouse is occupied. Therefore, South Coast AQMD staff recommends that the Lead Agency review South Coast AQMD Rule 2305 to determine the potential WAIRE Points Compliance Obligation for future operators and explore whether additional project requirements and CEQA mitigation measures can be identified and implemented at the Proposed Project that may help future warehouse operators meet their compliance obligation[9]. South Coast AQMD staff is available to answer questions concerning Rule 2305 implementation and compliance by phone or email at (909) 396-3140 or waire-program@aqmd.gov. For

[9] South Coast AQMD Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xxiii/r2305.pdf.

implementation guidance documents and compliance and reporting tools, please visit South Coast AQMD's WAIRE Program webpage[10].

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please feel free to contact Evelyn Aguilar, Air Quality Specialist, at eaguilar@aqmd.gov.

Sincerely,

Sam Wang

Sam Wang
Program Supervisor, CEQA IGR
Planning, Rule Development & Implementation

SW:EA
RVC230809-04
Control Number

[10] South Coast AQMD WAIRE Program. Accessed at: http://www.aqmd.gov/waire.

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

September 5, 2023
Sent via email

Glenn Mlaker
Associate Planner
City of Palm Springs
3200 East Tahquitz Canyon Way
Palm Springs, CA 92262

Subject: Notice of Preparation of a Draft Environmental Impact Report
Palm Springs Fulfillment Center Project
State Clearinghouse No. 2023080091

Dear Mr. Mlaker:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the City of Palm Springs (City) for the Palm Springs Fulfillment Center Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.). CDFW expects that it may

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

The proposed Project is located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, approximately 0.32 miles north of Interstate 10. The project is surrounded by vacant land to the north, wind energy facilities and vacant land to the west, 19th Avenue and existing commercial uses to the south, and Indian Canyon Drive and industrial uses to the east that are within the City of Desert Hot Springs. The Project encompasses Accessor's Parcel Number (APN) 666-320-018. The Project site is located within the boundaries of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

The Project proposes the construction of a two-story industrial building with paved parking area, a detention basin, and three gated access points. The two-story building area would be 739,360 square feet, with a building footprint of 727,360 square feet allotted to warehouse uses, and 12,000 square feet for offices on the second floor. The Project proposes 419 parking spaces for cars, 11 ADA spaces, and 306 stalls for trucks and trailers to include 110 docks along the northern and southern sides of the building. The Project site occupies approximately 38 acres west of Indian Canyon Drive and north of 19th Avenue in the City of Palm Springs. The proposed Project will connect to existing offsite infrastructure to provide electricity, natural gas, water, and sewer services to the Project along Indian Canyon Drive and 19th Avenue.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. The comments and recommendations are also offered to enable the CDFW to adequately review and comment on the proposed Project with respect to the Project's consistency with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

CDFW recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special

emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the Project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.

CDFW recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the Project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009[2]). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov or https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed Project.

   CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the Project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish & G. Code, § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. Focused CVMSHCP surveys, completed by a

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[2] Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

CVMSHCP Acceptable Biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018[3]).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

6. A full accounting of all open space and mitigation/conservation lands within and adjacent to the Project.

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project. To ensure that Project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

1. A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address Project-related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.

2. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g.,

[3] CDFW, 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities, State of California, California Natural Resources Agency, Department of Fish and Wildlife: March 20, 2018 (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline)

National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).

3. An evaluation of impacts to on-site and adjacent open space lands from both the construction of the Project and any long-term operational and maintenance needs.

4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect Project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Alternatives Analysis

CDFW recommends the DEIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would "feasibly attain most of the basic objectives of the Project," and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines § 15126.6[a]). The alternatives analysis should also evaluate a "no project" alternative (CEQA Guidelines § 15126.6[e]).

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. The City of Palm Springs should assess all direct, indirect, and cumulative impacts that are expected to occur as a result of the implementation of the Project and its long-term operation and maintenance. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: Fully protected species may not be taken or possessed at any time (with the exception of certain projects set forth in SB 147, which was passed on July 10, 2023). Project activities described in the DEIR should generally be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area. CDFW also recommends that the DEIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Lead Agency include in the analysis how appropriate avoidance, minimization, and mitigation measures will reduce indirect impacts to fully protected species.

2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts. Sensitive plant communities with ranks S-1 or S-2 have the potential to or have been documented to occur within or adjacent to the project area, including, but not limited to: Little San Bernardino Mountains linanthus (*Linanthus maculatus* ssp. *maculatus*), slender cottonheads (*Nemacaulis denudata* var. *gracilis*), and white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*).

3. *California Species of Special Concern* (CSSC): CSSC status applies to animals generally not listed under the federal Endangered Species Act or the CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CSSCs should be considered during the environmental review process. CSSC have the potential or have been documented to occur within or adjacent to the Project area, including, but not limited to: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), Le Conte's thrasher (*Toxostoma lecontei*), flat-tailed horned lizard (*Phrynosoma mcallii*), red-diamond rattlesnake (*Crotalus ruber*), San Diego desert woodrat (*Neotoma lepida intermedia*), Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*), and Palm Springs pocket mouse (*Perognathus longimembris bangsi*).

4. *Mitigation*: CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of Project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail. Where habitat preservation is not available onsite, offsite land acquisition, management, and preservation should be evaluated and discussed in detail.

   The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

   If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the DEIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation

measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center* v. *County* of *Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after Project approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrieta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777).

CDFW recommends that the DEIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the Project. Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.

5. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in advance of project impacts in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various Project components as appropriate.

   Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

6. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

   CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: Project phasing and timing, monitoring of Project-related noise (where applicable), sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site. If pre-construction surveys are proposed in the DEIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

7. *Moving Out of Harm's Way:* To avoid direct mortality to any non-listed terrestrial wildlife, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to inspect the Project area prior to any Project activities. Any individuals found shall not be harassed and shall be allowed to leave the Project area unharmed. If needed, a qualified biologist may guide, handle, or capture an individual non-listed, non-special-status wildlife species to move it to a nearby safe location within nearby refugium, or it shall be allowed to leave the Project site of its own volition. Capture methods may include hand, dip net, lizard lasso, snake tongs and snake hook. If the wildlife species is discovered or is caught in any pits, ditches, or other types of excavations, the qualified biologist shall release it into the most suitable habitat nearby the site of capture. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Only biologists with appropriate authorization by CDFW shall move CESA-listed or other special-status species. Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss.

8. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the Project; unless this Project is proposed to be a covered activity under the CVMSHCP. It is the policy of CESA to conserve, protect, enhance, and restore State-listed CESA species and their habitats.

CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. CDFW must comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the DEIR addresses all Project impacts to listed species and specify a mitigation monitoring and reporting program that will meet the requirements of CESA.

Based on review of CNDDB and Biogeographic Information and Observation System (BIOS), and/or knowledge of the project site/vicinity/general area, CDFW is aware that the following CESA-listed species have the potential to occur onsite/have previously been reported onsite are Coachella Valley fringe-toed lizard (*Uma inornata*). Additionally, CDFW is aware that the following ESA-listed species have the potential to occur onsite/have previously been reported onsite are Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*).

Coachella Valley Multiple Species Habitat Conservation Plan

Within the Inland Deserts Region, CDFW issued Natural Community Conservation Plan Approval and Take Authorization for the CVMSHCP per Section 2800, *et seq*., of the California Fish and Game Code on September 9, 2008. The CVMSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and provides for the incidental take of covered species in association with activities covered under the permit.

Compliance with approved habitat plans, such as the CVMSHCP, is discussed in CEQA. Specifically, Section 15125(d) of the CEQA Guidelines requires that the CEQA document discuss any inconsistencies between a proposed Project and applicable general plans and regional plans, including habitat conservation plans and natural

community conservation plans. An assessment of the impacts to the CVMSHCP as a result of this Project is necessary to address CEQA requirements. To obtain additional information regarding the CVMSHCP please go to: http://www.cvmshcp.org/.

The proposed Project occurs within the CVMSHCP area and is subject to the provisions and policies of the CVMSHCP. In order to be considered a covered activity, Permittees should demonstrate that proposed actions are consistent with the CVMSHCP and its associated Implementing Agreement.

Regardless of whether take of threatened and/or endangered species is obtained through the CVMSHCP or through a CESA ITP, the DEIR needs to address how the proposed Project will affect the conservation objectives of the CVMSHCP. Therefore, all surveys required by the CVMSHCP to determine consistency should be conducted and results included in the DEIR so that CDFW can adequately assess whether the Project will impact the CVMSHCP.

CDFW Lake and Streambed Alteration Program

Based on review of material submitted with the NOP and review of aerial photography, at least one ephemeral wash traverses the site. Depending on how the Project is designed and constructed, the Project applicant may need to notify CDFW per Fish and Game Code section 1602. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW’s issuance of an LSA Agreement is a “project” subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To submit a Lake or Streambed Alteration notification package, please go to

https://wildlife.ca.gov/Conservation/Environmental-Review/EPIMS.

ADDITIONAL COMMENTS AND RECOMMENDATIONS

Construction Noise

Project-related construction has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project. CDFW recommends that the DEIR include an analysis of impacts to wildlife from Project-related construction noise, and appropriate avoidance, minimization, and mitigation measures that will reduce impacts to less than significant.

Construction may result in substantial noise through road use, equipment, and other Project-related activities. This may adversely affect wildlife species in several ways as wildlife responses to noise can occur at exposure levels of only 55 to 60 dB[4]. Anthropogenic noise can disrupt the communication of many wildlife species including frogs, birds, and bats[5,6,7,8]. Noise can also affect predator-prey relationships as many nocturnal animals such as bats and owls primarily use auditory cures (i.e., hearing) to hunt. Additionally, many prey species increase their vigilance behavior when exposed to noise because they need to rely more on visual detection of predators when auditory cues may be masked by noise[9,10]. Noise has also been shown to reduce the density of nesting birds[11] and cause increased stress that results in decreased immune responses[12]. The City of Palm Springs should include measures in the DEIR to ensure the following: restricting the use of equipment to hours least likely to disrupt wildlife (e.g., not at night or in early morning); restricting the use of generators except for temporary use in emergencies; provide power to sites by solar PV (photovoltaic) systems, cogeneration systems (natural gas generator), small micro-hydroelectric systems, or small wind turbine systems; ensure the use of noise suppression devices such as mufflers or enclosure for generators; and sounds generated from any means

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4 Barber, J. R., K. R. Crooks, and K. M. Fristrup. 2009. The costs of chronic noise exposure for terrestrial organisms. Trends in Ecology and Evolution 25:180-189.
5 Sun, J. W. C., and P. M. Narins. 2005. Anthropogenic sounds differentially affect amphibian call rate. Biological Conservation 121:419–427.
6 Patricelli, G., and J. J. L. Blickley. 2006. Avian communication in urban noise: causes and consequences of vocal adjustment. Auk 123:639–649.
7 Gillam, E. H., and G. F. McCracken. 2007. Variability in the echolocation of Tadarida brasiliensis: effects of geography and local acoustic environment. Animal Behaviour 74:277–286.
8 Slabbekoorn, H., and E. A. P. Ripmeester. 2008. Birdsong and anthropogenic noise: Implications and applications for conservation. Molecular Ecology 17:72–83.
9 Rabin, L. A., R. G. Coss, and D. H. Owings. 2006. The effects of wind turbines on antipredator behavior in California ground squirrels (Spermophilus beecheyi). Biological Conservation 131:410–420.
10 Quinn, J. L., M. J. Whittingham, S. J. Butler, W. Cresswell, J. L. Quinn, M. J. Whittingham, S. J. Butler, W. Cresswell, and W. Noise. 2017. Noise, predation risk compensation and vigilance in the chaffinch Fringilla coelebs. Journal of Avian Biology 37:601–608.
11 Francis, C. D., C. P. Ortega, and A. Cruz. 2009. Noise pollution changes avian communities and species interactions. Current Biology 19:1415–1419.
12 Kight, C. R., and J. P. Swaddle. 2011. How and why environmental noise impacts animals: An integrative, mechanistic review. Ecology Letters 14:1052–1061.

must be below the 55-60 dB range within 50-feet from the source.

Artificial Nighttime Lighting

The Project will introduce new sources of artificial lighting. CDFW recommends that the DEIR include lighting design specifications for all artificial nighttime lighting that will be used by the Project, an analysis of the direct and indirect impacts of artificial nighttime lighting on biological resources, and appropriate avoidance, minimization, and mitigation measures that will reduce impacts to less than significant. The direct and indirect impacts of artificial nighttime lighting on biological resources including migratory birds that fly at night, bats, and other nocturnal and crepuscular wildlife should be analyzed, and appropriate avoidance and minimization measures should be included in the DEIR.

Artificial nighttime lighting often results in light pollution, which has the potential to significantly and adversely affect fish and wildlife. Artificial lighting alters ecological processes including, but not limited to, the temporal niches of species; the repair and recovery of physiological function; the measurement of time through interference with the detection of circadian and lunar and seasonal cycles; the detection of resources and natural enemies; and navigation[13]. Many species use photoperiod cues for communication (e.g., bird song[14]), determining when to begin foraging[15], behavioral thermoregulation[16], and migration[17]. Phototaxis, a phenomenon that results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it[8]. The City of Palm Springs should include measures in the DEIR to ensure the following: eliminate all nonessential lighting throughout the Project area; avoid or limit the use of artificial light during the hours of dawn and dusk when many wildlife species are most active; lighting for Project activities is fully shielded, cast downward, reduced in intensity to the greatest extent, and does not result in spill over onto other properties or upward into the night sky (see the International Dark-Sky Association standards at http://darksky.org/); the use of LED lighting with a correlated color temperature of 3,000 Kelvins or less; proper disposal of hazardous waste; and recycling of lighting that contains toxic compounds with a qualified recycler.

Landscaping

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[13] Gatson, K. J., Bennie, J., Davies, T., Hopkins, J. 2013. The ecological impacts of nighttime light pollution: a mechanistic appraisal. Biological Reviews, 88.4: 912-927.
[14] Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. The Condor 108:130–139.
[15] Stone, E. L., G. Jones, and S. Harris. 2009. Street lighting disturbs commuting bats. Current Biology 19:1123–1127.
[16] Beiswenger, R. E. 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. Ecology 58:98–108.
[17] Longcore, T., and C. Rich. 2004. Ecological light pollution - Review. Frontiers in Ecology and the Environment 2:191–198.

To ameliorate the water demands of this Project, CDFW recommends incorporation of water-wise concepts in any Project landscape design plans. In particular, CDFW recommends xeriscaping with locally native California species and installing water-efficient and targeted irrigation systems (such as drip irrigation). Native plants support butterflies, birds, reptiles, amphibians, small mammals, bees, and other pollinators that evolved with those plants, more information on native plants suitable for the Project location and nearby nurseries is available at CALSCAPE: https://calscape.org/. Local water agencies/districts and resource conservation districts in your area may be able to provide information on plant nurseries that carry locally native species, and some facilities display drought-tolerant locally native species demonstration gardens. Information on drought-tolerant landscaping and water-efficient irrigation systems is available on California's Save our Water website: https://saveourwater.com/. CDFW also recommends that the DEIR include recommendations regarding landscaping from Section 4.0 of the CVMSHCP "Table 4-112: Coachella Valley Native Plants Recommended for Landscaping" (pp. 4-180 to 4-182; https://cvmshcp.org/plan-documents/).

Sand-Dependent Covered Species

With regard to obligations of Local Permittees, Section 6.6.1 of the CVMSHCP indicates that "within and outside conservation areas, on parcels approved for development, the Permittees shall encourage the opportunity to salvage Covered sand-dependent species". The surface substrate on the Project site is composed mainly of wind-blown, fine-grained sand. This type of substrate has the potential to be occupied by several Covered Species under the CVMSHCP that are sand-dependent, including Coachella Valley fringe-toed lizard, flat-tailed horned lizard, and Coachella Valley milkvetch. An assessment of biological resources is recommended by CDFW to determine whether these or other send-dependent species are present on the Project site. The City of Palm Springs should include measures in the DEIR to prepare and submit to the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, for review and approval, a plan to salvage sand-dependent CVMSHCP Covered Species within the Project area. The plan shall be prepared by a qualified biologist experienced in surveying for and handling sand-dependent Covered Species. The plan shall include, but not be limited to, the species-specific salvage methods and timing for each sand-dependent Covered Species identified within the Project site and the location(s) where each species will be translocated. Only qualified biologist(s) with appropriate state and federal permits to handle special-status species shall carry out salvage activities.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, §

21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data.. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Palm Springs Fulfillment Center Project (SCH No. 2023080091) and recommends that the City of Palm Springs address CDFW's comments and concerns in the forthcoming DEIR. Questions regarding this letter or further coordination should be directed to Alyssa Hockaday, Senior Environmental Scientist (Specialist), at Alyssa.Hockaday@wildlife.ca.gov or (760) 920-8252.

Sincerely,

DocuSigned by:
Kim Freeburn
84F92FFEEFD24C8...

Kim Freeburn
Environmental Program Manager

ec:

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09/06/2023

VIA EMAIL ONLY

Glenn Mlaker, AICP, Associate Planner
City of Palm Springs
3200 E. Tahquitz Canyon Way
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Glenn.Mlaker@palmspringsca.gov

RE: NOP Comments for the Palm Springs Fulfillment Center Project

Dear Mr. Mlaker,

The comments are submitted on behalf of Californians Allied for a Responsible Economy ("CARE CA") regarding the Notice of Preparation ("NOP") of a Draft Environmental Impact Report ("DEIR") for the Palm Springs Fulfillment Center project ("the Project"). CARE CA understands that the proposed Project consists of the construction and operation of a 739,360 square-foot industrial warehouse building, with 727,360 square feet allotted to warehouse uses, and 12,000 square feet for offices.

The goal of an EIR is to provide decisionmakers and the public with detailed information about the effects of a proposed project on the environment, how significant impacts will be minimized and alternatives to the project (Pub. Res. Code § 21002.2). We, therefore, respectfully request a complete analysis of all identified impacts, imposition of all feasible mitigation and study of a reasonable range of alternatives. In addition, we wish to provide the following comments:

i) The City should avoid developing Project objectives that are so narrow as to exclude any meaningful alternative other than the Project. Such a narrow approach for describing project objectives ensures that the alternatives analysis is essentially useless and a foregone conclusion.

ii) The Initial Study ("IS") does not provide any details about the type of warehouse uses proposed. The DEIR should correct this error by providing details of any and all proposed future industrial/warehouse uses of the Project, clearly articulated and quantified. If planned operations are unknown, the DEIR must consider all reasonably foreseeable uses including higher intensity uses such as cold storage and subsequent potential use of transportation refrigeration units (TRUs) during Project operations. Ideally, the DEIR should study a combination of the five primary logistics-type uses at the site, including providing justification and square footage assumed for each use analyzed to ensure that the unique impacts of each

use (i.e., both truck and vehicular trips, air quality, GHG emissions, public health risk and other environmental effects) are comprehensively evaluated.

If the Project will not include cold storage, then the DEIR must include California Air Resources Board (CARB) recommended design measures in the Mitigation Monitoring and Reporting Program (MMRP). CARB recommends requiring contractual language in tenant lease agreements or restrictive covenant over parcels to prohibit use of transport refrigeration units (TRUs).

iii) Assuming industry standard 24 hours a day, 7 days a week operation, the Project would undoubtably contribute to air pollution. The City must make all efforts to minimize air quality effects to the greatest extent possible. Therefore, a revised Air Quality analysis should be based on actual emissions data from existing similar sized warehouse projects rather than computer generated estimates. In addition, another Health Risk Assessment (HRA) must be prepared as part of the DEIR that accurately reflects any and all proposed future industrial/warehouse uses, and also accounts for other emission sources such as backup generators, and forklifts. Furthermore, estimates of the significance of air quality impacts must be consistent with current epidemiological studies regarding the effects of pollution and various kinds of environmental stress on public health. Failure to take these measures will result in a DEIR that is deficient in its informational discussion of air quality impacts as they connect to adverse human health effects.

iv)The DEIR can use robust thresholds such as Earthjustice group's net zero emission model for the Project's GHG emissions analysis. Using such a model will enable the City to require effective measures that reduce GHGs or even achieve net zero emissions. In addition, the DEIR must include a detailed discussion on the Applicant's plan to offset the Project's GHG emissions. Any measures to address climate change threats must be considered. After all, it should be all about the letter and spirit of the law!

V) While there may not be sensitive receptors nearby, people living in the community would face environmental impacts from the cumulative effects of the Project and other surrounding commercial and industrial developments in the area. The EIR must analyze and mitigate this cumulative impact.

Thank you for the opportunity to submit NOP comments. Again, CARE CA respectfully requests under CEQA full analysis of the environmental impacts, feasible mitigation, and reasonable alternatives to the Project.

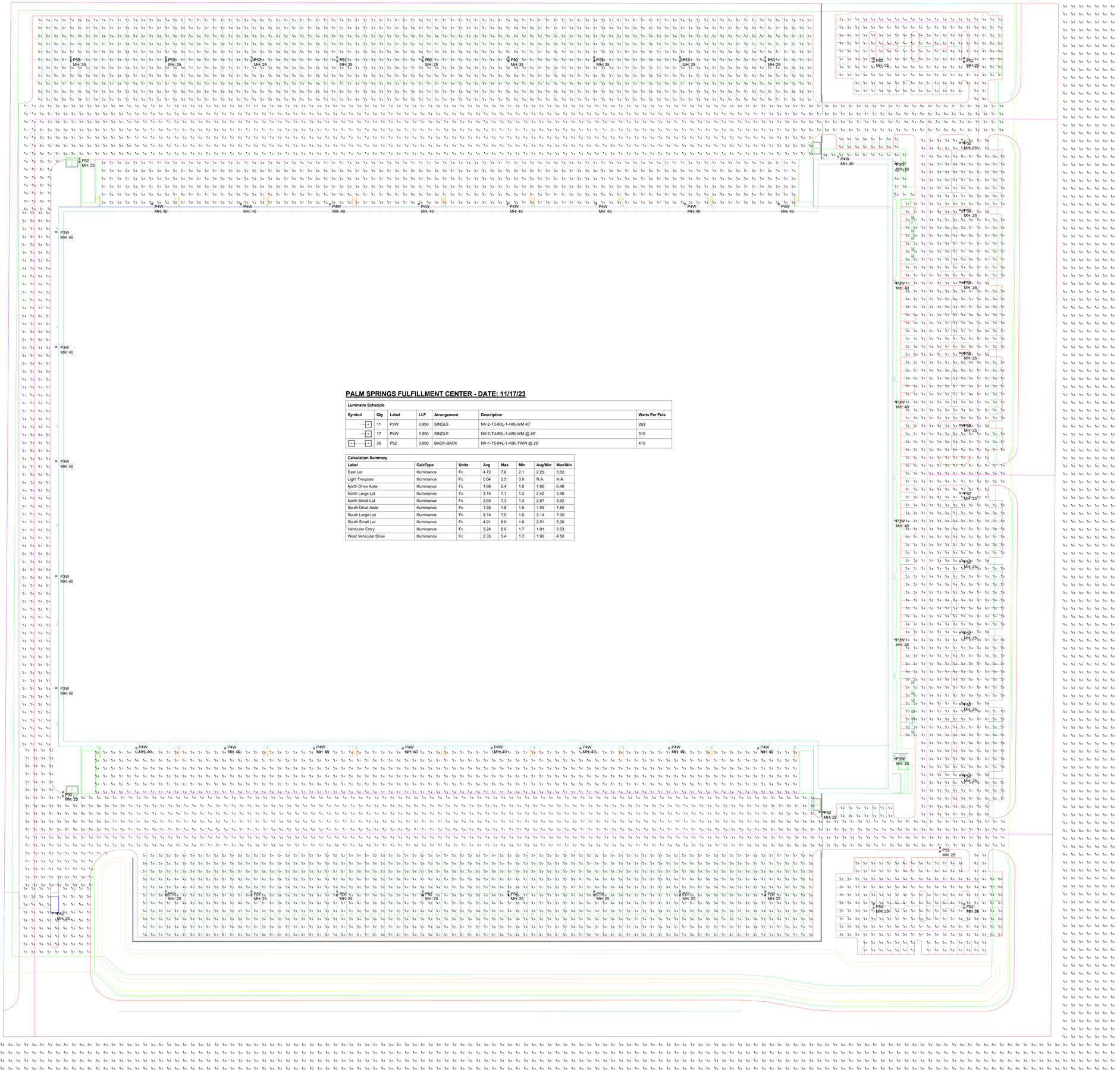
We look forward to reviewing and commenting on the DEIR.

Sincerely,

Jeff Modrzejewski
Executive Director

Appendix B

Photometric Plan



PALM SPRINGS FULFILLMENT CENTER - DATE: 11/17/23

Luminaire Schedule

Symbol	Qty	Label	LLF	Arrangement	Description	Watts Per Pole
	11	P3W	0.950	SINGLE	NV-2-T3-80L-1-40K-WM 40'	263
	17	P4W	0.950	SINGLE	NV-2-T4-96L-1-40K-WM @ 40'	316
	36	P52	0.950	BACK-BACK	NV-1-T5-64L-1-40K-TWIN @ 25'	410

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
East Lot	Illuminance	Fc	4.72	7.6	2.1	2.25	3.62
Light Trespass	Illuminance	Fc	0.04	0.5	0.0	N.A.	N.A.
North Drive Aisle	Illuminance	Fc	1.86	6.4	1.0	1.86	6.40
North Large Lot	Illuminance	Fc	3.14	7.1	1.3	2.42	5.46
North Small Lot	Illuminance	Fc	3.65	7.3	1.3	2.81	5.62
South Drive Aisle	Illuminance	Fc	1.93	7.8	1.0	1.93	7.80
South Large Lot	Illuminance	Fc	3.14	7.0	1.0	3.14	7.00
South Small Lot	Illuminance	Fc	4.01	8.0	1.6	2.51	5.00
Vehicular Entry	Illuminance	Fc	3.24	6.0	1.7	1.91	3.53
West Vehicular Drive	Illuminance	Fc	2.35	5.4	1.2	1.96	4.50

Appendix C.1

Air Quality Report

N Indian Canyon/19th Ave High-Cube Warehouse

AIR QUALITY IMPACT ANALYSIS

CITY OF PALM SPRINGS

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DECEMBER 15, 2023

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LIST OF ABBREVIATED TERMS

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m^3	Microgram per Cubic Meter
1992 CO Plan	*1992 Federal Attainment Plan for Carbon Monoxide*
1993 CEQA Handbook	SCAQMD's *CEQA Air Quality Handbook (1993)*
2003 AQMP	SCAQMD's *2003 Air Quality Management Plan*
2016 AQMP	SCAQMD's *Final 2019 Air Quality Management Plan*
2016-2040 RTP/SCS	*2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BAAQMD	Bay Area Air Quality Management District
Brief	Brief of Amicus Curiae by the SCAQMD in the Friant Ranch Case
C_2H_3Cl	Vinyl Chloride
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	CCR, Title 24, Part 11: California Green Building Standards Code
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guidelines	*2019 CEQA Statute and Guidelines*
City	City of Palm Springs
CN	Neighborhood Commercial
CO	Carbon Monoxide
COHb	Carboxyhemoglobin
CT	Tourist Commercial

CY	Cubic Yards
EIR	Environmental Impact Reports
EMFAC	EMissions FACtor Model
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
g/L	Grams per Liter
gal/day	Gallons Per Day
GC	Golf Course
GHG	Greenhouse Gas
H_2S	Hydrogen Sulfide
HI	Hazard Index
lbs/day	Pounds Per Day
LST	Localized Significance Threshold
LST METHODOLOGY	*Final Localized Significance Threshold Methodology*
MDR	Medium Density Residential
MICR	Maximum Individual Cancer Risk
mph	Miles Per Hour
MWELO	Model Water Efficient Landscape Ordinance
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
Pb	Lead
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppm	Parts Per Million
Project	N Indian Canyon/19th Ave High-Cube Warehouse
RECLAIM	Regional Clean Air Incentives Market
RL	Low Density Residential
RMH	Medium-High Density Residential
ROG	Reactive Organic Gases
Rule 402	Nuisance
Rule 403	Fugitive Dust

Rule 445	Wood Burning Devices
Rule 1113	Architectural Coating
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIP	State Implementation Plans
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SRA	Source Receptor Area
TAC	Toxic Air Contaminants
Title 24	CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
VOC	Volatile Organic Compounds
VPH	Vehicles Per Hour

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.7	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Operational Emissions	3.8	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.9	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.10	*Less Than Significant*	*n/a*
Sensitive Receptors	3.11	*Less Than Significant*	*n/a*
Odors	3.12	*Less Than Significant*	*n/a*
Cumulative Impacts	3.13	*Less Than Significant*	*n/a*

ES.2 STANDARD REGULATORY REQUIREMENTS

There are numerous requirements that development projects must comply with by law, and that were put in place by federal, State, and local regulatory agencies for the improvement of air quality.

Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or

other forms of property, or can cause excessive soiling on any other parcel shall conform to the requirements of the South Coast Air Quality Management District (SCAQMD).

SCAQMD RULES

SCAQMD Rules that are currently applicable during construction activity for this Project are described below.

SCAQMD RULE 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities.

Dust Control, Operations. Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel, shall conform to the requirements of the South Coast Air Quality Management District.

SCAQMD RULE 1113

This rule serves to limit the Volatile Organic Compound (VOC) content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed N Indian Canyon/19th Ave High-Cube Warehouse (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed N Indian Canyon/19th Ave High-Cube Warehouse Project is located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet. It is anticipated that the Project would be fully developed by year 2025. The preliminary site plan for the proposed Project is shown on Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 ATMOSPHERIC SETTING

The Project site is located within Salton Sea Air Basin (SSAB) within the jurisdiction of the SCAQMD. The SSAB (also referred to herein as "the Basin") is aligned in a north-west-southwest orientation stretching from Banning Pass to the Mexican border. The regional climate, as well as the temperature, wind, humidity, precipitation, and amount of sunshine significantly influence the air quality in the Basin.

The climate of the Coachella Valley is a continental, desert-type climate, with hot summers, mild winters, and very little annual rainfall. Precipitation is less than six inches annually and occurs mostly in the winter months from active frontal systems and in the late summer months from thunderstorms. Almost all of the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often being completely dry. Temperatures exceed 100 degrees Fahrenheit (°F), on the average, for four months each year, with daily highs near 110 °F during July and August. Summer nights are cooler with minimum temperatures in the mid-70s. During the winter season, daytime highs are quite mild, but the dry air is conducive to nocturnal radiational cooling, with early morning lows around 40 °F.

The Coachella Valley and adjacent areas are exposed to frequent gusty winds. The flat terrain of the valley and strong temperature differentials, created by intense solar heating, produce moderate winds and deep thermal convection. Wind speeds exceeding 31 miles per hour (mph) occur most frequently in April and May. On an annual basis, strong winds (greater than 31 mph) are observed 0.6 percent of the time and speeds of less than 6.8 mph account for more than one-half of the observed winds. Prevailing winds are from the northwest through southwest, with secondary flows from the southeast. The strongest and most persistent winds typically occur immediately to the east of Banning Pass, which is noted as a wind power generation resource area. Aside from this locale, the wind conditions in the remainder of the Coachella Valley are geographically distinct. Stronger winds tend to occur closer to the foothills. Less frequently, widespread gusty winds occur over all areas of the Valley.

Portions of the SSAB experience surface inversions almost every day of the year. Inversions in the SSAB are attributed to strong surface heating, but are usually broken, allowing pollutants to disperse more easily. Weak surface inversions are caused by cooling of air in contact with the cold surface of the earth at night. In the valleys and low-lying areas, this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. In addition, inversions in the SSAB caused by the presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms the air to a temperature higher than the air below. This subsidence inversion can act as a nearly impenetrable lid to the vertical mixing of pollutants. These inversions can persist for one or more

days, causing air stagnation and the buildup of pollutants. Subsidence inversions are common from November through June and are relatively absent from July through October.

Within the Project area, there is a natural sand migration process, called "blowsand," that has direct and indirect effects on air quality. Blowsand produces particulate matter (PM_{10}) in two ways: (1) by direct particle erosion and fragmentation as natural PM_{10}, and (2) by secondary effects, as sand deposits on road surfaces.

Also, where water has already receded around the Salton Sea, the surface areas contain a salty mix of sediments that can change from a hardened salt crust to a fluffy soft layer of dust depending upon the season. Exposed sediments could elevate PM_{10} levels throughout the region. Almost 120,000 acres of Salton Sea lakebed could be exposed as inflows to the Sea decrease in future years. Local communities may be affected by 60,000 potentially dust-blowing acres, which will cause PM_{10} levels to rise.

2.2 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (2):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk

Criteria Pollutant	Description	Sources	Health Effects
			include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one

Criteria Pollutant	Description	Sources	Health Effects
			pollutant alone is the predominant factor.
NO_X	NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with O_2. Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_X is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine	Formed when reactive organic gases (ROG) and NO_X	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and

Criteria Pollutant	Description	Sources	Health Effects
	exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Criteria Pollutant	Description	Sources	Health Effects
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X, organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air.	Organic chemicals are widely used as ingredients in household products. Paints,	Breathing VOCs can irritate the eyes, nose and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as

Criteria Pollutant	Description	Sources	Health Effects
	VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing,	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders,

Criteria Pollutant	Description	Sources	Health Effects
	particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.		distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (3).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.3 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (4).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by California Air Resources Board (CARB) on May 4, 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (5).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards [1]**		**National Standards [2]**		
		Concentration [3]	**Method [4]**	**Primary [3,5]**	**Secondary [3,6]**	**Method [7]**
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

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TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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2.4 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter, NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (6). On December 28, 2021, CARB posted the proposed 2021 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (7). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SSAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SSAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	-
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Attainment	Unclassifiable/Attainment
Pb	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SSAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.5 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to provide Southern California residents about the air quality conditions. The Project site is located within the Coachella Valley monitoring area (SRA 30). The Coachella Valley 1 monitoring station is located approximately 4.00 miles south of the Project site and reports air quality statistics for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$.

The most recent three (3) years of published data available from SCAQMD is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2019 through 2021 was obtained from the SCAQMD Air Quality Data Tables (8). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2019-2021

Pollutant	Standard	Year		
		2019	2020	2021
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.100	0.119	0.110
Maximum Federal 8-Hour Concentration (ppm)		0.084	0.094	0.092
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	5	9	10
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	34	49	38
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.3	0.8	0.8
Maximum Federal 8-Hour Concentration	> 20 ppm	0.7	0.5	0.4
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.041	0.047	0.036
Annual Average		0.007	0.007	0.007
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	75	48	100
Annual Federal Arithmetic Mean ($\mu g/m^3$)		29.5	20.4	21.4
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	5	0	9
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	15.50	23.90	13.50
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	6.05	6.42	6.2
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	0	0	0

$\mu g/m^3$ = Microgram per Cubic Meter
Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.

2.6 REGULATORY BACKGROUND

2.6.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (9). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (10). The CAA also mandates that states submit and implement SIPs for local areas not meeting these

standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (11) (12). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.6.2 CALIFORNIA REGULATIONS

CARB

The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SSAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (13) (9).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The 2022 Air Quality Management Plan (AQMP) and Coachella Valley PM_{10} State Implementation Plan constitute the SIP for the Riverside County portion of the SSAB. These air quality plans, promulgated by the SCAQMD, establish programs of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national ambient air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the Southern California Association of Governments' (SCAG's) latest Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and the latest growth forecasts. The 2022 AQMP constitute the SIP O3 within the Riverside County portion of the SSAB. The 2022 AQMP contains strategies stated in the SIPs for achieving air quality standards on a regional basis.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (14). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (15):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).

- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).

- Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.6.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SSAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards (16). The Coachella Valley PM_{10} State Implementation Plan (CVSIP) establishes additional controls needed to demonstrate expeditious attainment of the PM_{10} standards in the Coachella Valley, located in the Salton Sea Air Basin. This area which is under South Coast AQMD's jurisdiction has been designated as a serious non-attainment area for PM_{10}. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

This study quantifies air quality emissions generated by construction and operation of the Project and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP and Lead Agency planning regulations. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (17). The SCAQMD's *CEQA Air Quality Significance Thresholds* (March 2023) indicate that any projects in the SSAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Regional Construction Threshold	Regional Operational Thresholds
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CALEEMOD

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation (18). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1.

3.4 CONSTRUCTION EMISSIONS

3.4.1 CONSTRUCTION ACTIVITIES

Construction activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Per client provided data, this analysis assumes that earthwork activities are expected to balance on site and no import or export of soils would be required.

OFF-SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS

In addition, to support the Project development, there will be off-site improvements associated with utility installation of the Project site. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on

the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 3-4. As such, no impacts beyond what has already been identified in this report are expected to occur.

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 3-2. It should be noted that for Vendor Trips, specifically, CalEEMod only assigns Vendor Trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for Vendor Trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trip Per Day
Site Preparation	10	6	0
Grading	20	24	0
Building Construction	311	91	0
Paving	15	0	0
Architectural Coating	62	0	0

3.4.2 CONSTRUCTION DURATION

Construction is anticipated to begin in January 2024 and will last through April 2025. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[1]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (19).

[1] As shown in the CalEEMod User's Guide Version 2022, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-3: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	1/8/2024	2/2/2024	20
Grading	2/5/2024	5/17/2024	75
Building Construction	4/5/2024	5/12/2025	287
Paving	3/3/2025	4/11/2025	30
Architectural Coating	2/7/2025	4/24/2025	55

3.4.3 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	2	8
	Crawler Tractors	2	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	2	8
	Forklifts	6	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

3.4.4 REGIONAL CONSTRUCTION EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY (WITHOUT MITIGATION)

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer (Smog Season)						
2024	8.40	66.86	94.94	0.14	10.80	4.87
2025	73.91	36.33	78.10	0.09	7.20	2.66
Winter						
2024	3.97	37.63	48.23	0.07	5.95	3.01
2025	73.39	36.71	62.16	0.09	7.20	2.66
Maximum Daily Emissions	**73.91**	**66.86**	**94.94**	**0.14**	**10.80**	**4.87**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Area Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will require maintenance and will therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance. Based on information provided by the Project applicant, the site is not expected to utilize natural gas for the building envelope, and therefore would not generate any emissions from direct energy consumption. Electricity usage associated with the Project was calculated based on CalEEMod defaults

3.5.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis* were utilized in this analysis (20). Per the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis*, the proposed Project is expected to generate approximately 1,574 total trips per day, which include 1,294 passenger car trips per day and 280 truck trips per day.

APPROACH FOR ANALYSIS OF THE PROJECT

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[2] & LDT2[3]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

TABLE 3-6: PASSENGER CAR FLEET MIX – INDUSTRIAL USE

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Fulfillment Center Warehouse	50.75%	4.55%	25.13%	17.58%	1.99%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis*. The trip length function for the proposed industrial building use has been calculated to 34.51 miles and an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks.

In order to be consistent with the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis*, trucks are broken down by truck type. The truck fleet mix is estimated by apportioning the trip rates for each truck type based on information provided in the *N Indian Canyon/19th Ave High-Cube Warehouse Trip Generation Assessment*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[4] & LHDT2 [5])/2-axle, Medium-Heavy-Duty Trucks (MHD)/3-axle, and Heavy-Heavy-Duty Trucks (HHD)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

TABLE 3-7: TRUCK FLEET MIX – INDUSTRIAL USE

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Fulfillment Center Warehouse	8.21%	2.50%	10.71%	78.57%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips

[2] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[3] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

[4] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[5] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

3.5.4 FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads were calculated using CalEEMod.

3.5.5 ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to four (4) 200 horsepower (hp), natural gas-powered cargo handling equipment – port tractors operating at 4 hours a day[6] for 365 days of the year.

3.5.6 REGIONAL OPERATIONAL EMISSIONS SUMMARY

As previously stated, CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. As such, operational activities for summer and winter scenarios are presented in Table 3-8. Detailed operational model outputs are presented in Appendices 3.1. Project operational activities would not exceed the numerical thresholds of significance established by the SCAQMD for emissions of any criteria pollutant. As such, operational impacts would be considered less-than-significant.

TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer (Smog Season)						
Mobile Source	6.97	35.12	134.05	0.54	33.55	9.08
Area Source	22.17	0.27	32.15	0.00	0.06	0.04
On-Site Equipment Source	0.35	1.13	49.33	0.00	0.09	0.08
Total Maximum Daily Emissions	**29.49**	**36.51**	**215.54**	**0.55**	**33.70**	**9.20**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile Source	5.99	37.96	85.05	0.51	33.55	9.08
Area Source	16.89	0.00	0.00	0.00	0.00	0.00
On-Site Equipment Source	**23.24**	**39.09**	**134.38**	**0.51**	**33.64**	**9.16**
Total Maximum Daily Emissions	5.99	37.96	85.05	0.51	33.55	9.08

[6] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.6 LOCALIZED SIGNIFICANCE

3.6.1 BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (*LST Methodology*) (21). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[7]. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (22).

3.6.2 APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Coachella Valley 1 (SRA 30). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that will occur during construction activity:
    - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
    - The SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* can be used to

[7] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (23) (24).

- If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.
- The *LST Methodology* presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

3.6.3 EMISSIONS CONSIDERED

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (21)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

3.6.4 MAXIMUM DAILY DISTURBED-ACREAGE

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-8). The equipment-specific grading rates are summarized in the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix C: Emission Calculation Details for CalEEMod* (23) (25). The disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Based on Table 3-9, the Project's construction activities could actively disturb approximately 2 acres per day during site preparation and 4 acres per day during grading activities.

TABLE 3-9: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Activity	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Site Preparation	Crawler Tractors	2	0.5	8	2.0
	Rubber Tired Dozers	2	0.5	8	1.5
Total acres disturbed per day during Site Preparation					2

Grading	Crawler Tractors	2	0.5	8	1
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2
Total acres disturbed per day during Grading					4

Source: Maximum daily disturbed acreage based on equipment list presented in Appendix 3.1.

3.6.4 RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial, educational, and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours* (21)." Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the Project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8-hours.

RECEPTORS

Receptors in the Project area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

R1: Location R1 represents the existing residence at 10769 N. Indian Canyon Drive, approximately 3,327 feet north of the Project site. Since there are no private outdoor

living areas (backyards) facing the Project site, receptor R1 is placed at the building façade.

R2: Location R2 represents the existing residence at 64088 Teagarden Drive, approximately 2,795 feet northeast of the Project site. Receptor R2 is placed in the private outdoor living areas (backyard) facing the Project site.

R3: Location R3 represents the existing residence at 17725 Covey Street, approximately 2,054 feet northeast of the Project site. Receptor R3 is placed in the private outdoor living areas (backyard) facing the Project site.

R4: Location R4 represents the existing residence at 17364 N. Indian Canyon Drive, approximately 3,028 feet northeast of the Project site. Receptor R4 is placed in the private outdoor living areas (backyard) facing the Project site.

R5: Location R5 represents Sun Valley Storage at 19125 N. Indian Canyon Drive, approximately 81 feet south of the Project site. Receptor R5 is placed at the building façade.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual a cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ is represented by R3 which represents the existing residence at 17725 Covey St, approximately 2,054 feet (626 meters) northeast of the Project site. As such, for evaluation of localized PM_{10} and $PM_{2.5}$, a 626-meter distance will be used.

As previously stated, and consistent with *LST Methodology*, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. The nearest receptor used for evaluation of localized impacts of NO_X and CO is represented by location R5 which represents the existing building, Sun Valley Storage, at 19125 N. Indian Canyon Drive, approximately 81 feet (25 meters) southeast of the Project site. As such, for evaluation of localized NO_x and CO, a 25-meter distance will be used.

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS

3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

3.7.1 LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

Since the total acreage disturbed is 2 acres per day for site preparation and 4 acres per day grading activities, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 3-10 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3-10: MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS

Construction Activity	Construction Localized Thresholds			
	NO_X	CO	PM_{10}	PM_{10}
Site Preparation	191 lbs/day	1,299 lbs/day	279 lbs/day	147 lbs/day
Grading	266 lbs/day	1,961 lbs/day	297 lbs/day	160 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.7.2 CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

Table 3-11 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of any criterial pollutant. For analytical purposes, emissions associated with peak demolition, site preparation and grading activities are considered for purposes of LSTs since these phases represents the maximum localized emissions that would occur. Any other construction phases of development that overlap would result in lesser emissions and consequently lesser impacts than what is disclosed herein. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

TABLE 3-11: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS – WITHOUT MITIGATION

Construction Activity	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Site Preparation	**Maximum Daily Emissions**	**25.49**	**21.02**	**4.97**	**2.96**
	SCAQMD Localized Threshold	191	1,299	279	147
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Grading	**Maximum Daily Emissions**	**36.60**	**30.52**	**4.37**	**2.54**
	SCAQMD Localized Threshold	266	1,961	297	160
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix 3.1.

3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

The Project is located on an approximately 36.61-acre parcel. As noted previously, the *LST Methodology* provides look-up tables for sites with an area with daily disturbance of 5 acres or less. For projects that exceed 5 acres, the 5-acre LST look-up tables can be used as a screening tool to determine whether pollutants require additional detailed analysis. This approach is conservative as it assumes that all on-site emissions associated with the project would occur within a concentrated 5-acre area. This screening method would therefore over-predict potential localized impacts, because by assuming that on-site operational activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the project-site boundary. As such, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

The LST analysis generally includes on-site sources (area, energy, mobile, and on-site cargo handling equipment – are previously discussed in Section 3.5 of this report). However, it should be noted that the CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. As such, in an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-12 represent all on-site Project-related stationary (area) sources mobile sources. It should be noted that the longest on-site distance is roughly 0.35 miles for both trucks and passenger cars. As such, a separate CalEEMod run for operational LSTs has been prepared which accounts for the 0.35-mile on-site travel distance. Outputs from the model runs for operational LSTs are provided in Appendix 3.2. As shown in Table 3-12, emissions resulting from the Project operation will not exceed the numerical localized thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related operational-source emissions and no mitigation is required.

3.8.1 LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

As previously stated, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

TABLE 3-12: MAXIMUM DAILY LOCALIZED OPERATIONAL EMISSIONS THRESHOLDS

Operational Localized Thresholds			
NO_X	CO	PM_{10}	$PM_{2.5}$
304 lbs/day	2,292 lbs/day	74 lbs/day	40 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.8.2 OPERATIONAL-SOURCE LOCALIZED EMISSIONS

As shown on Table 3-13 operational emissions would not exceed the LST thresholds and is therefore, considered to have a less than significant localized impact during operational activity.

TABLE 3-13: LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS – WITHOUT MITIGATION

On-Site Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**6.26**	**94.69**	**0.56**	**0.24**
SCAQMD Localized Threshold	304	2,292	74	40
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod localized operational-source emissions are presented in Appendix 3.2.

3.9 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the SCAQMD's *CEQA Air Quality Handbook* (*1993 CEQA Handbook*), the SCAB was designated nonattainment under the CAAQS and NAAQS for CO (26).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-3. To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods[8]. This "hot spot" analysis did not predict any exceedance e of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 3-14.

[8] The CO "hot spot" analysis conducted in 2003 is the most current study used for CO "hot spot" analysis in the SCAB.

TABLE 3-14: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Source: *2003 AQMP*, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's *2003 Air Quality Management Plan (2003 AQMP)* and the *1992 Federal Attainment Plan for Carbon Monoxide* (*1992 CO Plan*), peak CO concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hour CO concentration measured at the Long Beach Boulevard and Imperial Highway intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the *2003 AQMP* was prepared (27). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

In contrast, the ambient 8-hour CO concentration within the Project study area is estimated at 0.8 ppm—0.5 ppm. Therefore, even if the traffic volumes for the Project were double or even triple of the traffic volumes generated at the Long Beach Boulevard and Imperial Highway intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.8 ppm and 0.4 ppm, respectively (data from Coachella Valley 1 station for 2021). Therefore, even if the traffic volumes for the proposed Project were ten times the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, due to the on-going improvements in ambient air quality and vehicular emissions controls, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. As noted above, only 0.7 ppm were attributable to the traffic volumes and congestion at one of the busiest intersections in the SCAB. Therefore if these traffic volumes were multiplied by ten times, it could be expected that the CO attributable to traffic would increase tenfold as well, resulting in 7 ppm – even if this were added to either the 1-hour or 8-hour CO concentrations within the Project study area, this would result in 7.8 ppm and 7.4 ppm for the 1-hr and 8-hr timeframes, respectively. Neither of which would exceed the applicable 1-hr standard of 20 ppm or the 8-hr standard of 9 ppm.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour

(vph) —or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (28). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 3-15. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day and AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (27).

TABLE 3-15: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: *2003 AQMP*

As shown on Table 3-16, the highest trips on a segment of road for the proposed Project during AM and PM traffic is 3,208 vph and 3,601 vph, respectively, on Indian Canyon Dr. and 20th Av. (20). As such, Project-related traffic volumes are less than the traffic volumes identified in the 2003 AQMP. The Project considered herein would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

TABLE 3-16: EAPC TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Indian Canyon Dr. / 19th Av.	1057/1641	1639/1208	13/35	61/208	2770/3092
Indian Canyon Dr. / Commercial Plaza	1068/1639	1593/1351	0/0	19/25	2680/3015
Indian Canyon Dr. / 20th Av.	763/1060	1554/1316	99/123	792/1102	3208/3601
Indian Canyon Dr. / I-10 EB On-Ramp	1161/1584	1709/1407	0/0	0/0	2870/2991

3.10 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SSAB and is subject to SCAQMD's 2022 AQMP and the 2003 CV PM_{10} SIP. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as

well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SSAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the *Final 2022 AQMP* (*2022 AQMP*). The *2022 AQMP* continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (29). Similar to the 2016 AQMP, the *2022 AQMP* incorporates scientific and technological information and planning assumptions, including the *2020-2045 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (30). The Project's consistency with the AQMP will be determined using the *2022 AQMP* as discussed below.

SCAG adopted the 2020-*2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal metropolitan planning organization (MPO) requirements under the Sustainable communities and Climate Protection Act. The proposed Project would be developed in accordance with all applicable rules and regulations contained in those plans.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook* (31). These indicators are discussed below:

3.10.1 Consistency Criterion No. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. As evaluated, the Project's regional and localized construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

As evaluated, the Project would not exceed the applicable regional and localized significance thresholds for operational activity. As such, the Project would not have the potential to result in a significant impact with respect to this criterion and the Project would be consistent with the AQMP.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

3.10.2 CONSISTENCY CRITERION NO. 2

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The *2022 AQMP* demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Palm Springs General Plan is considered to be consistent with the AQMP***.***

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

Operational Impacts – Consistency Criterion 2

The City of Palm Springs General Plan designates the Project Site for "Industrial" uses. The "Industrial" designation allows for research and development parks, light manufacturing, laboratories, and industrial services with a maximum FAR of 0.5 (32).

The zoning designation for the Project site is designated as "Manufacturing (M-2)." The "M-2" designation allows for the development of warehouse and distribution centers, and industrial uses which include fabrication, manufacturing, assembly, or processing that do not create by-products that will adversely affect the resort-open space environment of the city.

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet, which is consistent with the site's land use designation. Since the Project's proposed land use is consistent with the General Plan and as the Project's construction and operational-source air pollutant emissions would not exceed the regional or localized significance thresholds, the Project is determined to be consistent with the second criterion.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP CONSISTENCY CONCLUSION

The Project would not result in or cause NAAQS or CAAQS violations. Additionally, the proposed land uses are consistent with the City's designated uses. As such, the Project is therefore considered to be consistent with the AQMP.

3.11 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Further, Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

3.12 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance

with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required (33).

3.13 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published the *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* which addresses the cumulative impacts from air pollution (34). In this report the SCAQMD clearly states:

> *"…the AQMD [Air Quality Management District] uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the HI [Hazard Index] significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

CONSTRUCTION IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

OPERATIONAL IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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4 REFERENCES

1. **State of California.** *2019 CEQA California Environmental Quality Act.* 2019.
2. **South Coast Air Quality Management District.** *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.* 2005.
3. **St. Croix Sensory, Inc.** *The "Gray Line" Between Odor Nuisance and Health Effects.* 2000.
4. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.
5. **United State Environmental Protection Agency.** Frequent Questions about General Conformity . *EPA.* [Online] https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#8.
6. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2018. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2.
7. **Air Resources Board.** State and National Ambient Air Quality Standards. [Online] https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/sad20/appc.pdf.
8. **District, South Coast Air Quality Management.** Air Quality Data Tables. [Online] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year.
9. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990. https://www.epa.gov/environmental-topics/air-topics.
10. —. Air Pollution and the Clean Air Act. [Online] http://www.epa.gov/air/caa/.
11. **United States Environmental Protection Agency.** 1990 Clean Air Act Amendment Summary: Title I. [Online] https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-i.
12. —. 1990 Clean Air Act Amendment Summary: Title II. [Online] https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-ii.
13. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: April 16, 2018.] http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm.
14. **California Energy Commission.** Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses. [Online] August 11, 2021. https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0.
15. **California Department of General Services.** 2022 CALGreen Code. *CALGreen.* [Online] https://codes.iccsafe.org/content/CAGBC2022P1.
16. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.
17. **South Coast Air Quality Management District (SCAQMD).** SCAQMD Air Quality Significance Thresholds. [Online] https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf.
18. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] May 2022. www.caleemod.com.

19. **Association of Environmental Professionals.** *Guidelines for Implementation of the California Environmental Quality Act.* As Amended in 2018.

20. **Urban Crossroads, Inc.** *North Indian Canyon & 19th Avenue High-Cube Warehouse Traffic Analysis.* 2023.

21. **South Coast Air Quality Management District.** *Localized Significance Thresholds Methodology.* s.l. : South Coast Air Quality Managment District, 2008.

22. **Lake Environmental.** US EPA Models. *Lake Environmental.* [Online] http://www.weblakes.com/download/us_epa.html.

23. **South Coast Air Quality Management District.** Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf.

24. **California Air Pollution Control Officers Association (CAPCOA).** Appendix A: Calculation Details for CalEEMod. *CalEEMod.* [Online] October 2017. http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6.

25. —. Appendix C: Emission Calculation Details for CalEEMod. *CalEEMod.* [Online] May 2022. https://www.caleemod.com/documents/user-guide/04_Appendix%20C.pdf.

26. **South Coast Air Quality Management District.** 2003 Air Quality Management Plan. [Online] 2003. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2003-air-quality-management-plan/2003-aqmp-appendix-v.pdf.

27. —. 2003 Air Quality Management Plan. [Online] 2003. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp.

28. **Bay Area Air Quality Management District.** [Online] http://www.baaqmd.gov/.

29. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11.

30. **Southern California Association of Governments.** 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. [Online] September 2020. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176.

31. **South coast Air Quality Management District.** *CEQA Air Quality Handbook (1993).* 1993.

32. **Springs, City of Palm.** City of Palm Springs General Plan. [Online] https://www.palmspringsca.gov/home/showpublisheddocument/1969/635545493507830000.

33. **South Coast Air Quality Management District.** RULE 402 NUISANCE. [Online] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf.

34. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed N Indian Canyon/19th Ave High-Cube Warehouse Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation.

If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – CARB • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

Appendix C
Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

Appendix C
Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. § 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards [1]		National Standards [1]		
		Concentration [3]	Method [4]	Primary [5,6]	Secondary [5,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency (U.S. EPA) for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$)as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

Figure 1

Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 1
California Ambient Air Quality Standards Area Designations for Ozone[1]

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County	N			
Mono County	N			
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN				A
MOJAVE DESERT AIR BASIN	N			
MOUNTAIN COUNTIES AIR BASIN				
Amador County		NA-T		
Calaveras County	N			
El Dorado County (portion)	N			
Mariposa County	N			
Nevada County	N			
Placer County (portion)	N			
Plumas County			U	
Sierra County			U	
Tuolumne County	N			
NORTH CENTRAL COAST AIR BASIN				A
NORTH COAST AIR BASIN				A

	N	NA-T	U	A
NORTHEAST PLATEAU AIR BASIN				A
SACRAMENTO VALLEY AIR BASIN				
Colusa and Glenn Counties				A
Shasta County		NA-T		
Sutter/Yuba Counties				
Sutter Buttes	N			
Remainder of Sutter County	N			
Yuba County	N			
Yolo/Solano Counties		NA-T		
Remainder of Air Basin	N			
SALTON SEA AIR BASIN	N			
SAN DIEGO AIR BASIN	N			
SAN FRANCISCO BAY AREA AIR BASIN	N			
SAN JOAQUIN VALLEY AIR BASIN	N			
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County	N			
Santa Barbara County	N			
Ventura County	N			
SOUTH COAST AIR BASIN	N			

[1] AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

Figure 2

Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 2
California Ambient Air Quality Standards Area Designation for Suspended Particulate Matter (PM_{10})

	N	U	A
GREAT BASIN VALLEYS AIR BASIN	N		
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN	N		
MOJAVE DESERT AIR BASIN	N		
MOUNTAIN COUNTIES AIR BASIN			
Amador County		U	
Calaveras County	N		
El Dorado County (portion)	N		
Mariposa County			
- Yosemite National Park	N		
- Remainder of County		U	
Nevada County	N		
Placer County (portion)	N		
Plumas County	N		
Sierra County	N		
Tuolumne County		U	

	N	U	A
NORTH CENTRAL COAST AIR BASIN	N		
NORTH COAST AIR BASIN			
Del Norte, Mendocino, Sonoma (portion) and Trinity Counties			A
Remainder of Air Basin	N		
NORTHEAST PLATEAU AIR BASIN			
Siskiyou County			A
Remainder of Air Basin		U	
SACRAMENTO VALLEY AIR BASIN			
Shasta County			A
Remainder of Air Basin	N		
SALTON SEA AIR BASIN	N		
SAN DIEGO AIR BASIN	N		
SAN FRANCISCO BAY AREA AIR BASIN	N		
SAN JOAQUIN VALLEY AIR BASIN	N		
SOUTH CENTRAL COAST AIR BASIN	N		
SOUTH COAST AIR BASIN	N		

Figure 3

Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 3
California Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
Plumas County			A
- Portola Valley[1]	N		
Remainder of Air Basin		U	
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			
Butte County	N		
Colusa County			A
Glenn County			A
Placer County (portion)			A
Sacramento County			A
Shasta County			A
Sutter and Yuba Counties			A
Remainder of Air Basin		U	

	N	U	A
SALTON SEA AIR BASIN			
Imperial County			
- City of Calexico[2]	N		
Remainder of Air Basin			A
SAN DIEGO AIR BASIN	N		
SAN FRANCISCO BAY AREA AIR BASIN	N		
SAN JOAQUIN VALLEY AIR BASIN	N		
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN	N		

[1] California Code of Regulations, title 17, section 60200(c)

[2] California Code of Regulations, title 17, section 60200(a)

Figure 4

2021
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 4
California Ambient Air Quality Standards Area Designation for Carbon Monoxide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County				A
Mono County				A
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN				A
MOJAVE DESERT AIR BASIN				
Kern County (portion)			U	
Los Angeles County (portion)				A
Riverside County (portion)			U	
San Bernardino County (portion)				A
MOUNTAIN COUNTIES AIR BASIN				
Amador County			U	
Calaveras County			U	
El Dorado County (portion)			U	
Mariposa County			U	
Nevada County			U	
Placer County (portion)			U	
Plumas County				A
Sierra County			U	
Tuolumne County				A
NORTH CENTRAL COAST AIR BASIN				
Monterey County				A
San Benito County			U	
Santa Cruz County			U	
NORTH COAST AIR BASIN				
Del Norte County			U	
Humboldt County				A
Mendocino County				A
Sonoma County (portion)			U	
Trinity County			U	
NORTHEAST PLATEAU AIR BASIN			U	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN				
Butte County				A
Colusa County			U	
Glenn County			U	
Placer County (portion)				A
Sacramento County				A
Shasta County			U	
Solano County (portion)				A
Sutter County				A
Tehama County			U	
Yolo County				A
Yuba County			U	
SALTON SEA AIR BASIN				A
SAN DIEGO AIR BASIN				A
SAN FRANCISCO BAY AREA AIR BASIN				A
SAN JOAQUIN VALLEY AIR BASIN				
Fresno County				A
Kern County (portion)				A
Kings County			U	
Madera County			U	
Merced County			U	
San Joaquin County				A
Stanislaus County				A
Tulare County				A
SOUTH CENTRAL COAST AIR BASIN				A
SOUTH COAST AIR BASIN				A

* The area designated for carbon monoxide is a county or portion of a county

Figure 5

Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 5
California Ambient Air Quality Standards Area Designations for Nitrogen Dioxide

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A

	N	U	A
SACRAMENTO VALLEY AIR BASIN			A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			
CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties			A
Remainder of Air Basin			A

Figure 6

2021
Area Designations for State
Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 6
California Ambient Air Quality Standards Area Designation for Sulfur Dioxide*

	N	A
GREAT BASIN VALLEYS AIR BASIN		A
LAKE COUNTY AIR BASIN		A
LAKE TAHOE AIR BASIN		A
MOJAVE DESERT AIR BASIN		A
MOUNTAIN COUNTIES AIR BASIN		A
NORTH CENTRAL COAST AIR BASIN		A
NORTH COAST AIR BASIN		A
NORTHEAST PLATEAU AIR BASIN		A

	N	A
SACRAMENTO VALLEY AIR BASIN		A
SALTON SEA AIR BASIN		A
SAN DIEGO AIR BASIN		A
SAN FRANCISCO BAY AREA AIR BASIN		A
SAN JOAQUIN VALLEY AIR BASIN		A
SOUTH CENTRAL COAST AIR BASIN		A
SOUTH COAST AIR BASIN		A

* The area designated for sulfur dioxide is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 7

2021
Area Designations for State
Ambient Air Quality Standards
SULFATES
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 7
California Ambient Air Quality Standards Area Designation for Sulfates

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A

	N	U	A
SACRAMENTO VALLEY AIR BASIN			A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			A

Figure 8

2021
Area Designations for State
Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

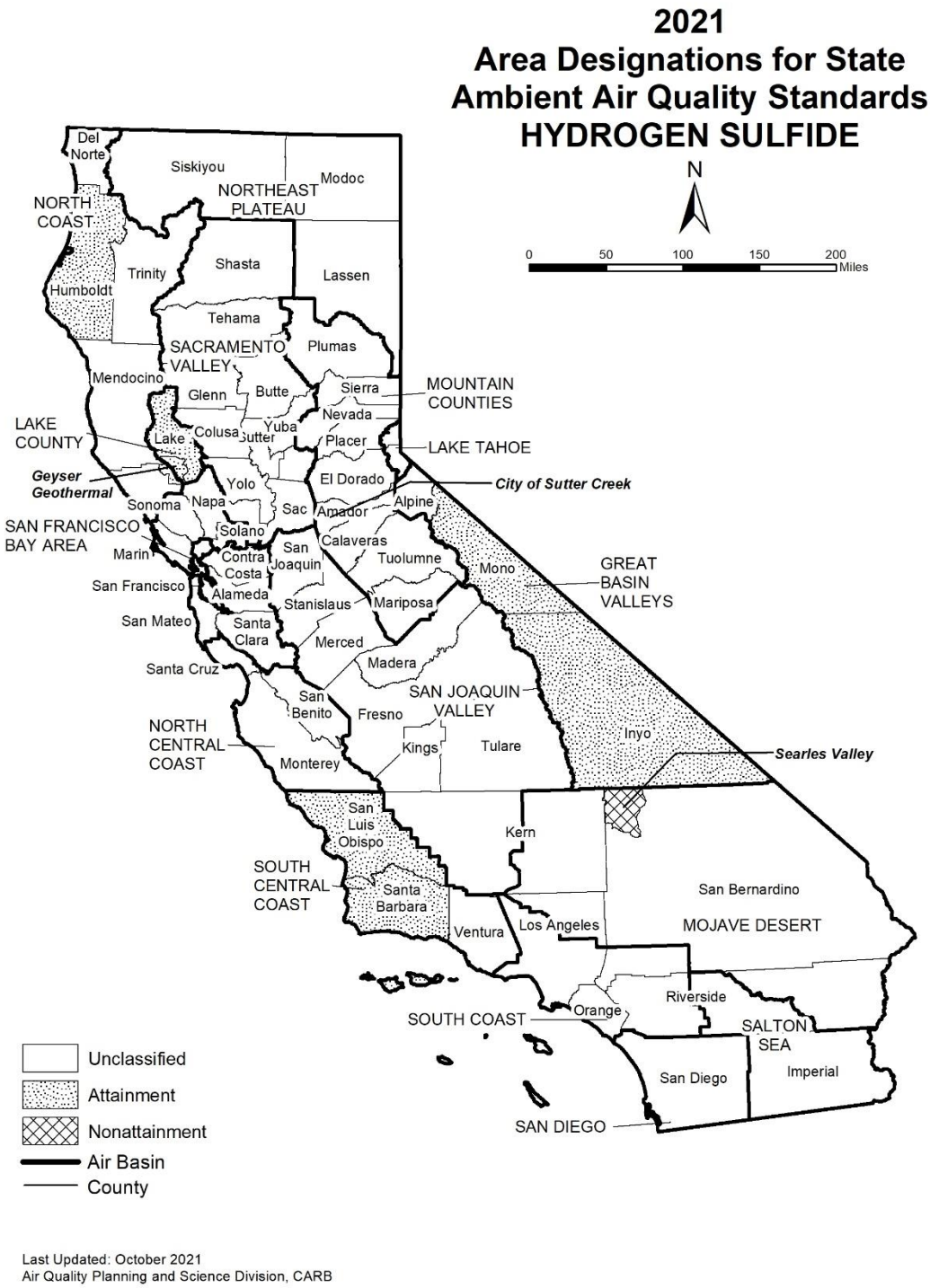
Table 8
California Ambient Air Quality Standards Area Designations for Lead (particulate)*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			A

	N	U	A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			A

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 9



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 9
California Ambient Air Quality Standards Area Designation for Hydrogen Sulfide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County				A
Mono County				A
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN			U	
MOJAVE DESERT AIR BASIN				
Kern County (portion)			U	
Los Angeles County (portion)			U	
Riverside County (portion)			U	
San Bernardino County (portion)				
- Searles Valley Planning Area[1]	N			
- Remainder of County			U	
MOUNTAIN COUNTIES AIR BASIN				
Amador County				
- City of Sutter Creek	N			
- Remainder of County			U	
Calaveras County			U	
El Dorado County (portion)			U	
Mariposa County			U	
Nevada County			U	
Placer County (portion)			U	
Plumas County			U	
Sierra County			U	
Tuolumne County			U	

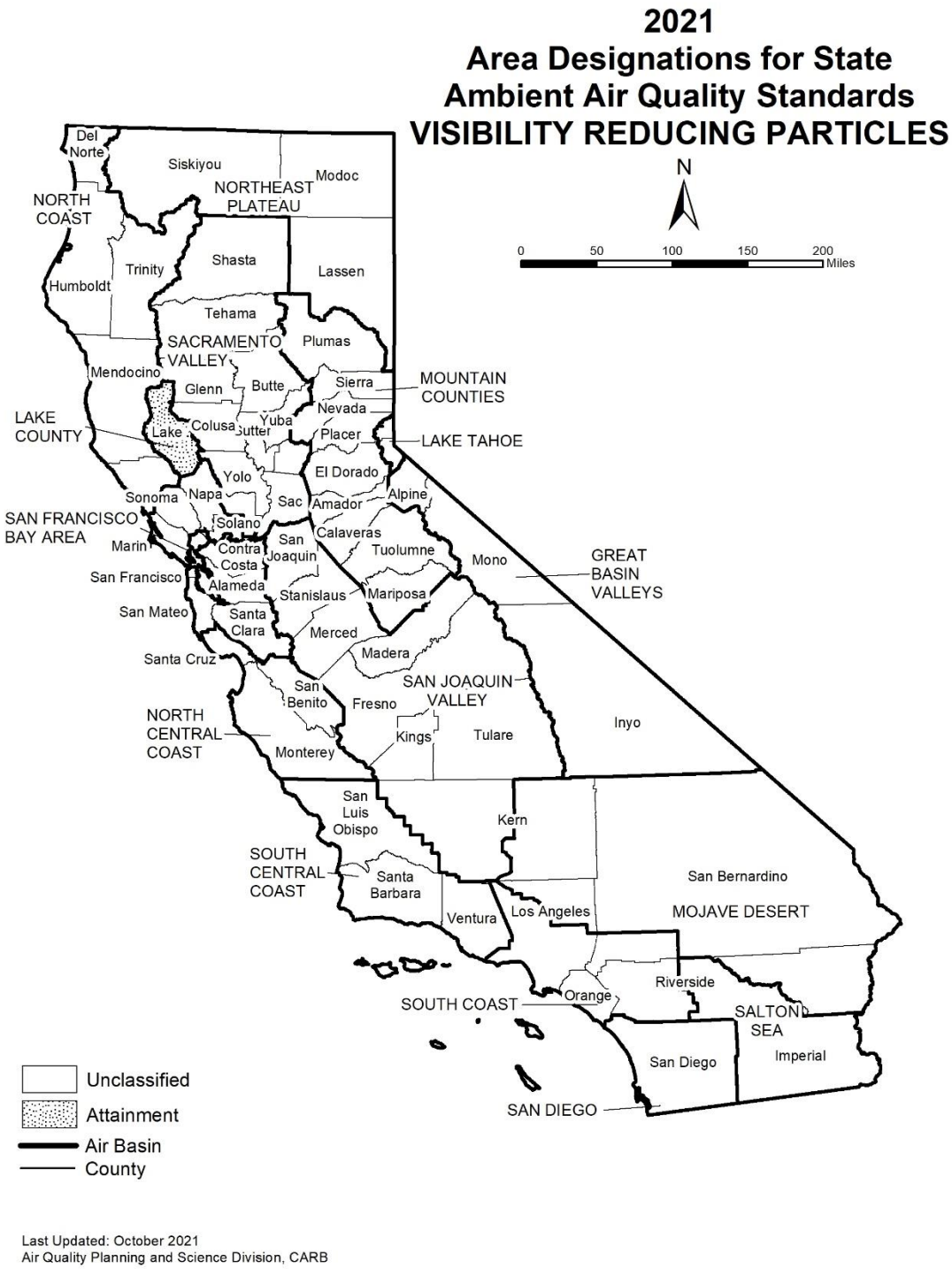
	N	NA-T	U	A
NORTH CENTRAL COAST AIR BASIN			U	
NORTH COAST AIR BASIN				
Del Norte County			U	
Humboldt County				A
Mendocino County			U	
Sonoma County (portion)				
- Geyser Geothermal Area[2]				A
- Remainder of County			U	
Trinity County			U	
NORTHEAST PLATEAU AIR BASIN			U	
SACRAMENTO VALLEY AIR BASIN			U	
SALTON SEA AIR BASIN			U	
SAN DIEGO AIR BASIN			U	
SAN FRANCISCO BAY AREA AIR BASIN			U	
SAN JOAQUIN VALLEY AIR BASIN			U	
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County				A
Santa Barbara County				A
Ventura County			U	
SOUTH COAST AIR BASIN			U	

* The area designated for hydrogen sulfide is a county or portion of a county

[1] 52 Federal Register 29384 (August 7, 1987)

[2] California Code of Regulations, title 17, section 60200(d)

Figure 10



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 10
California Ambient Air Quality Standards Area Designation for Visibility Reducing Particles

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			U	
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN			U	
MOJAVE DESERT AIR BASIN			U	
MOUNTAIN COUNTIES AIR BASIN			U	
NORTH CENTRAL COAST AIR BASIN			U	
NORTH COAST AIR BASIN			U	
NORTHEAST PLATEAU AIR BASIN			U	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN			U	
SALTON SEA AIR BASIN			U	
SAN DIEGO AIR BASIN			U	
SAN FRANCISCO BAY AREA AIR BASIN			U	
SAN JOAQUIN VALLEY AIR BASIN			U	
SOUTH CENTRAL COAST AIR BASIN			U	
SOUTH COAST AIR BASIN			U	

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. Environmental Protection Agency (U.S. EPA) website:

https://www.epa.gov/green-book

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

https://www.epa.gov/criteria-air-pollutants

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment (A)
- Nonattainment (N)
- Unclassifiable (U)

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment (N)
- Unclassifiable/Attainment (U/A)

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Area designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 12.0 µg/m^3. Area designations were finalized in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m^3 as well as the 24-hour standard of 35 µg/m^3, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO_2 standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO_2 standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO_2). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment (N),
- Unclassifiable (U), and
- Unclassifiable/Attainment (U/A).

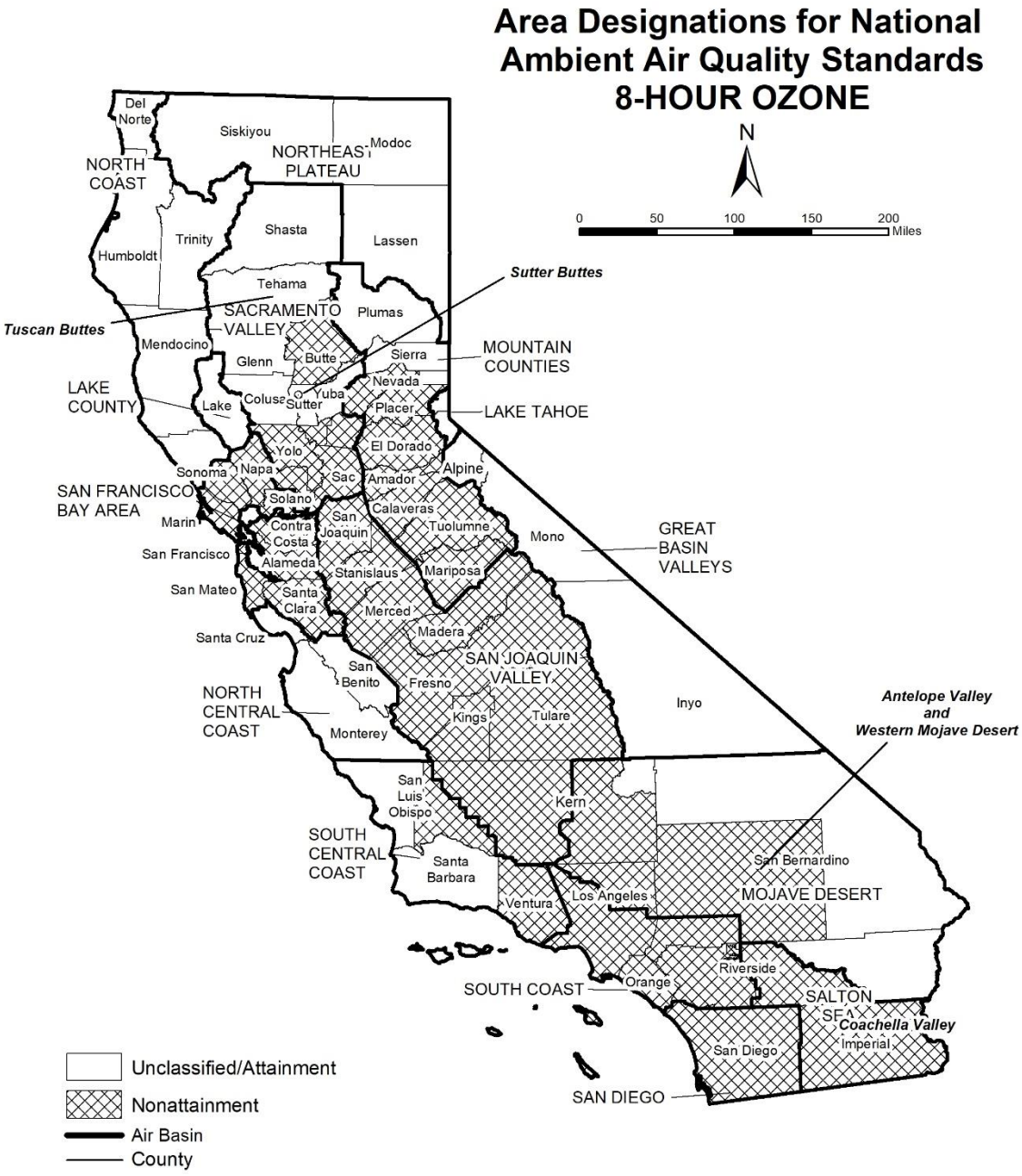
On June 2, 2010, the U.S. EPA established a new primary 1-hour SO_2 standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual average standards. Area designations for the 1-hour SO_2 standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m^3. Designations were made for this standard in November 2010.

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at: *https://ecfr.io/Title-40/se40.20.81_1305*

Figure 11



Last Updated: October 2021
Map reflects the 2015 8-hour ozone standard of 0.070 ppm
Air Quality Planning and Science Division, CARB

Table 11
National Ambient Air Quality Standards Area Designations for 8-Hour Ozone*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		
Amador County	N	
Calaveras County	N	
El Dorado County (portion)[1]	N	
Mariposa County	N	
Nevada County		
- Western Nevada County	N	
- Remainder of County		U/A
Placer County (portion)[1]	N	
Plumas County		U/A
Sierra County		U/A
Tuolumne County	N	
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		
Butte County	N	
Colusa County		U/A
Glenn County		U/A
Sacramento Metro Area[1]	N	
Shasta County		U/A
Sutter County		
- Sutter Buttes	N	
- Southern portion of Sutter County[1]	N	
- Remainder of Sutter County		U/A
Tehama County		
- Tuscan Buttes	N	
- Remainder of Tehama County		U/A

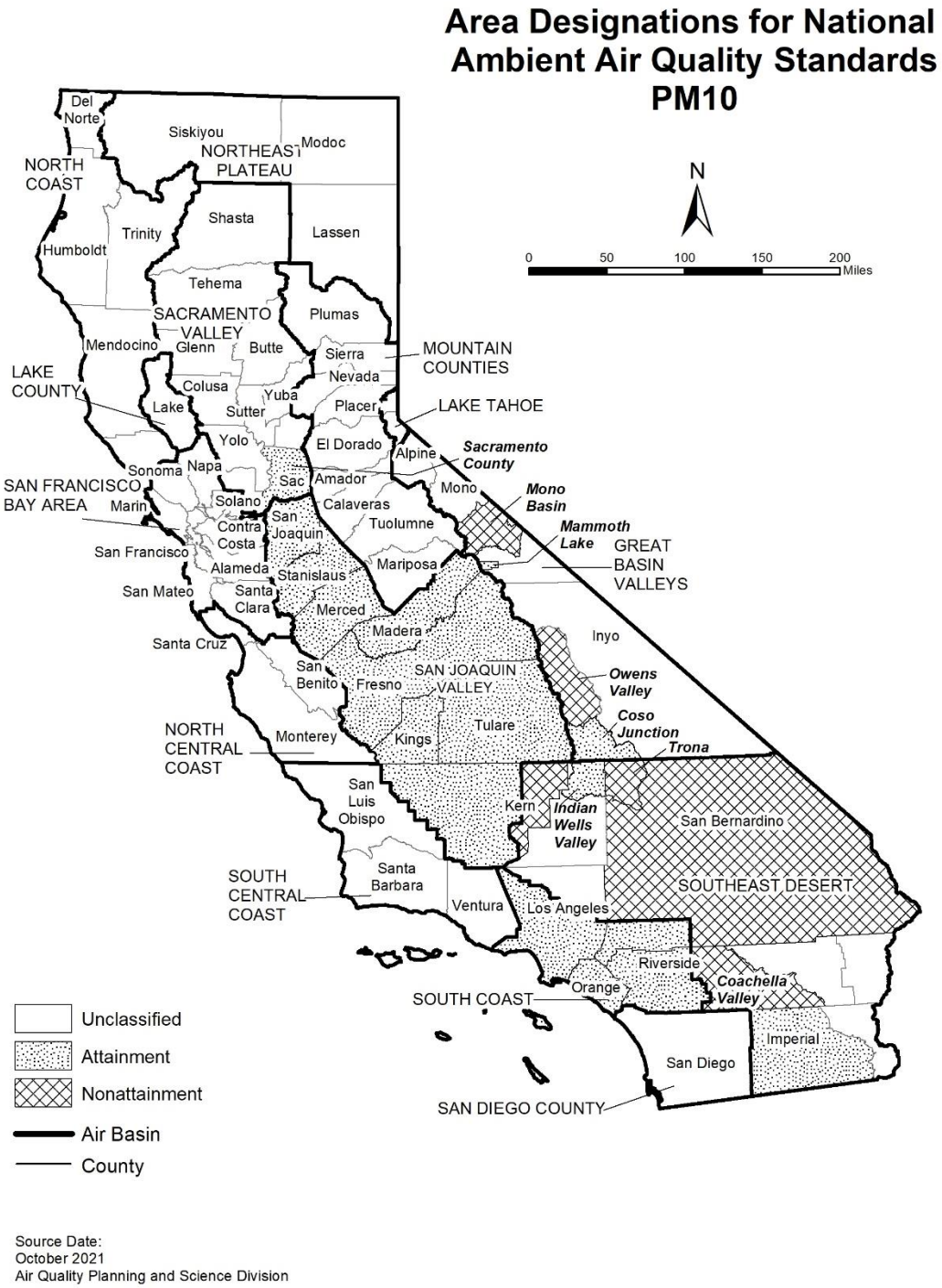
	N	U/A
SACRAMENTO VALLEY AIR BASIN (cont.)		
Yolo County[1]	N	
Yuba County		U/A
SAN DIEGO COUNTY	N	
SAN FRANCISCO BAY AREA AIR BASIN	N	
SAN JOAQUIN VALLEY AIR BASIN	N	
SOUTH CENTRAL COAST AIR BASIN[2]		
San Luis Obispo County		
- Eastern San Luis Obispo County	N	
- Remainder of County		U/A
Santa Barbara County		U/A
Ventura County		
- Area excluding Anacapa and San Nicolas Islands	N	
- Channel Islands[2]		U/A
SOUTH COAST AIR BASIN[2]	N	
SOUTHEAST DESERT AIR BASIN		
Kern County (portion)	N	
- Indian Wells Valley		U/A
Imperial County	N	
Los Angeles County (portion)	N	
Riverside County (portion)		
- Coachella Valley	N	
- Non-AQMA portion		U/A
San Bernardino County		
- Western portion (AQMA)	N	
- Eastern portion (non-AQMA)		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and Table reflect the 2015 8-hour ozone standard of 0.070 ppm.

[1] For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

[2] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
South Coast Air Basin:
Los Angeles County includes San Clemente and Santa Catalina Islands.

Figure 12



Source Date:
October 2021
Air Quality Planning and Science Division

Table 12
National Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			
Alpine County		U	
Inyo County			
- Owens Valley Planning Area	N		
- Coso Junction			A
- Remainder of County		U	
Mono County			
- Mammoth Lake Planning Area			A
- Mono Lake Basin	N		
- Remainder of County		U	
LAKE COUNTY AIR BASIN		U	
LAKE TAHOE AIR BASIN		U	
MOUNTAIN COUNTIES AIR BASIN		U	
NORTH CENTRAL COAST AIR BASIN		U	
NORTH COAST AIR BASIN		U	
NORTHEAST PLATEAU AIR BASIN		U	
SACRAMENTO VALLEY AIR BASIN			
Sacramento County[1]			A
Remainder of Air Basin		U	
SAN DIEGO COUNTY		U	

	N	U	A
SAN FRANCISCO BAY AREA AIR BASIN		U	
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN		U	
SOUTH COAST AIR BASIN			A
SOUTHEAST DESERT AIR BASIN			
Eastern Kern County			
- Indian Wells Valley			A
- Portion within San Joaquin Valley Planning Area	N		
- Remainder of County		U	
Imperial County			
- Imperial Valley Planning Area[2]			A
- Remainder of County		U	
Los Angeles County (portion)		U	
Riverside County (portion)			
- Coachella Valley	N		
- Non-AQMA portion		U	
San Bernardino County			
- Trona	N		
- Remainder of County	N		

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

[1] Air quality in Sacramento County meets the national PM_{10} standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

[2] The request for redesignation to attainment for the Imperial Valley Planning Area was approved by U.S. EPA in September 2020, effective October 2020.

Figure 13

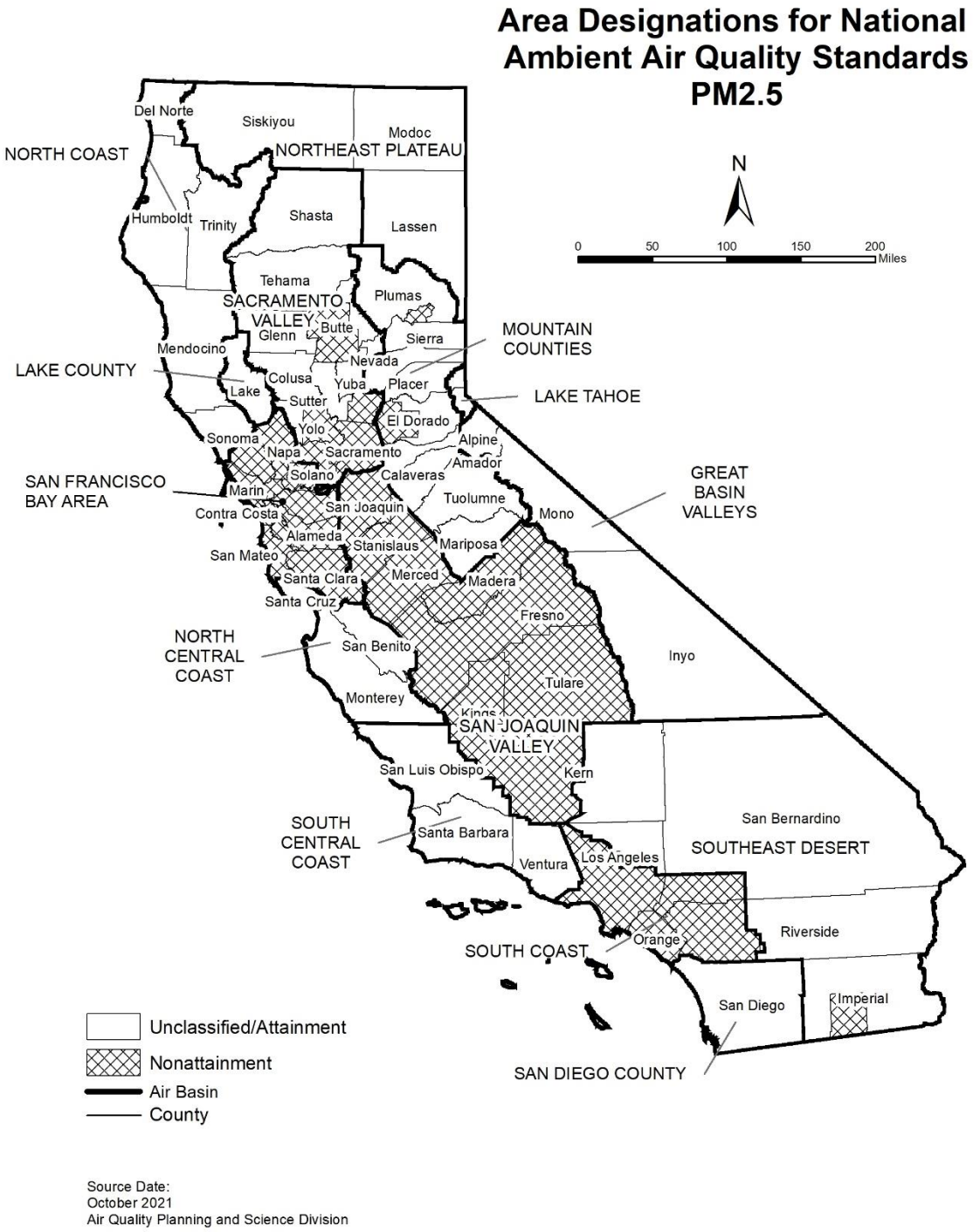

Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTH COAST
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
SACRAMENTO VALLEY
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Sonoma
Alpine
Napa
Sacramento
Amador
Solano
Calaveras
GREAT BASIN VALLEYS
SAN FRANCISCO BAY AREA
Marin
Tuolumne
San Joaquin
Mono
Contra Costa
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
Inyo
Tulare
Monterey
Kings
SAN JOAQUIN VALLEY
San Luis Obispo
Kern
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 13
National Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		
Plumas County		
- Portola Valley Portion of Plumas	N	
- Remainder of Plumas County		U/A
Remainder of Air Basin		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		
Sacramento Metro Area[1]	N	
Remainder of Air Basin		U/A

	N	U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN[2]	N	
SAN JOAQUIN VALLEY AIR BASIN	N	
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN[3]	N	
SOUTHEAST DESERT AIR BASIN		
Imperial County (portion)[4]	N	
Remainder of Air Basin		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour $PM_{2.5}$ standard as well as the 1997 and 2012 $PM_{2.5}$ annual standards.

[1] For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[2] Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[3] Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

[4] That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

Figure 14

Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 14
National Ambient Air Quality Standards Area Designations for Carbon Monoxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 15

Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Marin
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Los Angeles
San Bernardino
Ventura
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

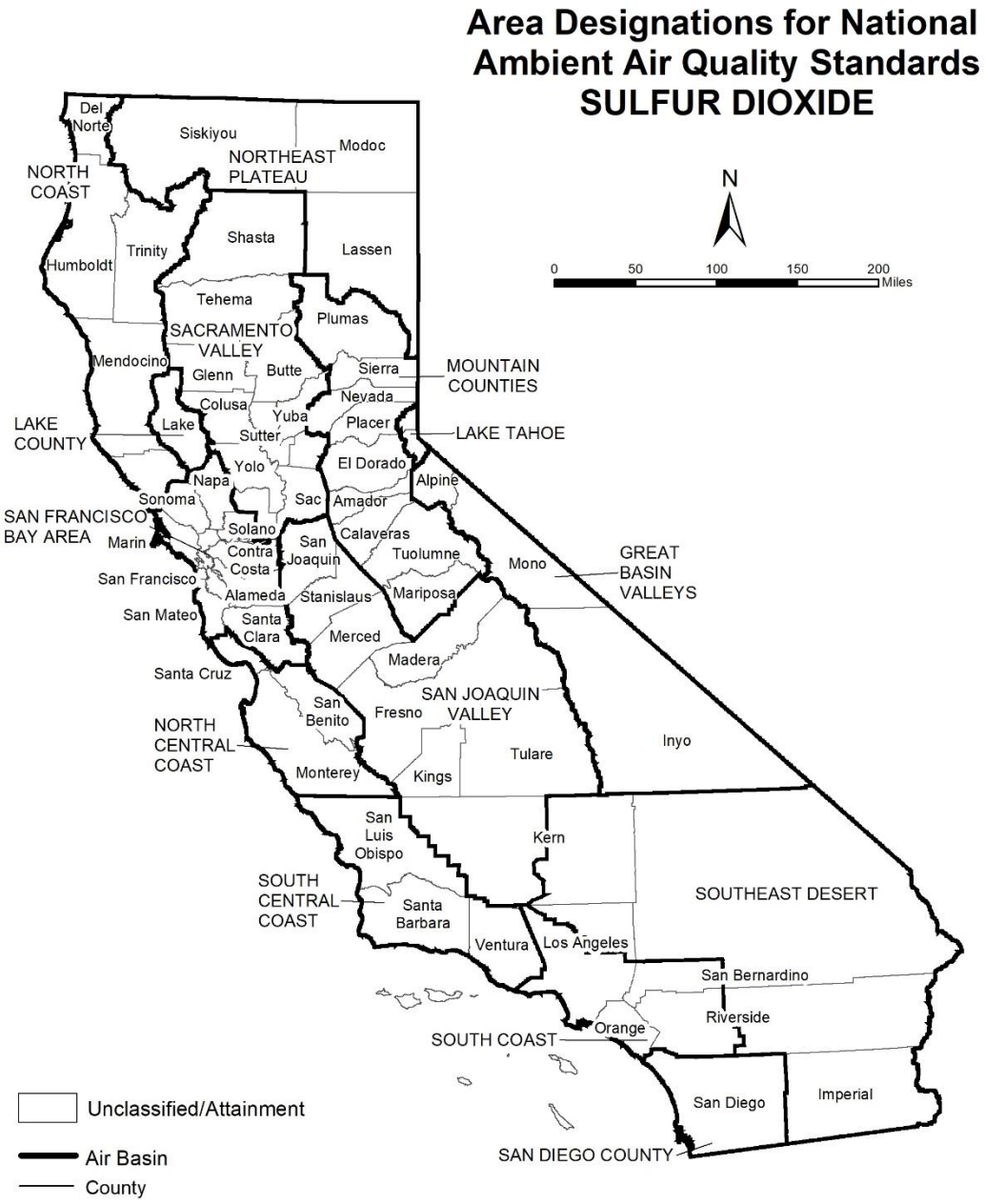
Table 15
National Ambient Air Quality Standards Area Designations for Nitrogen Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 16



Source Date:
October 2021
Air Quality Planning and Science Division

Table 16
National Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN[1]		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and table reflect the 2010 1-hour SO_2 standard of 75 ppb.

[1] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

Figure 17

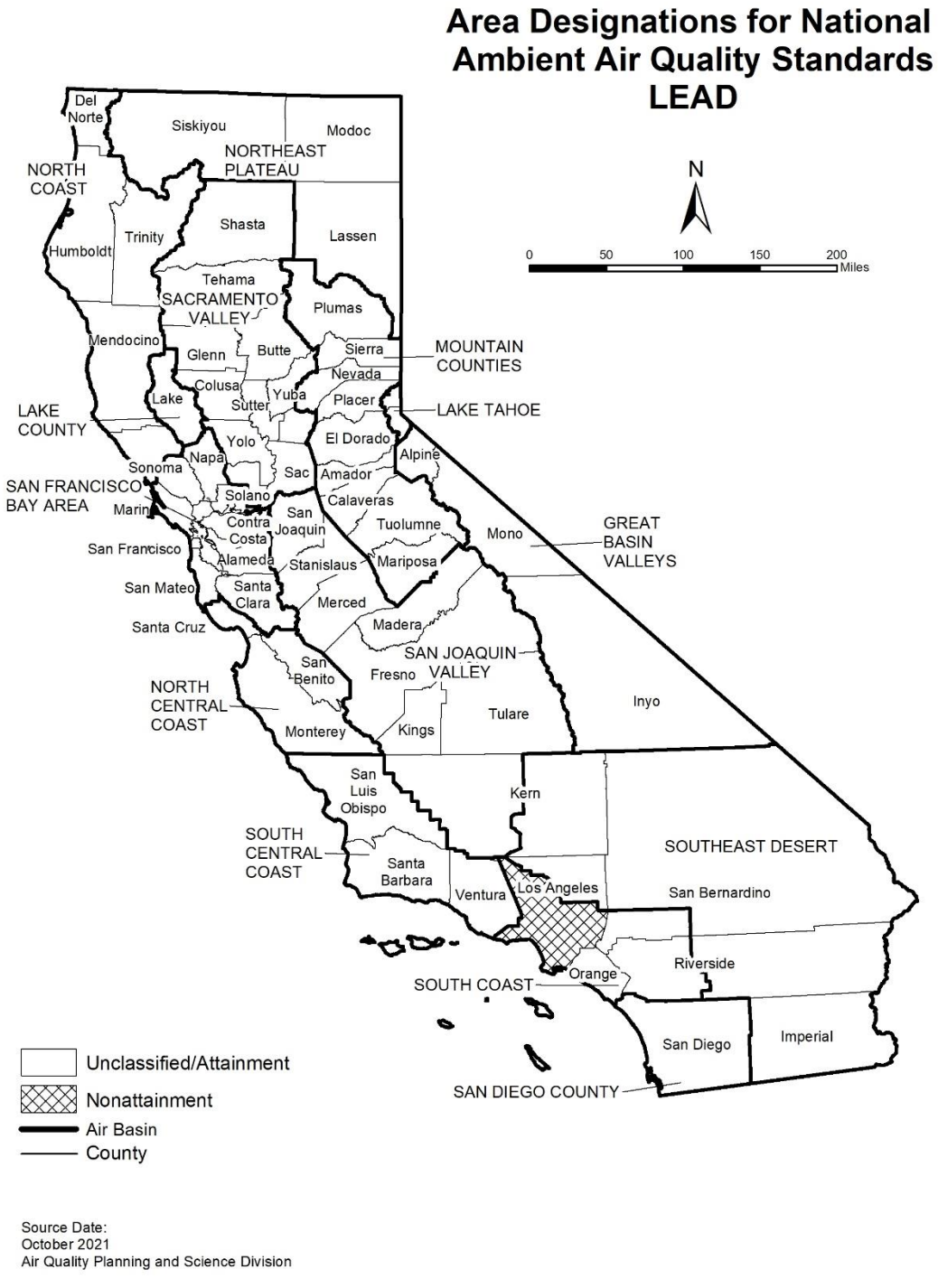

Area Designations for National Ambient Air Quality Standards
LEAD
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 17
National Ambient Air Quality Standards Area Designations for Lead (particulate)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		U/A

	N	U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		
Los Angeles County (portion)[1]	N	
Remainder of Air Basin		U/A
SOUTHEAST DESERT AIR BASIN		U/A

[1] Portion of County in Air Basin, not including Channel Islands

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APPENDIX 3.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

15097 - N Indian Canyon & 19th Ave Detailed Report

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2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

3.3. Grading (2024) - Unmitigated

3.5. Building Construction (2024) - Unmitigated

3.7. Building Construction (2025) - Unmitigated

3.9. Paving (2025) - Unmitigated

3.11. Architectural Coating (2025) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15097 - N Indian Canyon & 19th Ave
Construction Start Date	1/8/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.911458, -116.546215
County	Riverside-Salton Sea
City	Palm Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5694
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	739	1000sqft	17.0	739,360	0.00	—	—	—
Parking Lot	787	Space	7.08	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.5	Acre	12.5	0.00	0.00	—	—	—
User Defined Industrial	739	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.83	73.9	66.9	94.9	0.14	2.83	7.97	10.8	2.61	2.26	4.87	—	20,576	20,576	0.72	0.77	28.8	20,853
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.93	73.4	37.6	62.2	0.09	1.71	5.85	7.20	1.58	1.83	3.01	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.74	11.3	24.8	35.8	0.05	1.01	3.40	4.42	0.94	0.94	1.87	—	8,389	8,389	0.30	0.36	6.15	8,509
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	2.06	4.52	6.53	0.01	0.19	0.62	0.81	0.17	0.17	0.34	—	1,389	1,389	0.05	0.06	1.02	1,409

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	9.83	8.40	66.9	94.9	0.14	2.83	7.97	10.8	2.61	2.26	4.87	—	20,576	20,576	0.72	0.77	28.8	20,853
2025	6.43	73.9	36.3	78.1	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	15,587	15,587	0.54	0.64	27.8	15,817
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.80	3.97	37.6	48.2	0.07	1.71	4.84	5.95	1.58	1.83	3.01	—	12,200	12,200	0.44	0.60	0.66	12,392
2025	5.93	73.4	36.7	62.2	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.74	3.19	24.8	35.8	0.05	1.01	3.40	4.42	0.94	0.94	1.87	—	8,389	8,389	0.30	0.36	6.15	8,509
2025	1.32	11.3	7.94	14.9	0.02	0.29	1.38	1.66	0.26	0.33	0.59	—	3,481	3,481	0.12	0.16	2.90	3,533
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.68	0.58	4.52	6.53	0.01	0.19	0.62	0.81	0.17	0.17	0.34	—	1,389	1,389	0.05	0.06	1.02	1,409
2025	0.24	2.06	1.45	2.71	< 0.005	0.05	0.25	0.30	0.05	0.06	0.11	—	576	576	0.02	0.03	0.48	585

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	29.1	35.4	166	0.55	0.76	32.8	33.6	0.71	8.41	9.12	702	60,845	61,547	72.3	5.80	164	65,248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.03	22.9	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	702	56,897	57,599	72.3	5.85	4.26	61,154
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.18	24.9	32.4	104	0.46	0.64	28.5	29.1	0.61	7.30	7.90	702	51,633	52,335	72.2	5.19	61.9	55,749
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.68	4.55	5.92	19.0	0.08	0.12	5.20	5.32	0.11	1.33	1.44	116	8,548	8,665	12.0	0.86	10.3	9,230

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.04	6.97	35.1	134	0.54	0.70	32.8	33.6	0.67	8.41	9.08	—	56,431	56,431	0.86	4.95	164	58,092
Area	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	13.8	29.1	35.4	166	0.55	0.76	32.8	33.6	0.71	8.41	9.12	702	60,845	61,547	72.3	5.80	164	65,248
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.03	5.99	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	—	52,615	52,615	0.86	5.00	4.26	54,131
Area	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529

Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	7.03	22.9	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	702	56,897	57,599	72.3	5.85	4.26	61,154
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.36	5.45	32.3	88.3	0.46	0.61	28.5	29.1	0.58	7.30	7.88	—	47,286	47,286	0.74	4.35	61.9	48,661
Area	2.82	19.5	0.13	15.9	< 0.005	0.03	—	0.03	0.02	—	0.02	—	65.2	65.2	< 0.005	< 0.005	—	65.4
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	9.18	24.9	32.4	104	0.46	0.64	28.5	29.1	0.61	7.30	7.90	702	51,633	52,335	72.2	5.19	61.9	55,749
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.00	5.90	16.1	0.08	0.11	5.20	5.31	0.11	1.33	1.44	—	7,829	7,829	0.12	0.72	10.3	8,056
Area	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	581	581	0.05	0.01	—	584
Water	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Waste	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Total	1.68	4.55	5.92	19.0	0.08	0.12	5.20	5.32	0.11	1.33	1.44	116	8,548	8,665	12.0	0.86	10.3	9,230

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.17	2.66	25.5	21.0	0.03	1.28	—	1.28	1.18	—	1.18	—	3,335	3,335	0.14	0.03	—	3,347
Dust From Material Movement	—	—	—	—	—	—	3.68	3.68	—	1.78	1.78	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.40	1.15	< 0.005	0.07	—	0.07	0.06	—	0.06	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.01	0.01	0.23	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.01	201
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	36.6	30.5	0.06	1.70	—	1.70	1.56	—	1.56	—	6,597	6,597	0.27	0.05	—	6,619
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	36.6	30.5	0.06	1.70	—	1.70	1.56	—	1.56	—	6,597	6,597	0.27	0.05	—	6,619
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.79	7.52	6.27	0.01	0.35	—	0.35	0.32	—	0.32	—	1,356	1,356	0.05	0.01	—	1,360
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.37	1.14	< 0.005	0.06	—	0.06	0.06	—	0.06	—	224	224	0.01	< 0.005	—	225
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	2.07	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	304	304	0.01	0.01	1.13	308

Vendor	0.04	0.03	0.84	0.38	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	772	772	0.01	0.11	2.10	807
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.12	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	261
Vendor	0.04	0.03	0.91	0.39	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	773	773	0.01	0.11	0.05	805
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	56.7	56.7	< 0.005	< 0.005	0.10	57.5
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	159	159	< 0.005	0.02	0.19	166
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.39	9.39	< 0.005	< 0.005	0.02	9.52
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.3	26.3	< 0.005	< 0.005	0.03	27.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	12.9	15.1	0.03	0.57	—	0.57	0.52	—	0.52	—	2,790	2,790	0.11	0.02	—	2,799
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.36	2.75	< 0.005	0.10	—	0.10	0.10	—	0.10	—	462	462	0.02	< 0.005	—	463
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.87	1.72	1.77	32.1	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,714	4,714	0.18	0.15	17.6	4,782
Vendor	0.15	0.11	3.19	1.44	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,929	2,929	0.03	0.41	7.96	3,059
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.57	1.28	1.89	18.3	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,008	4,008	0.20	0.15	0.45	4,059
Vendor	0.14	0.10	3.44	1.47	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,931	2,931	0.03	0.41	0.21	3,054
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.87	0.79	0.93	12.1	0.00	0.00	2.14	2.14	0.00	0.50	0.50	—	2,273	2,273	0.10	0.08	4.02	2,304
Vendor	0.08	0.06	1.78	0.77	0.01	0.02	0.41	0.43	0.02	0.11	0.14	—	1,554	1,554	0.02	0.22	1.82	1,620
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.20	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	376	376	0.02	0.01	0.67	381
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	257	257	< 0.005	0.04	0.30	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.85	7.31	0.01	0.24	—	0.24	0.22	—	0.22	—	1,359	1,359	0.06	0.01	—	1,364

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.07	1.33	< 0.005	0.04	—	0.04	0.04	—	0.04	—	225	225	0.01	< 0.005	—	226
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.78	1.63	1.63	29.6	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,611	4,611	0.18	0.15	16.0	4,678
Vendor	0.15	0.11	3.04	1.35	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,880	2,880	0.03	0.39	7.93	3,004
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.39	1.23	1.75	16.8	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	3,924	3,924	0.19	0.15	0.41	3,975
Vendor	0.14	0.10	3.27	1.38	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,883	2,883	0.03	0.39	0.21	2,999
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.42	5.44	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,083	1,083	0.05	0.04	1.78	1,098
Vendor	0.04	0.03	0.83	0.35	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	744	744	0.01	0.10	0.88	775
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.99	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	179	179	0.01	0.01	0.29	182
Vendor	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	< 0.005	0.02	0.15	128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.81	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	190	190	0.01	0.01	0.02	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Architectural Coatings	—	10.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.44	4.44	< 0.005	< 0.005	—	4.46
Architectural Coatings	—	1.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.33	0.33	5.92	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	922	922	0.04	0.03	3.19	936
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.35	3.36	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	785	785	0.04	0.03	0.08	795
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.63	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	126	126	0.01	< 0.005	0.21	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.9	20.9	< 0.005	< 0.005	0.03	21.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	7.13	6.34	5.63	127	0.27	0.10	24.3	24.4	0.09	6.13	6.22	—	26,849	26,849	0.64	0.54	87.0	27,112
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.91	0.63	29.5	7.04	0.28	0.60	8.52	9.12	0.58	2.28	2.85	—	29,582	29,582	0.22	4.41	77.2	30,980
Total	8.04	6.97	35.1	134	0.54	0.70	32.8	33.6	0.67	8.41	9.08	—	56,431	56,431	0.86	4.95	164	58,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	6.16	5.40	6.29	78.0	0.23	0.10	24.3	24.4	0.09	6.13	6.22	—	23,019	23,019	0.64	0.58	2.25	23,211
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.87	0.59	31.7	7.08	0.28	0.60	8.52	9.12	0.58	2.28	2.85	—	29,595	29,595	0.22	4.42	2.00	30,920

Total	7.03	5.99	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	—	52,615	52,615	0.86	5.00	4.26	54,131
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.02	0.90	0.94	15.0	0.04	0.02	3.85	3.87	0.01	0.97	0.99	—	3,549	3,549	0.09	0.08	5.43	3,580
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.14	0.10	4.96	1.13	0.04	0.10	1.35	1.45	0.09	0.36	0.45	—	4,280	4,280	0.03	0.64	4.82	4,476
Total	1.16	1.00	5.90	16.1	0.08	0.11	5.20	5.31	0.11	1.33	1.44	—	7,829	7,829	0.12	0.72	10.3	8,056

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	538	538	0.05	0.01	—	541
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	42.7	42.7	< 0.005	< 0.005	—	43.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	581	581	0.05	0.01	—	584

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.72	5.28	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Total	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Total	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Site Preparation	Site Preparation	1/8/2024	2/2/2024	5.00	20.0	30
Grading	Grading	2/5/2024	5/17/2024	5.00	75.0	75
Building Construction	Building Construction	4/5/2024	5/12/2025	5.00	287	740
Paving	Paving	3/3/2025	4/11/2025	5.00	30.0	55
Architectural Coating	Architectural Coating	2/7/2025	4/24/2025	5.00	55.0	55

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	24.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	311	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	91.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	62.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	1,109,040	369,680	51,323

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	40.0	0.00	—
Grading	—	—	300	0.00	—
Paving	0.00	0.00	0.00	0.00	19.6

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	7.08	100%
Other Asphalt Surfaces	12.5	100%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	1,294	738	707	412,664	35,045	19,986	19,145	11,177,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	280	160	153	89,364	9,670	5,511	5,282	3,083,963

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	1,109,040	369,680	51,323

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	3,402,795	349	0.0330	0.0040	0.00
Parking Lot	270,277	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	170,977,000	0.00
Parking Lot	0.00	0.00

Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	695	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1

AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6
Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7
Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186
Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459
Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123
Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—

Insured adults	2.55357372
Arthritis	0.0
Asthma ER Admissions	54.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4
Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0

Elderly	5.7
English Speaking	42.6
Foreign-born	50.4
Outdoor Workers	10.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.
Operations: Energy Use	Per client data, no natural gas will be utilized

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APPENDIX 3.2:

CALEEMOD OPERATIONAL LSTS EMISSIONS MODEL OUTPUTS

15097 - N Indian Canyon & 19th Ave (Operational LSTs) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15097 - N Indian Canyon & 19th Ave (Operational LSTs)
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.911458, -116.546215
County	Riverside-Salton Sea
City	Palm Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5694
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	739	1000sqft	17.0	739,360	0.00	—	—	—

Parking Lot	787	Space	7.08	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.5	Acre	12.5	0.00	0.00	—	—	—
User Defined Industrial	739	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.1	26.4	5.09	45.4	0.01	0.07	0.40	0.47	0.06	0.10	0.16	702	5,748	6,450	71.7	1.07	1.91	8,563
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.58	20.3	5.13	13.8	0.01	0.01	0.40	0.42	0.01	0.10	0.12	702	5,582	6,285	71.7	1.07	0.05	8,396
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.12	22.7	4.43	26.9	0.01	0.04	0.35	0.39	0.03	0.09	0.12	702	5,491	6,194	71.7	1.04	0.72	8,295
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	4.14	0.81	4.91	< 0.005	0.01	0.06	0.07	0.01	0.02	0.02	116	909	1,025	11.9	0.17	0.12	1,373

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.41	4.26	4.82	13.2	0.01	0.01	0.40	0.42	0.01	0.10	0.12	—	1,334	1,334	0.23	0.22	1.91	1,407
Area	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	10.1	26.4	5.09	45.4	0.01	0.07	0.40	0.47	0.06	0.10	0.16	702	5,748	6,450	71.7	1.07	1.91	8,563
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.58	3.41	5.13	13.8	0.01	0.01	0.40	0.42	0.01	0.10	0.12	—	1,300	1,300	0.27	0.22	0.05	1,374
Area	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	3.58	20.3	5.13	13.8	0.01	0.01	0.40	0.42	0.01	0.10	0.12	702	5,582	6,285	71.7	1.07	0.05	8,396
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.30	3.16	4.29	11.1	0.01	0.01	0.35	0.36	0.01	0.09	0.10	—	1,144	1,144	0.22	0.19	0.72	1,207
Area	2.82	19.5	0.13	15.9	< 0.005	0.03	—	0.03	0.02	—	0.02	—	65.2	65.2	< 0.005	< 0.005	—	65.4
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	6.12	22.7	4.43	26.9	0.01	0.04	0.35	0.39	0.03	0.09	0.12	702	5,491	6,194	71.7	1.04	0.72	8,295
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.60	0.58	0.78	2.02	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	189	189	0.04	0.03	0.12	200
Area	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	581	581	0.05	0.01	—	584
Water	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Waste	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Total	1.12	4.14	0.81	4.91	< 0.005	0.01	0.06	0.07	0.01	0.02	0.02	116	909	1,025	11.9	0.17	0.12	1,373

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.08	4.00	0.85	9.90	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	561	561	0.18	0.10	1.12	596
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.33	0.26	3.97	3.31	0.01	0.01	0.09	0.09	0.01	0.02	0.03	—	773	773	0.05	0.12	0.78	811
Total	4.41	4.26	4.82	13.2	0.01	0.01	0.40	0.42	0.01	0.10	0.12	—	1,334	1,334	0.23	0.22	1.91	1,407

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	3.29	3.18	0.86	10.4	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	514	514	0.22	0.10	0.03	549
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.29	0.22	4.27	3.43	0.01	0.01	0.09	0.09	0.01	0.02	0.03	—	787	787	0.05	0.12	0.02	825
Total	3.58	3.41	5.13	13.8	0.01	0.01	0.40	0.42	0.01	0.10	0.12	—	1,300	1,300	0.27	0.22	0.05	1,374
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.55	0.54	0.13	1.48	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	76.8	76.8	0.03	0.01	0.07	81.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.05	0.04	0.65	0.54	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	113	113	0.01	0.02	0.05	118
Total	0.60	0.58	0.78	2.02	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	189	189	0.04	0.03	0.12	200

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	538	538	0.05	0.01	—	541
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	42.7	42.7	< 0.005	< 0.005	—	43.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	581	581	0.05	0.01	—	584

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.72	5.28	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Total	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Total	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	1,294	738	707	412,664	453	258	247	144,432
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	280	160	153	89,364	98.1	55.9	53.6	31,278

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	1,109,040	369,680	51,323

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	3,402,795	349	0.0330	0.0040	0.00
Parking Lot	270,277	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	170,977,000	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	695	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6

Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7
Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186

Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459
Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123
Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—
Insured adults	2.55357372
Arthritis	0.0
Asthma ER Admissions	54.0
High Blood Pressure	0.0

Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4
Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	5.7
English Speaking	42.6
Foreign-born	50.4
Outdoor Workers	10.8

Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.
Operations: Energy Use	Per client data, no natural gas will be utilized

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Appendix C.2

Health Risk Assessment

N Indian Canyon/19th Ave High-Cube Warehouse

MOBILE SOURCE HEALTH RISK ASSESSMENT

CITY OF PALM SPRINGS

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APRIL 3, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APS	Auxiliary Power System
AQMD	Air Quality Management District
ARB	Air Resources Board
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
HHD	Heavy Heavy-Duty
HI	Hazard Index
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MEIR	Maximally Exposed Individual Receptor
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PM_{10}	Particulate Matter 10 microns in diameter or less
Project	N Indian Canyon/19th Ave High-Cube Warehouse
REL	Reference Exposure Level
RM	Recommended Measures
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TA	Traffic Analysis
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

This report evaluates the potential health risk impacts to sensitive receptors (which are residents) and adjacent workers associated with the development of the Project, more specifically, health risk impacts as a result of exposure to Toxic Air Contaminants (TACs) including diesel particulate matter (DPM) as a result of heavy-duty diesel trucks accessing the site. This section summarizes the significance criteria and Project health risks.

The results of the health risk assessment from Project-generated DPM emissions are provided in Table ES-1, ES-2, and ES-3 below for the Project.

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R3 which is located approximately 2,054 feet northeast of the Project site at an existing residence located at 17725 Covey Street. R3 is placed in the private outdoor living area (backyard) facing the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 0.09 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. Location R3 would experience the highest concentrations of DPM during Project construction due to meteorological conditions at the site. Because all other modeled receptors would experience lower concentrations of DPM during Project construction, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R4 which is located approximately 3,028 feet northeast of the Project site at an existing residence located at 17364 N. Indian Canyon Drive. Since there are no private outdoor living areas facing the Project site, R4 is placed at the building façade nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.08 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled receptors would experience lower concentrations of DPM during Project operation, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project operational

activity. All other receptors during operational activity would experience less risk than what is identified for this location. The modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[1]*:*

The worker receptor land use with the greatest potential exposure to Project operational -source DPM emissions is Location R5, which represents the potential worker receptor located approximately 81 feet south of the Project site. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.09 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The modeled receptors are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools within ¼ mile of the Project site. The nearest school is Vista Del Monte Elementary School, which is located approximately 19,980 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

1 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential exposure to Project construction-source and operational-source DPM emissions is Location R3. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM emissions is estimated at 0.13 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The modeled receptors are illustrated on Exhibit 2-D.

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
1.29 Year Exposure	Maximum Exposed Sensitive Receptor	0.09	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

TABLE ES-2: SUMMARY OF OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.08	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor	0.09	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO
Annual Average	Maximum Exposed Worker Receptor	≤0.01	1.0	NO

TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.13	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

1 INTRODUCTION

This HRA has been prepared in accordance with the document Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2) and is comprised of all relevant and appropriate procedures presented by the United States Environmental Protection Agency (U.S. EPA), California EPA and SCAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to TAC exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (3). In this report the AQMD states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). A REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

1.1 SITE LOCATION

The proposed N Indian Canyon/19th Ave High-Cube Warehouse Project is located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet. It is anticipated that the Project would be fully developed by year 2025. The preliminary site plan for the proposed Project is shown on Exhibit 1-B.

Per the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 1,574 vehicular trips per day, which includes 280 truck trips per day (4).

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

This HRA is based on applicable guidelines to produce conservative estimates of human health risk posed by exposure to DPM. The conservative nature of this analysis is due primarily to the following factors:

- The ARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per µg/m3 is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM because it represents breathing rates that are high for the human body (95% higher than the average population).
- The emissions derived assume that every truck accessing the Project site will idle for 15 minutes under the unmitigated scenario, and this is an overestimation of actual idling times and thus conservative.[2] The California Air Resources Board (CARB's) anti-idling requirements impose a 5-minute maximum idling time and therefore the analysis conservatively overestimates DPM emissions from idling by a factor of 3.

2.2 CONSTRUCTION HEALTH RISK ASSESSMENT

2.2.1 EMISSIONS CALCULATIONS

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis* ("technical study") prepared by Urban Crossroads, Inc. (5).

Construction related DPM emissions are expected to occur primarily as a function of the operation of heavy-duty construction equipment.

As discussed in the technical study, the Project would result in approximately 339 total working-days of construction activity. The construction duration by phase is shown on Table 2-1. A detailed summary of construction equipment assumptions by phase is provided at Table 2-2. The CalEEMod emissions outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A.

[2] Although the Project is required to comply with ARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions should be estimated for 15 minutes of truck idling (personal communication, in person, with Jillian Wong, December 22, 2016), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

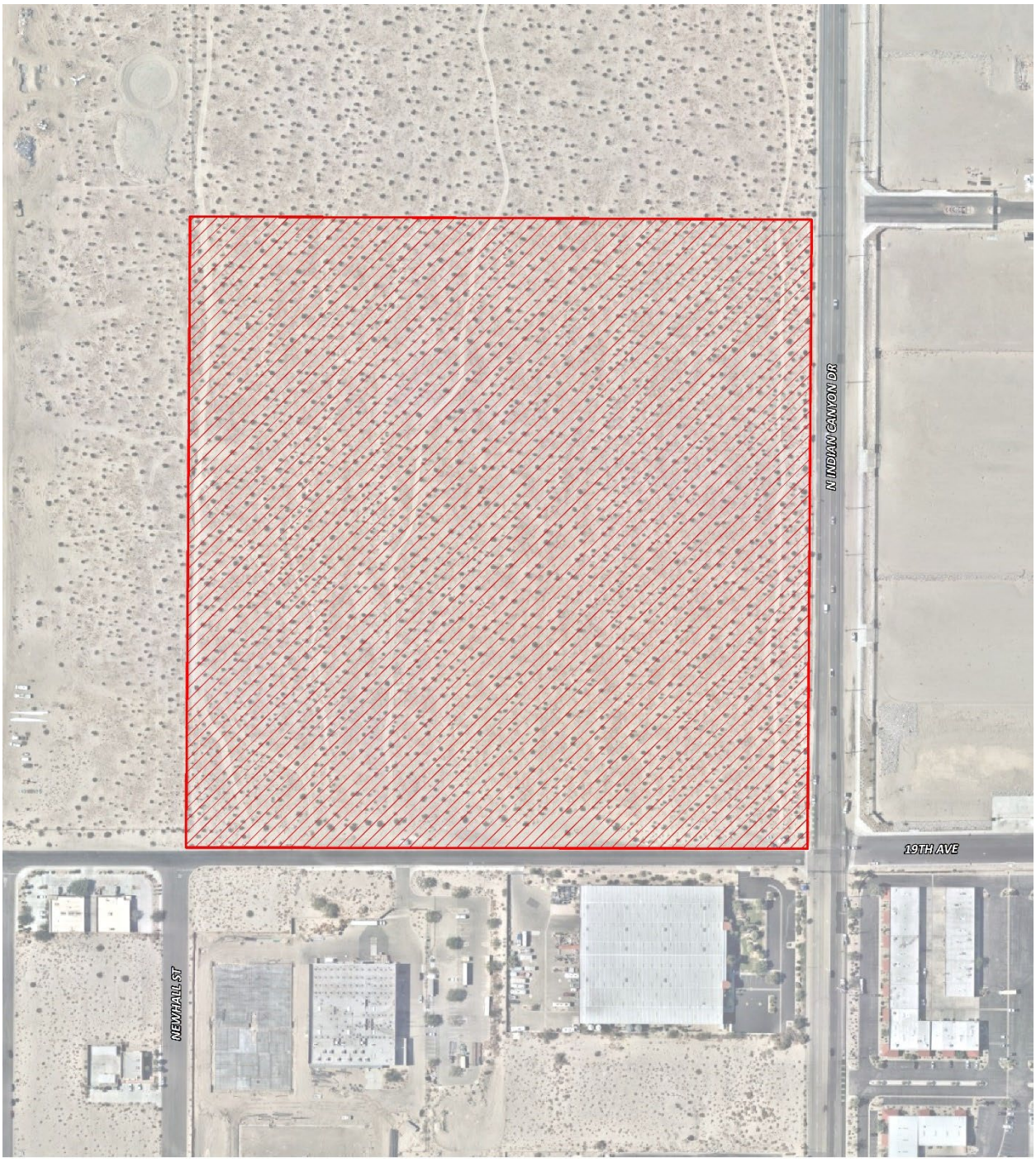
TABLE 2-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	1/8/2024	2/2/2024	20
Grading	2/5/2024	5/17/2024	75
Building Construction	4/5/2024	5/12/2025	287
Paving	3/3/2025	4/11/2025	30
Architectural Coating	2/7/2025	4/24/2025	55

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	2	8
	Crawler Tractors	2	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	2	8
	Forklifts	6	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES



2.3 OPERATIONAL HEALTH RISK ASSESSMENT

2.3.1 ON-SITE AND OFF-SITE TRUCK ACTIVITY

Vehicle DPM emissions were calculated using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2021 version of the EMission FACtor model (EMFAC) developed by the CARB. EMFAC 2021 is a mathematical model that CARB developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources (6). The most recent version of this model, EMFAC 2021, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

Several distinct emission processes are included in EMFAC 2021. Emission factors calculated using EMFAC 2021 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC 2021 in EMFAC Mode for vehicles in the Riverside County jurisdiction. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – on-site loading/unloading and truck gate
- 5 miles per hour – on-site vehicle movement including driving and maneuvering
- 25 miles per hour – off-site vehicle movement including driving and maneuvering.

It is expected that minimal idling would occur at nearby intersections during truck travel on study area roadways (e.g., at an intersection during a red light, or yielding to make a turn). Notwithstanding, the analysis conservatively utilizes a reduced off-site average speed of 25 miles per hour (below the posted speed limit) for travel on study area roadways, use of a lower average speed for off-site travel results in a higher emission factor and therefore any negligible idling that would occur during truck travel along the study area is accounted for.

Calculated emission factors are shown at Table 2-3. As a conservative measure, a 2025 EMFAC 2021 run was conducted and a static 2025 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2025 emission factors would overstate potential impacts since this approach assumes that emission factors remain “static” and do not change over time due to fleet turnover or cleaner technology with lower emissions that would be incorporated into vehicles after 2025. Additionally, based on EMFAC 2021, Light-Heavy-Duty Trucks are comprised of 59.8% diesel, Medium-Heavy-Duty Trucks are comprised of 91.6% diesel, and Heavy-Heavy-Duty Trucks are comprised of 95.1% diesel. Trucks fueled by diesel are

accounted for by these percentages accordingly in the emissions factor generation. Appendix 2.2 includes additional details on the emissions estimates from EMFAC.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC over the total distance traveled. The following equation was used to estimate off-site emissions for each of the different vehicle classes comprising the mobile sources (7):

$$Emissions_{Speed\ A} = EF_{Run\ Exhaust} \times Distance \times \frac{Number\ of\ Trips\ per\ Day}{Seconds\ per\ Day}$$

Where:

$Emissions_{Speed\ A}$ = Vehicle emissions at a given speed A (g/s)

$EF_{Run\ Exhaust}$ = EMFAC running exhaust PM_{10} emission factor at speed A (g/vmt)

$Distance$ = Total distance traveled per trip (miles)

Similar to off-site traffic, on-site vehicle running emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC and the total vehicle trip number over the length of the driving path using the same formula presented above for on-site emissions. In addition, on-site vehicle idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor (g/idle-hr) from EMFAC and the total truck trip over the total assumed idle time (15 minutes). The following equation was used to estimate the on-site vehicle idling emissions for each of the different vehicle classes (7):

$$Emissions_{Idle} = EF_{Idle} \times Number\ of\ Trips \times Idling\ Time \times \frac{60\ minutes\ per\ hour}{seconds\ per\ day}$$

Where:

$Emissions_{Idle}$ = Vehicle emissions during Idling (g/s)

EF_{Idle} = EMFAC idle exhaust PM_{10} emission factor (g/s)

$Number\ of\ Trips$ = Number of trips per day

$Idling\ Time$ = Idling time (minutes per trip)

TABLE 2-3: 2025 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.05961 (g/idle-hr)
5	0.01804 (g/s)
25	0.00813 (g/s)

Each roadway was modeled as a line source (made up of multiple adjacent volume sources). Due to the large number of volume sources modeled for this analysis, the corresponding coordinates

of each volume source have not been included in this report but are included in Appendix 2.3. The DPM emission rate for each volume source was calculated by multiplying the emission factor (based on the average travel speed along the roadway) by the number of trips and the distance traveled along each roadway segment and dividing the result by the number of volume sources along that roadway, as illustrated on Table 2-4. The modeled emission sources are illustrated on Exhibit 2-B for on-site sources and Exhibit 2-C for off-site sources. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than ¾ mile. This modeling domain is more inclusive and conservative than using only a ¼ mile modeling domain which is the distance supported by several reputable studies which conclude that the greatest potential risks occur within a ¼ mile of the primary source of emissions (1) (in the case of the Project, the primary source of emissions is the on-site idling and on-site travel).

On-site truck idling was estimated to occur as trucks enter and travel through the Project site. Although the Project's diesel-fueled truck and equipment operators will be required by State law to comply with CARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions be calculated assuming 15 minutes of truck idling (8), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc. As such, this analysis calculates truck idling at 15 minutes, consistent with SCAQMD's recommendation.

As summarized in the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 1,574 actual vehicular trip-ends per day (787 vehicles inbound + 787 vehicles outbound) which includes 1,294 passenger vehicle trips (647 passenger vehicles inbound + 647 passenger vehicles outbound) and 280 two-way truck trips (140 trucks inbound per day + 140 trucks outbound) per day (4).

EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES

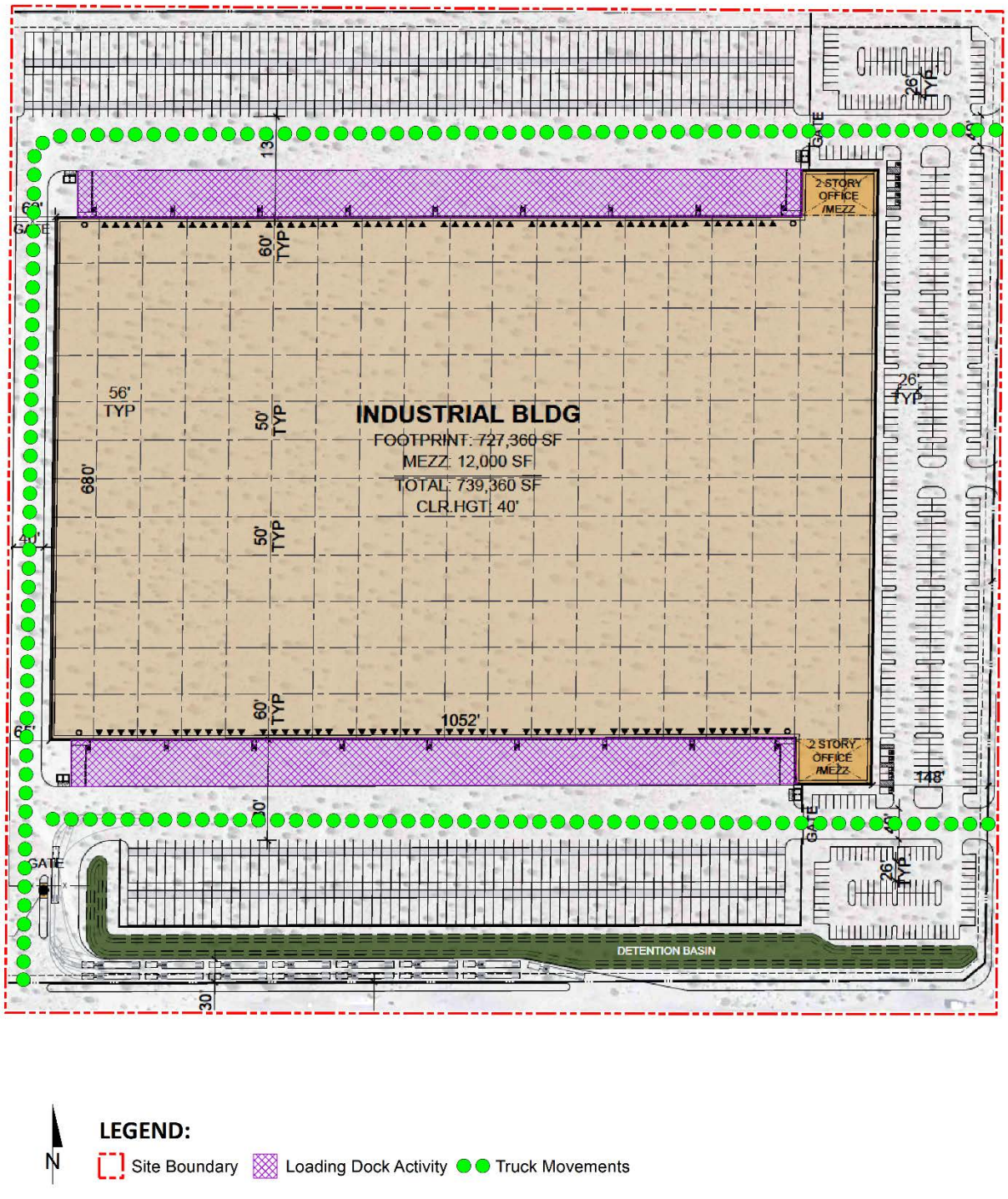


EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES

N

LEGEND:

Site Boundary Truck Movements

TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS (2025 ANALYSIS YEAR)

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling - North	70			0.0596	1.04	1.207E-05
On-Site Idling - South	70			0.0596	1.04	1.207E-05
On-Site Travel - North	140	63.44	0.0180		1.14	1.325E-05
On-Site Travel - South	140	32.69	0.0180		0.59	6.826E-06
Off-Site Travel - 19th 55% Inbound/Outbound	154	36.67	0.0081		0.30	3.449E-06
Off-Site Travel - Indian Canyon 25% Inbound/Outbound	70	3.45	0.0081		0.03	3.244E-07
Off-Site Travel - Indian Canyon 22.5% Inbound/Outbound	63	10.70	0.0081		0.09	1.006E-06
Off-Site Travel - Indian Canyon 10% Inbound/Outbound	28	7.90	0.0081		0.06	7.426E-07
Off-Site Travel - Indian Canyon N 10% Inbound/Outbound	28	13.96	0.0081		0.11	1.313E-06
Off-Site Travel - Indian Canyon 5% Inbound/Outbound	14	3.98	0.0081		0.03	3.746E-07
Off-Site Travel - Dillon 5% Inbound/Outbound	14	6.91	0.0081		0.06	6.502E-07
Off-Site Travel - Indian Canyon 90% Inbound/Outbound	252	79.59	0.0081		0.65	7.486E-06
Off-Site Travel - Indian Canyon 50% Inbound/Outbound	140	33.24	0.0081		0.27	3.126E-06
Off-Site Travel - Garnet 40% Inbound/Outbound	112	27.91	0.0081		0.23	2.625E-06
Off-Site Travel - Indian Canyon S 10% Inbound/Outbound	28	11.92	0.0081		0.10	1.121E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2021. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

2.4 EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2). The Environmental Protection Agency's (U.S. EPA's) AERMOD model has been utilized. For purposes of this analysis, the Lakes AERMOD View (Version 11.2.0) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 22112 (9).

The model offers additional flexibility by allowing the user to assign an initial release height and vertical dispersion parameters for mobile sources representative of a roadway. For this HRA, the roadways were modeled as adjacent volume sources. Roadways were modeled using the U.S. EPA's haul route methodology for modeling of on-site and off-site truck movement. More specifically, the Haul Road Volume Source Calculator in Lakes AERMOD View has been utilized to determine the release height parameters. Based on the US EPA methodology, the Project's modeled sources would result in a release height of 3.49 meters and an initial lateral dimension of 4.0 meters, and an initial vertical dimension of 3.25 meters.

Model parameters are presented in Table 2-5 (10). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Palm Springs monitoring station was used to represent local weather conditions and prevailing winds (11).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Urban (population 2,189,641)
Terrain (Flat/Elevated)	Elevated (Regulatory Default)
Averaging Time	1 year (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the Project site boundaries, each volume source location, and receptor locations in the Project vicinity. The AERMOD dispersion model summary output files for the Project are presented in Appendix 2.3. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of the properties containing these uses because the human receptors (residents and workers) spend a majority of their time at the residence or in the workplace's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. For example, the HRA evaluates the potential health risks to residents and workers over a period of 30 or 25 years of exposure, respectively. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

For purposes of this HRA, receptors include both residential and non-residential (worker and school child) land uses in the vicinity of the Project. These receptors are included in the HRA since

residents and workers may be exposed at these locations over a long-term duration of 30 and 25 years, respectively. This methodology is consistent with SCAQMD and OEHHA recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residents, workers, and schoolchildren would have a lesser impact than what has already been disclosed in the HRA at the MEIR and MEIW because concentrations dissipate with distance.

All receptors were set to existing elevation height so that only ground-level concentrations are analyzed. United States Geological Survey (USGS) Digital Elevation Model (DEM) terrain data based on a 7.5-minute topographic quadrangle map series using AERMAP was utilized in the HRA modeling to set elevations (12).

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-6 through 2-8 summarize the Exposure Parameters for Residents and Workers based on 2015 OEHHA Guidelines. Appendix 2.4 includes the detailed risk calculation.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
0 to 2	1,090	10	1.29	1.00	260	8

TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24
0 to 2	1,090	10	2	0.85	350	24
2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24

TABLE 2-8: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year)	Exposure Time (hours/day)
16 to 41	230	1	25	250	12

2.5 CARCINOGENIC CHEMICAL RISK

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time.

Guidance from CARB and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSE_{AIR} = \left(C_{AIR} \times \frac{BR}{BW} \times A \times EF\right) \times (1 \times 10^{-6})$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
C_{AIR}	=	concentration of contaminant in air (µg/m^3)
$\frac{BR}{BW}$	=	daily breathing rate normalized to body weight (L/kg BW-day)
A	=	inhalation absorption factor
EF	=	exposure frequency (days/365 days)
BW	=	body weight (kg)
1×10^{-6}	=	conversion factors (µg to mg, L to m^3)

$$RISK_{AIR} = DOSE_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
CPF	=	cancer potency factor

ED	=	number of years within particular age group
AT	=	averaging time

2.6 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 µg/m^3 (13).

Non-cancer health effects are expressed as a hazard index (HI), which is calculated using the following equation:

$$HI_{DPM} = \frac{C_{DPM}}{REL_{DPM}}$$

Where:

HI_{DPM}	=	Hazard index (unitless)
C_{DPM}	=	Annual average DPM concentration (µg/m^3)
REL_{DPM}	=	REL for DPM (the DPM concentration at which no adverse health effects are anticipated).

For purposes of this analysis the hazard index for the respiratory endpoint totaled less than one for all receptors in the project vicinity, and thus is less than significant.

2.7 POTENTIAL PROJECT DPM-SOURCE CANCER AND NON-CANCER RISKS

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R3 which is located approximately 2,054 feet northeast of the Project site at an existing residence located at 17725 Covey Street. R3 is placed in the private outdoor living area (backyard) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 0.09 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. Location R3 would experience the highest concentrations of DPM during Project construction due to meteorological conditions at the site. Because all other modeled receptors would experience lower concentrations of DPM during Project construction, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R4 which is located approximately 3,028 feet northeast of the Project site at an existing residence located at 17364 N. Indian Canyon Drive. Since there are no private outdoor living areas facing the Project site, R4 is placed at the building façade nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.08 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled receptors would experience lower concentrations of DPM during Project operation, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project operational activity. All other receptors during operational activity would experience less risk than what is identified for this location. The modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[3]*:*

The worker receptor land use with the greatest potential exposure to Project operational -source DPM emissions is Location R5, which represents the potential worker receptor located approximately 81 feet south of the Project site. At the MEIW, the maximum incremental cancer risk impact is 0.09 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The modeled receptors are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

3 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools within ¼ mile of the Project site. The nearest school is Vista Del Monte Elementary School, which is located approximately 19,980 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential exposure to Project construction-source and operational-source DPM emissions is Location R3. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM emissions is estimated at 0.13 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The modeled receptors are illustrated on Exhibit 2-D.

It should be noted that the receptors presented in Exhibit 2-D do not represent all modeled receptors.

EXHIBIT 2-D: RECEPTOR LOCATIONS

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3 REFERENCES

1. **Air Resources Board.** *Air Quality and Land Use Handbook: A Community Health Perspective.* 2005.
2. **South Coast Air Quality Managment District.** Mobile Source Toxics Analysis. [Online] 2003. http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html.
3. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. [Cited: June 6, 2019.] http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2.
4. **Urban Crossroads, Inc.** *North Indian Canyon & 19th Avenue High-Cube Warehouse Traffic Analysis.* 2023.
5. —. *North Indian Canyon/19th Avenue High-Cube Warehouse Air Quality Impact Analysis.* 2023.
6. **California Air Resources Board.** EMFAC 2021. [Online] https://arb.ca.gov/emfac/.
7. **California Department of Transportation.** EMFAC Software. [Online] http://www.dot.ca.gov/hq/env/air/pages/emfac.htm.
8. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11.
9. **Environmental Protection Agency.** User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] June 2022. https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_userguide.pdf.
10. —. User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] April 2018. https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf.
11. **South Coast Air Quality Management District.** Data for AERMOD. [Online] [Cited: May 9, 2022.] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod.
12. **Environmental Protection Agency.** User's Guide for the AERMOD Terrain Preprocessor (AERMAP). [Online] 2018. https://gaftp.epa.gov/Air/aqmg/SCRAM/models/related/aermap/aermap_userguide_v18081.pdf.
13. **Office of Environmental Health Hazard Assessment.** Chemical Toxicity Database. [Online] https://oehha.ca.gov/chemicals.

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4 CERTIFICATIONS

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed N Indian Canyon/19th Ave High-Cube Warehouse Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me at (949) 660-1994.

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Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

CALEEMOD OUTPUTS

15097 - N Indian Canyon & 19th Ave Detailed Report

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5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15097 - N Indian Canyon & 19th Ave
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.911458, -116.546215
County	Riverside-Salton Sea
City	Palm Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5694
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	739	1000sqft	17.0	739,360	0.00	—	—	—
Parking Lot	787	Space	7.08	0.00	0.00	—	—	—

Other Asphalt Surfaces	12.5	Acre	12.5	0.00	0.00	—	—	—
User Defined Industrial	739	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.46	73.9	64.5	94.6	0.14	2.58	7.97	10.5	2.37	2.26	4.64	—	20,577	20,577	0.72	0.77	28.8	20,854
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.93	73.4	36.7	62.2	0.09	1.46	5.85	7.20	1.34	1.83	2.78	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.64	11.3	24.2	35.7	0.05	0.95	3.40	4.35	0.87	0.94	1.81	—	8,389	8,389	0.30	0.36	6.15	8,509
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.66	2.06	4.41	6.52	0.01	0.17	0.62	0.79	0.16	0.17	0.33	—	1,389	1,389	0.05	0.06	1.02	1,409

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	9.46	8.08	64.5	94.6	0.14	2.58	7.97	10.5	2.37	2.26	4.64	—	20,577	20,577	0.72	0.77	28.8	20,854
2025	6.43	73.9	36.3	78.1	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	15,587	15,587	0.54	0.64	27.8	15,817
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.80	3.97	35.3	48.2	0.07	1.46	4.84	5.95	1.34	1.83	2.78	—	12,200	12,200	0.44	0.60	0.66	12,392
2025	5.93	73.4	36.7	62.2	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.64	3.10	24.2	35.7	0.05	0.95	3.40	4.35	0.87	0.94	1.81	—	8,389	8,389	0.30	0.36	6.15	8,509
2025	1.32	11.3	7.94	14.9	0.02	0.29	1.38	1.66	0.26	0.33	0.59	—	3,481	3,481	0.12	0.16	2.90	3,533
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.66	0.57	4.41	6.52	0.01	0.17	0.62	0.79	0.16	0.17	0.33	—	1,389	1,389	0.05	0.06	1.02	1,409
2025	0.24	2.06	1.45	2.71	< 0.005	0.05	0.25	0.30	0.05	0.06	0.11	—	576	576	0.02	0.03	0.48	585

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.2	29.3	39.2	169	0.57	1.03	13.6	14.6	1.01	2.57	3.59	702	65,369	66,071	72.7	5.81	918	70,538
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.44	23.1	41.8	88.2	0.53	0.99	13.6	14.6	0.96	2.57	3.53	702	61,421	62,123	72.7	5.86	758	66,444

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.60	25.2	36.2	107	0.48	0.92	11.9	12.8	0.90	2.25	3.15	702	56,157	56,859	72.6	5.20	816	61,039
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.75	4.59	6.61	19.6	0.09	0.17	2.17	2.34	0.16	0.41	0.57	116	9,297	9,414	12.0	0.86	135	10,106

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.04	6.97	35.1	134	0.54	0.70	13.6	14.3	0.67	2.57	3.24	—	56,431	56,431	0.86	4.95	164	58,092
Area	5.72	22.2	0.27	32.2	< 0.005	0.04	—	0.04	0.06	—	0.06	—	132	132	0.01	< 0.005	—	133
Energy	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	8,032	8,032	0.73	0.05	—	8,065
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754
Total	14.2	29.3	39.2	169	0.57	1.03	13.6	14.6	1.01	2.57	3.59	702	65,369	66,071	72.7	5.81	918	70,538
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.03	5.99	38.0	85.0	0.51	0.70	13.6	14.3	0.67	2.57	3.24	—	52,615	52,615	0.86	5.00	4.26	54,131
Area	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	8,032	8,032	0.73	0.05	—	8,065
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754

Total	7.44	23.1	41.8	88.2	0.53	0.99	13.6	14.6	0.96	2.57	3.53	702	61,421	62,123	72.7	5.86	758	66,444
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.36	5.45	32.3	88.3	0.46	0.61	11.9	12.5	0.58	2.25	2.83	—	47,286	47,286	0.74	4.35	61.9	48,661
Area	2.82	19.5	0.13	15.9	< 0.005	0.02	—	0.02	0.03	—	0.03	—	65.2	65.2	< 0.005	< 0.005	—	65.4
Energy	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	8,032	8,032	0.73	0.05	—	8,065
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754
Total	9.60	25.2	36.2	107	0.48	0.92	11.9	12.8	0.90	2.25	3.15	702	56,157	56,859	72.6	5.20	816	61,039
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.00	5.90	16.1	0.08	0.11	2.17	2.28	0.11	0.41	0.52	—	7,829	7,829	0.12	0.72	10.3	8,056
Area	0.51	3.56	0.02	2.89	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Energy	0.08	0.04	0.69	0.58	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,330	1,330	0.12	0.01	—	1,335
Water	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Waste	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125	125
Total	1.75	4.59	6.61	19.6	0.09	0.17	2.17	2.34	0.16	0.41	0.57	116	9,297	9,414	12.0	0.86	135	10,106

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.80	2.35	23.2	20.7	0.03	1.03	—	1.03	0.95	—	0.95	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	—	3.68	3.68	—	1.78	1.78	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.27	1.13	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.01	0.01	0.23	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.01	201
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	0.72	7.05	6.20	0.01	0.30	—	0.30	0.27	—	0.27	—	1,356	1,356	0.05	0.01	—	1,360
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.29	1.13	< 0.005	0.05	—	0.05	0.05	—	0.05	—	224	224	0.01	< 0.005	—	225
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	2.07	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	304	304	0.01	0.01	1.13	308

Vendor	0.04	0.03	0.84	0.38	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	772	772	0.01	0.11	2.10	807
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.12	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	261
Vendor	0.04	0.03	0.91	0.39	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	773	773	0.01	0.11	0.05	805
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	56.7	56.7	< 0.005	< 0.005	0.10	57.5
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	159	159	< 0.005	0.02	0.19	166
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.39	9.39	< 0.005	< 0.005	0.02	9.52
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.3	26.3	< 0.005	< 0.005	0.03	27.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	12.9	15.1	0.03	0.57	—	0.57	0.52	—	0.52	—	2,790	2,790	0.11	0.02	—	2,799
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.36	2.75	< 0.005	0.10	—	0.10	0.10	—	0.10	—	462	462	0.02	< 0.005	—	463
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.87	1.72	1.77	32.1	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,714	4,714	0.18	0.15	17.6	4,782
Vendor	0.15	0.11	3.19	1.44	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,929	2,929	0.03	0.41	7.96	3,059
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.57	1.28	1.89	18.3	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,008	4,008	0.20	0.15	0.45	4,059
Vendor	0.14	0.10	3.44	1.47	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,931	2,931	0.03	0.41	0.21	3,054
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.87	0.79	0.93	12.1	0.00	0.00	2.14	2.14	0.00	0.50	0.50	—	2,273	2,273	0.10	0.08	4.02	2,304
Vendor	0.08	0.06	1.78	0.77	0.01	0.02	0.41	0.43	0.02	0.11	0.14	—	1,554	1,554	0.02	0.22	1.82	1,620
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.20	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	376	376	0.02	0.01	0.67	381
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	257	257	< 0.005	0.04	0.30	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.85	7.31	0.01	0.24	—	0.24	0.22	—	0.22	—	1,359	1,359	0.06	0.01	—	1,364

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.07	1.33	< 0.005	0.04	—	0.04	0.04	—	0.04	—	225	225	0.01	< 0.005	—	226
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.78	1.63	1.63	29.6	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,611	4,611	0.18	0.15	16.0	4,678
Vendor	0.15	0.11	3.04	1.35	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,880	2,880	0.03	0.39	7.93	3,004
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.39	1.23	1.75	16.8	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	3,924	3,924	0.19	0.15	0.41	3,975
Vendor	0.14	0.10	3.27	1.38	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,883	2,883	0.03	0.39	0.21	2,999
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.42	5.44	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,083	1,083	0.05	0.04	1.78	1,098
Vendor	0.04	0.03	0.83	0.35	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	744	744	0.01	0.10	0.88	775
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.99	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	179	179	0.01	0.01	0.29	182
Vendor	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	< 0.005	0.02	0.15	128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.81	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	190	190	0.01	0.01	0.02	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Architectural Coatings	—	10.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.44	4.44	< 0.005	< 0.005	—	4.46
Architectural Coatings	—	1.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.33	0.33	5.92	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	922	922	0.04	0.03	3.19	936
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.35	3.36	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	785	785	0.04	0.03	0.08	795
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.63	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	126	126	0.01	< 0.005	0.21	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.9	20.9	< 0.005	< 0.005	0.03	21.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	7.13	6.34	5.63	127	0.27	0.10	9.24	9.34	0.09	1.56	1.65	—	26,849	26,849	0.64	0.54	87.0	27,112
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.91	0.63	29.5	7.04	0.28	0.60	4.35	4.96	0.58	1.01	1.59	—	29,582	29,582	0.22	4.41	77.2	30,980
Total	8.04	6.97	35.1	134	0.54	0.70	13.6	14.3	0.67	2.57	3.24	—	56,431	56,431	0.86	4.95	164	58,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	6.16	5.40	6.29	78.0	0.23	0.10	9.24	9.34	0.09	1.56	1.65	—	23,019	23,019	0.64	0.58	2.25	23,211
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.87	0.59	31.7	7.08	0.28	0.60	4.35	4.96	0.58	1.01	1.59	—	29,595	29,595	0.22	4.42	2.00	30,920

Total	7.03	5.99	38.0	85.0	0.51	0.70	13.6	14.3	0.67	2.57	3.24	—	52,615	52,615	0.86	5.00	4.26	54,131
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.02	0.90	0.94	15.0	0.04	0.02	1.47	1.49	0.01	0.25	0.26	—	3,549	3,549	0.09	0.08	5.43	3,580
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.14	0.10	4.96	1.13	0.04	0.10	0.69	0.79	0.09	0.16	0.25	—	4,280	4,280	0.03	0.64	4.82	4,476
Total	1.16	1.00	5.90	16.1	0.08	0.11	2.17	2.28	0.11	0.41	0.52	—	7,829	7,829	0.12	0.72	10.3	8,056

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	538	538	0.05	0.01	—	541
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	42.7	42.7	< 0.005	< 0.005	—	43.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	581	581	0.05	0.01	—	584

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	4,524	4,524	0.40	0.01	—	4,537
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	4,524	4,524	0.40	0.01	—	4,537
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	4,524	4,524	0.40	0.01	—	4,537

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.42	0.21	3.79	3.18	0.02	0.29	—	0.29	0.29	—	0.29	—	4,524	4,524	0.40	0.01	—	4,537
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.08	0.04	0.69	0.58	< 0.005	0.05	—	0.05	0.05	—	0.05	—	749	749	0.07	< 0.005	—	751
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.08	0.04	0.69	0.58	< 0.005	0.05	—	0.05	0.05	—	0.05	—	749	749	0.07	< 0.005	—	751

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.72	5.28	0.27	32.2	< 0.005	0.04	—	0.04	0.06	—	0.06	—	132	132	0.01	< 0.005	—	133
Total	5.72	22.2	0.27	32.2	< 0.005	0.04	—	0.04	0.06	—	0.06	—	132	132	0.01	< 0.005	—	133
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.89	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Total	0.51	3.56	0.02	2.89	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	10.8	10.8	< 0.005	< 0.005	—	10.8

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	754	754
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125	125
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125	125

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/8/2024	2/2/2024	5.00	20.0	30
Grading	Grading	2/5/2024	5/17/2024	5.00	75.0	75
Building Construction	Building Construction	4/5/2024	5/12/2025	5.00	287	740
Paving	Paving	3/3/2025	4/11/2025	5.00	30.0	55
Architectural Coating	Architectural Coating	2/7/2025	4/24/2025	5.00	55.0	55

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29

Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	24.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	311	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	91.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	62.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	1,109,040	369,680	51,323

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	40.0	0.00	—
Grading	—	—	300	0.00	—

Paving	0.00	0.00	0.00	0.00	19.6

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	7.08	100%
Other Asphalt Surfaces	12.5	100%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	1,294	738	707	412,664	35,045	19,986	19,145	11,177,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	280	160	153	89,364	9,670	5,511	5,282	3,083,963

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	1,109,040	369,680	51,323

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	3,402,795	349	0.0330	0.0040	14,115,995
Parking Lot	270,277	349	0.0330	0.0040	0.00

Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	170,977,000	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	695	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Unrefrigerated Warehouse-No Rail	Cold storage	User Defined	150	7.50	7.50	7.50	25.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6
Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7

Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186
Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459
Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123

Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—
Insured adults	2.55357372
Arthritis	0.0
Asthma ER Admissions	54.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4
Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0

Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	5.7
English Speaking	42.6
Foreign-born	50.4
Outdoor Workers	10.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0

Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks
Operations: Architectural Coatings	SCAQMD Rule 1113

Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.

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APPENDIX 2.2:

EMFAC EMISSIONS SUMMARY

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Site Preparation	1.03	20	20.6	1.03	0.12875
Exhaust PM-10	Grading	1.45	75	108.75	1.45	0.18125
	Building Construction	1.01	287	288.435	1.005	0.125625
	Paving	0.35	30	10.5	0.35	0.04375
	Architectural Coatings	0.04	55	2.2	0.04	0.005
		3.88	339	430.485	1.269867257	0.158733407
Off-Site	Site Preparation	5.00E-03	20	0.1	0.005	0.000625
Exhaust PM-10	Grading	1.00E-02	75	0.75	0.01	0.00125
	Building Construction	4.00E-02	287	11.48	0.04	0.005
	Paving	0.00E+00	30	0	0	0
	Architectural Coatings	0.00E+00	55	0	0	0
		5.50E-02	339	12.33	0.036371681	0.00454646

Phase	Start Date	End Date	No. Days
Site Preparation	1/8/2024	2/2/2024	20
Grading	2/5/2024	5/17/2024	75
Building Construction	4/5/2024	5/12/2025	287
Paving	3/3/2025	4/11/2025	30
Arch Coatings	2/7/2025	4/24/2025	55
		Total Days of Construction	**339**

AVERAGE EMISSION FACTOR
RIVERSIDE COUNTY 2025

Speed	LHD1	LHD2	MHD	HHD
0	0.364109	0.581025	0.05153	0.01229
5	0.045968	0.066375	0.030981	0.01182
25	0.021204	0.03194	0.008162	0.00600

Speed	**Weighted Average Emissions**
0	**0.05961**
5	**0.01804**
25	**0.00813**

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling - North	70			0.0596	1.04	1.207E-05
On-Site Idling - South	70			0.0596	1.04	1.207E-05
On-Site Travel - North	140	63.44	0.0180		1.14	1.325E-05
On-Site Travel - South	140	32.69	0.0180		0.59	6.826E-06
Off-Site Travel - 19th 55% Inbound/Outbound	154	36.67	0.0081		0.30	3.449E-06
Off-Site Travel - Indian Canyon 25% Inbound/Outbound	70	3.45	0.0081		0.03	3.244E-07
Off-Site Travel - Indian Canyon 22.5% Inbound/Outbound	63	10.70	0.0081		0.09	1.006E-06
Off-Site Travel - Indian Canyon 10% Inbound/Outbound	28	7.90	0.0081		0.06	7.426E-07
Off-Site Travel - Indian Canyon N 10% Inbound/Outbound	28	13.96	0.0081		0.11	1.313E-06
Off-Site Travel - Indian Canyon 5% Inbound/Outbound	14	3.98	0.0081		0.03	3.746E-07
Off-Site Travel - Dillon 5% Inbound/Outbound	14	6.91	0.0081		0.06	6.502E-07
Off-Site Travel - Indian Canyon 90% Inbound/Outbound	252	79.59	0.0081		0.65	7.486E-06
Off-Site Travel - Indian Canyon 50% Inbound/Outbound	140	33.24	0.0081		0.27	3.126E-06
Off-Site Travel - Garnet 40% Inbound/Outbound	112	27.91	0.0081		0.23	2.625E-06
Off-Site Travel - Indian Canyon S 10% Inbound/Outbound	28	11.92	0.0081		0.10	1.121E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2021. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

calendar_y	season_m	sub_area	vehicle_class	fuel	temperatu	relative_hu	process	speed_tim	pollutant	emission_rate
2025	Annual	Riverside (	HHDT	Dsl	60	70	RUNEX	5	PM10	0.012428
2025	Annual	Riverside (	HHDT	Dsl	60	70	RUNEX	25	PM10	0.006306
2025	Annual	Riverside (	HHDT	Dsl			IDLEX		PM10	0.01292
2025	Annual	Riverside (	LHDT1	Dsl	60	70	RUNEX	5	PM10	0.099629
2025	Annual	Riverside (	LHDT1	Dsl	60	70	RUNEX	25	PM10	0.045957
2025	Annual	Riverside (	LHDT1	Dsl			IDLEX		PM10	0.789149
2025	Annual	Riverside (	LHDT2	Dsl	60	70	RUNEX	5	PM10	0.090338
2025	Annual	Riverside (	LHDT2	Dsl	60	70	RUNEX	25	PM10	0.043471
2025	Annual	Riverside (	LHDT2	Dsl			IDLEX		PM10	0.790786
2025	Annual	Riverside (	MHDT	Dsl	60	70	RUNEX	5	PM10	0.033827
2025	Annual	Riverside (	MHDT	Dsl	60	70	RUNEX	25	PM10	0.008912
2025	Annual	Riverside (	MHDT	Dsl			IDLEX		PM10	0.056264

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar `	Vehicle Ca	Model Yea	Speed	Fuel	Population
Riverside	2025	HHDT	Aggregate	Aggregate	Gasoline	6.23225
Riverside	2025	HHDT	Aggregate	Aggregate	Diesel	15281.5
Riverside	2025	HHDT	Aggregate	Aggregate	Natural Ga	781.66
Riverside	2025	LHDT1	Aggregate	Aggregate	Gasoline	17598.4
Riverside	2025	LHDT1	Aggregate	Aggregate	Diesel	15075.6
Riverside	2025	LHDT2	Aggregate	Aggregate	Gasoline	2462.3
Riverside	2025	LHDT2	Aggregate	Aggregate	Diesel	6820.45
Riverside	2025	MHDT	Aggregate	Aggregate	Gasoline	1219.57
Riverside	2025	MHDT	Aggregate	Aggregate	Diesel	13275.7
Riverside	2025	MHDT	Aggregate	Aggregate	Natural Ga	169.786

HHDT% GAS/NG	0.04903
HHDT% DSL	0.95097
LHDT1% GAS	0.53861
LHDT1% DSL	0.46139
LHDT2% GAS	0.26526
LHDT2% DSL	0.73474
MHDT% GAS	0.08414
MHDT% DSL	0.91586

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APPENDIX 2.3:

AERMOD MODEL INPUT/OUTPUT

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 3/31/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Cons\15097
Cons.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Ops\1509
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2189641 Riverside_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15097 Cons.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     541818.060  3752502.010      237.890
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0005728443
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 541631.266, 3752296.509, 233.00, 3.49, 4.00
** 542018.482, 3752299.835, 233.00, 3.49, 4.00
```

```
** ----------------------------------------------------------------
   LOCATION L0000001     VOLUME   541635.561 3752296.546 233.04
   LOCATION L0000002     VOLUME   541644.150 3752296.620 233.04
   LOCATION L0000003     VOLUME   541652.740 3752296.694 233.04
   LOCATION L0000004     VOLUME   541661.330 3752296.767 233.05
   LOCATION L0000005     VOLUME   541669.919 3752296.841 233.05
   LOCATION L0000006     VOLUME   541678.509 3752296.915 233.05
   LOCATION L0000007     VOLUME   541687.099 3752296.989 233.05
   LOCATION L0000008     VOLUME   541695.688 3752297.062 233.06
   LOCATION L0000009     VOLUME   541704.278 3752297.136 233.06
   LOCATION L0000010     VOLUME   541712.868 3752297.210 233.06
   LOCATION L0000011     VOLUME   541721.457 3752297.284 233.06
   LOCATION L0000012     VOLUME   541730.047 3752297.357 233.07
   LOCATION L0000013     VOLUME   541738.637 3752297.431 233.07
   LOCATION L0000014     VOLUME   541747.227 3752297.505 233.07
   LOCATION L0000015     VOLUME   541755.816 3752297.579 233.07
   LOCATION L0000016     VOLUME   541764.406 3752297.653 233.08
   LOCATION L0000017     VOLUME   541772.996 3752297.726 233.08
   LOCATION L0000018     VOLUME   541781.585 3752297.800 233.08
   LOCATION L0000019     VOLUME   541790.175 3752297.874 233.08
   LOCATION L0000020     VOLUME   541798.765 3752297.948 233.09
   LOCATION L0000021     VOLUME   541807.354 3752298.021 233.09
   LOCATION L0000022     VOLUME   541815.944 3752298.095 233.09
   LOCATION L0000023     VOLUME   541824.534 3752298.169 233.09
   LOCATION L0000024     VOLUME   541833.123 3752298.243 233.10
   LOCATION L0000025     VOLUME   541841.713 3752298.317 233.10
   LOCATION L0000026     VOLUME   541850.303 3752298.390 233.10
   LOCATION L0000027     VOLUME   541858.892 3752298.464 233.10
   LOCATION L0000028     VOLUME   541867.482 3752298.538 233.11
   LOCATION L0000029     VOLUME   541876.072 3752298.612 233.11
   LOCATION L0000030     VOLUME   541884.661 3752298.685 233.11
   LOCATION L0000031     VOLUME   541893.251 3752298.759 233.11
   LOCATION L0000032     VOLUME   541901.841 3752298.833 233.12
   LOCATION L0000033     VOLUME   541910.431 3752298.907 233.12
   LOCATION L0000034     VOLUME   541919.020 3752298.981 233.12
   LOCATION L0000035     VOLUME   541927.610 3752299.054 233.12
   LOCATION L0000036     VOLUME   541936.200 3752299.128 233.13
   LOCATION L0000037     VOLUME   541944.789 3752299.202 233.13
   LOCATION L0000038     VOLUME   541953.379 3752299.276 233.13
   LOCATION L0000039     VOLUME   541961.969 3752299.349 233.13
   LOCATION L0000040     VOLUME   541970.558 3752299.423 233.14
   LOCATION L0000041     VOLUME   541979.148 3752299.497 233.14
   LOCATION L0000042     VOLUME   541987.738 3752299.571 233.14
   LOCATION L0000043     VOLUME   541996.327 3752299.645 233.14
   LOCATION L0000044     VOLUME   542004.917 3752299.718 233.15
   LOCATION L0000045     VOLUME   542013.507 3752299.792 233.15
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
```

```
** DESCRSRC
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0005728443
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 6
** 542027.034, 3752301.260, 233.00, 3.49, 6.51
** 542027.984, 3752059.428, 228.00, 3.49, 6.51
** 542027.509, 3751762.958, 222.95, 3.49, 6.51
** 542030.360, 3751420.877, 217.00, 3.49, 6.51
** 542006.129, 3751420.877, 217.00, 3.49, 6.51
** 541647.895, 3751511.149, 218.04, 3.49, 6.51
** ----------------------------------------------------------------
   LOCATION L0001696     VOLUME   542027.062 3752294.260 232.99
   LOCATION L0001697     VOLUME   542027.117 3752280.260 232.90
   LOCATION L0001698     VOLUME   542027.172 3752266.260 232.81
   LOCATION L0001699     VOLUME   542027.227 3752252.261 232.45
   LOCATION L0001700     VOLUME   542027.282 3752238.261 232.08
   LOCATION L0001701     VOLUME   542027.337 3752224.261 231.63
   LOCATION L0001702     VOLUME   542027.392 3752210.261 231.16
   LOCATION L0001703     VOLUME   542027.447 3752196.261 231.00
   LOCATION L0001704     VOLUME   542027.502 3752182.261 231.00
   LOCATION L0001705     VOLUME   542027.557 3752168.261 230.76
   LOCATION L0001706     VOLUME   542027.612 3752154.261 230.30
   LOCATION L0001707     VOLUME   542027.667 3752140.261 230.00
   LOCATION L0001708     VOLUME   542027.722 3752126.262 230.00
   LOCATION L0001709     VOLUME   542027.777 3752112.262 229.90
   LOCATION L0001710     VOLUME   542027.832 3752098.262 229.43
   LOCATION L0001711     VOLUME   542027.887 3752084.262 228.96
   LOCATION L0001712     VOLUME   542027.942 3752070.262 228.50
   LOCATION L0001713     VOLUME   542027.979 3752056.262 228.03
   LOCATION L0001714     VOLUME   542027.957 3752042.262 228.00
   LOCATION L0001715     VOLUME   542027.934 3752028.262 228.00
   LOCATION L0001716     VOLUME   542027.912 3752014.262 227.63
   LOCATION L0001717     VOLUME   542027.890 3752000.262 227.16
   LOCATION L0001718     VOLUME   542027.867 3751986.262 227.00
   LOCATION L0001719     VOLUME   542027.845 3751972.262 227.00
   LOCATION L0001720     VOLUME   542027.822 3751958.262 226.76
   LOCATION L0001721     VOLUME   542027.800 3751944.262 226.30
   LOCATION L0001722     VOLUME   542027.777 3751930.262 226.00
   LOCATION L0001723     VOLUME   542027.755 3751916.262 226.00
   LOCATION L0001724     VOLUME   542027.733 3751902.262 225.90
   LOCATION L0001725     VOLUME   542027.710 3751888.262 225.43
   LOCATION L0001726     VOLUME   542027.688 3751874.262 224.99
   LOCATION L0001727     VOLUME   542027.665 3751860.262 224.89
   LOCATION L0001728     VOLUME   542027.643 3751846.262 224.79
   LOCATION L0001729     VOLUME   542027.620 3751832.262 224.44
   LOCATION L0001730     VOLUME   542027.598 3751818.262 224.08
```

LOCATION L0001731 VOLUME 542027.576 3751804.262 223.63
LOCATION L0001732 VOLUME 542027.553 3751790.262 223.16
LOCATION L0001733 VOLUME 542027.531 3751776.262 223.00
LOCATION L0001734 VOLUME 542027.515 3751762.262 223.00
LOCATION L0001735 VOLUME 542027.632 3751748.263 222.76
LOCATION L0001736 VOLUME 542027.748 3751734.263 222.30
LOCATION L0001737 VOLUME 542027.865 3751720.264 222.00
LOCATION L0001738 VOLUME 542027.982 3751706.264 222.00
LOCATION L0001739 VOLUME 542028.098 3751692.265 221.90
LOCATION L0001740 VOLUME 542028.215 3751678.265 221.43
LOCATION L0001741 VOLUME 542028.332 3751664.266 220.99
LOCATION L0001742 VOLUME 542028.448 3751650.266 220.88
LOCATION L0001743 VOLUME 542028.565 3751636.267 220.76
LOCATION L0001744 VOLUME 542028.682 3751622.267 220.42
LOCATION L0001745 VOLUME 542028.798 3751608.268 220.07
LOCATION L0001746 VOLUME 542028.915 3751594.268 219.63
LOCATION L0001747 VOLUME 542029.032 3751580.269 219.16
LOCATION L0001748 VOLUME 542029.148 3751566.269 219.00
LOCATION L0001749 VOLUME 542029.265 3751552.270 219.00
LOCATION L0001750 VOLUME 542029.382 3751538.270 218.76
LOCATION L0001751 VOLUME 542029.498 3751524.271 218.30
LOCATION L0001752 VOLUME 542029.615 3751510.271 218.00
LOCATION L0001753 VOLUME 542029.732 3751496.272 218.00
LOCATION L0001754 VOLUME 542029.848 3751482.272 217.97
LOCATION L0001755 VOLUME 542029.965 3751468.273 217.83
LOCATION L0001756 VOLUME 542030.082 3751454.273 217.68
LOCATION L0001757 VOLUME 542030.198 3751440.274 217.35
LOCATION L0001758 VOLUME 542030.315 3751426.274 217.02
LOCATION L0001759 VOLUME 542021.757 3751420.877 217.00
LOCATION L0001760 VOLUME 542007.757 3751420.877 217.00
LOCATION L0001761 VOLUME 541994.132 3751423.901 217.00
LOCATION L0001762 VOLUME 541980.556 3751427.321 217.00
LOCATION L0001763 VOLUME 541966.981 3751430.742 217.00
LOCATION L0001764 VOLUME 541953.405 3751434.163 217.08
LOCATION L0001765 VOLUME 541939.829 3751437.584 217.29
LOCATION L0001766 VOLUME 541926.254 3751441.005 217.52
LOCATION L0001767 VOLUME 541912.678 3751444.426 217.64
LOCATION L0001768 VOLUME 541899.103 3751447.847 217.75
LOCATION L0001769 VOLUME 541885.527 3751451.268 217.86
LOCATION L0001770 VOLUME 541871.951 3751454.689 217.98
LOCATION L0001771 VOLUME 541858.376 3751458.110 218.00
LOCATION L0001772 VOLUME 541844.800 3751461.531 218.00
LOCATION L0001773 VOLUME 541831.225 3751464.952 218.00
LOCATION L0001774 VOLUME 541817.649 3751468.372 218.00
LOCATION L0001775 VOLUME 541804.073 3751471.793 218.00
LOCATION L0001776 VOLUME 541790.498 3751475.214 218.00
LOCATION L0001777 VOLUME 541776.922 3751478.635 217.97
LOCATION L0001778 VOLUME 541763.346 3751482.056 217.93
LOCATION L0001779 VOLUME 541749.771 3751485.477 218.00
LOCATION L0001780 VOLUME 541736.195 3751488.898 218.06

```
   LOCATION L0001781     VOLUME   541722.620 3751492.319 218.01
   LOCATION L0001782     VOLUME   541709.044 3751495.740 218.00
   LOCATION L0001783     VOLUME   541695.468 3751499.161 218.00
   LOCATION L0001784     VOLUME   541681.893 3751502.582 218.00
   LOCATION L0001785     VOLUME   541668.317 3751506.002 218.00
   LOCATION L0001786     VOLUME   541654.742 3751509.423 218.00
** End of LINE VOLUME Source ID = SLINE2
** Source Parameters **
   SRCPARAM VOL1         0.0200000729     5.000    90.684     1.400
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000002     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000003     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000004     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000005     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000006     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000007     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000008     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000009     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000010     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000011     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000012     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000013     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000014     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000015     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000016     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000017     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000018     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000019     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000020     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000021     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000022     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000023     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000024     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000025     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000026     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000027     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000028     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000029     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000030     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000031     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000032     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000033     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000034     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000035     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000036     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000037     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000038     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000039     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000040     0.0000127299      3.49      4.00      3.25
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   SRCPARAM L0000041     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000042     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000043     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000044     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000045     0.0000127299      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001696     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001697     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001698     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001699     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001700     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001701     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001702     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001703     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001704     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001705     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001706     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001707     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001708     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001709     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001710     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001711     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001712     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001713     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001714     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001715     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001716     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001717     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001718     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001719     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001720     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001721     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001722     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001723     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001724     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001725     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001726     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001727     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001728     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001729     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001730     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001731     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001732     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001733     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001734     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001735     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001736     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001737     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001738     0.000006295      3.49      6.51      3.25
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   SRCPARAM L0001739     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001740     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001741     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001742     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001743     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001744     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001745     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001746     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001747     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001748     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001749     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001750     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001751     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001752     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001753     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001754     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001755     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001756     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001757     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001758     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001759     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001760     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001761     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001762     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001763     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001764     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001765     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001766     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001767     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001768     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001769     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001770     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001771     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001772     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001773     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001774     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001775     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001776     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001777     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001778     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001779     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001780     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001781     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001782     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001783     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001784     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001785     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001786     0.000006295      3.49      6.51      3.25
** ------------------------------------------------------------------
   URBANSRC ALL
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** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000001     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000002     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000003     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000004     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000005     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000006     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000007     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000008     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000009     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000010     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000011     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000012     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000013     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000014     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000015     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000016     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000017     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000018     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000019     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000020     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000021     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000021     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000022     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000023     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000024     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000025     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000026     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000027     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000027     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000028     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000028     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000029     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000029     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000030     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000031     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000032     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000033     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000033     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT L0000033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000034     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000034     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000035     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000036     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000036     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000037     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000037     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000038     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000040     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000042     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
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EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** WeekDays:
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   EMISFACT L0001696     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001697     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001697     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT L0001698     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001699     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001699     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001699     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001705     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0001729     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001730     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001730     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0001735     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001735     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001735     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001736     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001736     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001736     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001736     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001737     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001737     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001737     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001737     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001738     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001738     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001738     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001738     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001739     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001739     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001739     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001739     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001740     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001740     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001740     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001740     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001741     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001741     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001741     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001741     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001742     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001742     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001742     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001742     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001743     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001743     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001743     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001743     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001744     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001744     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001745     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001745     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001745     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001745     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001746     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001746     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001746     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001746     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001747     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001747     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001747     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001747     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001748     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001749     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001749     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001749     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001751     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001752     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001752     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001759     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001759     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001759     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001760     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001760     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001767     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001767     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001768     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001768     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001769     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001769     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001770     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001772     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001775     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001775     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001778     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001778     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001779     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001780     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001780     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001781     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001781     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001782     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001784     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001784     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "15097 Cons.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE KPSP_V9_ADJU\KPSP_v9.SFC
   PROFFILE KPSP_V9_ADJU\KPSP_v9.PFL
   SURFDATA 93138 2012
   UAIRDATA 3190 2012
   PROFBASE 125.0 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "15097 CONS.AD\AN00GALL.PLT" 31
   SUMMFILE "15097 Cons.sum"
OU FINISHED
**
**********************************
** Project Parameters
**********************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
```

```
** ZONE     11
** ZONEINX  0
**

** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 3/31/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Cons\15097
Cons.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Ops\1509
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2189641 Riverside_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15097 Cons.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     541818.060  3752502.010      237.890
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0005728443
```

```
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 541631.266, 3752296.509, 233.00, 3.49, 4.00
** 542018.482, 3752299.835, 233.00, 3.49, 4.00
** ------------------------------------------------------------------
   LOCATION L0000001     VOLUME   541635.561 3752296.546 233.04
   LOCATION L0000002     VOLUME   541644.150 3752296.620 233.04
   LOCATION L0000003     VOLUME   541652.740 3752296.694 233.04
   LOCATION L0000004     VOLUME   541661.330 3752296.767 233.05
   LOCATION L0000005     VOLUME   541669.919 3752296.841 233.05
   LOCATION L0000006     VOLUME   541678.509 3752296.915 233.05
   LOCATION L0000007     VOLUME   541687.099 3752296.989 233.05
   LOCATION L0000008     VOLUME   541695.688 3752297.062 233.06
   LOCATION L0000009     VOLUME   541704.278 3752297.136 233.06
   LOCATION L0000010     VOLUME   541712.868 3752297.210 233.06
   LOCATION L0000011     VOLUME   541721.457 3752297.284 233.06
   LOCATION L0000012     VOLUME   541730.047 3752297.357 233.07
   LOCATION L0000013     VOLUME   541738.637 3752297.431 233.07
   LOCATION L0000014     VOLUME   541747.227 3752297.505 233.07
   LOCATION L0000015     VOLUME   541755.816 3752297.579 233.07
   LOCATION L0000016     VOLUME   541764.406 3752297.653 233.08
   LOCATION L0000017     VOLUME   541772.996 3752297.726 233.08
   LOCATION L0000018     VOLUME   541781.585 3752297.800 233.08
   LOCATION L0000019     VOLUME   541790.175 3752297.874 233.08
   LOCATION L0000020     VOLUME   541798.765 3752297.948 233.09
   LOCATION L0000021     VOLUME   541807.354 3752298.021 233.09
   LOCATION L0000022     VOLUME   541815.944 3752298.095 233.09
   LOCATION L0000023     VOLUME   541824.534 3752298.169 233.09
   LOCATION L0000024     VOLUME   541833.123 3752298.243 233.10
   LOCATION L0000025     VOLUME   541841.713 3752298.317 233.10
   LOCATION L0000026     VOLUME   541850.303 3752298.390 233.10
   LOCATION L0000027     VOLUME   541858.892 3752298.464 233.10
   LOCATION L0000028     VOLUME   541867.482 3752298.538 233.11
   LOCATION L0000029     VOLUME   541876.072 3752298.612 233.11
   LOCATION L0000030     VOLUME   541884.661 3752298.685 233.11
   LOCATION L0000031     VOLUME   541893.251 3752298.759 233.11
   LOCATION L0000032     VOLUME   541901.841 3752298.833 233.12
   LOCATION L0000033     VOLUME   541910.431 3752298.907 233.12
   LOCATION L0000034     VOLUME   541919.020 3752298.981 233.12
   LOCATION L0000035     VOLUME   541927.610 3752299.054 233.12
   LOCATION L0000036     VOLUME   541936.200 3752299.128 233.13
   LOCATION L0000037     VOLUME   541944.789 3752299.202 233.13
   LOCATION L0000038     VOLUME   541953.379 3752299.276 233.13
   LOCATION L0000039     VOLUME   541961.969 3752299.349 233.13
   LOCATION L0000040     VOLUME   541970.558 3752299.423 233.14
   LOCATION L0000041     VOLUME   541979.148 3752299.497 233.14
   LOCATION L0000042     VOLUME   541987.738 3752299.571 233.14
   LOCATION L0000043     VOLUME   541996.327 3752299.645 233.14
   LOCATION L0000044     VOLUME   542004.917 3752299.718 233.15
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   LOCATION L0000045     VOLUME   542013.507 3752299.792 233.15
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0005728443
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 6
** 542027.034, 3752301.260, 233.00, 3.49, 6.51
** 542027.984, 3752059.428, 228.00, 3.49, 6.51
** 542027.509, 3751762.958, 222.95, 3.49, 6.51
** 542030.360, 3751420.877, 217.00, 3.49, 6.51
** 542006.129, 3751420.877, 217.00, 3.49, 6.51
** 541647.895, 3751511.149, 218.04, 3.49, 6.51
** ------------------------------------------------------------------
   LOCATION L0001696     VOLUME   542027.062 3752294.260 232.99
   LOCATION L0001697     VOLUME   542027.117 3752280.260 232.90
   LOCATION L0001698     VOLUME   542027.172 3752266.260 232.81
   LOCATION L0001699     VOLUME   542027.227 3752252.261 232.45
   LOCATION L0001700     VOLUME   542027.282 3752238.261 232.08
   LOCATION L0001701     VOLUME   542027.337 3752224.261 231.63
   LOCATION L0001702     VOLUME   542027.392 3752210.261 231.16
   LOCATION L0001703     VOLUME   542027.447 3752196.261 231.00
   LOCATION L0001704     VOLUME   542027.502 3752182.261 231.00
   LOCATION L0001705     VOLUME   542027.557 3752168.261 230.76
   LOCATION L0001706     VOLUME   542027.612 3752154.261 230.30
   LOCATION L0001707     VOLUME   542027.667 3752140.261 230.00
   LOCATION L0001708     VOLUME   542027.722 3752126.262 230.00
   LOCATION L0001709     VOLUME   542027.777 3752112.262 229.90
   LOCATION L0001710     VOLUME   542027.832 3752098.262 229.43
   LOCATION L0001711     VOLUME   542027.887 3752084.262 228.96
   LOCATION L0001712     VOLUME   542027.942 3752070.262 228.50
   LOCATION L0001713     VOLUME   542027.979 3752056.262 228.03
   LOCATION L0001714     VOLUME   542027.957 3752042.262 228.00
   LOCATION L0001715     VOLUME   542027.934 3752028.262 228.00
   LOCATION L0001716     VOLUME   542027.912 3752014.262 227.63
   LOCATION L0001717     VOLUME   542027.890 3752000.262 227.16
   LOCATION L0001718     VOLUME   542027.867 3751986.262 227.00
   LOCATION L0001719     VOLUME   542027.845 3751972.262 227.00
   LOCATION L0001720     VOLUME   542027.822 3751958.262 226.76
   LOCATION L0001721     VOLUME   542027.800 3751944.262 226.30
   LOCATION L0001722     VOLUME   542027.777 3751930.262 226.00
   LOCATION L0001723     VOLUME   542027.755 3751916.262 226.00
   LOCATION L0001724     VOLUME   542027.733 3751902.262 225.90
   LOCATION L0001725     VOLUME   542027.710 3751888.262 225.43
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LOCATION L0001726 VOLUME 542027.688 3751874.262 224.99
LOCATION L0001727 VOLUME 542027.665 3751860.262 224.89
LOCATION L0001728 VOLUME 542027.643 3751846.262 224.79
LOCATION L0001729 VOLUME 542027.620 3751832.262 224.44
LOCATION L0001730 VOLUME 542027.598 3751818.262 224.08
LOCATION L0001731 VOLUME 542027.576 3751804.262 223.63
LOCATION L0001732 VOLUME 542027.553 3751790.262 223.16
LOCATION L0001733 VOLUME 542027.531 3751776.262 223.00
LOCATION L0001734 VOLUME 542027.515 3751762.262 223.00
LOCATION L0001735 VOLUME 542027.632 3751748.263 222.76
LOCATION L0001736 VOLUME 542027.748 3751734.263 222.30
LOCATION L0001737 VOLUME 542027.865 3751720.264 222.00
LOCATION L0001738 VOLUME 542027.982 3751706.264 222.00
LOCATION L0001739 VOLUME 542028.098 3751692.265 221.90
LOCATION L0001740 VOLUME 542028.215 3751678.265 221.43
LOCATION L0001741 VOLUME 542028.332 3751664.266 220.99
LOCATION L0001742 VOLUME 542028.448 3751650.266 220.88
LOCATION L0001743 VOLUME 542028.565 3751636.267 220.76
LOCATION L0001744 VOLUME 542028.682 3751622.267 220.42
LOCATION L0001745 VOLUME 542028.798 3751608.268 220.07
LOCATION L0001746 VOLUME 542028.915 3751594.268 219.63
LOCATION L0001747 VOLUME 542029.032 3751580.269 219.16
LOCATION L0001748 VOLUME 542029.148 3751566.269 219.00
LOCATION L0001749 VOLUME 542029.265 3751552.270 219.00
LOCATION L0001750 VOLUME 542029.382 3751538.270 218.76
LOCATION L0001751 VOLUME 542029.498 3751524.271 218.30
LOCATION L0001752 VOLUME 542029.615 3751510.271 218.00
LOCATION L0001753 VOLUME 542029.732 3751496.272 218.00
LOCATION L0001754 VOLUME 542029.848 3751482.272 217.97
LOCATION L0001755 VOLUME 542029.965 3751468.273 217.83
LOCATION L0001756 VOLUME 542030.082 3751454.273 217.68
LOCATION L0001757 VOLUME 542030.198 3751440.274 217.35
LOCATION L0001758 VOLUME 542030.315 3751426.274 217.02
LOCATION L0001759 VOLUME 542021.757 3751420.877 217.00
LOCATION L0001760 VOLUME 542007.757 3751420.877 217.00
LOCATION L0001761 VOLUME 541994.132 3751423.901 217.00
LOCATION L0001762 VOLUME 541980.556 3751427.321 217.00
LOCATION L0001763 VOLUME 541966.981 3751430.742 217.00
LOCATION L0001764 VOLUME 541953.405 3751434.163 217.08
LOCATION L0001765 VOLUME 541939.829 3751437.584 217.29
LOCATION L0001766 VOLUME 541926.254 3751441.005 217.52
LOCATION L0001767 VOLUME 541912.678 3751444.426 217.64
LOCATION L0001768 VOLUME 541899.103 3751447.847 217.75
LOCATION L0001769 VOLUME 541885.527 3751451.268 217.86
LOCATION L0001770 VOLUME 541871.951 3751454.689 217.98
LOCATION L0001771 VOLUME 541858.376 3751458.110 218.00
LOCATION L0001772 VOLUME 541844.800 3751461.531 218.00
LOCATION L0001773 VOLUME 541831.225 3751464.952 218.00
LOCATION L0001774 VOLUME 541817.649 3751468.372 218.00
LOCATION L0001775 VOLUME 541804.073 3751471.793 218.00

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   LOCATION L0001776     VOLUME   541790.498 3751475.214 218.00
   LOCATION L0001777     VOLUME   541776.922 3751478.635 217.97
   LOCATION L0001778     VOLUME   541763.346 3751482.056 217.93
   LOCATION L0001779     VOLUME   541749.771 3751485.477 218.00
   LOCATION L0001780     VOLUME   541736.195 3751488.898 218.06
   LOCATION L0001781     VOLUME   541722.620 3751492.319 218.01
   LOCATION L0001782     VOLUME   541709.044 3751495.740 218.00
   LOCATION L0001783     VOLUME   541695.468 3751499.161 218.00
   LOCATION L0001784     VOLUME   541681.893 3751502.582 218.00
   LOCATION L0001785     VOLUME   541668.317 3751506.002 218.00
   LOCATION L0001786     VOLUME   541654.742 3751509.423 218.00
** End of LINE VOLUME Source ID = SLINE2
** Source Parameters **
   SRCPARAM VOL1         0.0200000729     5.000    90.684     1.400
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000002     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000003     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000004     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000005     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000006     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000007     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000008     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000009     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000010     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000011     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000012     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000013     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000014     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000015     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000016     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000017     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000018     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000019     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000020     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000021     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000022     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000023     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000024     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000025     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000026     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000027     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000028     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000029     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000030     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000031     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000032     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000033     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000034     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000035     0.0000127299      3.49      4.00      3.25
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   SRCPARAM L0000036     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000037     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000038     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000039     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000040     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000041     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000042     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000043     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000044     0.0000127299      3.49      4.00      3.25
   SRCPARAM L0000045     0.0000127299      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001696     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001697     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001698     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001699     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001700     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001701     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001702     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001703     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001704     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001705     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001706     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001707     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001708     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001709     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001710     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001711     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001712     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001713     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001714     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001715     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001716     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001717     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001718     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001719     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001720     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001721     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001722     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001723     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001724     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001725     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001726     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001727     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001728     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001729     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001730     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001731     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001732     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001733     0.000006295      3.49      6.51      3.25
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SRCPARAM L0001734     0.000006295      3.49      6.51      3.25
SRCPARAM L0001735     0.000006295      3.49      6.51      3.25
SRCPARAM L0001736     0.000006295      3.49      6.51      3.25
SRCPARAM L0001737     0.000006295      3.49      6.51      3.25
SRCPARAM L0001738     0.000006295      3.49      6.51      3.25
SRCPARAM L0001739     0.000006295      3.49      6.51      3.25
SRCPARAM L0001740     0.000006295      3.49      6.51      3.25
SRCPARAM L0001741     0.000006295      3.49      6.51      3.25
SRCPARAM L0001742     0.000006295      3.49      6.51      3.25
SRCPARAM L0001743     0.000006295      3.49      6.51      3.25
SRCPARAM L0001744     0.000006295      3.49      6.51      3.25
SRCPARAM L0001745     0.000006295      3.49      6.51      3.25
SRCPARAM L0001746     0.000006295      3.49      6.51      3.25
SRCPARAM L0001747     0.000006295      3.49      6.51      3.25
SRCPARAM L0001748     0.000006295      3.49      6.51      3.25
SRCPARAM L0001749     0.000006295      3.49      6.51      3.25
SRCPARAM L0001750     0.000006295      3.49      6.51      3.25
SRCPARAM L0001751     0.000006295      3.49      6.51      3.25
SRCPARAM L0001752     0.000006295      3.49      6.51      3.25
SRCPARAM L0001753     0.000006295      3.49      6.51      3.25
SRCPARAM L0001754     0.000006295      3.49      6.51      3.25
SRCPARAM L0001755     0.000006295      3.49      6.51      3.25
SRCPARAM L0001756     0.000006295      3.49      6.51      3.25
SRCPARAM L0001757     0.000006295      3.49      6.51      3.25
SRCPARAM L0001758     0.000006295      3.49      6.51      3.25
SRCPARAM L0001759     0.000006295      3.49      6.51      3.25
SRCPARAM L0001760     0.000006295      3.49      6.51      3.25
SRCPARAM L0001761     0.000006295      3.49      6.51      3.25
SRCPARAM L0001762     0.000006295      3.49      6.51      3.25
SRCPARAM L0001763     0.000006295      3.49      6.51      3.25
SRCPARAM L0001764     0.000006295      3.49      6.51      3.25
SRCPARAM L0001765     0.000006295      3.49      6.51      3.25
SRCPARAM L0001766     0.000006295      3.49      6.51      3.25
SRCPARAM L0001767     0.000006295      3.49      6.51      3.25
SRCPARAM L0001768     0.000006295      3.49      6.51      3.25
SRCPARAM L0001769     0.000006295      3.49      6.51      3.25
SRCPARAM L0001770     0.000006295      3.49      6.51      3.25
SRCPARAM L0001771     0.000006295      3.49      6.51      3.25
SRCPARAM L0001772     0.000006295      3.49      6.51      3.25
SRCPARAM L0001773     0.000006295      3.49      6.51      3.25
SRCPARAM L0001774     0.000006295      3.49      6.51      3.25
SRCPARAM L0001775     0.000006295      3.49      6.51      3.25
SRCPARAM L0001776     0.000006295      3.49      6.51      3.25
SRCPARAM L0001777     0.000006295      3.49      6.51      3.25
SRCPARAM L0001778     0.000006295      3.49      6.51      3.25
SRCPARAM L0001779     0.000006295      3.49      6.51      3.25
SRCPARAM L0001780     0.000006295      3.49      6.51      3.25
SRCPARAM L0001781     0.000006295      3.49      6.51      3.25
SRCPARAM L0001782     0.000006295      3.49      6.51      3.25
SRCPARAM L0001783     0.000006295      3.49      6.51      3.25
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   SRCPARAM L0001784     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001785     0.000006295      3.49      6.51      3.25
   SRCPARAM L0001786     0.000006295      3.49      6.51      3.25
** ----------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000001     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000002     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000003     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000004     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000005     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000006     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000010     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000011     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** WeekDays:
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   EMISFACT L0001696     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001696     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001697     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001697     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001697     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001698     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001704     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001763     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001765     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001766     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001771     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001772     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001772     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001772     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001772     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001773     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001773     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001773     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001773     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001774     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001775     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001775     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001775     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001775     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001776     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001777     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001778     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001778     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001778     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001778     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001779     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001779     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001779     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001779     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001780     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001780     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001780     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001780     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001781     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001781     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001781     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001781     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001782     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001782     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001782     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001782     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001783     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001783     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001783     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001783     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001784     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001784     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001784     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001784     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001785     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001786     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "15097 Cons.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE KPSP_V9_ADJU\KPSP_v9.SFC
   PROFFILE KPSP_V9_ADJU\KPSP_v9.PFL
   SURFDATA 93138 2012
   UAIRDATA 3190 2012
   PROFBASE 125.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "15097 CONS.AD\AN00GALL.PLT" 31
   SUMMFILE "15097 Cons.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***
```

```
 --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    2029       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    2029       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                         ***       09:07:57

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                            ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for   137 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =   2189641.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
```

```
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    137 Source(s);       1 Source Group(s); and      53
Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:    137 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   125.00 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
VOL1	0	0.20000E-01	541818.1	3752502.0	237.9	5.00	90.68	1.40	YES	HRDOW
L0000001	0	0.12730E-04	541635.6	3752296.5	233.0	3.49	4.00	3.25	YES	HRDOW
L0000002	0	0.12730E-04	541644.2	3752296.6	233.0	3.49	4.00	3.25	YES	HRDOW
L0000003	0	0.12730E-04	541652.7	3752296.7	233.0	3.49	4.00	3.25	YES	HRDOW
L0000004	0	0.12730E-04	541661.3	3752296.8	233.1	3.49	4.00	3.25	YES	HRDOW
L0000005	0	0.12730E-04	541669.9	3752296.8	233.1	3.49	4.00	3.25	YES	HRDOW
L0000006	0	0.12730E-04	541678.5	3752296.9	233.1	3.49	4.00	3.25	YES	HRDOW
L0000007	0	0.12730E-04	541687.1	3752297.0	233.1	3.49	4.00	3.25	YES	HRDOW
L0000008	0	0.12730E-04	541695.7	3752297.1	233.1	3.49	4.00	3.25	YES	HRDOW
L0000009	0	0.12730E-04	541704.3	3752297.1	233.1	3.49	4.00	3.25	YES	HRDOW
L0000010	0	0.12730E-04	541712.9	3752297.2	233.1	3.49	4.00	3.25	YES	HRDOW
L0000011	0	0.12730E-04	541721.5	3752297.3	233.1	3.49	4.00	3.25	YES	HRDOW

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 L0000012          0   0.12730E-04  541730.0 3752297.4   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000013          0   0.12730E-04  541738.6 3752297.4   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000014          0   0.12730E-04  541747.2 3752297.5   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000015          0   0.12730E-04  541755.8 3752297.6   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000016          0   0.12730E-04  541764.4 3752297.7   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000017          0   0.12730E-04  541773.0 3752297.7   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000018          0   0.12730E-04  541781.6 3752297.8   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000019          0   0.12730E-04  541790.2 3752297.9   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000020          0   0.12730E-04  541798.8 3752297.9   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000021          0   0.12730E-04  541807.4 3752298.0   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000022          0   0.12730E-04  541815.9 3752298.1   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000023          0   0.12730E-04  541824.5 3752298.2   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000024          0   0.12730E-04  541833.1 3752298.2   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000025          0   0.12730E-04  541841.7 3752298.3   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000026          0   0.12730E-04  541850.3 3752298.4   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000027          0   0.12730E-04  541858.9 3752298.5   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000028          0   0.12730E-04  541867.5 3752298.5   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000029          0   0.12730E-04  541876.1 3752298.6   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000030          0   0.12730E-04  541884.7 3752298.7   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000031          0   0.12730E-04  541893.3 3752298.8   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000032          0   0.12730E-04  541901.8 3752298.8   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000033          0   0.12730E-04  541910.4 3752298.9   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000034          0   0.12730E-04  541919.0 3752299.0   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000035          0   0.12730E-04  541927.6 3752299.1   233.1     3.49     4.00
3.25     YES   HRDOW
 L0000036          0   0.12730E-04  541936.2 3752299.1   233.1     3.49     4.00
3.25     YES   HRDOW
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0000040	0	0.12730E-04	541970.6	3752299.4	233.1	3.49	4.00	3.25	YES	HRDOW
L0000041	0	0.12730E-04	541979.1	3752299.5	233.1	3.49	4.00	3.25	YES	HRDOW
L0000042	0	0.12730E-04	541987.7	3752299.6	233.1	3.49	4.00	3.25	YES	HRDOW
L0000043	0	0.12730E-04	541996.3	3752299.6	233.1	3.49	4.00	3.25	YES	HRDOW
L0000044	0	0.12730E-04	542004.9	3752299.7	233.2	3.49	4.00	3.25	YES	HRDOW
L0000045	0	0.12730E-04	542013.5	3752299.8	233.2	3.49	4.00	3.25	YES	HRDOW
L0001696	0	0.62950E-05	542027.1	3752294.3	233.0	3.49	6.51	3.25	YES	HRDOW
L0001697	0	0.62950E-05	542027.1	3752280.3	232.9	3.49	6.51	3.25	YES	HRDOW
L0001698	0	0.62950E-05	542027.2	3752266.3	232.8	3.49	6.51	3.25	YES	HRDOW
L0001699	0	0.62950E-05	542027.2	3752252.3	232.5	3.49	6.51	3.25	YES	HRDOW
L0001700	0	0.62950E-05	542027.3	3752238.3	232.1	3.49	6.51	3.25	YES	HRDOW
L0001701	0	0.62950E-05	542027.3	3752224.3	231.6	3.49	6.51	3.25	YES	HRDOW

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 L0001702          0   0.62950E-05  542027.4 3752210.3   231.2     3.49     6.51
3.25     YES   HRDOW
 L0001703          0   0.62950E-05  542027.4 3752196.3   231.0     3.49     6.51
3.25     YES   HRDOW
 L0001704          0   0.62950E-05  542027.5 3752182.3   231.0     3.49     6.51
3.25     YES   HRDOW
 L0001705          0   0.62950E-05  542027.6 3752168.3   230.8     3.49     6.51
3.25     YES   HRDOW
 L0001706          0   0.62950E-05  542027.6 3752154.3   230.3     3.49     6.51
3.25     YES   HRDOW
 L0001707          0   0.62950E-05  542027.7 3752140.3   230.0     3.49     6.51
3.25     YES   HRDOW
 L0001708          0   0.62950E-05  542027.7 3752126.3   230.0     3.49     6.51
3.25     YES   HRDOW
 L0001709          0   0.62950E-05  542027.8 3752112.3   229.9     3.49     6.51
3.25     YES   HRDOW
 L0001710          0   0.62950E-05  542027.8 3752098.3   229.4     3.49     6.51
3.25     YES   HRDOW
 L0001711          0   0.62950E-05  542027.9 3752084.3   229.0     3.49     6.51
3.25     YES   HRDOW
 L0001712          0   0.62950E-05  542027.9 3752070.3   228.5     3.49     6.51
3.25     YES   HRDOW
 L0001713          0   0.62950E-05  542028.0 3752056.3   228.0     3.49     6.51
3.25     YES   HRDOW
 L0001714          0   0.62950E-05  542028.0 3752042.3   228.0     3.49     6.51
3.25     YES   HRDOW
 L0001715          0   0.62950E-05  542027.9 3752028.3   228.0     3.49     6.51
3.25     YES   HRDOW
 L0001716          0   0.62950E-05  542027.9 3752014.3   227.6     3.49     6.51
3.25     YES   HRDOW
 L0001717          0   0.62950E-05  542027.9 3752000.3   227.2     3.49     6.51
3.25     YES   HRDOW
 L0001718          0   0.62950E-05  542027.9 3751986.3   227.0     3.49     6.51
3.25     YES   HRDOW
 L0001719          0   0.62950E-05  542027.8 3751972.3   227.0     3.49     6.51
3.25     YES   HRDOW
 L0001720          0   0.62950E-05  542027.8 3751958.3   226.8     3.49     6.51
3.25     YES   HRDOW
 L0001721          0   0.62950E-05  542027.8 3751944.3   226.3     3.49     6.51
3.25     YES   HRDOW
 L0001722          0   0.62950E-05  542027.8 3751930.3   226.0     3.49     6.51
3.25     YES   HRDOW
 L0001723          0   0.62950E-05  542027.8 3751916.3   226.0     3.49     6.51
3.25     YES   HRDOW
 L0001724          0   0.62950E-05  542027.7 3751902.3   225.9     3.49     6.51
3.25     YES   HRDOW
 L0001725          0   0.62950E-05  542027.7 3751888.3   225.4     3.49     6.51
3.25     YES   HRDOW
 L0001726          0   0.62950E-05  542027.7 3751874.3   225.0     3.49     6.51
3.25     YES   HRDOW
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001730	0	0.62950E-05	542027.6	3751818.3	224.1	3.49	6.51	3.25	YES	HRDOW
L0001731	0	0.62950E-05	542027.6	3751804.3	223.6	3.49	6.51	3.25	YES	HRDOW
L0001732	0	0.62950E-05	542027.6	3751790.3	223.2	3.49	6.51	3.25	YES	HRDOW
L0001733	0	0.62950E-05	542027.5	3751776.3	223.0	3.49	6.51	3.25	YES	HRDOW
L0001734	0	0.62950E-05	542027.5	3751762.3	223.0	3.49	6.51	3.25	YES	HRDOW
L0001735	0	0.62950E-05	542027.6	3751748.3	222.8	3.49	6.51	3.25	YES	HRDOW
L0001736	0	0.62950E-05	542027.7	3751734.3	222.3	3.49	6.51	3.25	YES	HRDOW
L0001737	0	0.62950E-05	542027.9	3751720.3	222.0	3.49	6.51	3.25	YES	HRDOW
L0001738	0	0.62950E-05	542028.0	3751706.3	222.0	3.49	6.51	3.25	YES	HRDOW
L0001739	0	0.62950E-05	542028.1	3751692.3	221.9	3.49	6.51	3.25	YES	HRDOW
L0001740	0	0.62950E-05	542028.2	3751678.3	221.4	3.49	6.51	3.25	YES	HRDOW
L0001741	0	0.62950E-05	542028.3	3751664.3	221.0	3.49	6.51	3.25	YES	HRDOW

```
 L0001742          0   0.62950E-05  542028.4 3751650.3   220.9     3.49     6.51
3.25     YES   HRDOW
 L0001743          0   0.62950E-05  542028.6 3751636.3   220.8     3.49     6.51
3.25     YES   HRDOW
 L0001744          0   0.62950E-05  542028.7 3751622.3   220.4     3.49     6.51
3.25     YES   HRDOW
 L0001745          0   0.62950E-05  542028.8 3751608.3   220.1     3.49     6.51
3.25     YES   HRDOW
 L0001746          0   0.62950E-05  542028.9 3751594.3   219.6     3.49     6.51
3.25     YES   HRDOW
 L0001747          0   0.62950E-05  542029.0 3751580.3   219.2     3.49     6.51
3.25     YES   HRDOW
 L0001748          0   0.62950E-05  542029.1 3751566.3   219.0     3.49     6.51
3.25     YES   HRDOW
 L0001749          0   0.62950E-05  542029.3 3751552.3   219.0     3.49     6.51
3.25     YES   HRDOW
 L0001750          0   0.62950E-05  542029.4 3751538.3   218.8     3.49     6.51
3.25     YES   HRDOW
 L0001751          0   0.62950E-05  542029.5 3751524.3   218.3     3.49     6.51
3.25     YES   HRDOW
 L0001752          0   0.62950E-05  542029.6 3751510.3   218.0     3.49     6.51
3.25     YES   HRDOW
 L0001753          0   0.62950E-05  542029.7 3751496.3   218.0     3.49     6.51
3.25     YES   HRDOW
 L0001754          0   0.62950E-05  542029.8 3751482.3   218.0     3.49     6.51
3.25     YES   HRDOW
 L0001755          0   0.62950E-05  542030.0 3751468.3   217.8     3.49     6.51
3.25     YES   HRDOW
 L0001756          0   0.62950E-05  542030.1 3751454.3   217.7     3.49     6.51
3.25     YES   HRDOW
 L0001757          0   0.62950E-05  542030.2 3751440.3   217.4     3.49     6.51
3.25     YES   HRDOW
 L0001758          0   0.62950E-05  542030.3 3751426.3   217.0     3.49     6.51
3.25     YES   HRDOW
 L0001759          0   0.62950E-05  542021.8 3751420.9   217.0     3.49     6.51
3.25     YES   HRDOW
 L0001760          0   0.62950E-05  542007.8 3751420.9   217.0     3.49     6.51
3.25     YES   HRDOW
 L0001761          0   0.62950E-05  541994.1 3751423.9   217.0     3.49     6.51
3.25     YES   HRDOW
 L0001762          0   0.62950E-05  541980.6 3751427.3   217.0     3.49     6.51
3.25     YES   HRDOW
 L0001763          0   0.62950E-05  541967.0 3751430.7   217.0     3.49     6.51
3.25     YES   HRDOW
 L0001764          0   0.62950E-05  541953.4 3751434.2   217.1     3.49     6.51
3.25     YES   HRDOW
 L0001765          0   0.62950E-05  541939.8 3751437.6   217.3     3.49     6.51
3.25     YES   HRDOW
 L0001766          0   0.62950E-05  541926.3 3751441.0   217.5     3.49     6.51
3.25     YES   HRDOW
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001770	0	0.62950E-05	541872.0	3751454.7	218.0	3.49	6.51	3.25	YES	HRDOW
L0001771	0	0.62950E-05	541858.4	3751458.1	218.0	3.49	6.51	3.25	YES	HRDOW
L0001772	0	0.62950E-05	541844.8	3751461.5	218.0	3.49	6.51	3.25	YES	HRDOW
L0001773	0	0.62950E-05	541831.2	3751465.0	218.0	3.49	6.51	3.25	YES	HRDOW
L0001774	0	0.62950E-05	541817.6	3751468.4	218.0	3.49	6.51	3.25	YES	HRDOW
L0001775	0	0.62950E-05	541804.1	3751471.8	218.0	3.49	6.51	3.25	YES	HRDOW
L0001776	0	0.62950E-05	541790.5	3751475.2	218.0	3.49	6.51	3.25	YES	HRDOW
L0001777	0	0.62950E-05	541776.9	3751478.6	218.0	3.49	6.51	3.25	YES	HRDOW
L0001778	0	0.62950E-05	541763.3	3751482.1	217.9	3.49	6.51	3.25	YES	HRDOW
L0001779	0	0.62950E-05	541749.8	3751485.5	218.0	3.49	6.51	3.25	YES	HRDOW
L0001780	0	0.62950E-05	541736.2	3751488.9	218.1	3.49	6.51	3.25	YES	HRDOW
L0001781	0	0.62950E-05	541722.6	3751492.3	218.0	3.49	6.51	3.25	YES	HRDOW

*** SOURCE IDs DEFINING SOURCE GROUPS
***

SRCGROUP ID	SOURCE IDs
ALL	VOL1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 ,
	L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 ,
	L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 ,
	L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 ,
	L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 ,
	L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0001696 , L0001697 ,
	L0001698 , L0001699 , L0001700 , L0001701 , L0001702 , L0001703 , L0001704 , L0001705 ,
	L0001706 , L0001707 , L0001708 , L0001709 , L0001710 , L0001711 , L0001712 , L0001713 ,

```
             L0001714    , L0001715    , L0001716    , L0001717    , L0001718    ,
L0001719    , L0001720    , L0001721    ,

             L0001722    , L0001723    , L0001724    , L0001725    , L0001726    ,
L0001727    , L0001728    , L0001729    ,

             L0001730    , L0001731    , L0001732    , L0001733    , L0001734    ,
L0001735    , L0001736    , L0001737    ,

             L0001738    , L0001739    , L0001740    , L0001741    , L0001742    ,
L0001743    , L0001744    , L0001745    ,

             L0001746    , L0001747    , L0001748    , L0001749    , L0001750    ,
L0001751    , L0001752    , L0001753    ,

             L0001754    , L0001755    , L0001756    , L0001757    , L0001758    ,
L0001759    , L0001760    , L0001761    ,

             L0001762    , L0001763    , L0001764    , L0001765    , L0001766    ,
L0001767    , L0001768    , L0001769    ,

             L0001770    , L0001771    , L0001772    , L0001773    , L0001774    ,
L0001775    , L0001776    , L0001777    ,

             L0001778    , L0001779    , L0001780    , L0001781    , L0001782    ,
L0001783    , L0001784    , L0001785    ,

             L0001786    ,
 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                      *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                  SOURCE IDs
  --------   ---------                                  ----------


              2189641.   VOL1        , L0000001    , L0000002    , L0000003    ,
L0000004    , L0000005    , L0000006    ,
 L0000007    ,

             L0000008    , L0000009    , L0000010    , L0000011    , L0000012    ,
L0000013    , L0000014    , L0000015    ,
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             L0000016    , L0000017    , L0000018    , L0000019    , L0000020    ,
L0000021    , L0000022    , L0000023    ,

             L0000024    , L0000025    , L0000026    , L0000027    , L0000028    ,
L0000029    , L0000030    , L0000031    ,

             L0000032    , L0000033    , L0000034    , L0000035    , L0000036    ,
L0000037    , L0000038    , L0000039    ,

             L0000040    , L0000041    , L0000042    , L0000043    , L0000044    ,
L0000045    , L0001696    , L0001697    ,

             L0001698    , L0001699    , L0001700    , L0001701    , L0001702    ,
L0001703    , L0001704    , L0001705    ,

             L0001706    , L0001707    , L0001708    , L0001709    , L0001710    ,
L0001711    , L0001712    , L0001713    ,

             L0001714    , L0001715    , L0001716    , L0001717    , L0001718    ,
L0001719    , L0001720    , L0001721    ,

             L0001722    , L0001723    , L0001724    , L0001725    , L0001726    ,
L0001727    , L0001728    , L0001729    ,

             L0001730    , L0001731    , L0001732    , L0001733    , L0001734    ,
L0001735    , L0001736    , L0001737    ,

             L0001738    , L0001739    , L0001740    , L0001741    , L0001742    ,
L0001743    , L0001744    , L0001745    ,

             L0001746    , L0001747    , L0001748    , L0001749    , L0001750    ,
L0001751    , L0001752    , L0001753    ,

             L0001754    , L0001755    , L0001756    , L0001757    , L0001758    ,
L0001759    , L0001760    , L0001761    ,

             L0001762    , L0001763    , L0001764    , L0001765    , L0001766    ,
L0001767    , L0001768    , L0001769    ,

             L0001770    , L0001771    , L0001772    , L0001773    , L0001774    ,
L0001775    , L0001776    , L0001777    ,

             L0001778    , L0001779    , L0001780    , L0001781    , L0001782    ,
L0001783    , L0001784    , L0001785    ,

             L0001786    ,
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000001     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
```

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                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000002     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000003     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000004 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000005 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000006     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000007     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000008 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000009 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01

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14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000010     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000011     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000012   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000013   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000014     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000015   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000016     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000017     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000018     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000019 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000020 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
DAY OF WEEK = WEEKDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000021   ; SOURCE TYPE = VOLUME   :
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
DAY OF WEEK = WEEKDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  30
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000022     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0000023   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

                                                   DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                   DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                   DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0000024   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  33
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000025     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  34
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000026     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000027   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000028   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000029     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

                                   PAGE  38
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000030     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000031 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000032 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  41
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000033     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

                                   PAGE  42
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000034     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

                                   PAGE  43
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000035     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000036     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000037   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000038     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *
```

```
 SOURCE ID = L0000039     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000040     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000041 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

                                   PAGE  50
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000042     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000043     ; SOURCE TYPE = VOLUME   :
```

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000044     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000045   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

Indian Cyn\15097 Ops\1509 *** 03/31/23
 *** AERMET - VERSION 16216 *** ***
                  *** 09:07:57

                              PAGE 54
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001696     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```



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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001697     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

```
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***       03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001698     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001699   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                          DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                          DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                          DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001700 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001701 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001702   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

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22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  61
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001703     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001704   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001705   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  64
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001706     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001707     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                           DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                           DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                           DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001708     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001709     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
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14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001710     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001711     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0001712   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001713   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001714   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001715   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0001716     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  75
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001717     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE  76
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001718     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001719 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001720 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001721 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  80
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001722     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0001723   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

                                                   DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                   DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                   DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0001724   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001725     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001726   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001727   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001728   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  87
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001729     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001730 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001731 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001732 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  91
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001733     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001734   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                              DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                              DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                              DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001735     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE  94
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001736     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001737   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001738     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *
```

```
 SOURCE ID = L0001739     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001740     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001741     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

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22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001742     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001743     ; SOURCE TYPE = VOLUME   :
```

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001744     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001745   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

Indian Cyn\15097 Ops\1509 *** 03/31/23
 *** AERMET - VERSION 16216 *** ***
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001746     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```



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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001747     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```



```
                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001748     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
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14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0001749   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001750 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001751 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001752     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE 111
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001753     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001754 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001755 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001756     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001757     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE 116
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001758     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001759     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
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14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001760     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001761     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0001762   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001763   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001764 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001765   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0001766     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE 125
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001767     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE 126
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001768     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001769 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001770 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```



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                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001771     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE 130
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001772     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0001773   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

                                                   DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                   DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                   DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

 SOURCE ID = L0001774   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                  PAGE 133
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001775     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001776   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001777 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001778 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE 137
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001779     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001780   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                          DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                          DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                          DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001781 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001782 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE 141
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001783     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

                                   PAGE 142
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0001784     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        09:07:57

                                   PAGE 143
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(541592.0, 3752272.6, 233.0, 233.0, 0.0); (541704.8, 3752233.5, 232.0, 232.0, 0.0);
(541760.2, 3752233.5, 231.9, 231.9, 0.0); (541874.3, 3752283.3, 233.0, 233.0, 0.0);
(541966.7, 3752283.1, 233.0, 233.0, 0.0); (541965.7, 3752197.2, 231.0, 231.0, 0.0);
(542066.4, 3752283.4, 232.6, 232.6, 0.0); (541482.7, 3752277.8, 233.0, 233.0, 0.0);
(541987.4, 3752109.5, 229.8, 229.8, 0.0); (541986.9, 3752042.1, 228.0, 228.0, 0.0);
(541987.9, 3751980.6, 227.0, 227.0, 0.0); (542066.6, 3752139.5, 230.0, 230.0, 0.0);
(542102.8, 3753323.4, 254.3, 254.3, 0.0); (541995.7, 3753329.8, 254.5, 254.5, 0.0);
(541865.0, 3753324.4, 255.5, 255.5, 0.0); (542394.2, 3753229.1, 252.0, 252.0, 0.0);
(542395.1, 3753266.6, 252.4, 252.4, 0.0); (542258.5, 3752403.4, 235.6, 235.6, 0.0);
(542251.0, 3752432.4, 236.6, 236.6, 0.0); (542251.0, 3752454.3, 237.0, 237.0, 0.0);
(542250.5, 3752572.8, 239.0, 239.0, 0.0); (542257.4, 3752823.0, 244.0, 244.0, 0.0);

```
     ( 542082.7, 3753524.9,     259.0,     259.0,       0.0);         ( 542044.9,
3753606.2,     260.7,     260.7,       0.0);
     ( 542169.0, 3753525.9,     259.0,     259.0,       0.0);         ( 542264.4,
3753529.2,     259.0,     259.0,       0.0);
     ( 542403.6, 3753374.2,     255.0,     255.0,       0.0);         ( 542000.7,
3753721.5,     263.5,     263.5,       0.0);
     ( 541937.2, 3753717.9,     263.4,     263.4,       0.0);         ( 541973.0,
3753719.3,     263.5,     263.5,       0.0);
     ( 541891.9, 3753715.4,     263.3,     263.3,       0.0);         ( 541842.3,
3753716.8,     264.3,     264.3,       0.0);
     ( 542083.0, 3753566.8,     259.4,     259.4,       0.0);         ( 542084.1,
3753587.2,     260.1,     260.1,       0.0);
     ( 542083.5, 3753607.4,     260.7,     260.7,       0.0);         ( 542082.7,
3753625.0,     261.0,     261.0,       0.0);
     ( 542082.4, 3753645.4,     261.0,     261.0,       0.0);         ( 542081.8,
3753666.1,     261.7,     261.7,       0.0);
     ( 542047.4, 3753744.7,     264.0,     264.0,       0.0);         ( 542081.8,
3753726.0,     263.0,     263.0,       0.0);
     ( 542054.7, 3753825.0,     266.0,     266.0,       0.0);         ( 542007.4,
3753899.7,     268.0,     268.0,       0.0);
     ( 541820.0, 3753896.4,     268.4,     268.4,       0.0);         ( 541662.6,
3753971.3,     271.0,     271.0,       0.0);
     ( 541988.3, 3751926.4,     226.0,     226.0,       0.0);         ( 542062.1,
3751942.4,     226.2,     226.2,       0.0);
     ( 542155.3, 3752048.2,     228.8,     228.8,       0.0);         ( 542153.6,
3752003.2,     227.3,     227.3,       0.0);
     ( 541895.3, 3752099.6,     229.5,     229.5,       0.0);         ( 542161.0,
3752134.3,     230.0,     230.0,       0.0);
     ( 541601.7, 3752176.7,     231.0,     231.0,       0.0);         ( 541381.4,
3752406.6,     235.7,     235.7,       0.0);
     ( 542055.9, 3753624.3,     261.0,     261.0,       0.0);

 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                          ***       09:07:57

                                    PAGE 146
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                    (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: KPSP_V9_ADJU\KPSP_v9.SFC
Met Version: 16216
Profile file: KPSP_V9_ADJU\KPSP_v9.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 93138 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN

Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT

```
 12 01 01   1 01  -28.7  0.293 -9.000 -9.000 -999.  381.     94.4  0.13   4.07
1.00    3.32  328.   10.1  286.4    2.0
 12 01 01   1 02   -5.5  0.102 -9.000 -9.000 -999.  122.     17.6  0.13   4.07
1.00    1.23  320.   10.1  284.2    2.0
 12 01 01   1 03  -19.4  0.196 -9.000 -9.000 -999.  209.     42.5  0.13   4.07
1.00    2.27  306.   10.1  283.1    2.0
 12 01 01   1 04  -16.5  0.181 -9.000 -9.000 -999.  184.     35.9  0.13   4.07
1.00    2.10  328.   10.1  282.5    2.0
 12 01 01   1 05  -20.0  0.202 -9.000 -9.000 -999.  218.     44.9  0.13   4.07
1.00    2.33  328.   10.1  283.8    2.0
 12 01 01   1 06  -18.7  0.193 -9.000 -9.000 -999.  203.     40.9  0.13   4.07
1.00    2.23  325.   10.1  283.1    2.0
 12 01 01   1 07  -18.7  0.193 -9.000 -9.000 -999.  203.     40.9  0.13   4.07
1.00    2.23  327.   10.1  284.2    2.0
 12 01 01   1 08   -9.3  0.150 -9.000 -9.000 -999.  140.     32.5  0.13   4.07
0.52    1.74  297.   10.1  284.9    2.0
 12 01 01   1 09   50.6  0.130  0.399  0.011   45.  112.     -3.9  0.13   4.07
0.32    0.92  282.   10.1  291.4    2.0
 12 01 01   1 10  126.5  0.172  0.815  0.008  154.  171.     -3.6  0.13   4.07
0.25    1.20  233.   10.1  294.2    2.0
 12 01 01   1 11  179.5  0.134  1.299  0.005  439.  118.     -1.2  0.13   4.07
0.23    0.75  344.   10.1  297.5    2.0
 12 01 01   1 12  203.7  0.185  1.649  0.005  791.  192.     -2.8  0.13   4.07
0.22    1.23  100.   10.1  298.8    2.0
 12 01 01   1 13  199.8  0.234  1.913  0.005 1259.  271.     -5.7  0.13   4.07
0.22    1.76  110.   10.1  299.9    2.0
 12 01 01   1 14  167.6  0.236  1.916  0.005 1507.  275.     -7.0  0.13   4.07
0.24    1.84  124.   10.1  300.4    2.0
 12 01 01   1 15  108.5  0.273  1.697  0.005 1617.  342.    -16.8  0.13   4.07
0.27    2.40   92.   10.1  300.4    2.0
 12 01 01   1 16   27.5  0.235  1.080  0.005 1640.  275.    -42.5  0.13   4.07
0.37    2.27  144.   10.1  299.2    2.0
 12 01 01   1 17   -5.6  0.106 -9.000 -9.000 -999.   95.     19.2  0.13   4.07
0.66    1.28  204.   10.1  294.9    2.0
 12 01 01   1 18  -17.6  0.188 -9.000 -9.000 -999.  196.     39.0  0.13   4.07
1.00    2.18  314.   10.1  292.0    2.0
 12 01 01   1 19  -25.3  0.260 -9.000 -9.000 -999.  318.     74.4  0.13   4.07
1.00    2.96  322.   10.1  289.9    2.0
 12 01 01   1 20  -21.1  0.217 -9.000 -9.000 -999.  243.     51.7  0.13   4.07
1.00    2.49  314.   10.1  289.2    2.0
 12 01 01   1 21  -26.7  0.275 -9.000 -9.000 -999.  346.     83.0  0.13   4.07
1.00    3.12  314.   10.1  290.4    2.0
 12 01 01   1 22  -22.1  0.226 -9.000 -9.000 -999.  259.     56.2  0.13   4.07
1.00    2.59  317.   10.1  288.8    2.0
 12 01 01   1 23  -28.1  0.285 -9.000 -9.000 -999.  365.     89.2  0.13   4.07
1.00    3.23  328.   10.1  285.4    2.0
 12 01 01   1 24  -33.3  0.338 -9.000 -9.000 -999.  472.    125.8  0.13   4.07
1.00    3.81  331.   10.1  286.4    2.0
```

First hour of profile data
YR MO DY HR HEIGHT F WDIR   WSPD AMB_TMP sigmaA sigmaW sigmaV
12 01 01 01   10.1 1 328.   3.32   286.5   99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)
↑ *** AERMOD - VERSION 22112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Ops\1509 ***   03/31/23
*** AERMET - VERSION 16216 ***   ***
***   09:07:57

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5 YEARS FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   VOL1   , L0000001 , L0000002   , L0000003   , L0000004   ,
L0000005   , L0000006   , L0000007   , L0000008   , L0000009 , L0000010   , L0000011   , L0000012   ,
L0000013   , L0000014   , L0000015   , L0000016   , L0000017 , L0000018   , L0000019   , L0000020   ,
L0000021   , L0000022   , L0000023   , L0000024   , L0000025 , L0000026   , L0000027   , . . .   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
541591.96	3752272.59	0.01004	541704.76	3752233.52	0.01414
541760.21	3752233.52	0.01710	541874.28	3752283.31	0.04061
541966.73	3752283.07	0.03311	541965.74	3752197.21	0.01419
542066.40	3752283.40	0.01358	541482.67	3752277.81	0.00518
541987.40	3752109.48	0.00956	541986.94	3752042.09	0.00739
541987.85	3751980.62	0.00614	542066.62	3752139.53	0.00928
542102.76	3753323.42	0.00062	541995.73	3753329.77	0.00066
541865.00	3753324.45	0.00073	542394.21	3753229.08	0.00055

```
         542395.05    3753266.56        0.00052                      542258.49
3752403.43        0.00338
         542250.98    3752432.37        0.00344                      542250.98
3752454.34        0.00337
         542250.45    3752572.78        0.00296                      542257.41
3752823.05        0.00172
         542082.74    3753524.94        0.00042                      542044.89
3753606.23        0.00038
         542168.98    3753525.93        0.00040                      542264.42
3753529.22        0.00038
         542403.64    3753374.20        0.00043                      542000.70
3753721.51        0.00032
         541937.19    3753717.88        0.00033                      541973.00
3753719.28        0.00033
         541891.86    3753715.36        0.00034                      541842.34
3753716.76        0.00034
         542082.95    3753566.80        0.00039                      542084.07
3753587.22        0.00038
         542083.51    3753607.37        0.00037                      542082.67
3753624.99        0.00036
         542082.39    3753645.41        0.00035                      542081.83
3753666.12        0.00034
         542047.42    3753744.74        0.00031                      542081.83
3753725.99        0.00031
         542054.69    3753825.03        0.00028                      542007.41
3753899.73        0.00026
         541819.96    3753896.38        0.00027                      541662.55
3753971.28        0.00026
         541988.32    3751926.42        0.00535                      542062.06
3751942.36        0.00560
         542155.30    3752048.20        0.00481                      542153.63
3752003.25        0.00431
         541895.32    3752099.58        0.00754                      542161.01
3752134.31        0.00568
         541601.67    3752176.70        0.00528                      541381.37
3752406.64        0.00571
         542055.87    3753624.32        0.00036

 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***       03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***         09:07:57

                                   PAGE 149
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***
```

```
                                    ** CONC OF DPM      IN MICROGRAMS/M**3
               **

                        NETWORK
GROUP ID                        AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS       0.04061 AT (  541874.28,  3752283.31,
233.00,   233.00,    0.00)  DC
          2ND HIGHEST VALUE IS       0.03311 AT (  541966.73,  3752283.07,
233.00,   233.00,    0.00)  DC
          3RD HIGHEST VALUE IS       0.01710 AT (  541760.21,  3752233.52,
231.94,   231.94,    0.00)  DC
          4TH HIGHEST VALUE IS       0.01419 AT (  541965.74,  3752197.21,
231.00,   231.00,    0.00)  DC
          5TH HIGHEST VALUE IS       0.01414 AT (  541704.76,  3752233.52,
231.97,   231.97,    0.00)  DC
          6TH HIGHEST VALUE IS       0.01358 AT (  542066.40,  3752283.40,
232.60,   232.60,    0.00)  DC
          7TH HIGHEST VALUE IS       0.01004 AT (  541591.96,  3752272.59,
233.00,   233.00,    0.00)  DC
          8TH HIGHEST VALUE IS       0.00956 AT (  541987.40,  3752109.48,
229.80,   229.80,    0.00)  DC
          9TH HIGHEST VALUE IS       0.00928 AT (  542066.62,  3752139.53,
230.00,   230.00,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00754 AT (  541895.32,  3752099.58,
229.47,   229.47,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/31/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        09:07:57

                                   PAGE 150
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
```

```
 A Total of          709 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          289 Calm Hours Identified

 A Total of          420 Missing Hours Identified (  0.96 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    2029       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    2029       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
**
***************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 3/30/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Ops\15097
Ops.ADI
**
***************************************
**
**
***************************************
** AERMOD Control Pathway
***************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Ops\1509
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2189641 Riverside_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15097 Ops.err"
CO FINISHED
**
```

```
************************************
** AERMOD Source Pathway
************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC 19th 55%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.449E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 541637.997, 3752297.169, 233.00, 3.49, 4.00
** 542021.137, 3752300.309, 233.00, 3.49, 4.00
** ------------------------------------------------------------------------
   LOCATION L0001137     VOLUME   541642.292 3752297.204 233.06
   LOCATION L0001138     VOLUME   541650.882 3752297.274 233.06
   LOCATION L0001139     VOLUME   541659.472 3752297.345 233.07
   LOCATION L0001140     VOLUME   541668.061 3752297.415 233.07
   LOCATION L0001141     VOLUME   541676.651 3752297.486 233.07
   LOCATION L0001142     VOLUME   541685.241 3752297.556 233.07
   LOCATION L0001143     VOLUME   541693.831 3752297.627 233.08
   LOCATION L0001144     VOLUME   541702.420 3752297.697 233.08
   LOCATION L0001145     VOLUME   541711.010 3752297.767 233.08
   LOCATION L0001146     VOLUME   541719.600 3752297.838 233.08
   LOCATION L0001147     VOLUME   541728.189 3752297.908 233.08
   LOCATION L0001148     VOLUME   541736.779 3752297.979 233.09
   LOCATION L0001149     VOLUME   541745.369 3752298.049 233.09
   LOCATION L0001150     VOLUME   541753.959 3752298.119 233.09
   LOCATION L0001151     VOLUME   541762.548 3752298.190 233.09
   LOCATION L0001152     VOLUME   541771.138 3752298.260 233.10
   LOCATION L0001153     VOLUME   541779.728 3752298.331 233.10
   LOCATION L0001154     VOLUME   541788.317 3752298.401 233.10
   LOCATION L0001155     VOLUME   541796.907 3752298.471 233.10
   LOCATION L0001156     VOLUME   541805.497 3752298.542 233.11
   LOCATION L0001157     VOLUME   541814.087 3752298.612 233.11
   LOCATION L0001158     VOLUME   541822.676 3752298.683 233.11
   LOCATION L0001159     VOLUME   541831.266 3752298.753 233.11
   LOCATION L0001160     VOLUME   541839.856 3752298.823 233.12
   LOCATION L0001161     VOLUME   541848.445 3752298.894 233.12
   LOCATION L0001162     VOLUME   541857.035 3752298.964 233.12
   LOCATION L0001163     VOLUME   541865.625 3752299.035 233.12
   LOCATION L0001164     VOLUME   541874.215 3752299.105 233.12
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   LOCATION L0001165     VOLUME   541882.804 3752299.175 233.13
   LOCATION L0001166     VOLUME   541891.394 3752299.246 233.13
   LOCATION L0001167     VOLUME   541899.984 3752299.316 233.13
   LOCATION L0001168     VOLUME   541908.573 3752299.387 233.13
   LOCATION L0001169     VOLUME   541917.163 3752299.457 233.14
   LOCATION L0001170     VOLUME   541925.753 3752299.528 233.14
   LOCATION L0001171     VOLUME   541934.343 3752299.598 233.14
   LOCATION L0001172     VOLUME   541942.932 3752299.668 233.14
   LOCATION L0001173     VOLUME   541951.522 3752299.739 233.15
   LOCATION L0001174     VOLUME   541960.112 3752299.809 233.15
   LOCATION L0001175     VOLUME   541968.701 3752299.880 233.15
   LOCATION L0001176     VOLUME   541977.291 3752299.950 233.15
   LOCATION L0001177     VOLUME   541985.881 3752300.020 233.16
   LOCATION L0001178     VOLUME   541994.471 3752300.091 233.16
   LOCATION L0001179     VOLUME   542003.060 3752300.161 233.16
   LOCATION L0001180     VOLUME   542011.650 3752300.232 233.16
   LOCATION L0001181     VOLUME   542020.240 3752300.302 233.16
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Indian Cyn 10% N
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.313E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 542028.326, 3753108.694, 249.00, 3.49, 4.00
** 542029.089, 3753306.328, 254.00, 3.49, 4.00
** 542029.089, 3753703.885, 262.94, 3.49, 4.00
** 542029.089, 3753911.057, 268.00, 3.49, 4.00
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   LOCATION L0001240     VOLUME   542028.343 3753112.989 249.25
   LOCATION L0001241     VOLUME   542028.376 3753121.579 249.54
   LOCATION L0001242     VOLUME   542028.409 3753130.169 249.83
   LOCATION L0001243     VOLUME   542028.442 3753138.759 250.11
   LOCATION L0001244     VOLUME   542028.475 3753147.349 250.40
   LOCATION L0001245     VOLUME   542028.509 3753155.939 250.69
   LOCATION L0001246     VOLUME   542028.542 3753164.529 250.97
   LOCATION L0001247     VOLUME   542028.575 3753173.119 251.00
   LOCATION L0001248     VOLUME   542028.608 3753181.708 251.00
   LOCATION L0001249     VOLUME   542028.641 3753190.298 251.00
   LOCATION L0001250     VOLUME   542028.674 3753198.888 251.12
   LOCATION L0001251     VOLUME   542028.708 3753207.478 251.40
   LOCATION L0001252     VOLUME   542028.741 3753216.068 251.69
   LOCATION L0001253     VOLUME   542028.774 3753224.658 251.98
   LOCATION L0001254     VOLUME   542028.807 3753233.248 252.26
   LOCATION L0001255     VOLUME   542028.840 3753241.838 252.55
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LOCATION L0001256 VOLUME 542028.873 3753250.428 252.84
LOCATION L0001257 VOLUME 542028.907 3753259.018 253.12
LOCATION L0001258 VOLUME 542028.940 3753267.608 253.41
LOCATION L0001259 VOLUME 542028.973 3753276.198 253.69
LOCATION L0001260 VOLUME 542029.006 3753284.788 253.98
LOCATION L0001261 VOLUME 542029.039 3753293.378 254.00
LOCATION L0001262 VOLUME 542029.072 3753301.968 254.00
LOCATION L0001263 VOLUME 542029.089 3753310.558 254.00
LOCATION L0001264 VOLUME 542029.089 3753319.148 254.13
LOCATION L0001265 VOLUME 542029.089 3753327.738 254.41
LOCATION L0001266 VOLUME 542029.089 3753336.328 254.70
LOCATION L0001267 VOLUME 542029.089 3753344.918 254.99
LOCATION L0001268 VOLUME 542029.089 3753353.508 255.27
LOCATION L0001269 VOLUME 542029.089 3753362.098 255.56
LOCATION L0001270 VOLUME 542029.089 3753370.688 255.84
LOCATION L0001271 VOLUME 542029.089 3753379.278 256.00
LOCATION L0001272 VOLUME 542029.089 3753387.868 256.00
LOCATION L0001273 VOLUME 542029.089 3753396.458 256.00
LOCATION L0001274 VOLUME 542029.089 3753405.048 256.00
LOCATION L0001275 VOLUME 542029.089 3753413.638 256.28
LOCATION L0001276 VOLUME 542029.089 3753422.228 256.56
LOCATION L0001277 VOLUME 542029.089 3753430.818 256.85
LOCATION L0001278 VOLUME 542029.089 3753439.408 257.13
LOCATION L0001279 VOLUME 542029.089 3753447.998 257.42
LOCATION L0001280 VOLUME 542029.089 3753456.588 257.71
LOCATION L0001281 VOLUME 542029.089 3753465.178 257.99
LOCATION L0001282 VOLUME 542029.089 3753473.768 258.00
LOCATION L0001283 VOLUME 542029.089 3753482.358 258.00
LOCATION L0001284 VOLUME 542029.089 3753490.948 258.00
LOCATION L0001285 VOLUME 542029.089 3753499.538 258.14
LOCATION L0001286 VOLUME 542029.089 3753508.128 258.43
LOCATION L0001287 VOLUME 542029.089 3753516.718 258.71
LOCATION L0001288 VOLUME 542029.089 3753525.308 259.00
LOCATION L0001289 VOLUME 542029.089 3753533.898 259.28
LOCATION L0001290 VOLUME 542029.089 3753542.488 259.57
LOCATION L0001291 VOLUME 542029.089 3753551.078 259.86
LOCATION L0001292 VOLUME 542029.089 3753559.668 260.00
LOCATION L0001293 VOLUME 542029.089 3753568.258 260.00
LOCATION L0001294 VOLUME 542029.089 3753576.848 260.00
LOCATION L0001295 VOLUME 542029.089 3753585.438 260.00
LOCATION L0001296 VOLUME 542029.089 3753594.028 260.29
LOCATION L0001297 VOLUME 542029.089 3753602.618 260.58
LOCATION L0001298 VOLUME 542029.089 3753611.208 260.86
LOCATION L0001299 VOLUME 542029.089 3753619.798 261.00
LOCATION L0001300 VOLUME 542029.089 3753628.388 261.00
LOCATION L0001301 VOLUME 542029.089 3753636.978 261.00
LOCATION L0001302 VOLUME 542029.089 3753645.568 261.01
LOCATION L0001303 VOLUME 542029.089 3753654.158 261.29
LOCATION L0001304 VOLUME 542029.089 3753662.748 261.58
LOCATION L0001305 VOLUME 542029.089 3753671.338 261.87

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   LOCATION L0001306     VOLUME   542029.089 3753679.928 262.15
   LOCATION L0001307     VOLUME   542029.089 3753688.518 262.44
   LOCATION L0001308     VOLUME   542029.089 3753697.108 262.72
   LOCATION L0001309     VOLUME   542029.089 3753705.698 263.01
   LOCATION L0001310     VOLUME   542029.089 3753714.288 263.30
   LOCATION L0001311     VOLUME   542029.089 3753722.878 263.58
   LOCATION L0001312     VOLUME   542029.089 3753731.468 263.87
   LOCATION L0001313     VOLUME   542029.089 3753740.058 264.00
   LOCATION L0001314     VOLUME   542029.089 3753748.648 264.00
   LOCATION L0001315     VOLUME   542029.089 3753757.238 264.00
   LOCATION L0001316     VOLUME   542029.089 3753765.828 264.02
   LOCATION L0001317     VOLUME   542029.089 3753774.418 264.30
   LOCATION L0001318     VOLUME   542029.089 3753783.008 264.59
   LOCATION L0001319     VOLUME   542029.089 3753791.598 264.87
   LOCATION L0001320     VOLUME   542029.089 3753800.188 265.16
   LOCATION L0001321     VOLUME   542029.089 3753808.778 265.45
   LOCATION L0001322     VOLUME   542029.089 3753817.368 265.73
   LOCATION L0001323     VOLUME   542029.089 3753825.958 266.02
   LOCATION L0001324     VOLUME   542029.089 3753834.548 266.31
   LOCATION L0001325     VOLUME   542029.089 3753843.138 266.59
   LOCATION L0001326     VOLUME   542029.089 3753851.728 266.88
   LOCATION L0001327     VOLUME   542029.089 3753860.318 267.12
   LOCATION L0001328     VOLUME   542029.089 3753868.908 267.33
   LOCATION L0001329     VOLUME   542029.089 3753877.498 267.54
   LOCATION L0001330     VOLUME   542029.089 3753886.088 267.74
   LOCATION L0001331     VOLUME   542029.089 3753894.678 267.82
   LOCATION L0001332     VOLUME   542029.089 3753903.268 267.89
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Dillon 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.502E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 542028.655, 3753914.106, 268.00, 3.49, 4.00
** 541926.490, 3753914.755, 268.00, 3.49, 4.00
** 541737.403, 3753913.782, 269.91, 3.49, 4.00
** 541234.036, 3753908.917, 270.05, 3.49, 4.00
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   LOCATION L0001386     VOLUME   542024.360 3753914.133 268.00
   LOCATION L0001387     VOLUME   542015.770 3753914.188 268.00
   LOCATION L0001388     VOLUME   542007.180 3753914.242 268.00
   LOCATION L0001389     VOLUME   541998.591 3753914.297 268.00
   LOCATION L0001390     VOLUME   541990.001 3753914.351 268.00
   LOCATION L0001391     VOLUME   541981.411 3753914.406 268.00
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LOCATION L0001392 VOLUME 541972.821 3753914.460 268.00
LOCATION L0001393 VOLUME 541964.231 3753914.515 268.00
LOCATION L0001394 VOLUME 541955.641 3753914.569 268.00
LOCATION L0001395 VOLUME 541947.052 3753914.624 268.00
LOCATION L0001396 VOLUME 541938.462 3753914.679 268.00
LOCATION L0001397 VOLUME 541929.872 3753914.733 268.00
LOCATION L0001398 VOLUME 541921.282 3753914.728 268.00
LOCATION L0001399 VOLUME 541912.692 3753914.684 268.00
LOCATION L0001400 VOLUME 541904.102 3753914.639 268.00
LOCATION L0001401 VOLUME 541895.512 3753914.595 268.18
LOCATION L0001402 VOLUME 541886.923 3753914.551 268.46
LOCATION L0001403 VOLUME 541878.333 3753914.507 268.74
LOCATION L0001404 VOLUME 541869.743 3753914.463 268.97
LOCATION L0001405 VOLUME 541861.153 3753914.418 268.97
LOCATION L0001406 VOLUME 541852.563 3753914.374 268.97
LOCATION L0001407 VOLUME 541843.973 3753914.330 268.97
LOCATION L0001408 VOLUME 541835.383 3753914.286 268.96
LOCATION L0001409 VOLUME 541826.793 3753914.242 268.96
LOCATION L0001410 VOLUME 541818.204 3753914.197 268.96
LOCATION L0001411 VOLUME 541809.614 3753914.153 268.96
LOCATION L0001412 VOLUME 541801.024 3753914.109 268.97
LOCATION L0001413 VOLUME 541792.434 3753914.065 268.98
LOCATION L0001414 VOLUME 541783.844 3753914.021 269.00
LOCATION L0001415 VOLUME 541775.254 3753913.976 269.19
LOCATION L0001416 VOLUME 541766.664 3753913.932 269.46
LOCATION L0001417 VOLUME 541758.074 3753913.888 269.73
LOCATION L0001418 VOLUME 541749.484 3753913.844 269.95
LOCATION L0001419 VOLUME 541740.895 3753913.800 269.95
LOCATION L0001420 VOLUME 541732.305 3753913.732 269.95
LOCATION L0001421 VOLUME 541723.715 3753913.649 269.94
LOCATION L0001422 VOLUME 541715.126 3753913.566 269.94
LOCATION L0001423 VOLUME 541706.536 3753913.483 269.94
LOCATION L0001424 VOLUME 541697.946 3753913.400 269.93
LOCATION L0001425 VOLUME 541689.357 3753913.317 269.93
LOCATION L0001426 VOLUME 541680.767 3753913.234 269.93
LOCATION L0001427 VOLUME 541672.178 3753913.151 269.93
LOCATION L0001428 VOLUME 541663.588 3753913.068 269.92
LOCATION L0001429 VOLUME 541654.998 3753912.985 269.92
LOCATION L0001430 VOLUME 541646.409 3753912.902 269.92
LOCATION L0001431 VOLUME 541637.819 3753912.819 269.91
LOCATION L0001432 VOLUME 541629.230 3753912.736 269.91
LOCATION L0001433 VOLUME 541620.640 3753912.653 269.91
LOCATION L0001434 VOLUME 541612.050 3753912.570 269.91
LOCATION L0001435 VOLUME 541603.461 3753912.487 269.90
LOCATION L0001436 VOLUME 541594.871 3753912.404 269.90
LOCATION L0001437 VOLUME 541586.282 3753912.321 269.90
LOCATION L0001438 VOLUME 541577.692 3753912.238 269.90
LOCATION L0001439 VOLUME 541569.102 3753912.155 269.89
LOCATION L0001440 VOLUME 541560.513 3753912.072 269.89
LOCATION L0001441 VOLUME 541551.923 3753911.989 269.89

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   LOCATION L0001442     VOLUME   541543.334 3753911.906 269.88
   LOCATION L0001443     VOLUME   541534.744 3753911.823 269.88
   LOCATION L0001444     VOLUME   541526.154 3753911.740 269.88
   LOCATION L0001445     VOLUME   541517.565 3753911.657 269.88
   LOCATION L0001446     VOLUME   541508.975 3753911.574 269.88
   LOCATION L0001447     VOLUME   541500.386 3753911.491 269.92
   LOCATION L0001448     VOLUME   541491.796 3753911.408 269.95
   LOCATION L0001449     VOLUME   541483.206 3753911.325 269.99
   LOCATION L0001450     VOLUME   541474.617 3753911.242 270.00
   LOCATION L0001451     VOLUME   541466.027 3753911.159 270.00
   LOCATION L0001452     VOLUME   541457.438 3753911.076 270.00
   LOCATION L0001453     VOLUME   541448.848 3753910.993 270.07
   LOCATION L0001454     VOLUME   541440.258 3753910.910 270.31
   LOCATION L0001455     VOLUME   541431.669 3753910.827 270.55
   LOCATION L0001456     VOLUME   541423.079 3753910.744 270.79
   LOCATION L0001457     VOLUME   541414.490 3753910.661 270.84
   LOCATION L0001458     VOLUME   541405.900 3753910.578 270.84
   LOCATION L0001459     VOLUME   541397.310 3753910.495 270.84
   LOCATION L0001460     VOLUME   541388.721 3753910.412 270.77
   LOCATION L0001461     VOLUME   541380.131 3753910.329 270.53
   LOCATION L0001462     VOLUME   541371.542 3753910.246 270.29
   LOCATION L0001463     VOLUME   541362.952 3753910.162 270.05
   LOCATION L0001464     VOLUME   541354.362 3753910.079 270.19
   LOCATION L0001465     VOLUME   541345.773 3753909.996 270.42
   LOCATION L0001466     VOLUME   541337.183 3753909.913 270.65
   LOCATION L0001467     VOLUME   541328.594 3753909.830 270.82
   LOCATION L0001468     VOLUME   541320.004 3753909.747 270.81
   LOCATION L0001469     VOLUME   541311.414 3753909.664 270.81
   LOCATION L0001470     VOLUME   541302.825 3753909.581 270.81
   LOCATION L0001471     VOLUME   541294.235 3753909.498 270.80
   LOCATION L0001472     VOLUME   541285.646 3753909.415 270.80
   LOCATION L0001473     VOLUME   541277.056 3753909.332 270.80
   LOCATION L0001474     VOLUME   541268.466 3753909.249 270.72
   LOCATION L0001475     VOLUME   541259.877 3753909.166 270.50
   LOCATION L0001476     VOLUME   541251.287 3753909.083 270.27
   LOCATION L0001477     VOLUME   541242.698 3753909.000 270.04
   LOCATION L0001478     VOLUME   541234.108 3753908.917 270.00
** End of LINE VOLUME Source ID = SLINE8
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Indian Cyn 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.746E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542029.638, 3753915.000, 268.00, 3.49, 4.00
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** 542030.189, 3754064.702, 271.93, 3.49, 4.00
** 542032.361, 3754372.804, 278.93, 3.49, 4.00
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   LOCATION L0001333     VOLUME   542029.654 3753919.295 268.13
   LOCATION L0001334     VOLUME   542029.685 3753927.885 268.42
   LOCATION L0001335     VOLUME   542029.717 3753936.475 268.70
   LOCATION L0001336     VOLUME   542029.748 3753945.065 268.99
   LOCATION L0001337     VOLUME   542029.780 3753953.655 269.20
   LOCATION L0001338     VOLUME   542029.812 3753962.245 269.40
   LOCATION L0001339     VOLUME   542029.843 3753970.835 269.60
   LOCATION L0001340     VOLUME   542029.875 3753979.425 269.75
   LOCATION L0001341     VOLUME   542029.907 3753988.015 269.83
   LOCATION L0001342     VOLUME   542029.938 3753996.605 269.91
   LOCATION L0001343     VOLUME   542029.970 3754005.195 270.00
   LOCATION L0001344     VOLUME   542030.002 3754013.785 270.28
   LOCATION L0001345     VOLUME   542030.033 3754022.375 270.57
   LOCATION L0001346     VOLUME   542030.065 3754030.965 270.85
   LOCATION L0001347     VOLUME   542030.097 3754039.555 271.14
   LOCATION L0001348     VOLUME   542030.128 3754048.144 271.43
   LOCATION L0001349     VOLUME   542030.160 3754056.734 271.71
   LOCATION L0001350     VOLUME   542030.194 3754065.324 272.00
   LOCATION L0001351     VOLUME   542030.254 3754073.914 272.20
   LOCATION L0001352     VOLUME   542030.315 3754082.504 272.40
   LOCATION L0001353     VOLUME   542030.375 3754091.094 272.59
   LOCATION L0001354     VOLUME   542030.436 3754099.683 272.73
   LOCATION L0001355     VOLUME   542030.496 3754108.273 272.82
   LOCATION L0001356     VOLUME   542030.557 3754116.863 272.91
   LOCATION L0001357     VOLUME   542030.617 3754125.453 273.00
   LOCATION L0001358     VOLUME   542030.678 3754134.043 273.29
   LOCATION L0001359     VOLUME   542030.738 3754142.632 273.58
   LOCATION L0001360     VOLUME   542030.799 3754151.222 273.86
   LOCATION L0001361     VOLUME   542030.860 3754159.812 274.15
   LOCATION L0001362     VOLUME   542030.920 3754168.402 274.43
   LOCATION L0001363     VOLUME   542030.981 3754176.992 274.72
   LOCATION L0001364     VOLUME   542031.041 3754185.581 275.00
   LOCATION L0001365     VOLUME   542031.102 3754194.171 275.20
   LOCATION L0001366     VOLUME   542031.162 3754202.761 275.39
   LOCATION L0001367     VOLUME   542031.223 3754211.351 275.57
   LOCATION L0001368     VOLUME   542031.283 3754219.941 275.71
   LOCATION L0001369     VOLUME   542031.344 3754228.530 275.81
   LOCATION L0001370     VOLUME   542031.404 3754237.120 275.91
   LOCATION L0001371     VOLUME   542031.465 3754245.710 276.01
   LOCATION L0001372     VOLUME   542031.525 3754254.300 276.30
   LOCATION L0001373     VOLUME   542031.586 3754262.889 276.58
   LOCATION L0001374     VOLUME   542031.647 3754271.479 276.87
   LOCATION L0001375     VOLUME   542031.707 3754280.069 277.10
   LOCATION L0001376     VOLUME   542031.768 3754288.659 277.29
   LOCATION L0001377     VOLUME   542031.828 3754297.249 277.47
   LOCATION L0001378     VOLUME   542031.889 3754305.838 277.65
   LOCATION L0001379     VOLUME   542031.949 3754314.428 277.75
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   LOCATION L0001380     VOLUME   542032.010 3754323.018 277.85
   LOCATION L0001381     VOLUME   542032.070 3754331.608 277.95
   LOCATION L0001382     VOLUME   542032.131 3754340.198 278.16
   LOCATION L0001383     VOLUME   542032.191 3754348.787 278.45
   LOCATION L0001384     VOLUME   542032.252 3754357.377 278.73
   LOCATION L0001385     VOLUME   542032.313 3754365.967 279.01
** End of LINE VOLUME Source ID = SLINE9
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Indian Cyn 90%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 7.486E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542028.398, 3752299.451, 233.00, 3.49, 6.51
** 542027.777, 3752080.733, 228.92, 3.49, 6.51
** 542026.534, 3751791.179, 223.00, 3.49, 6.51
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   LOCATION L0001479     VOLUME   542028.378 3752292.451 232.98
   LOCATION L0001480     VOLUME   542028.338 3752278.451 232.86
   LOCATION L0001481     VOLUME   542028.299 3752264.451 232.74
   LOCATION L0001482     VOLUME   542028.259 3752250.451 232.38
   LOCATION L0001483     VOLUME   542028.219 3752236.452 232.03
   LOCATION L0001484     VOLUME   542028.179 3752222.452 231.57
   LOCATION L0001485     VOLUME   542028.140 3752208.452 231.10
   LOCATION L0001486     VOLUME   542028.100 3752194.452 231.00
   LOCATION L0001487     VOLUME   542028.060 3752180.452 231.00
   LOCATION L0001488     VOLUME   542028.020 3752166.452 230.70
   LOCATION L0001489     VOLUME   542027.981 3752152.452 230.24
   LOCATION L0001490     VOLUME   542027.941 3752138.452 230.00
   LOCATION L0001491     VOLUME   542027.901 3752124.452 230.00
   LOCATION L0001492     VOLUME   542027.861 3752110.452 229.84
   LOCATION L0001493     VOLUME   542027.821 3752096.452 229.37
   LOCATION L0001494     VOLUME   542027.782 3752082.452 228.90
   LOCATION L0001495     VOLUME   542027.724 3752068.452 228.44
   LOCATION L0001496     VOLUME   542027.664 3752054.452 228.00
   LOCATION L0001497     VOLUME   542027.604 3752040.453 228.00
   LOCATION L0001498     VOLUME   542027.544 3752026.453 228.00
   LOCATION L0001499     VOLUME   542027.484 3752012.453 227.57
   LOCATION L0001500     VOLUME   542027.424 3751998.453 227.10
   LOCATION L0001501     VOLUME   542027.364 3751984.453 227.00
   LOCATION L0001502     VOLUME   542027.303 3751970.453 227.00
   LOCATION L0001503     VOLUME   542027.243 3751956.453 226.70
   LOCATION L0001504     VOLUME   542027.183 3751942.453 226.24
   LOCATION L0001505     VOLUME   542027.123 3751928.454 226.00
   LOCATION L0001506     VOLUME   542027.063 3751914.454 226.00
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   LOCATION L0001507     VOLUME   542027.003 3751900.454 225.84
   LOCATION L0001508     VOLUME   542026.943 3751886.454 225.37
   LOCATION L0001509     VOLUME   542026.883 3751872.454 224.98
   LOCATION L0001510     VOLUME   542026.823 3751858.454 224.89
   LOCATION L0001511     VOLUME   542026.763 3751844.454 224.79
   LOCATION L0001512     VOLUME   542026.703 3751830.454 224.41
   LOCATION L0001513     VOLUME   542026.643 3751816.455 224.03
   LOCATION L0001514     VOLUME   542026.582 3751802.455 223.57
** End of LINE VOLUME Source ID = SLINE10
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC Indian Cyn 50%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 3.126E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542025.913, 3751796.150, 223.00, 3.49, 6.51
** 542029.019, 3751414.013, 217.00, 3.49, 6.51
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   LOCATION L0001515     VOLUME   542025.970 3751789.150 223.13
   LOCATION L0001516     VOLUME   542026.083 3751775.150 223.00
   LOCATION L0001517     VOLUME   542026.197 3751761.151 223.00
   LOCATION L0001518     VOLUME   542026.311 3751747.151 222.73
   LOCATION L0001519     VOLUME   542026.425 3751733.152 222.26
   LOCATION L0001520     VOLUME   542026.539 3751719.152 222.00
   LOCATION L0001521     VOLUME   542026.653 3751705.153 222.00
   LOCATION L0001522     VOLUME   542026.766 3751691.153 221.86
   LOCATION L0001523     VOLUME   542026.880 3751677.153 221.39
   LOCATION L0001524     VOLUME   542026.994 3751663.154 220.99
   LOCATION L0001525     VOLUME   542027.108 3751649.154 220.89
   LOCATION L0001526     VOLUME   542027.222 3751635.155 220.79
   LOCATION L0001527     VOLUME   542027.335 3751621.155 220.42
   LOCATION L0001528     VOLUME   542027.449 3751607.156 220.05
   LOCATION L0001529     VOLUME   542027.563 3751593.156 219.59
   LOCATION L0001530     VOLUME   542027.677 3751579.157 219.13
   LOCATION L0001531     VOLUME   542027.791 3751565.157 219.00
   LOCATION L0001532     VOLUME   542027.904 3751551.158 219.00
   LOCATION L0001533     VOLUME   542028.018 3751537.158 218.73
   LOCATION L0001534     VOLUME   542028.132 3751523.159 218.26
   LOCATION L0001535     VOLUME   542028.246 3751509.159 218.00
   LOCATION L0001536     VOLUME   542028.360 3751495.160 218.00
   LOCATION L0001537     VOLUME   542028.474 3751481.160 217.97
   LOCATION L0001538     VOLUME   542028.587 3751467.160 217.85
   LOCATION L0001539     VOLUME   542028.701 3751453.161 217.69
   LOCATION L0001540     VOLUME   542028.815 3751439.161 217.34
   LOCATION L0001541     VOLUME   542028.929 3751425.162 217.00
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** End of LINE VOLUME Source ID = SLINE11
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC Garnet 40%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 2.625E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542026.534, 3751417.120, 217.00, 3.49, 6.51
** 541881.446, 3751450.013, 217.88, 3.49, 6.51
** 541637.823, 3751515.152, 218.03, 3.49, 6.51
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   LOCATION L0001542     VOLUME   542019.707 3751418.668 217.00
   LOCATION L0001543     VOLUME   542006.054 3751421.763 217.00
   LOCATION L0001544     VOLUME   541992.400 3751424.858 217.00
   LOCATION L0001545     VOLUME   541978.747 3751427.954 217.00
   LOCATION L0001546     VOLUME   541965.093 3751431.049 217.00
   LOCATION L0001547     VOLUME   541951.440 3751434.145 217.09
   LOCATION L0001548     VOLUME   541937.786 3751437.240 217.31
   LOCATION L0001549     VOLUME   541924.133 3751440.335 217.50
   LOCATION L0001550     VOLUME   541910.479 3751443.431 217.60
   LOCATION L0001551     VOLUME   541896.826 3751446.526 217.71
   LOCATION L0001552     VOLUME   541883.172 3751449.622 217.81
   LOCATION L0001553     VOLUME   541869.631 3751453.172 217.93
   LOCATION L0001554     VOLUME   541856.106 3751456.788 218.00
   LOCATION L0001555     VOLUME   541842.581 3751460.405 218.00
   LOCATION L0001556     VOLUME   541829.056 3751464.021 218.00
   LOCATION L0001557     VOLUME   541815.531 3751467.637 218.00
   LOCATION L0001558     VOLUME   541802.007 3751471.253 218.00
   LOCATION L0001559     VOLUME   541788.482 3751474.869 218.00
   LOCATION L0001560     VOLUME   541774.957 3751478.486 217.95
   LOCATION L0001561     VOLUME   541761.432 3751482.102 217.93
   LOCATION L0001562     VOLUME   541747.907 3751485.718 218.01
   LOCATION L0001563     VOLUME   541734.382 3751489.334 218.06
   LOCATION L0001564     VOLUME   541720.857 3751492.951 218.00
   LOCATION L0001565     VOLUME   541707.332 3751496.567 218.00
   LOCATION L0001566     VOLUME   541693.807 3751500.183 218.00
   LOCATION L0001567     VOLUME   541680.282 3751503.799 218.00
   LOCATION L0001568     VOLUME   541666.758 3751507.415 218.00
   LOCATION L0001569     VOLUME   541653.233 3751511.032 218.00
   LOCATION L0001570     VOLUME   541639.708 3751514.648 218.00
** End of LINE VOLUME Source ID = SLINE12
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC Indian Cyn 10% S
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** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.121E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542030.035, 3751412.559, 217.00, 3.49, 4.00
** 542033.691, 3750727.548, 212.94, 3.49, 4.00
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   LOCATION L0001571     VOLUME   542030.058 3751408.264 217.00
   LOCATION L0001572     VOLUME   542030.104 3751399.674 217.00
   LOCATION L0001573     VOLUME   542030.150 3751391.084 216.86
   LOCATION L0001574     VOLUME   542030.196 3751382.494 216.57
   LOCATION L0001575     VOLUME   542030.241 3751373.904 216.28
   LOCATION L0001576     VOLUME   542030.287 3751365.314 216.00
   LOCATION L0001577     VOLUME   542030.333 3751356.725 216.00
   LOCATION L0001578     VOLUME   542030.379 3751348.135 216.00
   LOCATION L0001579     VOLUME   542030.425 3751339.545 216.00
   LOCATION L0001580     VOLUME   542030.471 3751330.955 215.85
   LOCATION L0001581     VOLUME   542030.517 3751322.365 215.57
   LOCATION L0001582     VOLUME   542030.562 3751313.775 215.28
   LOCATION L0001583     VOLUME   542030.608 3751305.185 215.00
   LOCATION L0001584     VOLUME   542030.654 3751296.595 215.00
   LOCATION L0001585     VOLUME   542030.700 3751288.006 215.00
   LOCATION L0001586     VOLUME   542030.746 3751279.416 215.00
   LOCATION L0001587     VOLUME   542030.792 3751270.826 215.00
   LOCATION L0001588     VOLUME   542030.837 3751262.236 215.00
   LOCATION L0001589     VOLUME   542030.883 3751253.646 215.00
   LOCATION L0001590     VOLUME   542030.929 3751245.056 214.99
   LOCATION L0001591     VOLUME   542030.975 3751236.466 214.70
   LOCATION L0001592     VOLUME   542031.021 3751227.876 214.42
   LOCATION L0001593     VOLUME   542031.067 3751219.287 214.13
   LOCATION L0001594     VOLUME   542031.112 3751210.697 214.00
   LOCATION L0001595     VOLUME   542031.158 3751202.107 214.00
   LOCATION L0001596     VOLUME   542031.204 3751193.517 214.00
   LOCATION L0001597     VOLUME   542031.250 3751184.927 214.00
   LOCATION L0001598     VOLUME   542031.296 3751176.337 214.00
   LOCATION L0001599     VOLUME   542031.342 3751167.747 214.00
   LOCATION L0001600     VOLUME   542031.387 3751159.157 214.00
   LOCATION L0001601     VOLUME   542031.433 3751150.567 214.00
   LOCATION L0001602     VOLUME   542031.479 3751141.978 214.00
   LOCATION L0001603     VOLUME   542031.525 3751133.388 214.00
   LOCATION L0001604     VOLUME   542031.571 3751124.798 214.00
   LOCATION L0001605     VOLUME   542031.617 3751116.208 214.00
   LOCATION L0001606     VOLUME   542031.662 3751107.618 214.00
   LOCATION L0001607     VOLUME   542031.708 3751099.028 214.00
   LOCATION L0001608     VOLUME   542031.754 3751090.438 214.12
   LOCATION L0001609     VOLUME   542031.800 3751081.848 214.32
   LOCATION L0001610     VOLUME   542031.846 3751073.259 214.52
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   LOCATION L0001611     VOLUME   542031.892 3751064.669 214.76
   LOCATION L0001612     VOLUME   542031.937 3751056.079 215.34
   LOCATION L0001613     VOLUME   542031.983 3751047.489 215.91
   LOCATION L0001614     VOLUME   542032.029 3751038.899 216.49
   LOCATION L0001615     VOLUME   542032.075 3751030.309 217.37
   LOCATION L0001616     VOLUME   542032.121 3751021.719 218.47
   LOCATION L0001617     VOLUME   542032.167 3751013.129 219.57
   LOCATION L0001618     VOLUME   542032.212 3751004.540 220.60
   LOCATION L0001619     VOLUME   542032.258 3750995.950 220.82
   LOCATION L0001620     VOLUME   542032.304 3750987.360 221.04
   LOCATION L0001621     VOLUME   542032.350 3750978.770 221.27
   LOCATION L0001622     VOLUME   542032.396 3750970.180 220.46
   LOCATION L0001623     VOLUME   542032.442 3750961.590 218.97
   LOCATION L0001624     VOLUME   542032.488 3750953.000 217.47
   LOCATION L0001625     VOLUME   542032.533 3750944.410 216.09
   LOCATION L0001626     VOLUME   542032.579 3750935.821 215.70
   LOCATION L0001627     VOLUME   542032.625 3750927.231 215.31
   LOCATION L0001628     VOLUME   542032.671 3750918.641 214.92
   LOCATION L0001629     VOLUME   542032.717 3750910.051 214.57
   LOCATION L0001630     VOLUME   542032.763 3750901.461 214.24
   LOCATION L0001631     VOLUME   542032.808 3750892.871 213.90
   LOCATION L0001632     VOLUME   542032.854 3750884.281 213.61
   LOCATION L0001633     VOLUME   542032.900 3750875.691 213.61
   LOCATION L0001634     VOLUME   542032.946 3750867.102 213.61
   LOCATION L0001635     VOLUME   542032.992 3750858.512 213.61
   LOCATION L0001636     VOLUME   542033.038 3750849.922 213.21
   LOCATION L0001637     VOLUME   542033.083 3750841.332 212.58
   LOCATION L0001638     VOLUME   542033.129 3750832.742 211.95
   LOCATION L0001639     VOLUME   542033.175 3750824.152 211.47
   LOCATION L0001640     VOLUME   542033.221 3750815.562 211.98
   LOCATION L0001641     VOLUME   542033.267 3750806.972 212.49
   LOCATION L0001642     VOLUME   542033.313 3750798.383 213.01
   LOCATION L0001643     VOLUME   542033.358 3750789.793 213.26
   LOCATION L0001644     VOLUME   542033.404 3750781.203 213.38
   LOCATION L0001645     VOLUME   542033.450 3750772.613 213.49
   LOCATION L0001646     VOLUME   542033.496 3750764.023 213.56
   LOCATION L0001647     VOLUME   542033.542 3750755.433 213.39
   LOCATION L0001648     VOLUME   542033.588 3750746.843 213.22
   LOCATION L0001649     VOLUME   542033.633 3750738.253 213.06
   LOCATION L0001650     VOLUME   542033.679 3750729.663 212.92
** End of LINE VOLUME Source ID = SLINE13
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC Idle N
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001207
** Vertical Dimension = 6.99
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** SZINIT = 3.25
** Nodes = 2
** 541649.144, 3752625.907, 239.93, 3.49, 4.00
** 541933.090, 3752628.539, 239.99, 3.49, 4.00
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   LOCATION L0000942     VOLUME   541653.439 3752625.946 240.01
   LOCATION L0000943     VOLUME   541662.028 3752626.026 240.02
   LOCATION L0000944     VOLUME   541670.618 3752626.106 240.02
   LOCATION L0000945     VOLUME   541679.208 3752626.185 240.01
   LOCATION L0000946     VOLUME   541687.797 3752626.265 240.00
   LOCATION L0000947     VOLUME   541696.387 3752626.344 240.01
   LOCATION L0000948     VOLUME   541704.977 3752626.424 240.02
   LOCATION L0000949     VOLUME   541713.566 3752626.504 240.03
   LOCATION L0000950     VOLUME   541722.156 3752626.583 240.04
   LOCATION L0000951     VOLUME   541730.746 3752626.663 240.04
   LOCATION L0000952     VOLUME   541739.335 3752626.743 240.05
   LOCATION L0000953     VOLUME   541747.925 3752626.822 240.05
   LOCATION L0000954     VOLUME   541756.514 3752626.902 240.05
   LOCATION L0000955     VOLUME   541765.104 3752626.981 240.05
   LOCATION L0000956     VOLUME   541773.694 3752627.061 240.06
   LOCATION L0000957     VOLUME   541782.283 3752627.141 240.06
   LOCATION L0000958     VOLUME   541790.873 3752627.220 240.06
   LOCATION L0000959     VOLUME   541799.463 3752627.300 240.06
   LOCATION L0000960     VOLUME   541808.052 3752627.380 240.07
   LOCATION L0000961     VOLUME   541816.642 3752627.459 240.07
   LOCATION L0000962     VOLUME   541825.231 3752627.539 240.07
   LOCATION L0000963     VOLUME   541833.821 3752627.619 240.08
   LOCATION L0000964     VOLUME   541842.411 3752627.698 240.08
   LOCATION L0000965     VOLUME   541851.000 3752627.778 240.08
   LOCATION L0000966     VOLUME   541859.590 3752627.857 240.08
   LOCATION L0000967     VOLUME   541868.180 3752627.937 240.09
   LOCATION L0000968     VOLUME   541876.769 3752628.017 240.09
   LOCATION L0000969     VOLUME   541885.359 3752628.096 240.09
   LOCATION L0000970     VOLUME   541893.949 3752628.176 240.09
   LOCATION L0000971     VOLUME   541902.538 3752628.256 240.10
   LOCATION L0000972     VOLUME   541911.128 3752628.335 240.10
   LOCATION L0000973     VOLUME   541919.717 3752628.415 240.10
   LOCATION L0000974     VOLUME   541928.307 3752628.494 240.10
** End of LINE VOLUME Source ID = SLINE14
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE15
** DESCRSRC Idle S
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001207
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
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** 541647.828, 3752401.513, 235.74, 3.49, 4.00
** 541933.090, 3752404.146, 235.77, 3.49, 4.00
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   LOCATION L0000975     VOLUME   541652.123 3752401.553 235.54
   LOCATION L0000976     VOLUME   541660.712 3752401.632 235.54
   LOCATION L0000977     VOLUME   541669.302 3752401.711 235.54
   LOCATION L0000978     VOLUME   541677.892 3752401.791 235.55
   LOCATION L0000979     VOLUME   541686.481 3752401.870 235.55
   LOCATION L0000980     VOLUME   541695.071 3752401.949 235.55
   LOCATION L0000981     VOLUME   541703.661 3752402.029 235.56
   LOCATION L0000982     VOLUME   541712.250 3752402.108 235.56
   LOCATION L0000983     VOLUME   541720.840 3752402.187 235.56
   LOCATION L0000984     VOLUME   541729.429 3752402.266 235.56
   LOCATION L0000985     VOLUME   541738.019 3752402.346 235.57
   LOCATION L0000986     VOLUME   541746.609 3752402.425 235.57
   LOCATION L0000987     VOLUME   541755.198 3752402.504 235.57
   LOCATION L0000988     VOLUME   541763.788 3752402.583 235.57
   LOCATION L0000989     VOLUME   541772.378 3752402.663 235.58
   LOCATION L0000990     VOLUME   541780.967 3752402.742 235.58
   LOCATION L0000991     VOLUME   541789.557 3752402.821 235.58
   LOCATION L0000992     VOLUME   541798.147 3752402.900 235.58
   LOCATION L0000993     VOLUME   541806.736 3752402.980 235.59
   LOCATION L0000994     VOLUME   541815.326 3752403.059 235.59
   LOCATION L0000995     VOLUME   541823.915 3752403.138 235.59
   LOCATION L0000996     VOLUME   541832.505 3752403.217 235.60
   LOCATION L0000997     VOLUME   541841.095 3752403.297 235.60
   LOCATION L0000998     VOLUME   541849.684 3752403.376 235.60
   LOCATION L0000999     VOLUME   541858.274 3752403.455 235.60
   LOCATION L0001000     VOLUME   541866.864 3752403.534 235.61
   LOCATION L0001001     VOLUME   541875.453 3752403.614 235.61
   LOCATION L0001002     VOLUME   541884.043 3752403.693 235.61
   LOCATION L0001003     VOLUME   541892.633 3752403.772 235.61
   LOCATION L0001004     VOLUME   541901.222 3752403.851 235.62
   LOCATION L0001005     VOLUME   541909.812 3752403.931 235.62
   LOCATION L0001006     VOLUME   541918.401 3752404.010 235.62
   LOCATION L0001007     VOLUME   541926.991 3752404.089 235.62
** End of LINE VOLUME Source ID = SLINE15
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE16
** DESCRSRC Onsite N
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001325
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 5
** 542011.727, 3752653.544, 240.93, 3.49, 4.00
** 541640.589, 3752649.925, 240.24, 3.49, 4.00
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** 541631.706, 3752645.319, 240.14, 3.49, 4.00
** 541631.048, 3752361.702, 234.97, 3.49, 4.00
** 541633.351, 3752297.213, 233.00, 3.49, 4.00
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   LOCATION L0001008     VOLUME   542007.432 3752653.503 240.94
   LOCATION L0001009     VOLUME   541998.842 3752653.419 240.94
   LOCATION L0001010     VOLUME   541990.253 3752653.335 240.93
   LOCATION L0001011     VOLUME   541981.663 3752653.251 240.93
   LOCATION L0001012     VOLUME   541973.073 3752653.167 240.93
   LOCATION L0001013     VOLUME   541964.484 3752653.084 240.92
   LOCATION L0001014     VOLUME   541955.894 3752653.000 240.92
   LOCATION L0001015     VOLUME   541947.305 3752652.916 240.92
   LOCATION L0001016     VOLUME   541938.715 3752652.832 240.92
   LOCATION L0001017     VOLUME   541930.125 3752652.749 240.91
   LOCATION L0001018     VOLUME   541921.536 3752652.665 240.91
   LOCATION L0001019     VOLUME   541912.946 3752652.581 240.91
   LOCATION L0001020     VOLUME   541904.357 3752652.497 240.90
   LOCATION L0001021     VOLUME   541895.767 3752652.414 240.90
   LOCATION L0001022     VOLUME   541887.178 3752652.330 240.90
   LOCATION L0001023     VOLUME   541878.588 3752652.246 240.90
   LOCATION L0001024     VOLUME   541869.998 3752652.162 240.89
   LOCATION L0001025     VOLUME   541861.409 3752652.079 240.89
   LOCATION L0001026     VOLUME   541852.819 3752651.995 240.89
   LOCATION L0001027     VOLUME   541844.230 3752651.911 240.88
   LOCATION L0001028     VOLUME   541835.640 3752651.827 240.88
   LOCATION L0001029     VOLUME   541827.050 3752651.744 240.88
   LOCATION L0001030     VOLUME   541818.461 3752651.660 240.88
   LOCATION L0001031     VOLUME   541809.871 3752651.576 240.87
   LOCATION L0001032     VOLUME   541801.282 3752651.492 240.87
   LOCATION L0001033     VOLUME   541792.692 3752651.408 240.87
   LOCATION L0001034     VOLUME   541784.102 3752651.325 240.87
   LOCATION L0001035     VOLUME   541775.513 3752651.241 240.86
   LOCATION L0001036     VOLUME   541766.923 3752651.157 240.86
   LOCATION L0001037     VOLUME   541758.334 3752651.073 240.86
   LOCATION L0001038     VOLUME   541749.744 3752650.990 240.85
   LOCATION L0001039     VOLUME   541741.154 3752650.906 240.85
   LOCATION L0001040     VOLUME   541732.565 3752650.822 240.85
   LOCATION L0001041     VOLUME   541723.975 3752650.738 240.85
   LOCATION L0001042     VOLUME   541715.386 3752650.655 240.68
   LOCATION L0001043     VOLUME   541706.796 3752650.571 240.44
   LOCATION L0001044     VOLUME   541698.206 3752650.487 240.20
   LOCATION L0001045     VOLUME   541689.617 3752650.403 240.04
   LOCATION L0001046     VOLUME   541681.027 3752650.320 240.28
   LOCATION L0001047     VOLUME   541672.438 3752650.236 240.52
   LOCATION L0001048     VOLUME   541663.848 3752650.152 240.75
   LOCATION L0001049     VOLUME   541655.259 3752650.068 240.66
   LOCATION L0001050     VOLUME   541646.669 3752649.984 240.42
   LOCATION L0001051     VOLUME   541638.361 3752648.770 240.19
   LOCATION L0001052     VOLUME   541631.703 3752644.225 240.01
   LOCATION L0001053     VOLUME   541631.683 3752635.636 240.01
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   LOCATION L0001054     VOLUME   541631.663 3752627.046 240.00
   LOCATION L0001055     VOLUME   541631.644 3752618.456 239.77
   LOCATION L0001056     VOLUME   541631.624 3752609.866 239.48
   LOCATION L0001057     VOLUME   541631.604 3752601.276 239.20
   LOCATION L0001058     VOLUME   541631.584 3752592.686 239.00
   LOCATION L0001059     VOLUME   541631.564 3752584.096 239.00
   LOCATION L0001060     VOLUME   541631.544 3752575.506 239.00
   LOCATION L0001061     VOLUME   541631.524 3752566.916 239.00
   LOCATION L0001062     VOLUME   541631.504 3752558.326 238.77
   LOCATION L0001063     VOLUME   541631.484 3752549.736 238.48
   LOCATION L0001064     VOLUME   541631.464 3752541.146 238.19
   LOCATION L0001065     VOLUME   541631.444 3752532.556 238.00
   LOCATION L0001066     VOLUME   541631.424 3752523.966 238.00
   LOCATION L0001067     VOLUME   541631.404 3752515.376 238.00
   LOCATION L0001068     VOLUME   541631.384 3752506.786 238.00
   LOCATION L0001069     VOLUME   541631.364 3752498.196 237.76
   LOCATION L0001070     VOLUME   541631.345 3752489.606 237.47
   LOCATION L0001071     VOLUME   541631.325 3752481.016 237.19
   LOCATION L0001072     VOLUME   541631.305 3752472.426 237.00
   LOCATION L0001073     VOLUME   541631.285 3752463.836 237.00
   LOCATION L0001074     VOLUME   541631.265 3752455.246 237.00
   LOCATION L0001075     VOLUME   541631.245 3752446.656 237.00
   LOCATION L0001076     VOLUME   541631.225 3752438.066 236.75
   LOCATION L0001077     VOLUME   541631.205 3752429.476 236.47
   LOCATION L0001078     VOLUME   541631.185 3752420.886 236.18
   LOCATION L0001079     VOLUME   541631.165 3752412.296 235.90
   LOCATION L0001080     VOLUME   541631.145 3752403.706 235.61
   LOCATION L0001081     VOLUME   541631.125 3752395.116 235.33
   LOCATION L0001082     VOLUME   541631.105 3752386.526 235.04
   LOCATION L0001083     VOLUME   541631.085 3752377.936 235.00
   LOCATION L0001084     VOLUME   541631.066 3752369.346 235.00
   LOCATION L0001085     VOLUME   541631.082 3752360.757 235.00
   LOCATION L0001086     VOLUME   541631.388 3752352.172 234.89
   LOCATION L0001087     VOLUME   541631.695 3752343.588 234.61
   LOCATION L0001088     VOLUME   541632.001 3752335.003 234.32
   LOCATION L0001089     VOLUME   541632.308 3752326.419 234.04
   LOCATION L0001090     VOLUME   541632.614 3752317.834 233.75
   LOCATION L0001091     VOLUME   541632.921 3752309.250 233.46
   LOCATION L0001092     VOLUME   541633.228 3752300.665 233.18
** End of LINE VOLUME Source ID = SLINE16
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE17
** DESCRSRC Onsite S
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.826E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
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** Nodes = 2
** 542014.030, 3752381.443, 235.00, 3.49, 4.00
** 541638.286, 3752378.482, 235.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001093     VOLUME   542009.735 3752381.409 235.00
   LOCATION L0001094     VOLUME   542001.145 3752381.341 235.00
   LOCATION L0001095     VOLUME   541992.555 3752381.274 235.00
   LOCATION L0001096     VOLUME   541983.966 3752381.206 235.00
   LOCATION L0001097     VOLUME   541975.376 3752381.138 235.00
   LOCATION L0001098     VOLUME   541966.786 3752381.071 235.00
   LOCATION L0001099     VOLUME   541958.196 3752381.003 235.00
   LOCATION L0001100     VOLUME   541949.607 3752380.935 235.00
   LOCATION L0001101     VOLUME   541941.017 3752380.868 235.00
   LOCATION L0001102     VOLUME   541932.427 3752380.800 235.00
   LOCATION L0001103     VOLUME   541923.838 3752380.732 235.00
   LOCATION L0001104     VOLUME   541915.248 3752380.664 235.00
   LOCATION L0001105     VOLUME   541906.658 3752380.597 235.00
   LOCATION L0001106     VOLUME   541898.068 3752380.529 235.00
   LOCATION L0001107     VOLUME   541889.479 3752380.461 235.00
   LOCATION L0001108     VOLUME   541880.889 3752380.394 235.00
   LOCATION L0001109     VOLUME   541872.299 3752380.326 235.00
   LOCATION L0001110     VOLUME   541863.709 3752380.258 235.00
   LOCATION L0001111     VOLUME   541855.120 3752380.191 235.00
   LOCATION L0001112     VOLUME   541846.530 3752380.123 235.00
   LOCATION L0001113     VOLUME   541837.940 3752380.055 235.00
   LOCATION L0001114     VOLUME   541829.350 3752379.988 235.00
   LOCATION L0001115     VOLUME   541820.761 3752379.920 235.00
   LOCATION L0001116     VOLUME   541812.171 3752379.852 235.00
   LOCATION L0001117     VOLUME   541803.581 3752379.784 235.00
   LOCATION L0001118     VOLUME   541794.992 3752379.717 235.00
   LOCATION L0001119     VOLUME   541786.402 3752379.649 235.00
   LOCATION L0001120     VOLUME   541777.812 3752379.581 235.00
   LOCATION L0001121     VOLUME   541769.222 3752379.514 235.00
   LOCATION L0001122     VOLUME   541760.633 3752379.446 235.00
   LOCATION L0001123     VOLUME   541752.043 3752379.378 235.00
   LOCATION L0001124     VOLUME   541743.453 3752379.311 235.00
   LOCATION L0001125     VOLUME   541734.863 3752379.243 235.00
   LOCATION L0001126     VOLUME   541726.274 3752379.175 235.00
   LOCATION L0001127     VOLUME   541717.684 3752379.108 235.00
   LOCATION L0001128     VOLUME   541709.094 3752379.040 235.00
   LOCATION L0001129     VOLUME   541700.504 3752378.972 235.00
   LOCATION L0001130     VOLUME   541691.915 3752378.904 235.00
   LOCATION L0001131     VOLUME   541683.325 3752378.837 235.00
   LOCATION L0001132     VOLUME   541674.735 3752378.769 235.00
   LOCATION L0001133     VOLUME   541666.146 3752378.701 235.00
   LOCATION L0001134     VOLUME   541657.556 3752378.634 235.00
   LOCATION L0001135     VOLUME   541648.966 3752378.566 235.00
   LOCATION L0001136     VOLUME   541640.376 3752378.498 235.00
** End of LINE VOLUME Source ID = SLINE17
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE18
** DESCRSRC Indian Cyn 25%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 3.244E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542027.322, 3752301.634, 233.00, 3.49, 6.51
** 542027.322, 3752380.928, 235.00, 3.49, 6.51
** ------------------------------------------------------------------
   LOCATION L0001182     VOLUME   542027.322 3752308.634 233.44
   LOCATION L0001183     VOLUME   542027.322 3752322.634 233.91
   LOCATION L0001184     VOLUME   542027.322 3752336.634 234.38
   LOCATION L0001185     VOLUME   542027.322 3752350.634 234.84
   LOCATION L0001186     VOLUME   542027.322 3752364.634 235.00
   LOCATION L0001187     VOLUME   542027.322 3752378.634 235.00
** End of LINE VOLUME Source ID = SLINE18
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE19
** DESCRSRC Indian Cyn 22.5%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 1.006E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542027.418, 3752380.002, 235.00, 3.49, 6.51
** 542028.579, 3752653.291, 240.94, 3.49, 6.51
** ------------------------------------------------------------------
   LOCATION L0001188     VOLUME   542027.447 3752387.002 235.05
   LOCATION L0001189     VOLUME   542027.507 3752401.001 235.52
   LOCATION L0001190     VOLUME   542027.566 3752415.001 235.99
   LOCATION L0001191     VOLUME   542027.626 3752429.001 236.00
   LOCATION L0001192     VOLUME   542027.685 3752443.001 236.00
   LOCATION L0001193     VOLUME   542027.745 3752457.001 236.39
   LOCATION L0001194     VOLUME   542027.804 3752471.001 236.85
   LOCATION L0001195     VOLUME   542027.864 3752485.001 237.32
   LOCATION L0001196     VOLUME   542027.923 3752499.001 237.79
   LOCATION L0001197     VOLUME   542027.983 3752513.000 238.00
   LOCATION L0001198     VOLUME   542028.042 3752527.000 238.00
   LOCATION L0001199     VOLUME   542028.102 3752541.000 238.19
   LOCATION L0001200     VOLUME   542028.161 3752555.000 238.65
   LOCATION L0001201     VOLUME   542028.221 3752569.000 239.00
   LOCATION L0001202     VOLUME   542028.280 3752583.000 239.00
   LOCATION L0001203     VOLUME   542028.340 3752597.000 239.05
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   LOCATION L0001204     VOLUME   542028.399 3752611.000 239.52
   LOCATION L0001205     VOLUME   542028.459 3752624.999 239.99
   LOCATION L0001206     VOLUME   542028.518 3752638.999 240.45
   LOCATION L0001207     VOLUME   542028.578 3752652.999 240.92
** End of LINE VOLUME Source ID = SLINE19
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE20
** DESCRSRC Indian Cyn 10%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 7.426E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542028.192, 3752654.452, 240.95, 3.49, 6.51
** 542030.127, 3752967.612, 246.00, 3.49, 6.51
** 542028.227, 3753108.223, 249.00, 3.49, 6.51
** ----------------------------------------------------------------
   LOCATION L0001208     VOLUME   542028.235 3752661.452 241.00
   LOCATION L0001209     VOLUME   542028.322 3752675.451 241.00
   LOCATION L0001210     VOLUME   542028.408 3752689.451 241.14
   LOCATION L0001211     VOLUME   542028.495 3752703.451 241.60
   LOCATION L0001212     VOLUME   542028.581 3752717.451 242.00
   LOCATION L0001213     VOLUME   542028.668 3752731.450 242.00
   LOCATION L0001214     VOLUME   542028.754 3752745.450 242.00
   LOCATION L0001215     VOLUME   542028.841 3752759.450 242.47
   LOCATION L0001216     VOLUME   542028.927 3752773.450 242.94
   LOCATION L0001217     VOLUME   542029.014 3752787.449 243.00
   LOCATION L0001218     VOLUME   542029.100 3752801.449 243.00
   LOCATION L0001219     VOLUME   542029.187 3752815.449 243.34
   LOCATION L0001220     VOLUME   542029.273 3752829.449 243.80
   LOCATION L0001221     VOLUME   542029.360 3752843.448 244.27
   LOCATION L0001222     VOLUME   542029.447 3752857.448 244.74
   LOCATION L0001223     VOLUME   542029.533 3752871.448 245.00
   LOCATION L0001224     VOLUME   542029.620 3752885.447 245.00
   LOCATION L0001225     VOLUME   542029.706 3752899.447 245.14
   LOCATION L0001226     VOLUME   542029.793 3752913.447 245.60
   LOCATION L0001227     VOLUME   542029.879 3752927.447 246.00
   LOCATION L0001228     VOLUME   542029.966 3752941.446 246.00
   LOCATION L0001229     VOLUME   542030.052 3752955.446 246.00
   LOCATION L0001230     VOLUME   542030.103 3752969.446 246.47
   LOCATION L0001231     VOLUME   542029.913 3752983.444 246.94
   LOCATION L0001232     VOLUME   542029.724 3752997.443 247.29
   LOCATION L0001233     VOLUME   542029.535 3753011.442 247.63
   LOCATION L0001234     VOLUME   542029.346 3753025.441 247.82
   LOCATION L0001235     VOLUME   542029.157 3753039.439 247.95
   LOCATION L0001236     VOLUME   542028.968 3753053.438 248.27
   LOCATION L0001237     VOLUME   542028.779 3753067.437 248.74
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   LOCATION L0001238     VOLUME   542028.589 3753081.435 249.00
   LOCATION L0001239     VOLUME   542028.400 3753095.434 249.00
** End of LINE VOLUME Source ID = SLINE20
** Source Parameters **
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0001137     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001138     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001139     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001140     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001141     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001142     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001143     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001144     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001145     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001146     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001147     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001148     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001149     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001150     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001151     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001152     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001153     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001154     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001155     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001156     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001157     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001158     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001159     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001160     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001161     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001162     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001163     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001164     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001165     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001166     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001167     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001168     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001169     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001170     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001171     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001172     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001173     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001174     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001175     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001176     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001177     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001178     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001179     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001180     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001181     0.00000007664      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0001240     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001241     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001242     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001243     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001244     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001245     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001246     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001247     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001248     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001249     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001250     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001251     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001252     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001253     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001254     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001255     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001256     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001257     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001258     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001259     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001260     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001262     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001263     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001265     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001266     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001271     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001277     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001278     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001279     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001281     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001282     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001283     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001284     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001285     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001286     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001287     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001288     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001289     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001290     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001299     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001301     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001302     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001303     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001304     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001305     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001306     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001307     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001309     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001310     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001311     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001312     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001313     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001314     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001315     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001316     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001317     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001318     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001319     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001320     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001321     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001322     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001323     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001324     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001325     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001326     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001327     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001328     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001329     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001330     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001331     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001332     0.00000001412      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0001386     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001387     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001388     0.000000006991      3.49      4.00      3.25
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SRCPARAM L0001389     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001390     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001391     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001392     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001393     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001394     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001395     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001396     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001397     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001398     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001399     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001400     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001401     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001402     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001403     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001404     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001405     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001406     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001407     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001408     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001409     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001410     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001411     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001412     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001413     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001414     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001415     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001416     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001417     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001418     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001419     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001420     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001421     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001422     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001423     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001424     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001425     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001426     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001427     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001428     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001429     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001430     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001431     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001432     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001433     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001434     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001435     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001436     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001437     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001438     0.000000006991      3.49      4.00      3.25
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   SRCPARAM L0001439     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001440     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001441     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001442     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001443     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001444     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001445     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001446     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001447     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001448     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001449     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001450     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001451     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001452     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001453     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001454     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001455     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001456     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001457     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001458     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001459     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001460     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001461     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001462     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001463     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001464     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001465     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001466     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001467     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001468     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001469     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001470     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001471     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001472     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001473     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001474     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001475     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001476     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001477     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001478     0.000000006991      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0001333     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001334     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001335     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001336     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001337     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001338     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001339     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001340     0.000000007068      3.49      4.00      3.25
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   SRCPARAM L0001341     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001342     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001343     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001344     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001345     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001346     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001347     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001348     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001349     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001350     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001351     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001352     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001353     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001354     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001355     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001356     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001357     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001358     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001359     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001360     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001361     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001362     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001363     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001364     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001365     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001366     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001367     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001368     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001369     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001370     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001371     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001372     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001373     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001374     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001375     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001376     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001377     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001378     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001379     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001380     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001381     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001382     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001383     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001384     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001385     0.000000007068      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0001479     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001480     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001481     0.0000002079      3.49      6.51      3.25
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   SRCPARAM L0001482     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001483     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001484     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001485     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001486     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001487     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001488     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001489     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001490     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001491     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001492     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001493     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001494     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001495     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001496     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001497     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001498     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001499     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001500     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001501     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001502     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001503     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001504     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001505     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001506     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001507     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001508     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001509     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001510     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001511     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001512     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001513     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001514     0.0000002079      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE11
   SRCPARAM L0001515     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001516     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001517     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001518     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001519     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001520     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001521     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001522     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001523     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001524     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001525     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001526     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001527     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001528     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001529     0.0000001158      3.49      6.51      3.25
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   SRCPARAM L0001530     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001531     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001532     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001533     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001534     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001535     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001536     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001537     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001538     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001539     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001540     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001541     0.0000001158      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE12
   SRCPARAM L0001542     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001543     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001544     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001545     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001546     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001547     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001548     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001549     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001550     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001551     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001552     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001553     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001554     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001555     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001556     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001557     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001558     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001559     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001560     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001561     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001562     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001563     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001564     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001565     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001566     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001567     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001568     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001569     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001570     0.00000009052      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE13
   SRCPARAM L0001571     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001572     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001573     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001574     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001575     0.00000001401      3.49      4.00      3.25
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SRCPARAM L0001576     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001577     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001578     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001579     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001580     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001581     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001582     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001583     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001584     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001585     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001586     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001587     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001588     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001589     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001590     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001591     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001592     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001593     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001594     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001595     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001596     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001597     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001598     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001599     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001600     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001601     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001602     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001603     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001604     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001605     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001606     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001607     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001608     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001609     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001610     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001611     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001612     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001613     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001614     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001615     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001616     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001617     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001618     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001619     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001620     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001621     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001622     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001623     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001624     0.00000001401      3.49      4.00      3.25
SRCPARAM L0001625     0.00000001401      3.49      4.00      3.25
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   SRCPARAM L0001626     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001627     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001628     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001629     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001630     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001631     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001632     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001633     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001634     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001635     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001636     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001637     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001638     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001639     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001640     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001641     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001642     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001643     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001644     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001645     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001646     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001647     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001648     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001649     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001650     0.00000001401      3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE14
   SRCPARAM L0000942     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000943     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000944     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000945     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000946     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000947     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000948     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000949     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000950     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000951     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000952     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000953     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000954     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000955     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000956     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000957     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000958     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000959     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000960     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000961     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000962     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000963     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000964     0.0000003658      3.49      4.00      3.25
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   SRCPARAM L0000965     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000966     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000967     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000968     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000969     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000970     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000971     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000972     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000973     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000974     0.0000003658      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE15
   SRCPARAM L0000975     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000976     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000977     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000978     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000979     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000980     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000981     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000982     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000983     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000984     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000985     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000986     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000987     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000988     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000989     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000990     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000991     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000992     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000993     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000994     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000995     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000996     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000997     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000998     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000999     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001000     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001001     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001002     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001003     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001004     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001005     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001006     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001007     0.0000003658      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE16
   SRCPARAM L0001008     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001009     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001010     0.0000001559      3.49      4.00      3.25
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SRCPARAM L0001011     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001012     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001013     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001014     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001015     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001016     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001017     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001018     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001019     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001020     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001021     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001022     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001023     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001024     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001025     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001026     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001027     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001028     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001029     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001030     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001031     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001032     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001033     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001034     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001035     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001036     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001037     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001038     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001039     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001040     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001041     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001042     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001043     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001044     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001045     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001046     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001047     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001048     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001049     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001050     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001051     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001052     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001053     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001054     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001055     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001056     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001057     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001058     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001059     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001060     0.0000001559      3.49      4.00      3.25
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   SRCPARAM L0001061     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001062     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001063     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001064     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001065     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001066     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001067     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001068     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001069     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001070     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001071     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001072     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001073     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001074     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001075     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001076     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001077     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001078     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001079     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001080     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001081     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001082     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001083     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001084     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001085     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001086     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001087     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001088     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001089     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001090     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001091     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001092     0.0000001559      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE17
   SRCPARAM L0001093     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001094     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001095     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001096     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001097     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001098     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001099     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001100     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001101     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001102     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001103     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001104     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001105     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001106     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001107     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001108     0.0000001551      3.49      4.00      3.25
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   SRCPARAM L0001109     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001110     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001111     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001112     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001113     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001114     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001115     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001116     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001117     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001118     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001119     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001120     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001121     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001122     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001123     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001124     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001125     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001126     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001127     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001128     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001129     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001130     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001131     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001132     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001133     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001134     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001135     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001136     0.0000001551      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE18
   SRCPARAM L0001182     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001183     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001184     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001185     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001186     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001187     0.00000005407      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE19
   SRCPARAM L0001188     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001189     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001190     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001191     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001192     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001193     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001194     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001195     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001196     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001197     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001198     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001199     0.0000000503      3.49      6.51      3.25
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   SRCPARAM L0001200     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001201     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001202     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001203     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001204     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001205     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001206     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001207     0.0000000503      3.49      6.51      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE20
   SRCPARAM L0001208     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001209     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001210     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001211     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001212     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001213     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001214     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001215     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001216     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001217     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001218     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001219     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001220     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001221     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001222     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001223     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001224     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001225     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001226     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001227     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001228     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001229     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001230     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001231     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001232     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001233     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001234     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001235     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001236     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001237     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001238     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001239     0.00000002321      3.49      6.51      3.25
** ----------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
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**
**
RE STARTING
   INCLUDED "15097 Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
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**
**
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   PROFFILE KPSP_V9_ADJU\KPSP_v9.PFL
   SURFDATA 93138 2012
   UAIRDATA 3190 2012
   PROFBASE 125.0 METERS
ME FINISHED
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** AERMOD Output Pathway
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OU STARTING
** Auto-Generated Plotfiles
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   SUMMFILE "15097 Ops.sum"
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 3/30/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15097 Indian Cyn\15097 Ops\15097
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Ops.ADI
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** AERMOD Control Pathway
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CO STARTING
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   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2189641 Riverside_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15097 Ops.err"
CO FINISHED
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** AERMOD Source Pathway
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**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC 19th 55%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.449E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 541637.997, 3752297.169, 233.00, 3.49, 4.00
** 542021.137, 3752300.309, 233.00, 3.49, 4.00
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   LOCATION L0001138     VOLUME   541650.882 3752297.274 233.06
   LOCATION L0001139     VOLUME   541659.472 3752297.345 233.07
   LOCATION L0001140     VOLUME   541668.061 3752297.415 233.07
   LOCATION L0001141     VOLUME   541676.651 3752297.486 233.07
   LOCATION L0001142     VOLUME   541685.241 3752297.556 233.07
   LOCATION L0001143     VOLUME   541693.831 3752297.627 233.08
   LOCATION L0001144     VOLUME   541702.420 3752297.697 233.08
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   LOCATION L0001146     VOLUME   541719.600 3752297.838 233.08
   LOCATION L0001147     VOLUME   541728.189 3752297.908 233.08
   LOCATION L0001148     VOLUME   541736.779 3752297.979 233.09
   LOCATION L0001149     VOLUME   541745.369 3752298.049 233.09
   LOCATION L0001150     VOLUME   541753.959 3752298.119 233.09
   LOCATION L0001151     VOLUME   541762.548 3752298.190 233.09
   LOCATION L0001152     VOLUME   541771.138 3752298.260 233.10
   LOCATION L0001153     VOLUME   541779.728 3752298.331 233.10
   LOCATION L0001154     VOLUME   541788.317 3752298.401 233.10
   LOCATION L0001155     VOLUME   541796.907 3752298.471 233.10
   LOCATION L0001156     VOLUME   541805.497 3752298.542 233.11
   LOCATION L0001157     VOLUME   541814.087 3752298.612 233.11
   LOCATION L0001158     VOLUME   541822.676 3752298.683 233.11
   LOCATION L0001159     VOLUME   541831.266 3752298.753 233.11
   LOCATION L0001160     VOLUME   541839.856 3752298.823 233.12
   LOCATION L0001161     VOLUME   541848.445 3752298.894 233.12
   LOCATION L0001162     VOLUME   541857.035 3752298.964 233.12
   LOCATION L0001163     VOLUME   541865.625 3752299.035 233.12
   LOCATION L0001164     VOLUME   541874.215 3752299.105 233.12
   LOCATION L0001165     VOLUME   541882.804 3752299.175 233.13
   LOCATION L0001166     VOLUME   541891.394 3752299.246 233.13
   LOCATION L0001167     VOLUME   541899.984 3752299.316 233.13
   LOCATION L0001168     VOLUME   541908.573 3752299.387 233.13
   LOCATION L0001169     VOLUME   541917.163 3752299.457 233.14
   LOCATION L0001170     VOLUME   541925.753 3752299.528 233.14
   LOCATION L0001171     VOLUME   541934.343 3752299.598 233.14
   LOCATION L0001172     VOLUME   541942.932 3752299.668 233.14
   LOCATION L0001173     VOLUME   541951.522 3752299.739 233.15
   LOCATION L0001174     VOLUME   541960.112 3752299.809 233.15
   LOCATION L0001175     VOLUME   541968.701 3752299.880 233.15
   LOCATION L0001176     VOLUME   541977.291 3752299.950 233.15
   LOCATION L0001177     VOLUME   541985.881 3752300.020 233.16
   LOCATION L0001178     VOLUME   541994.471 3752300.091 233.16
   LOCATION L0001179     VOLUME   542003.060 3752300.161 233.16
   LOCATION L0001180     VOLUME   542011.650 3752300.232 233.16
   LOCATION L0001181     VOLUME   542020.240 3752300.302 233.16
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Indian Cyn 10% N
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.313E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 542028.326, 3753108.694, 249.00, 3.49, 4.00
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** 542029.089, 3753306.328, 254.00, 3.49, 4.00
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** 542029.089, 3753911.057, 268.00, 3.49, 4.00
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   LOCATION L0001240     VOLUME   542028.343 3753112.989 249.25
   LOCATION L0001241     VOLUME   542028.376 3753121.579 249.54
   LOCATION L0001242     VOLUME   542028.409 3753130.169 249.83
   LOCATION L0001243     VOLUME   542028.442 3753138.759 250.11
   LOCATION L0001244     VOLUME   542028.475 3753147.349 250.40
   LOCATION L0001245     VOLUME   542028.509 3753155.939 250.69
   LOCATION L0001246     VOLUME   542028.542 3753164.529 250.97
   LOCATION L0001247     VOLUME   542028.575 3753173.119 251.00
   LOCATION L0001248     VOLUME   542028.608 3753181.708 251.00
   LOCATION L0001249     VOLUME   542028.641 3753190.298 251.00
   LOCATION L0001250     VOLUME   542028.674 3753198.888 251.12
   LOCATION L0001251     VOLUME   542028.708 3753207.478 251.40
   LOCATION L0001252     VOLUME   542028.741 3753216.068 251.69
   LOCATION L0001253     VOLUME   542028.774 3753224.658 251.98
   LOCATION L0001254     VOLUME   542028.807 3753233.248 252.26
   LOCATION L0001255     VOLUME   542028.840 3753241.838 252.55
   LOCATION L0001256     VOLUME   542028.873 3753250.428 252.84
   LOCATION L0001257     VOLUME   542028.907 3753259.018 253.12
   LOCATION L0001258     VOLUME   542028.940 3753267.608 253.41
   LOCATION L0001259     VOLUME   542028.973 3753276.198 253.69
   LOCATION L0001260     VOLUME   542029.006 3753284.788 253.98
   LOCATION L0001261     VOLUME   542029.039 3753293.378 254.00
   LOCATION L0001262     VOLUME   542029.072 3753301.968 254.00
   LOCATION L0001263     VOLUME   542029.089 3753310.558 254.00
   LOCATION L0001264     VOLUME   542029.089 3753319.148 254.13
   LOCATION L0001265     VOLUME   542029.089 3753327.738 254.41
   LOCATION L0001266     VOLUME   542029.089 3753336.328 254.70
   LOCATION L0001267     VOLUME   542029.089 3753344.918 254.99
   LOCATION L0001268     VOLUME   542029.089 3753353.508 255.27
   LOCATION L0001269     VOLUME   542029.089 3753362.098 255.56
   LOCATION L0001270     VOLUME   542029.089 3753370.688 255.84
   LOCATION L0001271     VOLUME   542029.089 3753379.278 256.00
   LOCATION L0001272     VOLUME   542029.089 3753387.868 256.00
   LOCATION L0001273     VOLUME   542029.089 3753396.458 256.00
   LOCATION L0001274     VOLUME   542029.089 3753405.048 256.00
   LOCATION L0001275     VOLUME   542029.089 3753413.638 256.28
   LOCATION L0001276     VOLUME   542029.089 3753422.228 256.56
   LOCATION L0001277     VOLUME   542029.089 3753430.818 256.85
   LOCATION L0001278     VOLUME   542029.089 3753439.408 257.13
   LOCATION L0001279     VOLUME   542029.089 3753447.998 257.42
   LOCATION L0001280     VOLUME   542029.089 3753456.588 257.71
   LOCATION L0001281     VOLUME   542029.089 3753465.178 257.99
   LOCATION L0001282     VOLUME   542029.089 3753473.768 258.00
   LOCATION L0001283     VOLUME   542029.089 3753482.358 258.00
   LOCATION L0001284     VOLUME   542029.089 3753490.948 258.00
   LOCATION L0001285     VOLUME   542029.089 3753499.538 258.14
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   LOCATION L0001288     VOLUME   542029.089 3753525.308 259.00
   LOCATION L0001289     VOLUME   542029.089 3753533.898 259.28
   LOCATION L0001290     VOLUME   542029.089 3753542.488 259.57
   LOCATION L0001291     VOLUME   542029.089 3753551.078 259.86
   LOCATION L0001292     VOLUME   542029.089 3753559.668 260.00
   LOCATION L0001293     VOLUME   542029.089 3753568.258 260.00
   LOCATION L0001294     VOLUME   542029.089 3753576.848 260.00
   LOCATION L0001295     VOLUME   542029.089 3753585.438 260.00
   LOCATION L0001296     VOLUME   542029.089 3753594.028 260.29
   LOCATION L0001297     VOLUME   542029.089 3753602.618 260.58
   LOCATION L0001298     VOLUME   542029.089 3753611.208 260.86
   LOCATION L0001299     VOLUME   542029.089 3753619.798 261.00
   LOCATION L0001300     VOLUME   542029.089 3753628.388 261.00
   LOCATION L0001301     VOLUME   542029.089 3753636.978 261.00
   LOCATION L0001302     VOLUME   542029.089 3753645.568 261.01
   LOCATION L0001303     VOLUME   542029.089 3753654.158 261.29
   LOCATION L0001304     VOLUME   542029.089 3753662.748 261.58
   LOCATION L0001305     VOLUME   542029.089 3753671.338 261.87
   LOCATION L0001306     VOLUME   542029.089 3753679.928 262.15
   LOCATION L0001307     VOLUME   542029.089 3753688.518 262.44
   LOCATION L0001308     VOLUME   542029.089 3753697.108 262.72
   LOCATION L0001309     VOLUME   542029.089 3753705.698 263.01
   LOCATION L0001310     VOLUME   542029.089 3753714.288 263.30
   LOCATION L0001311     VOLUME   542029.089 3753722.878 263.58
   LOCATION L0001312     VOLUME   542029.089 3753731.468 263.87
   LOCATION L0001313     VOLUME   542029.089 3753740.058 264.00
   LOCATION L0001314     VOLUME   542029.089 3753748.648 264.00
   LOCATION L0001315     VOLUME   542029.089 3753757.238 264.00
   LOCATION L0001316     VOLUME   542029.089 3753765.828 264.02
   LOCATION L0001317     VOLUME   542029.089 3753774.418 264.30
   LOCATION L0001318     VOLUME   542029.089 3753783.008 264.59
   LOCATION L0001319     VOLUME   542029.089 3753791.598 264.87
   LOCATION L0001320     VOLUME   542029.089 3753800.188 265.16
   LOCATION L0001321     VOLUME   542029.089 3753808.778 265.45
   LOCATION L0001322     VOLUME   542029.089 3753817.368 265.73
   LOCATION L0001323     VOLUME   542029.089 3753825.958 266.02
   LOCATION L0001324     VOLUME   542029.089 3753834.548 266.31
   LOCATION L0001325     VOLUME   542029.089 3753843.138 266.59
   LOCATION L0001326     VOLUME   542029.089 3753851.728 266.88
   LOCATION L0001327     VOLUME   542029.089 3753860.318 267.12
   LOCATION L0001328     VOLUME   542029.089 3753868.908 267.33
   LOCATION L0001329     VOLUME   542029.089 3753877.498 267.54
   LOCATION L0001330     VOLUME   542029.089 3753886.088 267.74
   LOCATION L0001331     VOLUME   542029.089 3753894.678 267.82
   LOCATION L0001332     VOLUME   542029.089 3753903.268 267.89
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
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** LINE VOLUME Source ID = SLINE8
** DESCRSRC Dillon 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.502E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 542028.655, 3753914.106, 268.00, 3.49, 4.00
** 541926.490, 3753914.755, 268.00, 3.49, 4.00
** 541737.403, 3753913.782, 269.91, 3.49, 4.00
** 541234.036, 3753908.917, 270.05, 3.49, 4.00
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   LOCATION L0001387     VOLUME   542015.770 3753914.188 268.00
   LOCATION L0001388     VOLUME   542007.180 3753914.242 268.00
   LOCATION L0001389     VOLUME   541998.591 3753914.297 268.00
   LOCATION L0001390     VOLUME   541990.001 3753914.351 268.00
   LOCATION L0001391     VOLUME   541981.411 3753914.406 268.00
   LOCATION L0001392     VOLUME   541972.821 3753914.460 268.00
   LOCATION L0001393     VOLUME   541964.231 3753914.515 268.00
   LOCATION L0001394     VOLUME   541955.641 3753914.569 268.00
   LOCATION L0001395     VOLUME   541947.052 3753914.624 268.00
   LOCATION L0001396     VOLUME   541938.462 3753914.679 268.00
   LOCATION L0001397     VOLUME   541929.872 3753914.733 268.00
   LOCATION L0001398     VOLUME   541921.282 3753914.728 268.00
   LOCATION L0001399     VOLUME   541912.692 3753914.684 268.00
   LOCATION L0001400     VOLUME   541904.102 3753914.639 268.00
   LOCATION L0001401     VOLUME   541895.512 3753914.595 268.18
   LOCATION L0001402     VOLUME   541886.923 3753914.551 268.46
   LOCATION L0001403     VOLUME   541878.333 3753914.507 268.74
   LOCATION L0001404     VOLUME   541869.743 3753914.463 268.97
   LOCATION L0001405     VOLUME   541861.153 3753914.418 268.97
   LOCATION L0001406     VOLUME   541852.563 3753914.374 268.97
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   LOCATION L0001410     VOLUME   541818.204 3753914.197 268.96
   LOCATION L0001411     VOLUME   541809.614 3753914.153 268.96
   LOCATION L0001412     VOLUME   541801.024 3753914.109 268.97
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   LOCATION L0001414     VOLUME   541783.844 3753914.021 269.00
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   LOCATION L0001417     VOLUME   541758.074 3753913.888 269.73
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   LOCATION L0001421     VOLUME   541723.715 3753913.649 269.94
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LOCATION L0001440 VOLUME 541560.513 3753912.072 269.89
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LOCATION L0001442 VOLUME 541543.334 3753911.906 269.88
LOCATION L0001443 VOLUME 541534.744 3753911.823 269.88
LOCATION L0001444 VOLUME 541526.154 3753911.740 269.88
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LOCATION L0001447 VOLUME 541500.386 3753911.491 269.92
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LOCATION L0001449 VOLUME 541483.206 3753911.325 269.99
LOCATION L0001450 VOLUME 541474.617 3753911.242 270.00
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LOCATION L0001452 VOLUME 541457.438 3753911.076 270.00
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LOCATION L0001454 VOLUME 541440.258 3753910.910 270.31
LOCATION L0001455 VOLUME 541431.669 3753910.827 270.55
LOCATION L0001456 VOLUME 541423.079 3753910.744 270.79
LOCATION L0001457 VOLUME 541414.490 3753910.661 270.84
LOCATION L0001458 VOLUME 541405.900 3753910.578 270.84
LOCATION L0001459 VOLUME 541397.310 3753910.495 270.84
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LOCATION L0001461 VOLUME 541380.131 3753910.329 270.53
LOCATION L0001462 VOLUME 541371.542 3753910.246 270.29
LOCATION L0001463 VOLUME 541362.952 3753910.162 270.05
LOCATION L0001464 VOLUME 541354.362 3753910.079 270.19
LOCATION L0001465 VOLUME 541345.773 3753909.996 270.42
LOCATION L0001466 VOLUME 541337.183 3753909.913 270.65
LOCATION L0001467 VOLUME 541328.594 3753909.830 270.82
LOCATION L0001468 VOLUME 541320.004 3753909.747 270.81
LOCATION L0001469 VOLUME 541311.414 3753909.664 270.81
LOCATION L0001470 VOLUME 541302.825 3753909.581 270.81
LOCATION L0001471 VOLUME 541294.235 3753909.498 270.80

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   LOCATION L0001474     VOLUME   541268.466 3753909.249 270.72
   LOCATION L0001475     VOLUME   541259.877 3753909.166 270.50
   LOCATION L0001476     VOLUME   541251.287 3753909.083 270.27
   LOCATION L0001477     VOLUME   541242.698 3753909.000 270.04
   LOCATION L0001478     VOLUME   541234.108 3753908.917 270.00
** End of LINE VOLUME Source ID = SLINE8
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Indian Cyn 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.746E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542029.638, 3753915.000, 268.00, 3.49, 4.00
** 542030.189, 3754064.702, 271.93, 3.49, 4.00
** 542032.361, 3754372.804, 278.93, 3.49, 4.00
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   LOCATION L0001335     VOLUME   542029.717 3753936.475 268.70
   LOCATION L0001336     VOLUME   542029.748 3753945.065 268.99
   LOCATION L0001337     VOLUME   542029.780 3753953.655 269.20
   LOCATION L0001338     VOLUME   542029.812 3753962.245 269.40
   LOCATION L0001339     VOLUME   542029.843 3753970.835 269.60
   LOCATION L0001340     VOLUME   542029.875 3753979.425 269.75
   LOCATION L0001341     VOLUME   542029.907 3753988.015 269.83
   LOCATION L0001342     VOLUME   542029.938 3753996.605 269.91
   LOCATION L0001343     VOLUME   542029.970 3754005.195 270.00
   LOCATION L0001344     VOLUME   542030.002 3754013.785 270.28
   LOCATION L0001345     VOLUME   542030.033 3754022.375 270.57
   LOCATION L0001346     VOLUME   542030.065 3754030.965 270.85
   LOCATION L0001347     VOLUME   542030.097 3754039.555 271.14
   LOCATION L0001348     VOLUME   542030.128 3754048.144 271.43
   LOCATION L0001349     VOLUME   542030.160 3754056.734 271.71
   LOCATION L0001350     VOLUME   542030.194 3754065.324 272.00
   LOCATION L0001351     VOLUME   542030.254 3754073.914 272.20
   LOCATION L0001352     VOLUME   542030.315 3754082.504 272.40
   LOCATION L0001353     VOLUME   542030.375 3754091.094 272.59
   LOCATION L0001354     VOLUME   542030.436 3754099.683 272.73
   LOCATION L0001355     VOLUME   542030.496 3754108.273 272.82
   LOCATION L0001356     VOLUME   542030.557 3754116.863 272.91
   LOCATION L0001357     VOLUME   542030.617 3754125.453 273.00
   LOCATION L0001358     VOLUME   542030.678 3754134.043 273.29
   LOCATION L0001359     VOLUME   542030.738 3754142.632 273.58
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   LOCATION L0001360     VOLUME   542030.799 3754151.222 273.86
   LOCATION L0001361     VOLUME   542030.860 3754159.812 274.15
   LOCATION L0001362     VOLUME   542030.920 3754168.402 274.43
   LOCATION L0001363     VOLUME   542030.981 3754176.992 274.72
   LOCATION L0001364     VOLUME   542031.041 3754185.581 275.00
   LOCATION L0001365     VOLUME   542031.102 3754194.171 275.20
   LOCATION L0001366     VOLUME   542031.162 3754202.761 275.39
   LOCATION L0001367     VOLUME   542031.223 3754211.351 275.57
   LOCATION L0001368     VOLUME   542031.283 3754219.941 275.71
   LOCATION L0001369     VOLUME   542031.344 3754228.530 275.81
   LOCATION L0001370     VOLUME   542031.404 3754237.120 275.91
   LOCATION L0001371     VOLUME   542031.465 3754245.710 276.01
   LOCATION L0001372     VOLUME   542031.525 3754254.300 276.30
   LOCATION L0001373     VOLUME   542031.586 3754262.889 276.58
   LOCATION L0001374     VOLUME   542031.647 3754271.479 276.87
   LOCATION L0001375     VOLUME   542031.707 3754280.069 277.10
   LOCATION L0001376     VOLUME   542031.768 3754288.659 277.29
   LOCATION L0001377     VOLUME   542031.828 3754297.249 277.47
   LOCATION L0001378     VOLUME   542031.889 3754305.838 277.65
   LOCATION L0001379     VOLUME   542031.949 3754314.428 277.75
   LOCATION L0001380     VOLUME   542032.010 3754323.018 277.85
   LOCATION L0001381     VOLUME   542032.070 3754331.608 277.95
   LOCATION L0001382     VOLUME   542032.131 3754340.198 278.16
   LOCATION L0001383     VOLUME   542032.191 3754348.787 278.45
   LOCATION L0001384     VOLUME   542032.252 3754357.377 278.73
   LOCATION L0001385     VOLUME   542032.313 3754365.967 279.01
** End of LINE VOLUME Source ID = SLINE9
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Indian Cyn 90%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 7.486E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542028.398, 3752299.451, 233.00, 3.49, 6.51
** 542027.777, 3752080.733, 228.92, 3.49, 6.51
** 542026.534, 3751791.179, 223.00, 3.49, 6.51
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   LOCATION L0001479     VOLUME   542028.378 3752292.451 232.98
   LOCATION L0001480     VOLUME   542028.338 3752278.451 232.86
   LOCATION L0001481     VOLUME   542028.299 3752264.451 232.74
   LOCATION L0001482     VOLUME   542028.259 3752250.451 232.38
   LOCATION L0001483     VOLUME   542028.219 3752236.452 232.03
   LOCATION L0001484     VOLUME   542028.179 3752222.452 231.57
   LOCATION L0001485     VOLUME   542028.140 3752208.452 231.10
   LOCATION L0001486     VOLUME   542028.100 3752194.452 231.00
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   LOCATION L0001487     VOLUME   542028.060 3752180.452 231.00
   LOCATION L0001488     VOLUME   542028.020 3752166.452 230.70
   LOCATION L0001489     VOLUME   542027.981 3752152.452 230.24
   LOCATION L0001490     VOLUME   542027.941 3752138.452 230.00
   LOCATION L0001491     VOLUME   542027.901 3752124.452 230.00
   LOCATION L0001492     VOLUME   542027.861 3752110.452 229.84
   LOCATION L0001493     VOLUME   542027.821 3752096.452 229.37
   LOCATION L0001494     VOLUME   542027.782 3752082.452 228.90
   LOCATION L0001495     VOLUME   542027.724 3752068.452 228.44
   LOCATION L0001496     VOLUME   542027.664 3752054.452 228.00
   LOCATION L0001497     VOLUME   542027.604 3752040.453 228.00
   LOCATION L0001498     VOLUME   542027.544 3752026.453 228.00
   LOCATION L0001499     VOLUME   542027.484 3752012.453 227.57
   LOCATION L0001500     VOLUME   542027.424 3751998.453 227.10
   LOCATION L0001501     VOLUME   542027.364 3751984.453 227.00
   LOCATION L0001502     VOLUME   542027.303 3751970.453 227.00
   LOCATION L0001503     VOLUME   542027.243 3751956.453 226.70
   LOCATION L0001504     VOLUME   542027.183 3751942.453 226.24
   LOCATION L0001505     VOLUME   542027.123 3751928.454 226.00
   LOCATION L0001506     VOLUME   542027.063 3751914.454 226.00
   LOCATION L0001507     VOLUME   542027.003 3751900.454 225.84
   LOCATION L0001508     VOLUME   542026.943 3751886.454 225.37
   LOCATION L0001509     VOLUME   542026.883 3751872.454 224.98
   LOCATION L0001510     VOLUME   542026.823 3751858.454 224.89
   LOCATION L0001511     VOLUME   542026.763 3751844.454 224.79
   LOCATION L0001512     VOLUME   542026.703 3751830.454 224.41
   LOCATION L0001513     VOLUME   542026.643 3751816.455 224.03
   LOCATION L0001514     VOLUME   542026.582 3751802.455 223.57
** End of LINE VOLUME Source ID = SLINE10
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC Indian Cyn 50%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 3.126E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542025.913, 3751796.150, 223.00, 3.49, 6.51
** 542029.019, 3751414.013, 217.00, 3.49, 6.51
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   LOCATION L0001515     VOLUME   542025.970 3751789.150 223.13
   LOCATION L0001516     VOLUME   542026.083 3751775.150 223.00
   LOCATION L0001517     VOLUME   542026.197 3751761.151 223.00
   LOCATION L0001518     VOLUME   542026.311 3751747.151 222.73
   LOCATION L0001519     VOLUME   542026.425 3751733.152 222.26
   LOCATION L0001520     VOLUME   542026.539 3751719.152 222.00
   LOCATION L0001521     VOLUME   542026.653 3751705.153 222.00
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   LOCATION L0001522     VOLUME   542026.766 3751691.153 221.86
   LOCATION L0001523     VOLUME   542026.880 3751677.153 221.39
   LOCATION L0001524     VOLUME   542026.994 3751663.154 220.99
   LOCATION L0001525     VOLUME   542027.108 3751649.154 220.89
   LOCATION L0001526     VOLUME   542027.222 3751635.155 220.79
   LOCATION L0001527     VOLUME   542027.335 3751621.155 220.42
   LOCATION L0001528     VOLUME   542027.449 3751607.156 220.05
   LOCATION L0001529     VOLUME   542027.563 3751593.156 219.59
   LOCATION L0001530     VOLUME   542027.677 3751579.157 219.13
   LOCATION L0001531     VOLUME   542027.791 3751565.157 219.00
   LOCATION L0001532     VOLUME   542027.904 3751551.158 219.00
   LOCATION L0001533     VOLUME   542028.018 3751537.158 218.73
   LOCATION L0001534     VOLUME   542028.132 3751523.159 218.26
   LOCATION L0001535     VOLUME   542028.246 3751509.159 218.00
   LOCATION L0001536     VOLUME   542028.360 3751495.160 218.00
   LOCATION L0001537     VOLUME   542028.474 3751481.160 217.97
   LOCATION L0001538     VOLUME   542028.587 3751467.160 217.85
   LOCATION L0001539     VOLUME   542028.701 3751453.161 217.69
   LOCATION L0001540     VOLUME   542028.815 3751439.161 217.34
   LOCATION L0001541     VOLUME   542028.929 3751425.162 217.00
** End of LINE VOLUME Source ID = SLINE11
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC Garnet 40%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 2.625E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542026.534, 3751417.120, 217.00, 3.49, 6.51
** 541881.446, 3751450.013, 217.88, 3.49, 6.51
** 541637.823, 3751515.152, 218.03, 3.49, 6.51
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   LOCATION L0001542     VOLUME   542019.707 3751418.668 217.00
   LOCATION L0001543     VOLUME   542006.054 3751421.763 217.00
   LOCATION L0001544     VOLUME   541992.400 3751424.858 217.00
   LOCATION L0001545     VOLUME   541978.747 3751427.954 217.00
   LOCATION L0001546     VOLUME   541965.093 3751431.049 217.00
   LOCATION L0001547     VOLUME   541951.440 3751434.145 217.09
   LOCATION L0001548     VOLUME   541937.786 3751437.240 217.31
   LOCATION L0001549     VOLUME   541924.133 3751440.335 217.50
   LOCATION L0001550     VOLUME   541910.479 3751443.431 217.60
   LOCATION L0001551     VOLUME   541896.826 3751446.526 217.71
   LOCATION L0001552     VOLUME   541883.172 3751449.622 217.81
   LOCATION L0001553     VOLUME   541869.631 3751453.172 217.93
   LOCATION L0001554     VOLUME   541856.106 3751456.788 218.00
   LOCATION L0001555     VOLUME   541842.581 3751460.405 218.00
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   LOCATION L0001556     VOLUME   541829.056 3751464.021 218.00
   LOCATION L0001557     VOLUME   541815.531 3751467.637 218.00
   LOCATION L0001558     VOLUME   541802.007 3751471.253 218.00
   LOCATION L0001559     VOLUME   541788.482 3751474.869 218.00
   LOCATION L0001560     VOLUME   541774.957 3751478.486 217.95
   LOCATION L0001561     VOLUME   541761.432 3751482.102 217.93
   LOCATION L0001562     VOLUME   541747.907 3751485.718 218.01
   LOCATION L0001563     VOLUME   541734.382 3751489.334 218.06
   LOCATION L0001564     VOLUME   541720.857 3751492.951 218.00
   LOCATION L0001565     VOLUME   541707.332 3751496.567 218.00
   LOCATION L0001566     VOLUME   541693.807 3751500.183 218.00
   LOCATION L0001567     VOLUME   541680.282 3751503.799 218.00
   LOCATION L0001568     VOLUME   541666.758 3751507.415 218.00
   LOCATION L0001569     VOLUME   541653.233 3751511.032 218.00
   LOCATION L0001570     VOLUME   541639.708 3751514.648 218.00
** End of LINE VOLUME Source ID = SLINE12
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC Indian Cyn 10% S
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.121E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542030.035, 3751412.559, 217.00, 3.49, 4.00
** 542033.691, 3750727.548, 212.94, 3.49, 4.00
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   LOCATION L0001571     VOLUME   542030.058 3751408.264 217.00
   LOCATION L0001572     VOLUME   542030.104 3751399.674 217.00
   LOCATION L0001573     VOLUME   542030.150 3751391.084 216.86
   LOCATION L0001574     VOLUME   542030.196 3751382.494 216.57
   LOCATION L0001575     VOLUME   542030.241 3751373.904 216.28
   LOCATION L0001576     VOLUME   542030.287 3751365.314 216.00
   LOCATION L0001577     VOLUME   542030.333 3751356.725 216.00
   LOCATION L0001578     VOLUME   542030.379 3751348.135 216.00
   LOCATION L0001579     VOLUME   542030.425 3751339.545 216.00
   LOCATION L0001580     VOLUME   542030.471 3751330.955 215.85
   LOCATION L0001581     VOLUME   542030.517 3751322.365 215.57
   LOCATION L0001582     VOLUME   542030.562 3751313.775 215.28
   LOCATION L0001583     VOLUME   542030.608 3751305.185 215.00
   LOCATION L0001584     VOLUME   542030.654 3751296.595 215.00
   LOCATION L0001585     VOLUME   542030.700 3751288.006 215.00
   LOCATION L0001586     VOLUME   542030.746 3751279.416 215.00
   LOCATION L0001587     VOLUME   542030.792 3751270.826 215.00
   LOCATION L0001588     VOLUME   542030.837 3751262.236 215.00
   LOCATION L0001589     VOLUME   542030.883 3751253.646 215.00
   LOCATION L0001590     VOLUME   542030.929 3751245.056 214.99
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LOCATION L0001591 VOLUME 542030.975 3751236.466 214.70
LOCATION L0001592 VOLUME 542031.021 3751227.876 214.42
LOCATION L0001593 VOLUME 542031.067 3751219.287 214.13
LOCATION L0001594 VOLUME 542031.112 3751210.697 214.00
LOCATION L0001595 VOLUME 542031.158 3751202.107 214.00
LOCATION L0001596 VOLUME 542031.204 3751193.517 214.00
LOCATION L0001597 VOLUME 542031.250 3751184.927 214.00
LOCATION L0001598 VOLUME 542031.296 3751176.337 214.00
LOCATION L0001599 VOLUME 542031.342 3751167.747 214.00
LOCATION L0001600 VOLUME 542031.387 3751159.157 214.00
LOCATION L0001601 VOLUME 542031.433 3751150.567 214.00
LOCATION L0001602 VOLUME 542031.479 3751141.978 214.00
LOCATION L0001603 VOLUME 542031.525 3751133.388 214.00
LOCATION L0001604 VOLUME 542031.571 3751124.798 214.00
LOCATION L0001605 VOLUME 542031.617 3751116.208 214.00
LOCATION L0001606 VOLUME 542031.662 3751107.618 214.00
LOCATION L0001607 VOLUME 542031.708 3751099.028 214.00
LOCATION L0001608 VOLUME 542031.754 3751090.438 214.12
LOCATION L0001609 VOLUME 542031.800 3751081.848 214.32
LOCATION L0001610 VOLUME 542031.846 3751073.259 214.52
LOCATION L0001611 VOLUME 542031.892 3751064.669 214.76
LOCATION L0001612 VOLUME 542031.937 3751056.079 215.34
LOCATION L0001613 VOLUME 542031.983 3751047.489 215.91
LOCATION L0001614 VOLUME 542032.029 3751038.899 216.49
LOCATION L0001615 VOLUME 542032.075 3751030.309 217.37
LOCATION L0001616 VOLUME 542032.121 3751021.719 218.47
LOCATION L0001617 VOLUME 542032.167 3751013.129 219.57
LOCATION L0001618 VOLUME 542032.212 3751004.540 220.60
LOCATION L0001619 VOLUME 542032.258 3750995.950 220.82
LOCATION L0001620 VOLUME 542032.304 3750987.360 221.04
LOCATION L0001621 VOLUME 542032.350 3750978.770 221.27
LOCATION L0001622 VOLUME 542032.396 3750970.180 220.46
LOCATION L0001623 VOLUME 542032.442 3750961.590 218.97
LOCATION L0001624 VOLUME 542032.488 3750953.000 217.47
LOCATION L0001625 VOLUME 542032.533 3750944.410 216.09
LOCATION L0001626 VOLUME 542032.579 3750935.821 215.70
LOCATION L0001627 VOLUME 542032.625 3750927.231 215.31
LOCATION L0001628 VOLUME 542032.671 3750918.641 214.92
LOCATION L0001629 VOLUME 542032.717 3750910.051 214.57
LOCATION L0001630 VOLUME 542032.763 3750901.461 214.24
LOCATION L0001631 VOLUME 542032.808 3750892.871 213.90
LOCATION L0001632 VOLUME 542032.854 3750884.281 213.61
LOCATION L0001633 VOLUME 542032.900 3750875.691 213.61
LOCATION L0001634 VOLUME 542032.946 3750867.102 213.61
LOCATION L0001635 VOLUME 542032.992 3750858.512 213.61
LOCATION L0001636 VOLUME 542033.038 3750849.922 213.21
LOCATION L0001637 VOLUME 542033.083 3750841.332 212.58
LOCATION L0001638 VOLUME 542033.129 3750832.742 211.95
LOCATION L0001639 VOLUME 542033.175 3750824.152 211.47
LOCATION L0001640 VOLUME 542033.221 3750815.562 211.98

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   LOCATION L0001641     VOLUME   542033.267 3750806.972 212.49
   LOCATION L0001642     VOLUME   542033.313 3750798.383 213.01
   LOCATION L0001643     VOLUME   542033.358 3750789.793 213.26
   LOCATION L0001644     VOLUME   542033.404 3750781.203 213.38
   LOCATION L0001645     VOLUME   542033.450 3750772.613 213.49
   LOCATION L0001646     VOLUME   542033.496 3750764.023 213.56
   LOCATION L0001647     VOLUME   542033.542 3750755.433 213.39
   LOCATION L0001648     VOLUME   542033.588 3750746.843 213.22
   LOCATION L0001649     VOLUME   542033.633 3750738.253 213.06
   LOCATION L0001650     VOLUME   542033.679 3750729.663 212.92
** End of LINE VOLUME Source ID = SLINE13
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC Idle N
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001207
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 541649.144, 3752625.907, 239.93, 3.49, 4.00
** 541933.090, 3752628.539, 239.99, 3.49, 4.00
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   LOCATION L0000942     VOLUME   541653.439 3752625.946 240.01
   LOCATION L0000943     VOLUME   541662.028 3752626.026 240.02
   LOCATION L0000944     VOLUME   541670.618 3752626.106 240.02
   LOCATION L0000945     VOLUME   541679.208 3752626.185 240.01
   LOCATION L0000946     VOLUME   541687.797 3752626.265 240.00
   LOCATION L0000947     VOLUME   541696.387 3752626.344 240.01
   LOCATION L0000948     VOLUME   541704.977 3752626.424 240.02
   LOCATION L0000949     VOLUME   541713.566 3752626.504 240.03
   LOCATION L0000950     VOLUME   541722.156 3752626.583 240.04
   LOCATION L0000951     VOLUME   541730.746 3752626.663 240.04
   LOCATION L0000952     VOLUME   541739.335 3752626.743 240.05
   LOCATION L0000953     VOLUME   541747.925 3752626.822 240.05
   LOCATION L0000954     VOLUME   541756.514 3752626.902 240.05
   LOCATION L0000955     VOLUME   541765.104 3752626.981 240.05
   LOCATION L0000956     VOLUME   541773.694 3752627.061 240.06
   LOCATION L0000957     VOLUME   541782.283 3752627.141 240.06
   LOCATION L0000958     VOLUME   541790.873 3752627.220 240.06
   LOCATION L0000959     VOLUME   541799.463 3752627.300 240.06
   LOCATION L0000960     VOLUME   541808.052 3752627.380 240.07
   LOCATION L0000961     VOLUME   541816.642 3752627.459 240.07
   LOCATION L0000962     VOLUME   541825.231 3752627.539 240.07
   LOCATION L0000963     VOLUME   541833.821 3752627.619 240.08
   LOCATION L0000964     VOLUME   541842.411 3752627.698 240.08
   LOCATION L0000965     VOLUME   541851.000 3752627.778 240.08
   LOCATION L0000966     VOLUME   541859.590 3752627.857 240.08
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   LOCATION L0000967     VOLUME   541868.180 3752627.937 240.09
   LOCATION L0000968     VOLUME   541876.769 3752628.017 240.09
   LOCATION L0000969     VOLUME   541885.359 3752628.096 240.09
   LOCATION L0000970     VOLUME   541893.949 3752628.176 240.09
   LOCATION L0000971     VOLUME   541902.538 3752628.256 240.10
   LOCATION L0000972     VOLUME   541911.128 3752628.335 240.10
   LOCATION L0000973     VOLUME   541919.717 3752628.415 240.10
   LOCATION L0000974     VOLUME   541928.307 3752628.494 240.10
** End of LINE VOLUME Source ID = SLINE14
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE15
** DESCRSRC Idle S
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001207
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 541647.828, 3752401.513, 235.74, 3.49, 4.00
** 541933.090, 3752404.146, 235.77, 3.49, 4.00
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   LOCATION L0000975     VOLUME   541652.123 3752401.553 235.54
   LOCATION L0000976     VOLUME   541660.712 3752401.632 235.54
   LOCATION L0000977     VOLUME   541669.302 3752401.711 235.54
   LOCATION L0000978     VOLUME   541677.892 3752401.791 235.55
   LOCATION L0000979     VOLUME   541686.481 3752401.870 235.55
   LOCATION L0000980     VOLUME   541695.071 3752401.949 235.55
   LOCATION L0000981     VOLUME   541703.661 3752402.029 235.56
   LOCATION L0000982     VOLUME   541712.250 3752402.108 235.56
   LOCATION L0000983     VOLUME   541720.840 3752402.187 235.56
   LOCATION L0000984     VOLUME   541729.429 3752402.266 235.56
   LOCATION L0000985     VOLUME   541738.019 3752402.346 235.57
   LOCATION L0000986     VOLUME   541746.609 3752402.425 235.57
   LOCATION L0000987     VOLUME   541755.198 3752402.504 235.57
   LOCATION L0000988     VOLUME   541763.788 3752402.583 235.57
   LOCATION L0000989     VOLUME   541772.378 3752402.663 235.58
   LOCATION L0000990     VOLUME   541780.967 3752402.742 235.58
   LOCATION L0000991     VOLUME   541789.557 3752402.821 235.58
   LOCATION L0000992     VOLUME   541798.147 3752402.900 235.58
   LOCATION L0000993     VOLUME   541806.736 3752402.980 235.59
   LOCATION L0000994     VOLUME   541815.326 3752403.059 235.59
   LOCATION L0000995     VOLUME   541823.915 3752403.138 235.59
   LOCATION L0000996     VOLUME   541832.505 3752403.217 235.60
   LOCATION L0000997     VOLUME   541841.095 3752403.297 235.60
   LOCATION L0000998     VOLUME   541849.684 3752403.376 235.60
   LOCATION L0000999     VOLUME   541858.274 3752403.455 235.60
   LOCATION L0001000     VOLUME   541866.864 3752403.534 235.61
   LOCATION L0001001     VOLUME   541875.453 3752403.614 235.61
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   LOCATION L0001002     VOLUME   541884.043 3752403.693 235.61
   LOCATION L0001003     VOLUME   541892.633 3752403.772 235.61
   LOCATION L0001004     VOLUME   541901.222 3752403.851 235.62
   LOCATION L0001005     VOLUME   541909.812 3752403.931 235.62
   LOCATION L0001006     VOLUME   541918.401 3752404.010 235.62
   LOCATION L0001007     VOLUME   541926.991 3752404.089 235.62
** End of LINE VOLUME Source ID = SLINE15
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE16
** DESCRSRC Onsite N
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001325
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 5
** 542011.727, 3752653.544, 240.93, 3.49, 4.00
** 541640.589, 3752649.925, 240.24, 3.49, 4.00
** 541631.706, 3752645.319, 240.14, 3.49, 4.00
** 541631.048, 3752361.702, 234.97, 3.49, 4.00
** 541633.351, 3752297.213, 233.00, 3.49, 4.00
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   LOCATION L0001008     VOLUME   542007.432 3752653.503 240.94
   LOCATION L0001009     VOLUME   541998.842 3752653.419 240.94
   LOCATION L0001010     VOLUME   541990.253 3752653.335 240.93
   LOCATION L0001011     VOLUME   541981.663 3752653.251 240.93
   LOCATION L0001012     VOLUME   541973.073 3752653.167 240.93
   LOCATION L0001013     VOLUME   541964.484 3752653.084 240.92
   LOCATION L0001014     VOLUME   541955.894 3752653.000 240.92
   LOCATION L0001015     VOLUME   541947.305 3752652.916 240.92
   LOCATION L0001016     VOLUME   541938.715 3752652.832 240.92
   LOCATION L0001017     VOLUME   541930.125 3752652.749 240.91
   LOCATION L0001018     VOLUME   541921.536 3752652.665 240.91
   LOCATION L0001019     VOLUME   541912.946 3752652.581 240.91
   LOCATION L0001020     VOLUME   541904.357 3752652.497 240.90
   LOCATION L0001021     VOLUME   541895.767 3752652.414 240.90
   LOCATION L0001022     VOLUME   541887.178 3752652.330 240.90
   LOCATION L0001023     VOLUME   541878.588 3752652.246 240.90
   LOCATION L0001024     VOLUME   541869.998 3752652.162 240.89
   LOCATION L0001025     VOLUME   541861.409 3752652.079 240.89
   LOCATION L0001026     VOLUME   541852.819 3752651.995 240.89
   LOCATION L0001027     VOLUME   541844.230 3752651.911 240.88
   LOCATION L0001028     VOLUME   541835.640 3752651.827 240.88
   LOCATION L0001029     VOLUME   541827.050 3752651.744 240.88
   LOCATION L0001030     VOLUME   541818.461 3752651.660 240.88
   LOCATION L0001031     VOLUME   541809.871 3752651.576 240.87
   LOCATION L0001032     VOLUME   541801.282 3752651.492 240.87
   LOCATION L0001033     VOLUME   541792.692 3752651.408 240.87
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LOCATION L0001034     VOLUME   541784.102 3752651.325 240.87
LOCATION L0001035     VOLUME   541775.513 3752651.241 240.86
LOCATION L0001036     VOLUME   541766.923 3752651.157 240.86
LOCATION L0001037     VOLUME   541758.334 3752651.073 240.86
LOCATION L0001038     VOLUME   541749.744 3752650.990 240.85
LOCATION L0001039     VOLUME   541741.154 3752650.906 240.85
LOCATION L0001040     VOLUME   541732.565 3752650.822 240.85
LOCATION L0001041     VOLUME   541723.975 3752650.738 240.85
LOCATION L0001042     VOLUME   541715.386 3752650.655 240.68
LOCATION L0001043     VOLUME   541706.796 3752650.571 240.44
LOCATION L0001044     VOLUME   541698.206 3752650.487 240.20
LOCATION L0001045     VOLUME   541689.617 3752650.403 240.04
LOCATION L0001046     VOLUME   541681.027 3752650.320 240.28
LOCATION L0001047     VOLUME   541672.438 3752650.236 240.52
LOCATION L0001048     VOLUME   541663.848 3752650.152 240.75
LOCATION L0001049     VOLUME   541655.259 3752650.068 240.66
LOCATION L0001050     VOLUME   541646.669 3752649.984 240.42
LOCATION L0001051     VOLUME   541638.361 3752648.770 240.19
LOCATION L0001052     VOLUME   541631.703 3752644.225 240.01
LOCATION L0001053     VOLUME   541631.683 3752635.636 240.01
LOCATION L0001054     VOLUME   541631.663 3752627.046 240.00
LOCATION L0001055     VOLUME   541631.644 3752618.456 239.77
LOCATION L0001056     VOLUME   541631.624 3752609.866 239.48
LOCATION L0001057     VOLUME   541631.604 3752601.276 239.20
LOCATION L0001058     VOLUME   541631.584 3752592.686 239.00
LOCATION L0001059     VOLUME   541631.564 3752584.096 239.00
LOCATION L0001060     VOLUME   541631.544 3752575.506 239.00
LOCATION L0001061     VOLUME   541631.524 3752566.916 239.00
LOCATION L0001062     VOLUME   541631.504 3752558.326 238.77
LOCATION L0001063     VOLUME   541631.484 3752549.736 238.48
LOCATION L0001064     VOLUME   541631.464 3752541.146 238.19
LOCATION L0001065     VOLUME   541631.444 3752532.556 238.00
LOCATION L0001066     VOLUME   541631.424 3752523.966 238.00
LOCATION L0001067     VOLUME   541631.404 3752515.376 238.00
LOCATION L0001068     VOLUME   541631.384 3752506.786 238.00
LOCATION L0001069     VOLUME   541631.364 3752498.196 237.76
LOCATION L0001070     VOLUME   541631.345 3752489.606 237.47
LOCATION L0001071     VOLUME   541631.325 3752481.016 237.19
LOCATION L0001072     VOLUME   541631.305 3752472.426 237.00
LOCATION L0001073     VOLUME   541631.285 3752463.836 237.00
LOCATION L0001074     VOLUME   541631.265 3752455.246 237.00
LOCATION L0001075     VOLUME   541631.245 3752446.656 237.00
LOCATION L0001076     VOLUME   541631.225 3752438.066 236.75
LOCATION L0001077     VOLUME   541631.205 3752429.476 236.47
LOCATION L0001078     VOLUME   541631.185 3752420.886 236.18
LOCATION L0001079     VOLUME   541631.165 3752412.296 235.90
LOCATION L0001080     VOLUME   541631.145 3752403.706 235.61
LOCATION L0001081     VOLUME   541631.125 3752395.116 235.33
LOCATION L0001082     VOLUME   541631.105 3752386.526 235.04
LOCATION L0001083     VOLUME   541631.085 3752377.936 235.00
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   LOCATION L0001084     VOLUME   541631.066 3752369.346 235.00
   LOCATION L0001085     VOLUME   541631.082 3752360.757 235.00
   LOCATION L0001086     VOLUME   541631.388 3752352.172 234.89
   LOCATION L0001087     VOLUME   541631.695 3752343.588 234.61
   LOCATION L0001088     VOLUME   541632.001 3752335.003 234.32
   LOCATION L0001089     VOLUME   541632.308 3752326.419 234.04
   LOCATION L0001090     VOLUME   541632.614 3752317.834 233.75
   LOCATION L0001091     VOLUME   541632.921 3752309.250 233.46
   LOCATION L0001092     VOLUME   541633.228 3752300.665 233.18
** End of LINE VOLUME Source ID = SLINE16
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE17
** DESCRSRC Onsite S
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.826E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542014.030, 3752381.443, 235.00, 3.49, 4.00
** 541638.286, 3752378.482, 235.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001093     VOLUME   542009.735 3752381.409 235.00
   LOCATION L0001094     VOLUME   542001.145 3752381.341 235.00
   LOCATION L0001095     VOLUME   541992.555 3752381.274 235.00
   LOCATION L0001096     VOLUME   541983.966 3752381.206 235.00
   LOCATION L0001097     VOLUME   541975.376 3752381.138 235.00
   LOCATION L0001098     VOLUME   541966.786 3752381.071 235.00
   LOCATION L0001099     VOLUME   541958.196 3752381.003 235.00
   LOCATION L0001100     VOLUME   541949.607 3752380.935 235.00
   LOCATION L0001101     VOLUME   541941.017 3752380.868 235.00
   LOCATION L0001102     VOLUME   541932.427 3752380.800 235.00
   LOCATION L0001103     VOLUME   541923.838 3752380.732 235.00
   LOCATION L0001104     VOLUME   541915.248 3752380.664 235.00
   LOCATION L0001105     VOLUME   541906.658 3752380.597 235.00
   LOCATION L0001106     VOLUME   541898.068 3752380.529 235.00
   LOCATION L0001107     VOLUME   541889.479 3752380.461 235.00
   LOCATION L0001108     VOLUME   541880.889 3752380.394 235.00
   LOCATION L0001109     VOLUME   541872.299 3752380.326 235.00
   LOCATION L0001110     VOLUME   541863.709 3752380.258 235.00
   LOCATION L0001111     VOLUME   541855.120 3752380.191 235.00
   LOCATION L0001112     VOLUME   541846.530 3752380.123 235.00
   LOCATION L0001113     VOLUME   541837.940 3752380.055 235.00
   LOCATION L0001114     VOLUME   541829.350 3752379.988 235.00
   LOCATION L0001115     VOLUME   541820.761 3752379.920 235.00
   LOCATION L0001116     VOLUME   541812.171 3752379.852 235.00
   LOCATION L0001117     VOLUME   541803.581 3752379.784 235.00
   LOCATION L0001118     VOLUME   541794.992 3752379.717 235.00
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   LOCATION L0001119     VOLUME   541786.402 3752379.649 235.00
   LOCATION L0001120     VOLUME   541777.812 3752379.581 235.00
   LOCATION L0001121     VOLUME   541769.222 3752379.514 235.00
   LOCATION L0001122     VOLUME   541760.633 3752379.446 235.00
   LOCATION L0001123     VOLUME   541752.043 3752379.378 235.00
   LOCATION L0001124     VOLUME   541743.453 3752379.311 235.00
   LOCATION L0001125     VOLUME   541734.863 3752379.243 235.00
   LOCATION L0001126     VOLUME   541726.274 3752379.175 235.00
   LOCATION L0001127     VOLUME   541717.684 3752379.108 235.00
   LOCATION L0001128     VOLUME   541709.094 3752379.040 235.00
   LOCATION L0001129     VOLUME   541700.504 3752378.972 235.00
   LOCATION L0001130     VOLUME   541691.915 3752378.904 235.00
   LOCATION L0001131     VOLUME   541683.325 3752378.837 235.00
   LOCATION L0001132     VOLUME   541674.735 3752378.769 235.00
   LOCATION L0001133     VOLUME   541666.146 3752378.701 235.00
   LOCATION L0001134     VOLUME   541657.556 3752378.634 235.00
   LOCATION L0001135     VOLUME   541648.966 3752378.566 235.00
   LOCATION L0001136     VOLUME   541640.376 3752378.498 235.00
** End of LINE VOLUME Source ID = SLINE17
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE18
** DESCRSRC Indian Cyn 25%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 3.244E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 542027.322, 3752301.634, 233.00, 3.49, 6.51
** 542027.322, 3752380.928, 235.00, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0001182     VOLUME   542027.322 3752308.634 233.44
   LOCATION L0001183     VOLUME   542027.322 3752322.634 233.91
   LOCATION L0001184     VOLUME   542027.322 3752336.634 234.38
   LOCATION L0001185     VOLUME   542027.322 3752350.634 234.84
   LOCATION L0001186     VOLUME   542027.322 3752364.634 235.00
   LOCATION L0001187     VOLUME   542027.322 3752378.634 235.00
** End of LINE VOLUME Source ID = SLINE18
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE19
** DESCRSRC Indian Cyn 22.5%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 1.006E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
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** Nodes = 2
** 542027.418, 3752380.002, 235.00, 3.49, 6.51
** 542028.579, 3752653.291, 240.94, 3.49, 6.51
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   LOCATION L0001188     VOLUME   542027.447 3752387.002 235.05
   LOCATION L0001189     VOLUME   542027.507 3752401.001 235.52
   LOCATION L0001190     VOLUME   542027.566 3752415.001 235.99
   LOCATION L0001191     VOLUME   542027.626 3752429.001 236.00
   LOCATION L0001192     VOLUME   542027.685 3752443.001 236.00
   LOCATION L0001193     VOLUME   542027.745 3752457.001 236.39
   LOCATION L0001194     VOLUME   542027.804 3752471.001 236.85
   LOCATION L0001195     VOLUME   542027.864 3752485.001 237.32
   LOCATION L0001196     VOLUME   542027.923 3752499.001 237.79
   LOCATION L0001197     VOLUME   542027.983 3752513.000 238.00
   LOCATION L0001198     VOLUME   542028.042 3752527.000 238.00
   LOCATION L0001199     VOLUME   542028.102 3752541.000 238.19
   LOCATION L0001200     VOLUME   542028.161 3752555.000 238.65
   LOCATION L0001201     VOLUME   542028.221 3752569.000 239.00
   LOCATION L0001202     VOLUME   542028.280 3752583.000 239.00
   LOCATION L0001203     VOLUME   542028.340 3752597.000 239.05
   LOCATION L0001204     VOLUME   542028.399 3752611.000 239.52
   LOCATION L0001205     VOLUME   542028.459 3752624.999 239.99
   LOCATION L0001206     VOLUME   542028.518 3752638.999 240.45
   LOCATION L0001207     VOLUME   542028.578 3752652.999 240.92
** End of LINE VOLUME Source ID = SLINE19
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE20
** DESCRSRC Indian Cyn 10%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 7.426E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 542028.192, 3752654.452, 240.95, 3.49, 6.51
** 542030.127, 3752967.612, 246.00, 3.49, 6.51
** 542028.227, 3753108.223, 249.00, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0001208     VOLUME   542028.235 3752661.452 241.00
   LOCATION L0001209     VOLUME   542028.322 3752675.451 241.00
   LOCATION L0001210     VOLUME   542028.408 3752689.451 241.14
   LOCATION L0001211     VOLUME   542028.495 3752703.451 241.60
   LOCATION L0001212     VOLUME   542028.581 3752717.451 242.00
   LOCATION L0001213     VOLUME   542028.668 3752731.450 242.00
   LOCATION L0001214     VOLUME   542028.754 3752745.450 242.00
   LOCATION L0001215     VOLUME   542028.841 3752759.450 242.47
   LOCATION L0001216     VOLUME   542028.927 3752773.450 242.94
   LOCATION L0001217     VOLUME   542029.014 3752787.449 243.00
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   LOCATION L0001218     VOLUME   542029.100 3752801.449 243.00
   LOCATION L0001219     VOLUME   542029.187 3752815.449 243.34
   LOCATION L0001220     VOLUME   542029.273 3752829.449 243.80
   LOCATION L0001221     VOLUME   542029.360 3752843.448 244.27
   LOCATION L0001222     VOLUME   542029.447 3752857.448 244.74
   LOCATION L0001223     VOLUME   542029.533 3752871.448 245.00
   LOCATION L0001224     VOLUME   542029.620 3752885.447 245.00
   LOCATION L0001225     VOLUME   542029.706 3752899.447 245.14
   LOCATION L0001226     VOLUME   542029.793 3752913.447 245.60
   LOCATION L0001227     VOLUME   542029.879 3752927.447 246.00
   LOCATION L0001228     VOLUME   542029.966 3752941.446 246.00
   LOCATION L0001229     VOLUME   542030.052 3752955.446 246.00
   LOCATION L0001230     VOLUME   542030.103 3752969.446 246.47
   LOCATION L0001231     VOLUME   542029.913 3752983.444 246.94
   LOCATION L0001232     VOLUME   542029.724 3752997.443 247.29
   LOCATION L0001233     VOLUME   542029.535 3753011.442 247.63
   LOCATION L0001234     VOLUME   542029.346 3753025.441 247.82
   LOCATION L0001235     VOLUME   542029.157 3753039.439 247.95
   LOCATION L0001236     VOLUME   542028.968 3753053.438 248.27
   LOCATION L0001237     VOLUME   542028.779 3753067.437 248.74
   LOCATION L0001238     VOLUME   542028.589 3753081.435 249.00
   LOCATION L0001239     VOLUME   542028.400 3753095.434 249.00
** End of LINE VOLUME Source ID = SLINE20
** Source Parameters **
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0001137     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001138     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001139     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001140     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001141     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001142     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001143     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001144     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001145     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001146     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001147     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001148     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001149     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001150     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001151     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001152     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001153     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001154     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001155     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001156     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001157     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001158     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001159     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001160     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001161     0.00000007664      3.49      4.00      3.25
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   SRCPARAM L0001162     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001163     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001164     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001165     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001166     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001167     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001168     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001169     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001170     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001171     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001172     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001173     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001174     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001175     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001176     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001177     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001178     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001179     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001180     0.00000007664      3.49      4.00      3.25
   SRCPARAM L0001181     0.00000007664      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0001240     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001241     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001242     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001243     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001244     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001245     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001246     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001247     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001248     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001249     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001250     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001251     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001252     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001253     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001254     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001255     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001256     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001257     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001258     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001259     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001260     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001261     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001262     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001263     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001264     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001265     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001266     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001267     0.00000001412      3.49      4.00      3.25
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SRCPARAM L0001268     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001269     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001270     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001271     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001272     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001273     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001274     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001275     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001276     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001277     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001278     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001279     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001280     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001281     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001282     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001283     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001284     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001285     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001286     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001287     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001288     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001289     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001290     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001291     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001292     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001293     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001294     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001295     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001296     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001297     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001298     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001299     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001300     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001301     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001302     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001303     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001304     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001305     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001306     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001307     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001308     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001309     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001310     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001311     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001312     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001313     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001314     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001315     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001316     0.00000001412      3.49      4.00      3.25
SRCPARAM L0001317     0.00000001412      3.49      4.00      3.25
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   SRCPARAM L0001318     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001319     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001320     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001321     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001322     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001323     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001324     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001325     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001326     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001327     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001328     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001329     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001330     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001331     0.00000001412      3.49      4.00      3.25
   SRCPARAM L0001332     0.00000001412      3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0001386     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001387     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001388     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001389     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001390     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001391     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001392     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001393     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001394     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001395     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001396     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001397     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001398     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001399     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001400     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001401     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001402     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001403     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001404     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001405     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001406     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001407     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001408     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001409     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001410     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001411     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001412     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001413     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001414     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001415     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001416     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001417     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001418     0.000000006991      3.49      4.00      3.25
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SRCPARAM L0001419     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001420     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001421     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001422     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001423     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001424     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001425     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001426     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001427     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001428     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001429     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001430     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001431     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001432     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001433     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001434     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001435     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001436     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001437     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001438     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001439     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001440     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001441     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001442     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001443     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001444     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001445     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001446     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001447     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001448     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001449     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001450     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001451     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001452     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001453     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001454     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001455     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001456     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001457     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001458     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001459     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001460     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001461     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001462     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001463     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001464     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001465     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001466     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001467     0.000000006991      3.49      4.00      3.25
SRCPARAM L0001468     0.000000006991      3.49      4.00      3.25
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   SRCPARAM L0001469     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001470     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001471     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001472     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001473     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001474     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001475     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001476     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001477     0.000000006991      3.49      4.00      3.25
   SRCPARAM L0001478     0.000000006991      3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0001333     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001334     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001335     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001336     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001337     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001338     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001339     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001340     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001341     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001342     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001343     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001344     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001345     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001346     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001347     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001348     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001349     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001350     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001351     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001352     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001353     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001354     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001355     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001356     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001357     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001358     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001359     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001360     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001361     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001362     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001363     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001364     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001365     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001366     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001367     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001368     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001369     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001370     0.000000007068      3.49      4.00      3.25
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   SRCPARAM L0001371     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001372     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001373     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001374     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001375     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001376     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001377     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001378     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001379     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001380     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001381     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001382     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001383     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001384     0.000000007068      3.49      4.00      3.25
   SRCPARAM L0001385     0.000000007068      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0001479     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001480     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001481     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001482     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001483     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001484     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001485     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001486     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001487     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001488     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001489     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001490     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001491     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001492     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001493     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001494     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001495     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001496     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001497     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001498     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001499     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001500     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001501     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001502     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001503     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001504     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001505     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001506     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001507     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001508     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001509     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001510     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001511     0.0000002079      3.49      6.51      3.25
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   SRCPARAM L0001512     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001513     0.0000002079      3.49      6.51      3.25
   SRCPARAM L0001514     0.0000002079      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE11
   SRCPARAM L0001515     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001516     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001517     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001518     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001519     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001520     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001521     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001522     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001523     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001524     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001525     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001526     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001527     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001528     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001529     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001530     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001531     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001532     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001533     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001534     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001535     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001536     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001537     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001538     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001539     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001540     0.0000001158      3.49      6.51      3.25
   SRCPARAM L0001541     0.0000001158      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE12
   SRCPARAM L0001542     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001543     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001544     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001545     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001546     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001547     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001548     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001549     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001550     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001551     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001552     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001553     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001554     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001555     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001556     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001557     0.00000009052      3.49      6.51      3.25
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   SRCPARAM L0001558     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001559     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001560     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001561     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001562     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001563     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001564     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001565     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001566     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001567     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001568     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001569     0.00000009052      3.49      6.51      3.25
   SRCPARAM L0001570     0.00000009052      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE13
   SRCPARAM L0001571     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001572     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001573     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001574     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001575     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001576     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001577     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001578     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001579     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001580     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001581     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001582     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001583     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001584     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001585     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001586     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001587     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001588     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001589     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001590     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001591     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001592     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001593     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001594     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001595     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001596     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001597     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001598     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001599     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001600     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001601     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001602     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001603     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001604     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001605     0.00000001401      3.49      4.00      3.25
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   SRCPARAM L0001606     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001607     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001608     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001609     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001610     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001611     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001612     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001613     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001614     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001615     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001616     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001617     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001618     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001619     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001620     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001621     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001622     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001623     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001624     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001625     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001626     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001627     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001628     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001629     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001630     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001631     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001632     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001633     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001634     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001635     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001636     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001637     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001638     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001639     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001640     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001641     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001642     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001643     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001644     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001645     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001646     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001647     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001648     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001649     0.00000001401      3.49      4.00      3.25
   SRCPARAM L0001650     0.00000001401      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE14
   SRCPARAM L0000942     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000943     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000944     0.0000003658      3.49      4.00      3.25
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   SRCPARAM L0000945     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000946     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000947     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000948     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000949     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000950     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000951     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000952     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000953     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000954     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000955     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000956     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000957     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000958     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000959     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000960     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000961     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000962     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000963     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000964     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000965     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000966     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000967     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000968     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000969     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000970     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000971     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000972     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000973     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000974     0.0000003658      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE15
   SRCPARAM L0000975     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000976     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000977     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000978     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000979     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000980     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000981     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000982     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000983     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000984     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000985     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000986     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000987     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000988     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000989     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000990     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000991     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000992     0.0000003658      3.49      4.00      3.25
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   SRCPARAM L0000993     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000994     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000995     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000996     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000997     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000998     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0000999     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001000     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001001     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001002     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001003     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001004     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001005     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001006     0.0000003658      3.49      4.00      3.25
   SRCPARAM L0001007     0.0000003658      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE16
   SRCPARAM L0001008     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001009     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001010     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001011     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001012     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001013     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001014     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001015     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001016     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001017     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001018     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001019     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001020     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001021     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001022     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001023     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001024     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001025     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001026     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001027     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001028     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001029     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001030     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001031     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001032     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001033     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001034     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001035     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001036     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001037     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001038     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001039     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001040     0.0000001559      3.49      4.00      3.25
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SRCPARAM L0001041     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001042     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001043     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001044     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001045     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001046     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001047     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001048     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001049     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001050     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001051     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001052     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001053     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001054     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001055     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001056     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001057     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001058     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001059     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001060     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001061     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001062     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001063     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001064     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001065     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001066     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001067     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001068     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001069     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001070     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001071     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001072     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001073     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001074     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001075     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001076     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001077     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001078     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001079     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001080     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001081     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001082     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001083     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001084     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001085     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001086     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001087     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001088     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001089     0.0000001559      3.49      4.00      3.25
SRCPARAM L0001090     0.0000001559      3.49      4.00      3.25
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   SRCPARAM L0001091     0.0000001559      3.49      4.00      3.25
   SRCPARAM L0001092     0.0000001559      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE17
   SRCPARAM L0001093     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001094     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001095     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001096     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001097     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001098     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001099     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001100     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001101     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001102     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001103     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001104     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001105     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001106     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001107     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001108     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001109     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001110     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001111     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001112     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001113     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001114     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001115     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001116     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001117     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001118     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001119     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001120     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001121     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001122     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001123     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001124     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001125     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001126     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001127     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001128     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001129     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001130     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001131     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001132     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001133     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001134     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001135     0.0000001551      3.49      4.00      3.25
   SRCPARAM L0001136     0.0000001551      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE18
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   SRCPARAM L0001182     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001183     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001184     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001185     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001186     0.00000005407      3.49      6.51      3.25
   SRCPARAM L0001187     0.00000005407      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE19
   SRCPARAM L0001188     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001189     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001190     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001191     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001192     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001193     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001194     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001195     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001196     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001197     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001198     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001199     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001200     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001201     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001202     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001203     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001204     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001205     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001206     0.0000000503      3.49      6.51      3.25
   SRCPARAM L0001207     0.0000000503      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE20
   SRCPARAM L0001208     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001209     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001210     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001211     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001212     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001213     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001214     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001215     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001216     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001217     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001218     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001219     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001220     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001221     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001222     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001223     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001224     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001225     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001226     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001227     0.00000002321      3.49      6.51      3.25
```

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   SRCPARAM L0001228     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001229     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001230     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001231     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001232     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001233     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001234     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001235     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001236     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001237     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001238     0.00000002321      3.49      6.51      3.25
   SRCPARAM L0001239     0.00000002321      3.49      6.51      3.25
** ----------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "15097 Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE KPSP_V9_ADJU\KPSP_v9.SFC
   PROFFILE KPSP_V9_ADJU\KPSP_v9.PFL
   SURFDATA 93138 2012
   UAIRDATA 3190 2012
   PROFBASE 125.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "15097 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "15097 Ops.sum"
OU FINISHED
```

```
  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    1745       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    1745       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/30/23
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:24:26

                                  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for   709 Source(s),
```

```
        for Total of    1 Urban Area(s):
   Urban Population =   2189641.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    709 Source(s);       1 Source Group(s); and      53
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    709 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   125.00 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.8 MB of RAM.
```

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: 15097 Ops.err

**File for Summary of Results: 15097 Ops.sum

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001137	0	0.76640E-07	541642.3	3752297.2	233.1	3.49	4.00	3.25	YES	
L0001138	0	0.76640E-07	541650.9	3752297.3	233.1	3.49	4.00	3.25	YES	
L0001139	0	0.76640E-07	541659.5	3752297.3	233.1	3.49	4.00	3.25	YES	
L0001140	0	0.76640E-07	541668.1	3752297.4	233.1	3.49	4.00	3.25	YES	
L0001141	0	0.76640E-07	541676.7	3752297.5	233.1	3.49	4.00	3.25	YES	
L0001142	0	0.76640E-07	541685.2	3752297.6	233.1	3.49	4.00	3.25	YES	
L0001143	0	0.76640E-07	541693.8	3752297.6	233.1	3.49	4.00	3.25	YES	
L0001144	0	0.76640E-07	541702.4	3752297.7	233.1	3.49	4.00	3.25	YES	
L0001145	0	0.76640E-07	541711.0	3752297.8	233.1	3.49	4.00	3.25	YES	
L0001146	0	0.76640E-07	541719.6	3752297.8	233.1	3.49	4.00	3.25	YES	
L0001147	0	0.76640E-07	541728.2	3752297.9	233.1	3.49	4.00			

3.25 YES
L0001148 0 0.76640E-07 541736.8 3752298.0 233.1 3.49 4.00
3.25 YES
L0001149 0 0.76640E-07 541745.4 3752298.0 233.1 3.49 4.00
3.25 YES
L0001150 0 0.76640E-07 541754.0 3752298.1 233.1 3.49 4.00
3.25 YES
L0001151 0 0.76640E-07 541762.5 3752298.2 233.1 3.49 4.00
3.25 YES
L0001152 0 0.76640E-07 541771.1 3752298.3 233.1 3.49 4.00
3.25 YES
L0001153 0 0.76640E-07 541779.7 3752298.3 233.1 3.49 4.00
3.25 YES
L0001154 0 0.76640E-07 541788.3 3752298.4 233.1 3.49 4.00
3.25 YES
L0001155 0 0.76640E-07 541796.9 3752298.5 233.1 3.49 4.00
3.25 YES
L0001156 0 0.76640E-07 541805.5 3752298.5 233.1 3.49 4.00
3.25 YES
L0001157 0 0.76640E-07 541814.1 3752298.6 233.1 3.49 4.00
3.25 YES
L0001158 0 0.76640E-07 541822.7 3752298.7 233.1 3.49 4.00
3.25 YES
L0001159 0 0.76640E-07 541831.3 3752298.8 233.1 3.49 4.00
3.25 YES
L0001160 0 0.76640E-07 541839.9 3752298.8 233.1 3.49 4.00
3.25 YES
L0001161 0 0.76640E-07 541848.4 3752298.9 233.1 3.49 4.00
3.25 YES
L0001162 0 0.76640E-07 541857.0 3752299.0 233.1 3.49 4.00
3.25 YES
L0001163 0 0.76640E-07 541865.6 3752299.0 233.1 3.49 4.00
3.25 YES
L0001164 0 0.76640E-07 541874.2 3752299.1 233.1 3.49 4.00
3.25 YES
L0001165 0 0.76640E-07 541882.8 3752299.2 233.1 3.49 4.00
3.25 YES
L0001166 0 0.76640E-07 541891.4 3752299.2 233.1 3.49 4.00
3.25 YES
L0001167 0 0.76640E-07 541900.0 3752299.3 233.1 3.49 4.00
3.25 YES
L0001168 0 0.76640E-07 541908.6 3752299.4 233.1 3.49 4.00
3.25 YES
L0001169 0 0.76640E-07 541917.2 3752299.5 233.1 3.49 4.00
3.25 YES
L0001170 0 0.76640E-07 541925.8 3752299.5 233.1 3.49 4.00
3.25 YES
L0001171 0 0.76640E-07 541934.3 3752299.6 233.1 3.49 4.00
3.25 YES
L0001172 0 0.76640E-07 541942.9 3752299.7 233.1 3.49 4.00

```
3.25     YES
 L0001173         0   0.76640E-07  541951.5 3752299.7   233.2     3.49     4.00
3.25     YES
 L0001174         0   0.76640E-07  541960.1 3752299.8   233.2     3.49     4.00
3.25     YES
 L0001175         0   0.76640E-07  541968.7 3752299.9   233.2     3.49     4.00
3.25     YES
 L0001176         0   0.76640E-07  541977.3 3752299.9   233.2     3.49     4.00
3.25     YES
```



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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                          *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001177         0   0.76640E-07  541985.9 3752300.0   233.2     3.49     4.00
3.25     YES
 L0001178         0   0.76640E-07  541994.5 3752300.1   233.2     3.49     4.00
3.25     YES
 L0001179         0   0.76640E-07  542003.1 3752300.2   233.2     3.49     4.00
3.25     YES
 L0001180         0   0.76640E-07  542011.7 3752300.2   233.2     3.49     4.00
3.25     YES
 L0001181         0   0.76640E-07  542020.2 3752300.3   233.2     3.49     4.00
3.25     YES
 L0001240         0   0.14120E-07  542028.3 3753113.0   249.2     3.49     4.00
3.25     YES
 L0001241         0   0.14120E-07  542028.4 3753121.6   249.5     3.49     4.00
3.25     YES
 L0001242         0   0.14120E-07  542028.4 3753130.2   249.8     3.49     4.00
3.25     YES
 L0001243         0   0.14120E-07  542028.4 3753138.8   250.1     3.49     4.00
3.25     YES
 L0001244         0   0.14120E-07  542028.5 3753147.3   250.4     3.49     4.00
3.25     YES
 L0001245         0   0.14120E-07  542028.5 3753155.9   250.7     3.49     4.00
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3.25     YES
 L0001246          0   0.14120E-07  542028.5 3753164.5   251.0     3.49     4.00
3.25     YES
 L0001247          0   0.14120E-07  542028.6 3753173.1   251.0     3.49     4.00
3.25     YES
 L0001248          0   0.14120E-07  542028.6 3753181.7   251.0     3.49     4.00
3.25     YES
 L0001249          0   0.14120E-07  542028.6 3753190.3   251.0     3.49     4.00
3.25     YES
 L0001250          0   0.14120E-07  542028.7 3753198.9   251.1     3.49     4.00
3.25     YES
 L0001251          0   0.14120E-07  542028.7 3753207.5   251.4     3.49     4.00
3.25     YES
 L0001252          0   0.14120E-07  542028.7 3753216.1   251.7     3.49     4.00
3.25     YES
 L0001253          0   0.14120E-07  542028.8 3753224.7   252.0     3.49     4.00
3.25     YES
 L0001254          0   0.14120E-07  542028.8 3753233.2   252.3     3.49     4.00
3.25     YES
 L0001255          0   0.14120E-07  542028.8 3753241.8   252.6     3.49     4.00
3.25     YES
 L0001256          0   0.14120E-07  542028.9 3753250.4   252.8     3.49     4.00
3.25     YES
 L0001257          0   0.14120E-07  542028.9 3753259.0   253.1     3.49     4.00
3.25     YES
 L0001258          0   0.14120E-07  542028.9 3753267.6   253.4     3.49     4.00
3.25     YES
 L0001259          0   0.14120E-07  542029.0 3753276.2   253.7     3.49     4.00
3.25     YES
 L0001260          0   0.14120E-07  542029.0 3753284.8   254.0     3.49     4.00
3.25     YES
 L0001261          0   0.14120E-07  542029.0 3753293.4   254.0     3.49     4.00
3.25     YES
 L0001262          0   0.14120E-07  542029.1 3753302.0   254.0     3.49     4.00
3.25     YES
 L0001263          0   0.14120E-07  542029.1 3753310.6   254.0     3.49     4.00
3.25     YES
 L0001264          0   0.14120E-07  542029.1 3753319.1   254.1     3.49     4.00
3.25     YES
 L0001265          0   0.14120E-07  542029.1 3753327.7   254.4     3.49     4.00
3.25     YES
 L0001266          0   0.14120E-07  542029.1 3753336.3   254.7     3.49     4.00
3.25     YES
 L0001267          0   0.14120E-07  542029.1 3753344.9   255.0     3.49     4.00
3.25     YES
 L0001268          0   0.14120E-07  542029.1 3753353.5   255.3     3.49     4.00
3.25     YES
 L0001269          0   0.14120E-07  542029.1 3753362.1   255.6     3.49     4.00
3.25     YES
 L0001270          0   0.14120E-07  542029.1 3753370.7   255.8     3.49     4.00
```

3.25 YES
L0001271 0 0.14120E-07 542029.1 3753379.3 256.0 3.49 4.00
3.25 YES
L0001272 0 0.14120E-07 542029.1 3753387.9 256.0 3.49 4.00
3.25 YES
L0001273 0 0.14120E-07 542029.1 3753396.5 256.0 3.49 4.00
3.25 YES
L0001274 0 0.14120E-07 542029.1 3753405.0 256.0 3.49 4.00
3.25 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001275	0	0.14120E-07	542029.1	3753413.6	256.3	3.49	4.00	3.25	YES	
L0001276	0	0.14120E-07	542029.1	3753422.2	256.6	3.49	4.00	3.25	YES	
L0001277	0	0.14120E-07	542029.1	3753430.8	256.9	3.49	4.00	3.25	YES	
L0001278	0	0.14120E-07	542029.1	3753439.4	257.1	3.49	4.00	3.25	YES	
L0001279	0	0.14120E-07	542029.1	3753448.0	257.4	3.49	4.00	3.25	YES	
L0001280	0	0.14120E-07	542029.1	3753456.6	257.7	3.49	4.00	3.25	YES	
L0001281	0	0.14120E-07	542029.1	3753465.2	258.0	3.49	4.00	3.25	YES	
L0001282	0	0.14120E-07	542029.1	3753473.8	258.0	3.49	4.00	3.25	YES	
L0001283	0	0.14120E-07	542029.1	3753482.4	258.0	3.49	4.00	3.25	YES	
L0001284	0	0.14120E-07	542029.1	3753490.9	258.0	3.49	4.00	3.25	YES	
L0001285	0	0.14120E-07	542029.1	3753499.5	258.1	3.49	4.00			

3.25 YES
L0001286 0 0.14120E-07 542029.1 3753508.1 258.4 3.49 4.00
3.25 YES
L0001287 0 0.14120E-07 542029.1 3753516.7 258.7 3.49 4.00
3.25 YES
L0001288 0 0.14120E-07 542029.1 3753525.3 259.0 3.49 4.00
3.25 YES
L0001289 0 0.14120E-07 542029.1 3753533.9 259.3 3.49 4.00
3.25 YES
L0001290 0 0.14120E-07 542029.1 3753542.5 259.6 3.49 4.00
3.25 YES
L0001291 0 0.14120E-07 542029.1 3753551.1 259.9 3.49 4.00
3.25 YES
L0001292 0 0.14120E-07 542029.1 3753559.7 260.0 3.49 4.00
3.25 YES
L0001293 0 0.14120E-07 542029.1 3753568.3 260.0 3.49 4.00
3.25 YES
L0001294 0 0.14120E-07 542029.1 3753576.8 260.0 3.49 4.00
3.25 YES
L0001295 0 0.14120E-07 542029.1 3753585.4 260.0 3.49 4.00
3.25 YES
L0001296 0 0.14120E-07 542029.1 3753594.0 260.3 3.49 4.00
3.25 YES
L0001297 0 0.14120E-07 542029.1 3753602.6 260.6 3.49 4.00
3.25 YES
L0001298 0 0.14120E-07 542029.1 3753611.2 260.9 3.49 4.00
3.25 YES
L0001299 0 0.14120E-07 542029.1 3753619.8 261.0 3.49 4.00
3.25 YES
L0001300 0 0.14120E-07 542029.1 3753628.4 261.0 3.49 4.00
3.25 YES
L0001301 0 0.14120E-07 542029.1 3753637.0 261.0 3.49 4.00
3.25 YES
L0001302 0 0.14120E-07 542029.1 3753645.6 261.0 3.49 4.00
3.25 YES
L0001303 0 0.14120E-07 542029.1 3753654.2 261.3 3.49 4.00
3.25 YES
L0001304 0 0.14120E-07 542029.1 3753662.7 261.6 3.49 4.00
3.25 YES
L0001305 0 0.14120E-07 542029.1 3753671.3 261.9 3.49 4.00
3.25 YES
L0001306 0 0.14120E-07 542029.1 3753679.9 262.2 3.49 4.00
3.25 YES
L0001307 0 0.14120E-07 542029.1 3753688.5 262.4 3.49 4.00
3.25 YES
L0001308 0 0.14120E-07 542029.1 3753697.1 262.7 3.49 4.00
3.25 YES
L0001309 0 0.14120E-07 542029.1 3753705.7 263.0 3.49 4.00
3.25 YES
L0001310 0 0.14120E-07 542029.1 3753714.3 263.3 3.49 4.00

3.25 YES

L0001311	0	0.14120E-07	542029.1	3753722.9	263.6	3.49	4.00	3.25	YES	
L0001312	0	0.14120E-07	542029.1	3753731.5	263.9	3.49	4.00	3.25	YES	
L0001313	0	0.14120E-07	542029.1	3753740.1	264.0	3.49	4.00	3.25	YES	
L0001314	0	0.14120E-07	542029.1	3753748.6	264.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001315	0	0.14120E-07	542029.1	3753757.2	264.0	3.49	4.00	3.25	YES	
L0001316	0	0.14120E-07	542029.1	3753765.8	264.0	3.49	4.00	3.25	YES	
L0001317	0	0.14120E-07	542029.1	3753774.4	264.3	3.49	4.00	3.25	YES	
L0001318	0	0.14120E-07	542029.1	3753783.0	264.6	3.49	4.00	3.25	YES	
L0001319	0	0.14120E-07	542029.1	3753791.6	264.9	3.49	4.00	3.25	YES	
L0001320	0	0.14120E-07	542029.1	3753800.2	265.2	3.49	4.00	3.25	YES	
L0001321	0	0.14120E-07	542029.1	3753808.8	265.4	3.49	4.00	3.25	YES	
L0001322	0	0.14120E-07	542029.1	3753817.4	265.7	3.49	4.00	3.25	YES	
L0001323	0	0.14120E-07	542029.1	3753826.0	266.0	3.49	4.00	3.25	YES	
L0001324	0	0.14120E-07	542029.1	3753834.5	266.3	3.49	4.00	3.25	YES	
L0001325	0	0.14120E-07	542029.1	3753843.1	266.6	3.49	4.00			

3.25 YES
L0001326 0 0.14120E-07 542029.1 3753851.7 266.9 3.49 4.00
3.25 YES
L0001327 0 0.14120E-07 542029.1 3753860.3 267.1 3.49 4.00
3.25 YES
L0001328 0 0.14120E-07 542029.1 3753868.9 267.3 3.49 4.00
3.25 YES
L0001329 0 0.14120E-07 542029.1 3753877.5 267.5 3.49 4.00
3.25 YES
L0001330 0 0.14120E-07 542029.1 3753886.1 267.7 3.49 4.00
3.25 YES
L0001331 0 0.14120E-07 542029.1 3753894.7 267.8 3.49 4.00
3.25 YES
L0001332 0 0.14120E-07 542029.1 3753903.3 267.9 3.49 4.00
3.25 YES
L0001386 0 0.69910E-08 542024.4 3753914.1 268.0 3.49 4.00
3.25 YES
L0001387 0 0.69910E-08 542015.8 3753914.2 268.0 3.49 4.00
3.25 YES
L0001388 0 0.69910E-08 542007.2 3753914.2 268.0 3.49 4.00
3.25 YES
L0001389 0 0.69910E-08 541998.6 3753914.3 268.0 3.49 4.00
3.25 YES
L0001390 0 0.69910E-08 541990.0 3753914.4 268.0 3.49 4.00
3.25 YES
L0001391 0 0.69910E-08 541981.4 3753914.4 268.0 3.49 4.00
3.25 YES
L0001392 0 0.69910E-08 541972.8 3753914.5 268.0 3.49 4.00
3.25 YES
L0001393 0 0.69910E-08 541964.2 3753914.5 268.0 3.49 4.00
3.25 YES
L0001394 0 0.69910E-08 541955.6 3753914.6 268.0 3.49 4.00
3.25 YES
L0001395 0 0.69910E-08 541947.1 3753914.6 268.0 3.49 4.00
3.25 YES
L0001396 0 0.69910E-08 541938.5 3753914.7 268.0 3.49 4.00
3.25 YES
L0001397 0 0.69910E-08 541929.9 3753914.7 268.0 3.49 4.00
3.25 YES
L0001398 0 0.69910E-08 541921.3 3753914.7 268.0 3.49 4.00
3.25 YES
L0001399 0 0.69910E-08 541912.7 3753914.7 268.0 3.49 4.00
3.25 YES
L0001400 0 0.69910E-08 541904.1 3753914.6 268.0 3.49 4.00
3.25 YES
L0001401 0 0.69910E-08 541895.5 3753914.6 268.2 3.49 4.00
3.25 YES
L0001402 0 0.69910E-08 541886.9 3753914.6 268.5 3.49 4.00
3.25 YES
L0001403 0 0.69910E-08 541878.3 3753914.5 268.7 3.49 4.00

3.25   YES
 L0001404   0   0.69910E-08 541869.7 3753914.5   269.0   3.49   4.00
3.25   YES
 L0001405   0   0.69910E-08 541861.2 3753914.4   269.0   3.49   4.00
3.25   YES
 L0001406   0   0.69910E-08 541852.6 3753914.4   269.0   3.49   4.00
3.25   YES
 L0001407   0   0.69910E-08 541844.0 3753914.3   269.0   3.49   4.00
3.25   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001408	0	0.69910E-08	541835.4	3753914.3	269.0	3.49	4.00	3.25	YES	
L0001409	0	0.69910E-08	541826.8	3753914.2	269.0	3.49	4.00	3.25	YES	
L0001410	0	0.69910E-08	541818.2	3753914.2	269.0	3.49	4.00	3.25	YES	
L0001411	0	0.69910E-08	541809.6	3753914.2	269.0	3.49	4.00	3.25	YES	
L0001412	0	0.69910E-08	541801.0	3753914.1	269.0	3.49	4.00	3.25	YES	
L0001413	0	0.69910E-08	541792.4	3753914.1	269.0	3.49	4.00	3.25	YES	
L0001414	0	0.69910E-08	541783.8	3753914.0	269.0	3.49	4.00	3.25	YES	
L0001415	0	0.69910E-08	541775.3	3753914.0	269.2	3.49	4.00	3.25	YES	
L0001416	0	0.69910E-08	541766.7	3753913.9	269.5	3.49	4.00	3.25	YES	
L0001417	0	0.69910E-08	541758.1	3753913.9	269.7	3.49	4.00	3.25	YES	
L0001418	0	0.69910E-08	541749.5	3753913.8	269.9	3.49	4.00			

3.25 YES
L0001419 0 0.69910E-08 541740.9 3753913.8 269.9 3.49 4.00
3.25 YES
L0001420 0 0.69910E-08 541732.3 3753913.7 269.9 3.49 4.00
3.25 YES
L0001421 0 0.69910E-08 541723.7 3753913.6 269.9 3.49 4.00
3.25 YES
L0001422 0 0.69910E-08 541715.1 3753913.6 269.9 3.49 4.00
3.25 YES
L0001423 0 0.69910E-08 541706.5 3753913.5 269.9 3.49 4.00
3.25 YES
L0001424 0 0.69910E-08 541697.9 3753913.4 269.9 3.49 4.00
3.25 YES
L0001425 0 0.69910E-08 541689.4 3753913.3 269.9 3.49 4.00
3.25 YES
L0001426 0 0.69910E-08 541680.8 3753913.2 269.9 3.49 4.00
3.25 YES
L0001427 0 0.69910E-08 541672.2 3753913.2 269.9 3.49 4.00
3.25 YES
L0001428 0 0.69910E-08 541663.6 3753913.1 269.9 3.49 4.00
3.25 YES
L0001429 0 0.69910E-08 541655.0 3753913.0 269.9 3.49 4.00
3.25 YES
L0001430 0 0.69910E-08 541646.4 3753912.9 269.9 3.49 4.00
3.25 YES
L0001431 0 0.69910E-08 541637.8 3753912.8 269.9 3.49 4.00
3.25 YES
L0001432 0 0.69910E-08 541629.2 3753912.7 269.9 3.49 4.00
3.25 YES
L0001433 0 0.69910E-08 541620.6 3753912.7 269.9 3.49 4.00
3.25 YES
L0001434 0 0.69910E-08 541612.1 3753912.6 269.9 3.49 4.00
3.25 YES
L0001435 0 0.69910E-08 541603.5 3753912.5 269.9 3.49 4.00
3.25 YES
L0001436 0 0.69910E-08 541594.9 3753912.4 269.9 3.49 4.00
3.25 YES
L0001437 0 0.69910E-08 541586.3 3753912.3 269.9 3.49 4.00
3.25 YES
L0001438 0 0.69910E-08 541577.7 3753912.2 269.9 3.49 4.00
3.25 YES
L0001439 0 0.69910E-08 541569.1 3753912.2 269.9 3.49 4.00
3.25 YES
L0001440 0 0.69910E-08 541560.5 3753912.1 269.9 3.49 4.00
3.25 YES
L0001441 0 0.69910E-08 541551.9 3753912.0 269.9 3.49 4.00
3.25 YES
L0001442 0 0.69910E-08 541543.3 3753911.9 269.9 3.49 4.00
3.25 YES
L0001443 0 0.69910E-08 541534.7 3753911.8 269.9 3.49 4.00

3.25   YES
 L0001444   0   0.69910E-08 541526.2 3753911.7   269.9   3.49   4.00
3.25   YES
 L0001445   0   0.69910E-08 541517.6 3753911.7   269.9   3.49   4.00
3.25   YES
 L0001446   0   0.69910E-08 541509.0 3753911.6   269.9   3.49   4.00
3.25   YES
 L0001447   0   0.69910E-08 541500.4 3753911.5   269.9   3.49   4.00
3.25   YES

*** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
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- - - - - - - - - - - - - - - - - - - -

 L0001448   0   0.69910E-08 541491.8 3753911.4   269.9   3.49   4.00
3.25   YES
 L0001449   0   0.69910E-08 541483.2 3753911.3   270.0   3.49   4.00
3.25   YES
 L0001450   0   0.69910E-08 541474.6 3753911.2   270.0   3.49   4.00
3.25   YES
 L0001451   0   0.69910E-08 541466.0 3753911.2   270.0   3.49   4.00
3.25   YES
 L0001452   0   0.69910E-08 541457.4 3753911.1   270.0   3.49   4.00
3.25   YES
 L0001453   0   0.69910E-08 541448.8 3753911.0   270.1   3.49   4.00
3.25   YES
 L0001454   0   0.69910E-08 541440.3 3753910.9   270.3   3.49   4.00
3.25   YES
 L0001455   0   0.69910E-08 541431.7 3753910.8   270.6   3.49   4.00
3.25   YES
 L0001456   0   0.69910E-08 541423.1 3753910.7   270.8   3.49   4.00
3.25   YES
 L0001457   0   0.69910E-08 541414.5 3753910.7   270.8   3.49   4.00
3.25   YES
 L0001458   0   0.69910E-08 541405.9 3753910.6   270.8   3.49   4.00

3.25 YES
L0001459 0 0.69910E-08 541397.3 3753910.5 270.8 3.49 4.00
3.25 YES
L0001460 0 0.69910E-08 541388.7 3753910.4 270.8 3.49 4.00
3.25 YES
L0001461 0 0.69910E-08 541380.1 3753910.3 270.5 3.49 4.00
3.25 YES
L0001462 0 0.69910E-08 541371.5 3753910.2 270.3 3.49 4.00
3.25 YES
L0001463 0 0.69910E-08 541363.0 3753910.2 270.1 3.49 4.00
3.25 YES
L0001464 0 0.69910E-08 541354.4 3753910.1 270.2 3.49 4.00
3.25 YES
L0001465 0 0.69910E-08 541345.8 3753910.0 270.4 3.49 4.00
3.25 YES
L0001466 0 0.69910E-08 541337.2 3753909.9 270.7 3.49 4.00
3.25 YES
L0001467 0 0.69910E-08 541328.6 3753909.8 270.8 3.49 4.00
3.25 YES
L0001468 0 0.69910E-08 541320.0 3753909.7 270.8 3.49 4.00
3.25 YES
L0001469 0 0.69910E-08 541311.4 3753909.7 270.8 3.49 4.00
3.25 YES
L0001470 0 0.69910E-08 541302.8 3753909.6 270.8 3.49 4.00
3.25 YES
L0001471 0 0.69910E-08 541294.2 3753909.5 270.8 3.49 4.00
3.25 YES
L0001472 0 0.69910E-08 541285.6 3753909.4 270.8 3.49 4.00
3.25 YES
L0001473 0 0.69910E-08 541277.1 3753909.3 270.8 3.49 4.00
3.25 YES
L0001474 0 0.69910E-08 541268.5 3753909.2 270.7 3.49 4.00
3.25 YES
L0001475 0 0.69910E-08 541259.9 3753909.2 270.5 3.49 4.00
3.25 YES
L0001476 0 0.69910E-08 541251.3 3753909.1 270.3 3.49 4.00
3.25 YES
L0001477 0 0.69910E-08 541242.7 3753909.0 270.0 3.49 4.00
3.25 YES
L0001478 0 0.69910E-08 541234.1 3753908.9 270.0 3.49 4.00
3.25 YES
L0001333 0 0.70680E-08 542029.7 3753919.3 268.1 3.49 4.00
3.25 YES
L0001334 0 0.70680E-08 542029.7 3753927.9 268.4 3.49 4.00
3.25 YES
L0001335 0 0.70680E-08 542029.7 3753936.5 268.7 3.49 4.00
3.25 YES
L0001336 0 0.70680E-08 542029.7 3753945.1 269.0 3.49 4.00
3.25 YES
L0001337 0 0.70680E-08 542029.8 3753953.7 269.2 3.49 4.00

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3.25     YES
 L0001338         0   0.70680E-08  542029.8 3753962.2   269.4     3.49     4.00
3.25     YES
 L0001339         0   0.70680E-08  542029.8 3753970.8   269.6     3.49     4.00
3.25     YES
 L0001340         0   0.70680E-08  542029.9 3753979.4   269.8     3.49     4.00
3.25     YES
 L0001341         0   0.70680E-08  542029.9 3753988.0   269.8     3.49     4.00
3.25     YES
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                                                   *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                  BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001342         0   0.70680E-08  542029.9 3753996.6   269.9     3.49     4.00
3.25     YES
 L0001343         0   0.70680E-08  542030.0 3754005.2   270.0     3.49     4.00
3.25     YES
 L0001344         0   0.70680E-08  542030.0 3754013.8   270.3     3.49     4.00
3.25     YES
 L0001345         0   0.70680E-08  542030.0 3754022.4   270.6     3.49     4.00
3.25     YES
 L0001346         0   0.70680E-08  542030.1 3754031.0   270.9     3.49     4.00
3.25     YES
 L0001347         0   0.70680E-08  542030.1 3754039.6   271.1     3.49     4.00
3.25     YES
 L0001348         0   0.70680E-08  542030.1 3754048.1   271.4     3.49     4.00
3.25     YES
 L0001349         0   0.70680E-08  542030.2 3754056.7   271.7     3.49     4.00
3.25     YES
 L0001350         0   0.70680E-08  542030.2 3754065.3   272.0     3.49     4.00
3.25     YES
 L0001351         0   0.70680E-08  542030.3 3754073.9   272.2     3.49     4.00
3.25     YES
 L0001352         0   0.70680E-08  542030.3 3754082.5   272.4     3.49     4.00
```

3.25 YES
L0001353 0 0.70680E-08 542030.4 3754091.1 272.6 3.49 4.00
3.25 YES
L0001354 0 0.70680E-08 542030.4 3754099.7 272.7 3.49 4.00
3.25 YES
L0001355 0 0.70680E-08 542030.5 3754108.3 272.8 3.49 4.00
3.25 YES
L0001356 0 0.70680E-08 542030.6 3754116.9 272.9 3.49 4.00
3.25 YES
L0001357 0 0.70680E-08 542030.6 3754125.5 273.0 3.49 4.00
3.25 YES
L0001358 0 0.70680E-08 542030.7 3754134.0 273.3 3.49 4.00
3.25 YES
L0001359 0 0.70680E-08 542030.7 3754142.6 273.6 3.49 4.00
3.25 YES
L0001360 0 0.70680E-08 542030.8 3754151.2 273.9 3.49 4.00
3.25 YES
L0001361 0 0.70680E-08 542030.9 3754159.8 274.2 3.49 4.00
3.25 YES
L0001362 0 0.70680E-08 542030.9 3754168.4 274.4 3.49 4.00
3.25 YES
L0001363 0 0.70680E-08 542031.0 3754177.0 274.7 3.49 4.00
3.25 YES
L0001364 0 0.70680E-08 542031.0 3754185.6 275.0 3.49 4.00
3.25 YES
L0001365 0 0.70680E-08 542031.1 3754194.2 275.2 3.49 4.00
3.25 YES
L0001366 0 0.70680E-08 542031.2 3754202.8 275.4 3.49 4.00
3.25 YES
L0001367 0 0.70680E-08 542031.2 3754211.4 275.6 3.49 4.00
3.25 YES
L0001368 0 0.70680E-08 542031.3 3754219.9 275.7 3.49 4.00
3.25 YES
L0001369 0 0.70680E-08 542031.3 3754228.5 275.8 3.49 4.00
3.25 YES
L0001370 0 0.70680E-08 542031.4 3754237.1 275.9 3.49 4.00
3.25 YES
L0001371 0 0.70680E-08 542031.5 3754245.7 276.0 3.49 4.00
3.25 YES
L0001372 0 0.70680E-08 542031.5 3754254.3 276.3 3.49 4.00
3.25 YES
L0001373 0 0.70680E-08 542031.6 3754262.9 276.6 3.49 4.00
3.25 YES
L0001374 0 0.70680E-08 542031.6 3754271.5 276.9 3.49 4.00
3.25 YES
L0001375 0 0.70680E-08 542031.7 3754280.1 277.1 3.49 4.00
3.25 YES
L0001376 0 0.70680E-08 542031.8 3754288.7 277.3 3.49 4.00
3.25 YES
L0001377 0 0.70680E-08 542031.8 3754297.2 277.5 3.49 4.00

3.25   YES
 L0001378   0   0.70680E-08 542031.9 3754305.8   277.7   3.49   4.00
3.25   YES
 L0001379   0   0.70680E-08 542031.9 3754314.4   277.8   3.49   4.00
3.25   YES
 L0001380   0   0.70680E-08 542032.0 3754323.0   277.9   3.49   4.00
3.25   YES
 L0001381   0   0.70680E-08 542032.1 3754331.6   277.9   3.49   4.00
3.25   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
 -
- -

 L0001382   0   0.70680E-08 542032.1 3754340.2   278.2   3.49   4.00
3.25   YES
 L0001383   0   0.70680E-08 542032.2 3754348.8   278.4   3.49   4.00
3.25   YES
 L0001384   0   0.70680E-08 542032.3 3754357.4   278.7   3.49   4.00
3.25   YES
 L0001385   0   0.70680E-08 542032.3 3754366.0   279.0   3.49   4.00
3.25   YES
 L0001479   0   0.20790E-06 542028.4 3752292.5   233.0   3.49   6.51
3.25   YES
 L0001480   0   0.20790E-06 542028.3 3752278.5   232.9   3.49   6.51
3.25   YES
 L0001481   0   0.20790E-06 542028.3 3752264.5   232.7   3.49   6.51
3.25   YES
 L0001482   0   0.20790E-06 542028.3 3752250.5   232.4   3.49   6.51
3.25   YES
 L0001483   0   0.20790E-06 542028.2 3752236.5   232.0   3.49   6.51
3.25   YES
 L0001484   0   0.20790E-06 542028.2 3752222.5   231.6   3.49   6.51
3.25   YES
 L0001485   0   0.20790E-06 542028.1 3752208.5   231.1   3.49   6.51

3.25 YES
L0001486 0 0.20790E-06 542028.1 3752194.5 231.0 3.49 6.51
3.25 YES
L0001487 0 0.20790E-06 542028.1 3752180.5 231.0 3.49 6.51
3.25 YES
L0001488 0 0.20790E-06 542028.0 3752166.5 230.7 3.49 6.51
3.25 YES
L0001489 0 0.20790E-06 542028.0 3752152.5 230.2 3.49 6.51
3.25 YES
L0001490 0 0.20790E-06 542027.9 3752138.5 230.0 3.49 6.51
3.25 YES
L0001491 0 0.20790E-06 542027.9 3752124.5 230.0 3.49 6.51
3.25 YES
L0001492 0 0.20790E-06 542027.9 3752110.5 229.8 3.49 6.51
3.25 YES
L0001493 0 0.20790E-06 542027.8 3752096.5 229.4 3.49 6.51
3.25 YES
L0001494 0 0.20790E-06 542027.8 3752082.5 228.9 3.49 6.51
3.25 YES
L0001495 0 0.20790E-06 542027.7 3752068.5 228.4 3.49 6.51
3.25 YES
L0001496 0 0.20790E-06 542027.7 3752054.5 228.0 3.49 6.51
3.25 YES
L0001497 0 0.20790E-06 542027.6 3752040.5 228.0 3.49 6.51
3.25 YES
L0001498 0 0.20790E-06 542027.5 3752026.5 228.0 3.49 6.51
3.25 YES
L0001499 0 0.20790E-06 542027.5 3752012.5 227.6 3.49 6.51
3.25 YES
L0001500 0 0.20790E-06 542027.4 3751998.5 227.1 3.49 6.51
3.25 YES
L0001501 0 0.20790E-06 542027.4 3751984.5 227.0 3.49 6.51
3.25 YES
L0001502 0 0.20790E-06 542027.3 3751970.5 227.0 3.49 6.51
3.25 YES
L0001503 0 0.20790E-06 542027.2 3751956.5 226.7 3.49 6.51
3.25 YES
L0001504 0 0.20790E-06 542027.2 3751942.5 226.2 3.49 6.51
3.25 YES
L0001505 0 0.20790E-06 542027.1 3751928.5 226.0 3.49 6.51
3.25 YES
L0001506 0 0.20790E-06 542027.1 3751914.5 226.0 3.49 6.51
3.25 YES
L0001507 0 0.20790E-06 542027.0 3751900.5 225.8 3.49 6.51
3.25 YES
L0001508 0 0.20790E-06 542026.9 3751886.5 225.4 3.49 6.51
3.25 YES
L0001509 0 0.20790E-06 542026.9 3751872.5 225.0 3.49 6.51
3.25 YES
L0001510 0 0.20790E-06 542026.8 3751858.5 224.9 3.49 6.51

								3.25	YES
L0001511	0	0.20790E-06	542026.8	3751844.5	224.8	3.49	6.51	3.25	YES
L0001512	0	0.20790E-06	542026.7	3751830.5	224.4	3.49	6.51	3.25	YES
L0001513	0	0.20790E-06	542026.6	3751816.5	224.0	3.49	6.51	3.25	YES
L0001514	0	0.20790E-06	542026.6	3751802.5	223.6	3.49	6.51	3.25	YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001515	0	0.11580E-06	542026.0	3751789.1	223.1	3.49	6.51	3.25	YES	
L0001516	0	0.11580E-06	542026.1	3751775.1	223.0	3.49	6.51	3.25	YES	
L0001517	0	0.11580E-06	542026.2	3751761.2	223.0	3.49	6.51	3.25	YES	
L0001518	0	0.11580E-06	542026.3	3751747.2	222.7	3.49	6.51	3.25	YES	
L0001519	0	0.11580E-06	542026.4	3751733.2	222.3	3.49	6.51	3.25	YES	
L0001520	0	0.11580E-06	542026.5	3751719.2	222.0	3.49	6.51	3.25	YES	
L0001521	0	0.11580E-06	542026.7	3751705.2	222.0	3.49	6.51	3.25	YES	
L0001522	0	0.11580E-06	542026.8	3751691.2	221.9	3.49	6.51	3.25	YES	
L0001523	0	0.11580E-06	542026.9	3751677.2	221.4	3.49	6.51	3.25	YES	
L0001524	0	0.11580E-06	542027.0	3751663.2	221.0	3.49	6.51	3.25	YES	
L0001525	0	0.11580E-06	542027.1	3751649.2	220.9	3.49	6.51			

3.25 YES
L0001526 0 0.11580E-06 542027.2 3751635.2 220.8 3.49 6.51
3.25 YES
L0001527 0 0.11580E-06 542027.3 3751621.2 220.4 3.49 6.51
3.25 YES
L0001528 0 0.11580E-06 542027.4 3751607.2 220.1 3.49 6.51
3.25 YES
L0001529 0 0.11580E-06 542027.6 3751593.2 219.6 3.49 6.51
3.25 YES
L0001530 0 0.11580E-06 542027.7 3751579.2 219.1 3.49 6.51
3.25 YES
L0001531 0 0.11580E-06 542027.8 3751565.2 219.0 3.49 6.51
3.25 YES
L0001532 0 0.11580E-06 542027.9 3751551.2 219.0 3.49 6.51
3.25 YES
L0001533 0 0.11580E-06 542028.0 3751537.2 218.7 3.49 6.51
3.25 YES
L0001534 0 0.11580E-06 542028.1 3751523.2 218.3 3.49 6.51
3.25 YES
L0001535 0 0.11580E-06 542028.2 3751509.2 218.0 3.49 6.51
3.25 YES
L0001536 0 0.11580E-06 542028.4 3751495.2 218.0 3.49 6.51
3.25 YES
L0001537 0 0.11580E-06 542028.5 3751481.2 218.0 3.49 6.51
3.25 YES
L0001538 0 0.11580E-06 542028.6 3751467.2 217.9 3.49 6.51
3.25 YES
L0001539 0 0.11580E-06 542028.7 3751453.2 217.7 3.49 6.51
3.25 YES
L0001540 0 0.11580E-06 542028.8 3751439.2 217.3 3.49 6.51
3.25 YES
L0001541 0 0.11580E-06 542028.9 3751425.2 217.0 3.49 6.51
3.25 YES
L0001542 0 0.90520E-07 542019.7 3751418.7 217.0 3.49 6.51
3.25 YES
L0001543 0 0.90520E-07 542006.1 3751421.8 217.0 3.49 6.51
3.25 YES
L0001544 0 0.90520E-07 541992.4 3751424.9 217.0 3.49 6.51
3.25 YES
L0001545 0 0.90520E-07 541978.7 3751428.0 217.0 3.49 6.51
3.25 YES
L0001546 0 0.90520E-07 541965.1 3751431.0 217.0 3.49 6.51
3.25 YES
L0001547 0 0.90520E-07 541951.4 3751434.1 217.1 3.49 6.51
3.25 YES
L0001548 0 0.90520E-07 541937.8 3751437.2 217.3 3.49 6.51
3.25 YES
L0001549 0 0.90520E-07 541924.1 3751440.3 217.5 3.49 6.51
3.25 YES
L0001550 0 0.90520E-07 541910.5 3751443.4 217.6 3.49 6.51

3.25 YES
L0001551 0 0.90520E-07 541896.8 3751446.5 217.7 3.49 6.51
3.25 YES
L0001552 0 0.90520E-07 541883.2 3751449.6 217.8 3.49 6.51
3.25 YES
L0001553 0 0.90520E-07 541869.6 3751453.2 217.9 3.49 6.51
3.25 YES
L0001554 0 0.90520E-07 541856.1 3751456.8 218.0 3.49 6.51
3.25 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001555	0	0.90520E-07	541842.6	3751460.4	218.0	3.49	6.51	3.25	YES	
L0001556	0	0.90520E-07	541829.1	3751464.0	218.0	3.49	6.51	3.25	YES	
L0001557	0	0.90520E-07	541815.5	3751467.6	218.0	3.49	6.51	3.25	YES	
L0001558	0	0.90520E-07	541802.0	3751471.3	218.0	3.49	6.51	3.25	YES	
L0001559	0	0.90520E-07	541788.5	3751474.9	218.0	3.49	6.51	3.25	YES	
L0001560	0	0.90520E-07	541775.0	3751478.5	218.0	3.49	6.51	3.25	YES	
L0001561	0	0.90520E-07	541761.4	3751482.1	217.9	3.49	6.51	3.25	YES	
L0001562	0	0.90520E-07	541747.9	3751485.7	218.0	3.49	6.51	3.25	YES	
L0001563	0	0.90520E-07	541734.4	3751489.3	218.1	3.49	6.51	3.25	YES	
L0001564	0	0.90520E-07	541720.9	3751493.0	218.0	3.49	6.51	3.25	YES	
L0001565	0	0.90520E-07	541707.3	3751496.6	218.0	3.49	6.51			

3.25 YES
L0001566 0 0.90520E-07 541693.8 3751500.2 218.0 3.49 6.51
3.25 YES
L0001567 0 0.90520E-07 541680.3 3751503.8 218.0 3.49 6.51
3.25 YES
L0001568 0 0.90520E-07 541666.8 3751507.4 218.0 3.49 6.51
3.25 YES
L0001569 0 0.90520E-07 541653.2 3751511.0 218.0 3.49 6.51
3.25 YES
L0001570 0 0.90520E-07 541639.7 3751514.6 218.0 3.49 6.51
3.25 YES
L0001571 0 0.14010E-07 542030.1 3751408.3 217.0 3.49 4.00
3.25 YES
L0001572 0 0.14010E-07 542030.1 3751399.7 217.0 3.49 4.00
3.25 YES
L0001573 0 0.14010E-07 542030.2 3751391.1 216.9 3.49 4.00
3.25 YES
L0001574 0 0.14010E-07 542030.2 3751382.5 216.6 3.49 4.00
3.25 YES
L0001575 0 0.14010E-07 542030.2 3751373.9 216.3 3.49 4.00
3.25 YES
L0001576 0 0.14010E-07 542030.3 3751365.3 216.0 3.49 4.00
3.25 YES
L0001577 0 0.14010E-07 542030.3 3751356.7 216.0 3.49 4.00
3.25 YES
L0001578 0 0.14010E-07 542030.4 3751348.1 216.0 3.49 4.00
3.25 YES
L0001579 0 0.14010E-07 542030.4 3751339.5 216.0 3.49 4.00
3.25 YES
L0001580 0 0.14010E-07 542030.5 3751331.0 215.9 3.49 4.00
3.25 YES
L0001581 0 0.14010E-07 542030.5 3751322.4 215.6 3.49 4.00
3.25 YES
L0001582 0 0.14010E-07 542030.6 3751313.8 215.3 3.49 4.00
3.25 YES
L0001583 0 0.14010E-07 542030.6 3751305.2 215.0 3.49 4.00
3.25 YES
L0001584 0 0.14010E-07 542030.7 3751296.6 215.0 3.49 4.00
3.25 YES
L0001585 0 0.14010E-07 542030.7 3751288.0 215.0 3.49 4.00
3.25 YES
L0001586 0 0.14010E-07 542030.7 3751279.4 215.0 3.49 4.00
3.25 YES
L0001587 0 0.14010E-07 542030.8 3751270.8 215.0 3.49 4.00
3.25 YES
L0001588 0 0.14010E-07 542030.8 3751262.2 215.0 3.49 4.00
3.25 YES
L0001589 0 0.14010E-07 542030.9 3751253.6 215.0 3.49 4.00
3.25 YES
L0001590 0 0.14010E-07 542030.9 3751245.1 215.0 3.49 4.00

3.25   YES
 L0001591   0   0.14010E-07 542031.0 3751236.5   214.7   3.49   4.00
3.25   YES
 L0001592   0   0.14010E-07 542031.0 3751227.9   214.4   3.49   4.00
3.25   YES
 L0001593   0   0.14010E-07 542031.1 3751219.3   214.1   3.49   4.00
3.25   YES
 L0001594   0   0.14010E-07 542031.1 3751210.7   214.0   3.49   4.00
3.25   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001595	0	0.14010E-07	542031.2	3751202.1	214.0	3.49	4.00	3.25	YES	
L0001596	0	0.14010E-07	542031.2	3751193.5	214.0	3.49	4.00	3.25	YES	
L0001597	0	0.14010E-07	542031.2	3751184.9	214.0	3.49	4.00	3.25	YES	
L0001598	0	0.14010E-07	542031.3	3751176.3	214.0	3.49	4.00	3.25	YES	
L0001599	0	0.14010E-07	542031.3	3751167.7	214.0	3.49	4.00	3.25	YES	
L0001600	0	0.14010E-07	542031.4	3751159.2	214.0	3.49	4.00	3.25	YES	
L0001601	0	0.14010E-07	542031.4	3751150.6	214.0	3.49	4.00	3.25	YES	
L0001602	0	0.14010E-07	542031.5	3751142.0	214.0	3.49	4.00	3.25	YES	
L0001603	0	0.14010E-07	542031.5	3751133.4	214.0	3.49	4.00	3.25	YES	
L0001604	0	0.14010E-07	542031.6	3751124.8	214.0	3.49	4.00	3.25	YES	
L0001605	0	0.14010E-07	542031.6	3751116.2	214.0	3.49	4.00			

3.25 YES
L0001606 0 0.14010E-07 542031.7 3751107.6 214.0 3.49 4.00
3.25 YES
L0001607 0 0.14010E-07 542031.7 3751099.0 214.0 3.49 4.00
3.25 YES
L0001608 0 0.14010E-07 542031.8 3751090.4 214.1 3.49 4.00
3.25 YES
L0001609 0 0.14010E-07 542031.8 3751081.8 214.3 3.49 4.00
3.25 YES
L0001610 0 0.14010E-07 542031.8 3751073.3 214.5 3.49 4.00
3.25 YES
L0001611 0 0.14010E-07 542031.9 3751064.7 214.8 3.49 4.00
3.25 YES
L0001612 0 0.14010E-07 542031.9 3751056.1 215.3 3.49 4.00
3.25 YES
L0001613 0 0.14010E-07 542032.0 3751047.5 215.9 3.49 4.00
3.25 YES
L0001614 0 0.14010E-07 542032.0 3751038.9 216.5 3.49 4.00
3.25 YES
L0001615 0 0.14010E-07 542032.1 3751030.3 217.4 3.49 4.00
3.25 YES
L0001616 0 0.14010E-07 542032.1 3751021.7 218.5 3.49 4.00
3.25 YES
L0001617 0 0.14010E-07 542032.2 3751013.1 219.6 3.49 4.00
3.25 YES
L0001618 0 0.14010E-07 542032.2 3751004.5 220.6 3.49 4.00
3.25 YES
L0001619 0 0.14010E-07 542032.3 3750995.9 220.8 3.49 4.00
3.25 YES
L0001620 0 0.14010E-07 542032.3 3750987.4 221.0 3.49 4.00
3.25 YES
L0001621 0 0.14010E-07 542032.4 3750978.8 221.3 3.49 4.00
3.25 YES
L0001622 0 0.14010E-07 542032.4 3750970.2 220.5 3.49 4.00
3.25 YES
L0001623 0 0.14010E-07 542032.4 3750961.6 219.0 3.49 4.00
3.25 YES
L0001624 0 0.14010E-07 542032.5 3750953.0 217.5 3.49 4.00
3.25 YES
L0001625 0 0.14010E-07 542032.5 3750944.4 216.1 3.49 4.00
3.25 YES
L0001626 0 0.14010E-07 542032.6 3750935.8 215.7 3.49 4.00
3.25 YES
L0001627 0 0.14010E-07 542032.6 3750927.2 215.3 3.49 4.00
3.25 YES
L0001628 0 0.14010E-07 542032.7 3750918.6 214.9 3.49 4.00
3.25 YES
L0001629 0 0.14010E-07 542032.7 3750910.1 214.6 3.49 4.00
3.25 YES
L0001630 0 0.14010E-07 542032.8 3750901.5 214.2 3.49 4.00

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3.25     YES
 L0001631         0   0.14010E-07  542032.8 3750892.9   213.9     3.49     4.00
3.25     YES
 L0001632         0   0.14010E-07  542032.9 3750884.3   213.6     3.49     4.00
3.25     YES
 L0001633         0   0.14010E-07  542032.9 3750875.7   213.6     3.49     4.00
3.25     YES
 L0001634         0   0.14010E-07  542032.9 3750867.1   213.6     3.49     4.00
3.25     YES
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                                                     *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                  BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001635         0   0.14010E-07  542033.0 3750858.5   213.6     3.49     4.00
3.25     YES
 L0001636         0   0.14010E-07  542033.0 3750849.9   213.2     3.49     4.00
3.25     YES
 L0001637         0   0.14010E-07  542033.1 3750841.3   212.6     3.49     4.00
3.25     YES
 L0001638         0   0.14010E-07  542033.1 3750832.7   212.0     3.49     4.00
3.25     YES
 L0001639         0   0.14010E-07  542033.2 3750824.2   211.5     3.49     4.00
3.25     YES
 L0001640         0   0.14010E-07  542033.2 3750815.6   212.0     3.49     4.00
3.25     YES
 L0001641         0   0.14010E-07  542033.3 3750807.0   212.5     3.49     4.00
3.25     YES
 L0001642         0   0.14010E-07  542033.3 3750798.4   213.0     3.49     4.00
3.25     YES
 L0001643         0   0.14010E-07  542033.4 3750789.8   213.3     3.49     4.00
3.25     YES
 L0001644         0   0.14010E-07  542033.4 3750781.2   213.4     3.49     4.00
3.25     YES
 L0001645         0   0.14010E-07  542033.5 3750772.6   213.5     3.49     4.00
```

3.25 YES
L0001646 0 0.14010E-07 542033.5 3750764.0 213.6 3.49 4.00
3.25 YES
L0001647 0 0.14010E-07 542033.5 3750755.4 213.4 3.49 4.00
3.25 YES
L0001648 0 0.14010E-07 542033.6 3750746.8 213.2 3.49 4.00
3.25 YES
L0001649 0 0.14010E-07 542033.6 3750738.3 213.1 3.49 4.00
3.25 YES
L0001650 0 0.14010E-07 542033.7 3750729.7 212.9 3.49 4.00
3.25 YES
L0000942 0 0.36580E-06 541653.4 3752625.9 240.0 3.49 4.00
3.25 YES
L0000943 0 0.36580E-06 541662.0 3752626.0 240.0 3.49 4.00
3.25 YES
L0000944 0 0.36580E-06 541670.6 3752626.1 240.0 3.49 4.00
3.25 YES
L0000945 0 0.36580E-06 541679.2 3752626.2 240.0 3.49 4.00
3.25 YES
L0000946 0 0.36580E-06 541687.8 3752626.3 240.0 3.49 4.00
3.25 YES
L0000947 0 0.36580E-06 541696.4 3752626.3 240.0 3.49 4.00
3.25 YES
L0000948 0 0.36580E-06 541705.0 3752626.4 240.0 3.49 4.00
3.25 YES
L0000949 0 0.36580E-06 541713.6 3752626.5 240.0 3.49 4.00
3.25 YES
L0000950 0 0.36580E-06 541722.2 3752626.6 240.0 3.49 4.00
3.25 YES
L0000951 0 0.36580E-06 541730.7 3752626.7 240.0 3.49 4.00
3.25 YES
L0000952 0 0.36580E-06 541739.3 3752626.7 240.1 3.49 4.00
3.25 YES
L0000953 0 0.36580E-06 541747.9 3752626.8 240.1 3.49 4.00
3.25 YES
L0000954 0 0.36580E-06 541756.5 3752626.9 240.1 3.49 4.00
3.25 YES
L0000955 0 0.36580E-06 541765.1 3752627.0 240.1 3.49 4.00
3.25 YES
L0000956 0 0.36580E-06 541773.7 3752627.1 240.1 3.49 4.00
3.25 YES
L0000957 0 0.36580E-06 541782.3 3752627.1 240.1 3.49 4.00
3.25 YES
L0000958 0 0.36580E-06 541790.9 3752627.2 240.1 3.49 4.00
3.25 YES
L0000959 0 0.36580E-06 541799.5 3752627.3 240.1 3.49 4.00
3.25 YES
L0000960 0 0.36580E-06 541808.1 3752627.4 240.1 3.49 4.00
3.25 YES
L0000961 0 0.36580E-06 541816.6 3752627.5 240.1 3.49 4.00

3.25 YES
L0000962 0 0.36580E-06 541825.2 3752627.5 240.1 3.49 4.00
3.25 YES
L0000963 0 0.36580E-06 541833.8 3752627.6 240.1 3.49 4.00
3.25 YES
L0000964 0 0.36580E-06 541842.4 3752627.7 240.1 3.49 4.00
3.25 YES
L0000965 0 0.36580E-06 541851.0 3752627.8 240.1 3.49 4.00
3.25 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000966	0	0.36580E-06	541859.6	3752627.9	240.1	3.49	4.00	3.25	YES	
L0000967	0	0.36580E-06	541868.2	3752627.9	240.1	3.49	4.00	3.25	YES	
L0000968	0	0.36580E-06	541876.8	3752628.0	240.1	3.49	4.00	3.25	YES	
L0000969	0	0.36580E-06	541885.4	3752628.1	240.1	3.49	4.00	3.25	YES	
L0000970	0	0.36580E-06	541893.9	3752628.2	240.1	3.49	4.00	3.25	YES	
L0000971	0	0.36580E-06	541902.5	3752628.3	240.1	3.49	4.00	3.25	YES	
L0000972	0	0.36580E-06	541911.1	3752628.3	240.1	3.49	4.00	3.25	YES	
L0000973	0	0.36580E-06	541919.7	3752628.4	240.1	3.49	4.00	3.25	YES	
L0000974	0	0.36580E-06	541928.3	3752628.5	240.1	3.49	4.00	3.25	YES	
L0000975	0	0.36580E-06	541652.1	3752401.6	235.5	3.49	4.00	3.25	YES	
L0000976	0	0.36580E-06	541660.7	3752401.6	235.5	3.49	4.00			

3.25 YES
L0000977 0 0.36580E-06 541669.3 3752401.7 235.5 3.49 4.00
3.25 YES
L0000978 0 0.36580E-06 541677.9 3752401.8 235.6 3.49 4.00
3.25 YES
L0000979 0 0.36580E-06 541686.5 3752401.9 235.6 3.49 4.00
3.25 YES
L0000980 0 0.36580E-06 541695.1 3752401.9 235.6 3.49 4.00
3.25 YES
L0000981 0 0.36580E-06 541703.7 3752402.0 235.6 3.49 4.00
3.25 YES
L0000982 0 0.36580E-06 541712.2 3752402.1 235.6 3.49 4.00
3.25 YES
L0000983 0 0.36580E-06 541720.8 3752402.2 235.6 3.49 4.00
3.25 YES
L0000984 0 0.36580E-06 541729.4 3752402.3 235.6 3.49 4.00
3.25 YES
L0000985 0 0.36580E-06 541738.0 3752402.3 235.6 3.49 4.00
3.25 YES
L0000986 0 0.36580E-06 541746.6 3752402.4 235.6 3.49 4.00
3.25 YES
L0000987 0 0.36580E-06 541755.2 3752402.5 235.6 3.49 4.00
3.25 YES
L0000988 0 0.36580E-06 541763.8 3752402.6 235.6 3.49 4.00
3.25 YES
L0000989 0 0.36580E-06 541772.4 3752402.7 235.6 3.49 4.00
3.25 YES
L0000990 0 0.36580E-06 541781.0 3752402.7 235.6 3.49 4.00
3.25 YES
L0000991 0 0.36580E-06 541789.6 3752402.8 235.6 3.49 4.00
3.25 YES
L0000992 0 0.36580E-06 541798.1 3752402.9 235.6 3.49 4.00
3.25 YES
L0000993 0 0.36580E-06 541806.7 3752403.0 235.6 3.49 4.00
3.25 YES
L0000994 0 0.36580E-06 541815.3 3752403.1 235.6 3.49 4.00
3.25 YES
L0000995 0 0.36580E-06 541823.9 3752403.1 235.6 3.49 4.00
3.25 YES
L0000996 0 0.36580E-06 541832.5 3752403.2 235.6 3.49 4.00
3.25 YES
L0000997 0 0.36580E-06 541841.1 3752403.3 235.6 3.49 4.00
3.25 YES
L0000998 0 0.36580E-06 541849.7 3752403.4 235.6 3.49 4.00
3.25 YES
L0000999 0 0.36580E-06 541858.3 3752403.5 235.6 3.49 4.00
3.25 YES
L0001000 0 0.36580E-06 541866.9 3752403.5 235.6 3.49 4.00
3.25 YES
L0001001 0 0.36580E-06 541875.5 3752403.6 235.6 3.49 4.00

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
								3.25	YES	
L0001002	0	0.36580E-06	541884.0	3752403.7	235.6	3.49	4.00	3.25	YES	
L0001003	0	0.36580E-06	541892.6	3752403.8	235.6	3.49	4.00	3.25	YES	
L0001004	0	0.36580E-06	541901.2	3752403.9	235.6	3.49	4.00	3.25	YES	
L0001005	0	0.36580E-06	541909.8	3752403.9	235.6	3.49	4.00	3.25	YES	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001006	0	0.36580E-06	541918.4	3752404.0	235.6	3.49	4.00	3.25	YES	
L0001007	0	0.36580E-06	541927.0	3752404.1	235.6	3.49	4.00	3.25	YES	
L0001008	0	0.15590E-06	542007.4	3752653.5	240.9	3.49	4.00	3.25	YES	
L0001009	0	0.15590E-06	541998.8	3752653.4	240.9	3.49	4.00	3.25	YES	
L0001010	0	0.15590E-06	541990.3	3752653.3	240.9	3.49	4.00	3.25	YES	
L0001011	0	0.15590E-06	541981.7	3752653.3	240.9	3.49	4.00	3.25	YES	
L0001012	0	0.15590E-06	541973.1	3752653.2	240.9	3.49	4.00	3.25	YES	
L0001013	0	0.15590E-06	541964.5	3752653.1	240.9	3.49	4.00	3.25	YES	
L0001014	0	0.15590E-06	541955.9	3752653.0	240.9	3.49	4.00	3.25	YES	
L0001015	0	0.15590E-06	541947.3	3752652.9	240.9	3.49	4.00	3.25	YES	
L0001016	0	0.15590E-06	541938.7	3752652.8	240.9	3.49	4.00			

3.25 YES
L0001017 0 0.15590E-06 541930.1 3752652.7 240.9 3.49 4.00
3.25 YES
L0001018 0 0.15590E-06 541921.5 3752652.7 240.9 3.49 4.00
3.25 YES
L0001019 0 0.15590E-06 541912.9 3752652.6 240.9 3.49 4.00
3.25 YES
L0001020 0 0.15590E-06 541904.4 3752652.5 240.9 3.49 4.00
3.25 YES
L0001021 0 0.15590E-06 541895.8 3752652.4 240.9 3.49 4.00
3.25 YES
L0001022 0 0.15590E-06 541887.2 3752652.3 240.9 3.49 4.00
3.25 YES
L0001023 0 0.15590E-06 541878.6 3752652.2 240.9 3.49 4.00
3.25 YES
L0001024 0 0.15590E-06 541870.0 3752652.2 240.9 3.49 4.00
3.25 YES
L0001025 0 0.15590E-06 541861.4 3752652.1 240.9 3.49 4.00
3.25 YES
L0001026 0 0.15590E-06 541852.8 3752652.0 240.9 3.49 4.00
3.25 YES
L0001027 0 0.15590E-06 541844.2 3752651.9 240.9 3.49 4.00
3.25 YES
L0001028 0 0.15590E-06 541835.6 3752651.8 240.9 3.49 4.00
3.25 YES
L0001029 0 0.15590E-06 541827.1 3752651.7 240.9 3.49 4.00
3.25 YES
L0001030 0 0.15590E-06 541818.5 3752651.7 240.9 3.49 4.00
3.25 YES
L0001031 0 0.15590E-06 541809.9 3752651.6 240.9 3.49 4.00
3.25 YES
L0001032 0 0.15590E-06 541801.3 3752651.5 240.9 3.49 4.00
3.25 YES
L0001033 0 0.15590E-06 541792.7 3752651.4 240.9 3.49 4.00
3.25 YES
L0001034 0 0.15590E-06 541784.1 3752651.3 240.9 3.49 4.00
3.25 YES
L0001035 0 0.15590E-06 541775.5 3752651.2 240.9 3.49 4.00
3.25 YES
L0001036 0 0.15590E-06 541766.9 3752651.2 240.9 3.49 4.00
3.25 YES
L0001037 0 0.15590E-06 541758.3 3752651.1 240.9 3.49 4.00
3.25 YES
L0001038 0 0.15590E-06 541749.7 3752651.0 240.9 3.49 4.00
3.25 YES
L0001039 0 0.15590E-06 541741.2 3752650.9 240.9 3.49 4.00
3.25 YES
L0001040 0 0.15590E-06 541732.6 3752650.8 240.9 3.49 4.00
3.25 YES
L0001041 0 0.15590E-06 541724.0 3752650.7 240.9 3.49 4.00

3.25   YES
 L0001042   0   0.15590E-06 541715.4 3752650.7   240.7   3.49   4.00
3.25   YES
 L0001043   0   0.15590E-06 541706.8 3752650.6   240.4   3.49   4.00
3.25   YES
 L0001044   0   0.15590E-06 541698.2 3752650.5   240.2   3.49   4.00
3.25   YES
 L0001045   0   0.15590E-06 541689.6 3752650.4   240.0   3.49   4.00
3.25   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
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- -

 L0001046   0   0.15590E-06 541681.0 3752650.3   240.3   3.49   4.00
3.25   YES
 L0001047   0   0.15590E-06 541672.4 3752650.2   240.5   3.49   4.00
3.25   YES
 L0001048   0   0.15590E-06 541663.8 3752650.2   240.8   3.49   4.00
3.25   YES
 L0001049   0   0.15590E-06 541655.3 3752650.1   240.7   3.49   4.00
3.25   YES
 L0001050   0   0.15590E-06 541646.7 3752650.0   240.4   3.49   4.00
3.25   YES
 L0001051   0   0.15590E-06 541638.4 3752648.8   240.2   3.49   4.00
3.25   YES
 L0001052   0   0.15590E-06 541631.7 3752644.2   240.0   3.49   4.00
3.25   YES
 L0001053   0   0.15590E-06 541631.7 3752635.6   240.0   3.49   4.00
3.25   YES
 L0001054   0   0.15590E-06 541631.7 3752627.0   240.0   3.49   4.00
3.25   YES
 L0001055   0   0.15590E-06 541631.6 3752618.5   239.8   3.49   4.00
3.25   YES
 L0001056   0   0.15590E-06 541631.6 3752609.9   239.5   3.49   4.00

3.25 YES
L0001057 0 0.15590E-06 541631.6 3752601.3 239.2 3.49 4.00
3.25 YES
L0001058 0 0.15590E-06 541631.6 3752592.7 239.0 3.49 4.00
3.25 YES
L0001059 0 0.15590E-06 541631.6 3752584.1 239.0 3.49 4.00
3.25 YES
L0001060 0 0.15590E-06 541631.5 3752575.5 239.0 3.49 4.00
3.25 YES
L0001061 0 0.15590E-06 541631.5 3752566.9 239.0 3.49 4.00
3.25 YES
L0001062 0 0.15590E-06 541631.5 3752558.3 238.8 3.49 4.00
3.25 YES
L0001063 0 0.15590E-06 541631.5 3752549.7 238.5 3.49 4.00
3.25 YES
L0001064 0 0.15590E-06 541631.5 3752541.1 238.2 3.49 4.00
3.25 YES
L0001065 0 0.15590E-06 541631.4 3752532.6 238.0 3.49 4.00
3.25 YES
L0001066 0 0.15590E-06 541631.4 3752524.0 238.0 3.49 4.00
3.25 YES
L0001067 0 0.15590E-06 541631.4 3752515.4 238.0 3.49 4.00
3.25 YES
L0001068 0 0.15590E-06 541631.4 3752506.8 238.0 3.49 4.00
3.25 YES
L0001069 0 0.15590E-06 541631.4 3752498.2 237.8 3.49 4.00
3.25 YES
L0001070 0 0.15590E-06 541631.3 3752489.6 237.5 3.49 4.00
3.25 YES
L0001071 0 0.15590E-06 541631.3 3752481.0 237.2 3.49 4.00
3.25 YES
L0001072 0 0.15590E-06 541631.3 3752472.4 237.0 3.49 4.00
3.25 YES
L0001073 0 0.15590E-06 541631.3 3752463.8 237.0 3.49 4.00
3.25 YES
L0001074 0 0.15590E-06 541631.3 3752455.2 237.0 3.49 4.00
3.25 YES
L0001075 0 0.15590E-06 541631.2 3752446.7 237.0 3.49 4.00
3.25 YES
L0001076 0 0.15590E-06 541631.2 3752438.1 236.8 3.49 4.00
3.25 YES
L0001077 0 0.15590E-06 541631.2 3752429.5 236.5 3.49 4.00
3.25 YES
L0001078 0 0.15590E-06 541631.2 3752420.9 236.2 3.49 4.00
3.25 YES
L0001079 0 0.15590E-06 541631.2 3752412.3 235.9 3.49 4.00
3.25 YES
L0001080 0 0.15590E-06 541631.1 3752403.7 235.6 3.49 4.00
3.25 YES
L0001081 0 0.15590E-06 541631.1 3752395.1 235.3 3.49 4.00

3.25   YES
 L0001082   0   0.15590E-06 541631.1 3752386.5   235.0   3.49   4.00
3.25   YES
 L0001083   0   0.15590E-06 541631.1 3752377.9   235.0   3.49   4.00
3.25   YES
 L0001084   0   0.15590E-06 541631.1 3752369.3   235.0   3.49   4.00
3.25   YES
 L0001085   0   0.15590E-06 541631.1 3752360.8   235.0   3.49   4.00
3.25   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
 -
- -

 L0001086   0   0.15590E-06 541631.4 3752352.2   234.9   3.49   4.00
3.25   YES
 L0001087   0   0.15590E-06 541631.7 3752343.6   234.6   3.49   4.00
3.25   YES
 L0001088   0   0.15590E-06 541632.0 3752335.0   234.3   3.49   4.00
3.25   YES
 L0001089   0   0.15590E-06 541632.3 3752326.4   234.0   3.49   4.00
3.25   YES
 L0001090   0   0.15590E-06 541632.6 3752317.8   233.8   3.49   4.00
3.25   YES
 L0001091   0   0.15590E-06 541632.9 3752309.2   233.5   3.49   4.00
3.25   YES
 L0001092   0   0.15590E-06 541633.2 3752300.7   233.2   3.49   4.00
3.25   YES
 L0001093   0   0.15510E-06 542009.7 3752381.4   235.0   3.49   4.00
3.25   YES
 L0001094   0   0.15510E-06 542001.1 3752381.3   235.0   3.49   4.00
3.25   YES
 L0001095   0   0.15510E-06 541992.6 3752381.3   235.0   3.49   4.00
3.25   YES
 L0001096   0   0.15510E-06 541984.0 3752381.2   235.0   3.49   4.00

3.25 YES
L0001097 0 0.15510E-06 541975.4 3752381.1 235.0 3.49 4.00
3.25 YES
L0001098 0 0.15510E-06 541966.8 3752381.1 235.0 3.49 4.00
3.25 YES
L0001099 0 0.15510E-06 541958.2 3752381.0 235.0 3.49 4.00
3.25 YES
L0001100 0 0.15510E-06 541949.6 3752380.9 235.0 3.49 4.00
3.25 YES
L0001101 0 0.15510E-06 541941.0 3752380.9 235.0 3.49 4.00
3.25 YES
L0001102 0 0.15510E-06 541932.4 3752380.8 235.0 3.49 4.00
3.25 YES
L0001103 0 0.15510E-06 541923.8 3752380.7 235.0 3.49 4.00
3.25 YES
L0001104 0 0.15510E-06 541915.2 3752380.7 235.0 3.49 4.00
3.25 YES
L0001105 0 0.15510E-06 541906.7 3752380.6 235.0 3.49 4.00
3.25 YES
L0001106 0 0.15510E-06 541898.1 3752380.5 235.0 3.49 4.00
3.25 YES
L0001107 0 0.15510E-06 541889.5 3752380.5 235.0 3.49 4.00
3.25 YES
L0001108 0 0.15510E-06 541880.9 3752380.4 235.0 3.49 4.00
3.25 YES
L0001109 0 0.15510E-06 541872.3 3752380.3 235.0 3.49 4.00
3.25 YES
L0001110 0 0.15510E-06 541863.7 3752380.3 235.0 3.49 4.00
3.25 YES
L0001111 0 0.15510E-06 541855.1 3752380.2 235.0 3.49 4.00
3.25 YES
L0001112 0 0.15510E-06 541846.5 3752380.1 235.0 3.49 4.00
3.25 YES
L0001113 0 0.15510E-06 541837.9 3752380.1 235.0 3.49 4.00
3.25 YES
L0001114 0 0.15510E-06 541829.4 3752380.0 235.0 3.49 4.00
3.25 YES
L0001115 0 0.15510E-06 541820.8 3752379.9 235.0 3.49 4.00
3.25 YES
L0001116 0 0.15510E-06 541812.2 3752379.9 235.0 3.49 4.00
3.25 YES
L0001117 0 0.15510E-06 541803.6 3752379.8 235.0 3.49 4.00
3.25 YES
L0001118 0 0.15510E-06 541795.0 3752379.7 235.0 3.49 4.00
3.25 YES
L0001119 0 0.15510E-06 541786.4 3752379.6 235.0 3.49 4.00
3.25 YES
L0001120 0 0.15510E-06 541777.8 3752379.6 235.0 3.49 4.00
3.25 YES
L0001121 0 0.15510E-06 541769.2 3752379.5 235.0 3.49 4.00

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3.25     YES
 L0001122         0   0.15510E-06  541760.6 3752379.4   235.0     3.49     4.00
3.25     YES
 L0001123         0   0.15510E-06  541752.0 3752379.4   235.0     3.49     4.00
3.25     YES
 L0001124         0   0.15510E-06  541743.5 3752379.3   235.0     3.49     4.00
3.25     YES
 L0001125         0   0.15510E-06  541734.9 3752379.2   235.0     3.49     4.00
3.25     YES
↑ *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/30/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        16:24:26

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                   BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT       SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001126         0   0.15510E-06  541726.3 3752379.2   235.0     3.49     4.00
3.25     YES
 L0001127         0   0.15510E-06  541717.7 3752379.1   235.0     3.49     4.00
3.25     YES
 L0001128         0   0.15510E-06  541709.1 3752379.0   235.0     3.49     4.00
3.25     YES
 L0001129         0   0.15510E-06  541700.5 3752379.0   235.0     3.49     4.00
3.25     YES
 L0001130         0   0.15510E-06  541691.9 3752378.9   235.0     3.49     4.00
3.25     YES
 L0001131         0   0.15510E-06  541683.3 3752378.8   235.0     3.49     4.00
3.25     YES
 L0001132         0   0.15510E-06  541674.7 3752378.8   235.0     3.49     4.00
3.25     YES
 L0001133         0   0.15510E-06  541666.1 3752378.7   235.0     3.49     4.00
3.25     YES
 L0001134         0   0.15510E-06  541657.6 3752378.6   235.0     3.49     4.00
3.25     YES
 L0001135         0   0.15510E-06  541649.0 3752378.6   235.0     3.49     4.00
3.25     YES
 L0001136         0   0.15510E-06  541640.4 3752378.5   235.0     3.49     4.00
```

3.25 YES
L0001182 0 0.54070E-07 542027.3 3752308.6 233.4 3.49 6.51
3.25 YES
L0001183 0 0.54070E-07 542027.3 3752322.6 233.9 3.49 6.51
3.25 YES
L0001184 0 0.54070E-07 542027.3 3752336.6 234.4 3.49 6.51
3.25 YES
L0001185 0 0.54070E-07 542027.3 3752350.6 234.8 3.49 6.51
3.25 YES
L0001186 0 0.54070E-07 542027.3 3752364.6 235.0 3.49 6.51
3.25 YES
L0001187 0 0.54070E-07 542027.3 3752378.6 235.0 3.49 6.51
3.25 YES
L0001188 0 0.50300E-07 542027.4 3752387.0 235.1 3.49 6.51
3.25 YES
L0001189 0 0.50300E-07 542027.5 3752401.0 235.5 3.49 6.51
3.25 YES
L0001190 0 0.50300E-07 542027.6 3752415.0 236.0 3.49 6.51
3.25 YES
L0001191 0 0.50300E-07 542027.6 3752429.0 236.0 3.49 6.51
3.25 YES
L0001192 0 0.50300E-07 542027.7 3752443.0 236.0 3.49 6.51
3.25 YES
L0001193 0 0.50300E-07 542027.7 3752457.0 236.4 3.49 6.51
3.25 YES
L0001194 0 0.50300E-07 542027.8 3752471.0 236.9 3.49 6.51
3.25 YES
L0001195 0 0.50300E-07 542027.9 3752485.0 237.3 3.49 6.51
3.25 YES
L0001196 0 0.50300E-07 542027.9 3752499.0 237.8 3.49 6.51
3.25 YES
L0001197 0 0.50300E-07 542028.0 3752513.0 238.0 3.49 6.51
3.25 YES
L0001198 0 0.50300E-07 542028.0 3752527.0 238.0 3.49 6.51
3.25 YES
L0001199 0 0.50300E-07 542028.1 3752541.0 238.2 3.49 6.51
3.25 YES
L0001200 0 0.50300E-07 542028.2 3752555.0 238.7 3.49 6.51
3.25 YES
L0001201 0 0.50300E-07 542028.2 3752569.0 239.0 3.49 6.51
3.25 YES
L0001202 0 0.50300E-07 542028.3 3752583.0 239.0 3.49 6.51
3.25 YES
L0001203 0 0.50300E-07 542028.3 3752597.0 239.1 3.49 6.51
3.25 YES
L0001204 0 0.50300E-07 542028.4 3752611.0 239.5 3.49 6.51
3.25 YES
L0001205 0 0.50300E-07 542028.5 3752625.0 240.0 3.49 6.51
3.25 YES
L0001206 0 0.50300E-07 542028.5 3752639.0 240.5 3.49 6.51

3.25 YES
L0001207 0 0.50300E-07 542028.6 3752653.0 240.9 3.49 6.51
3.25 YES
L0001208 0 0.23210E-07 542028.2 3752661.5 241.0 3.49 6.51
3.25 YES
L0001209 0 0.23210E-07 542028.3 3752675.5 241.0 3.49 6.51
3.25 YES
L0001210 0 0.23210E-07 542028.4 3752689.5 241.1 3.49 6.51
3.25 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001211	0	0.23210E-07	542028.5	3752703.5	241.6	3.49	6.51	3.25	YES	
L0001212	0	0.23210E-07	542028.6	3752717.5	242.0	3.49	6.51	3.25	YES	
L0001213	0	0.23210E-07	542028.7	3752731.4	242.0	3.49	6.51	3.25	YES	
L0001214	0	0.23210E-07	542028.8	3752745.4	242.0	3.49	6.51	3.25	YES	
L0001215	0	0.23210E-07	542028.8	3752759.4	242.5	3.49	6.51	3.25	YES	
L0001216	0	0.23210E-07	542028.9	3752773.4	242.9	3.49	6.51	3.25	YES	
L0001217	0	0.23210E-07	542029.0	3752787.4	243.0	3.49	6.51	3.25	YES	
L0001218	0	0.23210E-07	542029.1	3752801.4	243.0	3.49	6.51	3.25	YES	
L0001219	0	0.23210E-07	542029.2	3752815.4	243.3	3.49	6.51	3.25	YES	
L0001220	0	0.23210E-07	542029.3	3752829.4	243.8	3.49	6.51	3.25	YES	
L0001221	0	0.23210E-07	542029.4	3752843.4	244.3	3.49	6.51			

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3.25     YES
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3.25     YES
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3.25     YES
 L0001225         0   0.23210E-07  542029.7 3752899.4   245.1     3.49     6.51
3.25     YES
 L0001226         0   0.23210E-07  542029.8 3752913.4   245.6     3.49     6.51
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3.25     YES
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3.25     YES
 L0001230         0   0.23210E-07  542030.1 3752969.4   246.5     3.49     6.51
3.25     YES
 L0001231         0   0.23210E-07  542029.9 3752983.4   246.9     3.49     6.51
3.25     YES
 L0001232         0   0.23210E-07  542029.7 3752997.4   247.3     3.49     6.51
3.25     YES
 L0001233         0   0.23210E-07  542029.5 3753011.4   247.6     3.49     6.51
3.25     YES
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3.25     YES
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3.25     YES
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3.25     YES
 L0001237         0   0.23210E-07  542028.8 3753067.4   248.7     3.49     6.51
3.25     YES
 L0001238         0   0.23210E-07  542028.6 3753081.4   249.0     3.49     6.51
3.25     YES
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 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/30/23
 *** AERMET - VERSION  16216 ***   ***
                          ***       16:24:26

                                    PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                              *** SOURCE IDs DEFINING SOURCE GROUPS
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                                          *** SOURCE IDs DEFINING SOURCE GROUPS
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                                          *** SOURCE IDs DEFINING SOURCE GROUPS
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 SRCGROUP ID                                                SOURCE IDs
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                                          *** SOURCE IDs DEFINING SOURCE GROUPS
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID   SOURCE IDs

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🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/30/23
 *** AERMET - VERSION  16216 ***   ***
                        ***        16:24:26

                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                        *** SOURCE IDs DEFINED AS URBAN SOURCES
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  URBAN ID   URBAN POP                                      SOURCE IDs
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP   SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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L0001544 , L0001545 , L0001546 ,

L0001547 , L0001548 , L0001549 , L0001550 , L0001551 ,
L0001552 , L0001553 , L0001554 ,

L0001555 , L0001556 , L0001557 , L0001558 , L0001559 ,
L0001560 , L0001561 , L0001562 ,

L0001563 , L0001564 , L0001565 , L0001566 , L0001567 ,
L0001568 , L0001569 , L0001570 ,

L0001571 , L0001572 , L0001573 , L0001574 , L0001575 ,
L0001576 , L0001577 , L0001578 ,

L0001579 , L0001580 , L0001581 , L0001582 , L0001583 ,
L0001584 , L0001585 , L0001586 ,

L0001587 , L0001588 , L0001589 , L0001590 , L0001591 ,
L0001592 , L0001593 , L0001594 ,

L0001595 , L0001596 , L0001597 , L0001598 , L0001599 ,
L0001600 , L0001601 , L0001602 ,

L0001603 , L0001604 , L0001605 , L0001606 , L0001607 ,
L0001608 , L0001609 , L0001610 ,

L0001611 , L0001612 , L0001613 , L0001614 , L0001615 ,
L0001616 , L0001617 , L0001618 ,

L0001619 , L0001620 , L0001621 , L0001622 , L0001623 ,
L0001624 , L0001625 , L0001626 ,

L0001627 , L0001628 , L0001629 , L0001630 , L0001631 ,
L0001632 , L0001633 , L0001634 ,

L0001635 , L0001636 , L0001637 , L0001638 , L0001639 ,
L0001640 , L0001641 , L0001642 ,

L0001643 , L0001644 , L0001645 , L0001646 , L0001647 ,
L0001648 , L0001649 , L0001650 ,

L0000942 , L0000943 , L0000944 , L0000945 , L0000946 ,
L0000947 , L0000948 , L0000949 ,

L0000950 , L0000951 , L0000952 , L0000953 , L0000954 ,

L0000955   , L0000956   , L0000957   ,

             L0000958   , L0000959   , L0000960   , L0000961   , L0000962   ,
L0000963   , L0000964   , L0000965   ,

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP   SOURCE IDs
  --------   ---------   ----------

             L0000966   , L0000967   , L0000968   , L0000969   , L0000970   ,
L0000971   , L0000972   , L0000973   ,

             L0000974   , L0000975   , L0000976   , L0000977   , L0000978   ,
L0000979   , L0000980   , L0000981   ,

             L0000982   , L0000983   , L0000984   , L0000985   , L0000986   ,
L0000987   , L0000988   , L0000989   ,

             L0000990   , L0000991   , L0000992   , L0000993   , L0000994   ,
L0000995   , L0000996   , L0000997   ,

             L0000998   , L0000999   , L0001000   , L0001001   , L0001002   ,
L0001003   , L0001004   , L0001005   ,

             L0001006   , L0001007   , L0001008   , L0001009   , L0001010   ,
L0001011   , L0001012   , L0001013   ,

             L0001014   , L0001015   , L0001016   , L0001017   , L0001018   ,
L0001019   , L0001020   , L0001021   ,

             L0001022   , L0001023   , L0001024   , L0001025   , L0001026   ,
L0001027   , L0001028   , L0001029   ,

             L0001030   , L0001031   , L0001032   , L0001033   , L0001034   ,
L0001035   , L0001036   , L0001037   ,

             L0001038   , L0001039   , L0001040   , L0001041   , L0001042   ,
L0001043   , L0001044   , L0001045   ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0001126 , L0001127 , L0001128 , L0001129 , L0001130 ,
L0001131 , L0001132 , L0001133 ,

L0001134 , L0001135 , L0001136 , L0001182 , L0001183 ,
L0001184 , L0001185 , L0001186 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(541592.0, 3752272.6, 233.0, 233.0, 0.0); (541704.8, 3752233.5, 232.0, 232.0, 0.0);
(541760.2, 3752233.5, 231.9, 231.9, 0.0); (541874.3, 3752283.3, 233.0, 233.0, 0.0);
(541966.7, 3752283.1, 233.0, 233.0, 0.0); (541965.7, 3752197.2, 231.0, 231.0, 0.0);
(542066.4, 3752283.4, 232.6, 232.6, 0.0); (541482.7, 3752277.8, 233.0, 233.0, 0.0);
(541987.4, 3752109.5, 229.8, 229.8, 0.0); (541986.9, 3752042.1, 228.0, 228.0, 0.0);
(541987.9, 3751980.6, 227.0, 227.0, 0.0); (542066.6, 3752139.5, 230.0, 230.0, 0.0);
(542102.8, 3753323.4, 254.3, 254.3, 0.0); (541995.7, 3753329.8, 254.5, 254.5, 0.0);
(541865.0, 3753324.4, 255.5, 255.5, 0.0); (542394.2, 3753229.1, 252.0, 252.0, 0.0);
(542395.1, 3753266.6, 252.4, 252.4, 0.0); (542258.5, 3752403.4, 235.6, 235.6, 0.0);

```
     ( 542251.0, 3752432.4,     236.6,     236.6,       0.0);         ( 542251.0,
3752454.3,     237.0,     237.0,       0.0);
     ( 542250.5, 3752572.8,     239.0,     239.0,       0.0);         ( 542257.4,
3752823.0,     244.0,     244.0,       0.0);
     ( 542082.7, 3753524.9,     259.0,     259.0,       0.0);         ( 542044.9,
3753606.2,     260.7,     260.7,       0.0);
     ( 542169.0, 3753525.9,     259.0,     259.0,       0.0);         ( 542264.4,
3753529.2,     259.0,     259.0,       0.0);
     ( 542403.6, 3753374.2,     255.0,     255.0,       0.0);         ( 542000.7,
3753721.5,     263.5,     263.5,       0.0);
     ( 541937.2, 3753717.9,     263.4,     263.4,       0.0);         ( 541973.0,
3753719.3,     263.5,     263.5,       0.0);
     ( 541891.9, 3753715.4,     263.3,     263.3,       0.0);         ( 541842.3,
3753716.8,     264.3,     264.3,       0.0);
     ( 542083.0, 3753566.8,     259.4,     259.4,       0.0);         ( 542084.1,
3753587.2,     260.1,     260.1,       0.0);
     ( 542083.5, 3753607.4,     260.7,     260.7,       0.0);         ( 542082.7,
3753625.0,     261.0,     261.0,       0.0);
     ( 542082.4, 3753645.4,     261.0,     261.0,       0.0);         ( 542081.8,
3753666.1,     261.7,     261.7,       0.0);
     ( 542047.4, 3753744.7,     264.0,     264.0,       0.0);         ( 542081.8,
3753726.0,     263.0,     263.0,       0.0);
     ( 542054.7, 3753825.0,     266.0,     266.0,       0.0);         ( 542007.4,
3753899.7,     268.0,     268.0,       0.0);
     ( 541820.0, 3753896.4,     268.4,     268.4,       0.0);         ( 541662.6,
3753971.3,     271.0,     271.0,       0.0);
     ( 541988.3, 3751926.4,     226.0,     226.0,       0.0);         ( 542062.1,
3751942.4,     226.2,     226.2,       0.0);
     ( 542155.3, 3752048.2,     228.8,     228.8,       0.0);         ( 542153.6,
3752003.2,     227.3,     227.3,       0.0);
     ( 541895.3, 3752099.6,     229.5,     229.5,       0.0);         ( 542161.0,
3752134.3,     230.0,     230.0,       0.0);
     ( 541601.7, 3752176.7,     231.0,     231.0,       0.0);         ( 541381.4,
3752406.6,     235.7,     235.7,       0.0);
     ( 542055.9, 3753624.3,     261.0,     261.0,       0.0);

 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/30/23
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                                   PAGE  31
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                          *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                              (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: KPSP_V9_ADJU\KPSP_v9.SFC
Met Version: 16216
Profile file: KPSP_V9_ADJU\KPSP_v9.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 93138 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN

Year: 2012 Year: 2012

First 24 hours of scalar data

```
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 12 01 01   1 01  -28.7  0.293 -9.000 -9.000 -999.  381.     94.4  0.13   4.07
1.00    3.32  328.   10.1  286.4    2.0
 12 01 01   1 02   -5.5  0.102 -9.000 -9.000 -999.  122.     17.6  0.13   4.07
1.00    1.23  320.   10.1  284.2    2.0
 12 01 01   1 03  -19.4  0.196 -9.000 -9.000 -999.  209.     42.5  0.13   4.07
1.00    2.27  306.   10.1  283.1    2.0
 12 01 01   1 04  -16.5  0.181 -9.000 -9.000 -999.  184.     35.9  0.13   4.07
1.00    2.10  328.   10.1  282.5    2.0
 12 01 01   1 05  -20.0  0.202 -9.000 -9.000 -999.  218.     44.9  0.13   4.07
1.00    2.33  328.   10.1  283.8    2.0
 12 01 01   1 06  -18.7  0.193 -9.000 -9.000 -999.  203.     40.9  0.13   4.07
1.00    2.23  325.   10.1  283.1    2.0
 12 01 01   1 07  -18.7  0.193 -9.000 -9.000 -999.  203.     40.9  0.13   4.07
1.00    2.23  327.   10.1  284.2    2.0
 12 01 01   1 08   -9.3  0.150 -9.000 -9.000 -999.  140.     32.5  0.13   4.07
0.52    1.74  297.   10.1  284.9    2.0
 12 01 01   1 09   50.6  0.130  0.399  0.011   45.  112.     -3.9  0.13   4.07
0.32    0.92  282.   10.1  291.4    2.0
 12 01 01   1 10  126.5  0.172  0.815  0.008  154.  171.     -3.6  0.13   4.07
0.25    1.20  233.   10.1  294.2    2.0
 12 01 01   1 11  179.5  0.134  1.299  0.005  439.  118.     -1.2  0.13   4.07
0.23    0.75  344.   10.1  297.5    2.0
 12 01 01   1 12  203.7  0.185  1.649  0.005  791.  192.     -2.8  0.13   4.07
0.22    1.23  100.   10.1  298.8    2.0
 12 01 01   1 13  199.8  0.234  1.913  0.005 1259.  271.     -5.7  0.13   4.07
0.22    1.76  110.   10.1  299.9    2.0
 12 01 01   1 14  167.6  0.236  1.916  0.005 1507.  275.     -7.0  0.13   4.07
0.24    1.84  124.   10.1  300.4    2.0
 12 01 01   1 15  108.5  0.273  1.697  0.005 1617.  342.    -16.8  0.13   4.07
0.27    2.40   92.   10.1  300.4    2.0
 12 01 01   1 16   27.5  0.235  1.080  0.005 1640.  275.    -42.5  0.13   4.07
0.37    2.27  144.   10.1  299.2    2.0
 12 01 01   1 17   -5.6  0.106 -9.000 -9.000 -999.   95.     19.2  0.13   4.07
0.66    1.28  204.   10.1  294.9    2.0
 12 01 01   1 18  -17.6  0.188 -9.000 -9.000 -999.  196.     39.0  0.13   4.07
1.00    2.18  314.   10.1  292.0    2.0
 12 01 01   1 19  -25.3  0.260 -9.000 -9.000 -999.  318.     74.4  0.13   4.07
1.00    2.96  322.   10.1  289.9    2.0
 12 01 01   1 20  -21.1  0.217 -9.000 -9.000 -999.  243.     51.7  0.13   4.07
1.00    2.49  314.   10.1  289.2    2.0
 12 01 01   1 21  -26.7  0.275 -9.000 -9.000 -999.  346.     83.0  0.13   4.07
1.00    3.12  314.   10.1  290.4    2.0
 12 01 01   1 22  -22.1  0.226 -9.000 -9.000 -999.  259.     56.2  0.13   4.07
1.00    2.59  317.   10.1  288.8    2.0
 12 01 01   1 23  -28.1  0.285 -9.000 -9.000 -999.  365.     89.2  0.13   4.07
1.00    3.23  328.   10.1  285.4    2.0
```

```
 12 01 01   1 24  -33.3  0.338 -9.000 -9.000 -999.  472.    125.8  0.13   4.07
1.00    3.81  331.   10.1  286.4    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01   10.1 1  328.    3.32   286.5   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15097
Indian Cyn\15097 Ops\1509 ***        03/30/23
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     L0001137    , L0001138
 , L0001139    , L0001140    , L0001141    ,
                 L0001142    , L0001143    , L0001144    , L0001145    , L0001146
 , L0001147    , L0001148    , L0001149    ,
                 L0001150    , L0001151    , L0001152    , L0001153    , L0001154
 , L0001155    , L0001156    , L0001157    ,
                 L0001158    , L0001159    , L0001160    , L0001161    , L0001162
 , L0001163    , L0001164    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                       ** CONC OF DPM      IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         541591.96    3752272.59        0.00052                      541704.76
3752233.52        0.00070
         541760.21    3752233.52        0.00080                      541874.28
3752283.31        0.00158
         541966.73    3752283.07        0.00153                      541965.74
3752197.21        0.00084
         542066.40    3752283.40        0.00098                      541482.67
3752277.81        0.00026
         541987.40    3752109.48        0.00078                      541986.94
3752042.09        0.00069
         541987.85    3751980.62        0.00065                      542066.62
3752139.53        0.00094
```

```
         542102.76    3753323.42        0.00009                        541995.73
3753329.77        0.00011
         541865.00    3753324.45        0.00007                        542394.21
3753229.08        0.00005
         542395.05    3753266.56        0.00005                        542258.49
3752403.43        0.00026
         542250.98    3752432.37        0.00026                        542250.98
3752454.34        0.00025
         542250.45    3752572.78        0.00021                        542257.41
3752823.05        0.00013
         542082.74    3753524.94        0.00009                        542044.89
3753606.23        0.00015
         542168.98    3753525.93        0.00006                        542264.42
3753529.22        0.00005
         542403.64    3753374.20        0.00004                        542000.70
3753721.51        0.00010
         541937.19    3753717.88        0.00006                        541973.00
3753719.28        0.00007
         541891.86    3753715.36        0.00005                        541842.34
3753716.76        0.00004
         542082.95    3753566.80        0.00009                        542084.07
3753587.22        0.00009
         542083.51    3753607.37        0.00008                        542082.67
3753624.99        0.00008
         542082.39    3753645.41        0.00008                        542081.83
3753666.12        0.00008
         542047.42    3753744.74        0.00014                        542081.83
3753725.99        0.00008
         542054.69    3753825.03        0.00011                        542007.41
3753899.73        0.00013
         541819.96    3753896.38        0.00008                        541662.55
3753971.28        0.00004
         541988.32    3751926.42        0.00061                        542062.06
3751942.36        0.00082
         542155.30    3752048.20        0.00043                        542153.63
3752003.25        0.00041
         541895.32    3752099.58        0.00046                        542161.01
3752134.31        0.00045
         541601.67    3752176.70        0.00028                        541381.37
3752406.64        0.00021
         542055.87    3753624.32        0.00012

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Indian Cyn\15097 Ops\1509 ***        03/30/23
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                                  PAGE  34
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***

** CONC OF DPM   IN MICROGRAMS/M**3
**

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00158 AT (541874.28, 3752283.31, 233.00, 233.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.00153 AT (541966.73, 3752283.07, 233.00, 233.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.00098 AT (542066.40, 3752283.40, 232.60, 232.60, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.00094 AT (542066.62, 3752139.53, 230.00, 230.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.00084 AT (541965.74, 3752197.21, 231.00, 231.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.00082 AT (542062.06, 3751942.36, 226.23, 226.23, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.00080 AT (541760.21, 3752233.52, 231.94, 231.94, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.00078 AT (541987.40, 3752109.48, 229.80, 229.80, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.00070 AT (541704.76, 3752233.52, 231.97, 231.97, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.00069 AT (541986.94, 3752042.09, 228.00, 228.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

```
 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of          709 Informational Message(s)

A Total of        43848 Hours Were Processed

A Total of          289 Calm Hours Identified

A Total of          420 Missing Hours Identified (  0.96 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W186    1745       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
ME W187    1745       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

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APPENDIX 2.4:

RISK CALCULATIONS

Construction Risk

Receptor No.	Age Bin	DPM Conc. (µg/m^3)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk								
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
1	0 to 2	0.00034	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	2.6E-07	0.05	5.0E+00	1.4E-03	6.8E-05						
												Total	0.05			6.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2	0 to 2	0.00040	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.1E-07	0.06	5.0E+00	1.4E-03	8.0E-05						
												Total	0.06			8.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3 (MEIR)	0 to 2	0.00062	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	4.8E-07	0.09	5.0E+00	1.4E-03	1.2E-04						
												Total	0.09			1.2E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4	0 to 2	0.00036	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	2.8E-07	0.05	5.0E+00	1.4E-03	7.2E-05						
												Total	0.05			7.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5 (MEIW)	16 to 41	0.04061	260	1.29	230	1	70	1.00	1	3.0E-04	1.1E+00	6.7E-06	0.13	5.0E+00	1.4E-03	8.1E-03						
												Total	0.13			8.1E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Operational Risk

Receptor No.	Age Bin	DPM Conc. ($\mu g/m^3$)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk							
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
1	-0.25 to 0	0.00010	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	3.5E-08	0.00	5.0E+00	1.4E-03	2.0E-05						
	0 to 2	0.00010	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	1.0E-07	0.03	5.0E+00	1.4E-03	2.0E-05						
	2 to 16	0.00010	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	5.5E-08	0.02	5.0E+00	1.4E-03	2.0E-05						
	16 to 30	0.00010	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.5E-08	0.00	5.0E+00	1.4E-03	2.0E-05						
												Total	0.06			8.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2	-0.25 to 0	0.00009	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	3.1E-08	0.00	5.0E+00	1.4E-03	1.8E-05						
	0 to 2	0.00009	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	9.4E-08	0.02	5.0E+00	1.4E-03	1.8E-05						
	2 to 16	0.00009	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	4.9E-08	0.02	5.0E+00	1.4E-03	1.8E-05						
	16 to 30	0.00009	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.3E-08	0.00	5.0E+00	1.4E-03	1.8E-05						
												Total	0.05			7.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3	-0.25 to 0	0.00009	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	3.1E-08	0.00	5.0E+00	1.4E-03	1.8E-05						
	0 to 2	0.00009	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	9.4E-08	0.02	5.0E+00	1.4E-03	1.8E-05						
	2 to 16	0.00009	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	4.9E-08	0.02	5.0E+00	1.4E-03	1.8E-05						
	16 to 30	0.00009	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.3E-08	0.00	5.0E+00	1.4E-03	1.8E-05						
												Total	0.05			7.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4 (MEIR)	-0.25 to 0	0.00014	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	4.8E-08	0.00	5.0E+00	1.4E-03	2.8E-05						
	0 to 2	0.00014	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	1.5E-07	0.04	5.0E+00	1.4E-03	2.8E-05						
	2 to 16	0.00014	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	7.7E-08	0.03	5.0E+00	1.4E-03	2.8E-05						
	16 to 30	0.00014	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	3.5E-08	0.01	5.0E+00	1.4E-03	2.8E-05						
												Total	0.08			1.1E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5 (MEIW)	16 to 41	0.00158	250	25	230	1	70	1.00	1	3.0E-04	1.1E+00	2.5E-07	0.09	5.0E+00	1.4E-03	3.2E-04						
												Total	0.09			3.2E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Combined Construction and Operational Risk

Receptor No.	Age Bin	DPM Conc. (µg/m^3)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk								
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
1	0 to 2	0.00034	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	2.6E-07	0.05	5.0E+00	1.4E-03	6.8E-05						
	0 to 2	0.00010	350	0.71	1090	1	70	0.85	10	3.0E-04	1.1E+00	1.0E-07	0.01	5.0E+00	1.4E-03	2.0E-05						
	2 to 16	0.00010	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	5.5E-08	0.02	5.0E+00	1.4E-03	2.0E-05						
	16 to 30	0.00010	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.5E-08	0.00	5.0E+00	1.4E-03	2.0E-05						
												Total	0.09			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2	0 to 2	0.00040	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.1E-07	0.06	5.0E+00	1.4E-03	8.0E-05						
	0 to 2	0.00009	350	0.71	1090	1	70	0.85	10	3.0E-04	1.1E+00	9.4E-08	0.01	5.0E+00	1.4E-03	1.8E-05						
	2 to 16	0.00009	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	4.9E-08	0.02	5.0E+00	1.4E-03	1.8E-05						
	16 to 30	0.00009	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.3E-08	0.00	5.0E+00	1.4E-03	1.8E-05						
												Total	0.09			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3 (MEIR)	0 to 2	0.00062	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	4.8E-07	0.09	5.0E+00	1.4E-03	1.2E-04						
	0 to 2	0.00009	350	0.71	1090	1	70	0.85	10	3.0E-04	1.1E+00	9.4E-08	0.01	5.0E+00	1.4E-03	1.8E-05						
	2 to 16	0.00009	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	4.9E-08	0.02	5.0E+00	1.4E-03	1.8E-05						
	16 to 30	0.00009	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.3E-08	0.00	5.0E+00	1.4E-03	1.8E-05						
												Total	0.13			1.8E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4	0 to 2	0.00036	260	1.29	1090	1	70	1.00	10	3.0E-04	1.1E+00	2.8E-07	0.05	5.0E+00	1.4E-03	7.2E-05						
	0 to 2	0.00014	350	0.71	1090	1	70	0.85	10	3.0E-04	1.1E+00	1.5E-07	0.01	5.0E+00	1.4E-03	2.8E-05						
	2 to 16	0.00014	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	7.7E-08	0.03	5.0E+00	1.4E-03	2.8E-05						
	16 to 30	0.00014	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	3.5E-08	0.01	5.0E+00	1.4E-03	2.8E-05						
												Total	0.11			1.6E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5 (MEIW)	16 to 41	0.04061	260	1.29	230	1	70	1.00	1	3.0E-04	1.1E+00	6.7E-06	0.13	5.0E+00	1.4E-03	8.1E-03						
	16 to 41	0.00158	260	23.71	230	1	70	1.00	1	3.0E-04	1.1E+00	2.6E-07	0.09	5.0E+00	1.4E-03	3.2E-04						
												Total	0.22			8.4E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

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Appendix D

Biology Report

GENERAL and FOCUSED
BIOLOGICAL RESOURCE ASSESSMENT
and
CVMSHCP CONSISTENCY ANALYSIS

38.19-Acre
Palm Springs Site

Located Within
Township 3 South, Range 4 East, Section 15
Parcel 666-320-018-2
Palm Springs, Riverside County, California

Prepared For:
Mr. David Snider
Snider Interests, LLC
730 Arcady Road
Montecito, California 93108
E-mail dsnider@sniderinterests.com

Field Study and Report Completed By:
JAMES W. CORNETT
Ecological Consultant
P.O. Box 846
Palm Springs, California 92263
Telephone 760-320-8135

December 20, 2022

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EXECUTIVE SUMMARY

Development of a 38.19-acre site necessitated a biological survey and impact analysis as required by the California Environmental Quality Act (CEQA) and city of Palm Springs.

The burrowing owl is a state and federally protected species and not functionally covered under the Coachella Valley Multiple Species Habitat Conservation Plan. The species was observed on five occasions and an active burrow was found. The entire site is considered suitable habitat for the owl. For these reasons, the California Department of Fish & Game recommends that a burrowing owl clearance survey be conducted prior to site disturbance.

No evidence of the loggerhead shrike was recorded. The shrike is a non-covered bird under the CVMSHCP though considered a Species of Special Concern by the state of California. Potential breeding habitat for this species was not found within the project site boundaries. Future breeding surveys are not recommended.

Casey's June beetle, another non-covered species and classified as Endangered by the federal government, was not detected during the surveys. Additionally, the site is not within the survey area established by the U.S. Fish & Wildlife Service. No future surveys for this species within the project boundaries are required or recommended.

Though the desert tortoise is a covered species under the CVMSHCP, clearance surveys to relocate tortoises found on a project site are necessary prior to site disturbance. Focused, protocol-level surveys revealed no evidence of the desert tortoise within or adjacent to the project site and, therefore, no clearance surveys for this species are recommended.

The site is located within the Coachella Valley Multiple Species Habitat Plan area (CVMSHCP, "the Plan"). Impacts to many sensitive species and habitats are mitigated by the payment of a fee to the Coachella Valley Association of Governments. The project applicant should contact CVAG to determine the amount due at the time a grading permit is issued.

The project site is not within, or adjacent to, a Conservation Area as shown in the CVMSHCP. Therefore, other than the payment of the mitigation fee, no other action is necessary regarding the CVMSHCP.

It is concluded the Project, upon execution of recommendations described in this report, will not have significant adverse impacts upon biological resources in the region.

I. INTRODUCTION

On November 17, 2022, James W. Cornett - Ecological Consultant, was retained by Mr. David Snider of Snider Interests, LLC, to conduct a biological survey and resource analysis on a 38.19-acre site located north of Interstate 10 and adjacent to Indian Canyon Drive in the city of Palm Springs, Riverside County, California. The project site lies within Section 15, Township 3 South, Range 4 East (San Bernardino Baseline and Meridian). The regional location is shown in Figure 1, area location in Figure 2 and specific location with project boundaries in Figure 3. Site photographs are shown in Figures 4-7.

This study was part of an environmental assessment mandated by the California Environmental Quality Act (CEQA) and city of Palm Springs. The biological survey and impact analysis were designed to ascertain impacts of development on the biological resources of the project site and immediate vicinity.

Specific purposes of the biological surveys and impact analysis are listed below.

1. Determine the vascular plant and animal species that occur on, and immediately adjacent to, the project site.

2. Ascertain the presence of plant or animal species given special status by government agencies; emphasis is on sensitive species or communities *not covered* under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

3. Ascertain the existence of other significant biotic elements, corridors, or communities.

4. Consider the site's biological resources as they relate to the CVMSHCP and its Conservation Areas.

5. If necessary and where appropriate, recommend measures to mitigate significant adverse impacts of the project on sensitive species and habitats not covered in the Plan but determined to occur within, or immediately adjacent to, the project boundaries.

Figure 1. Regional Location

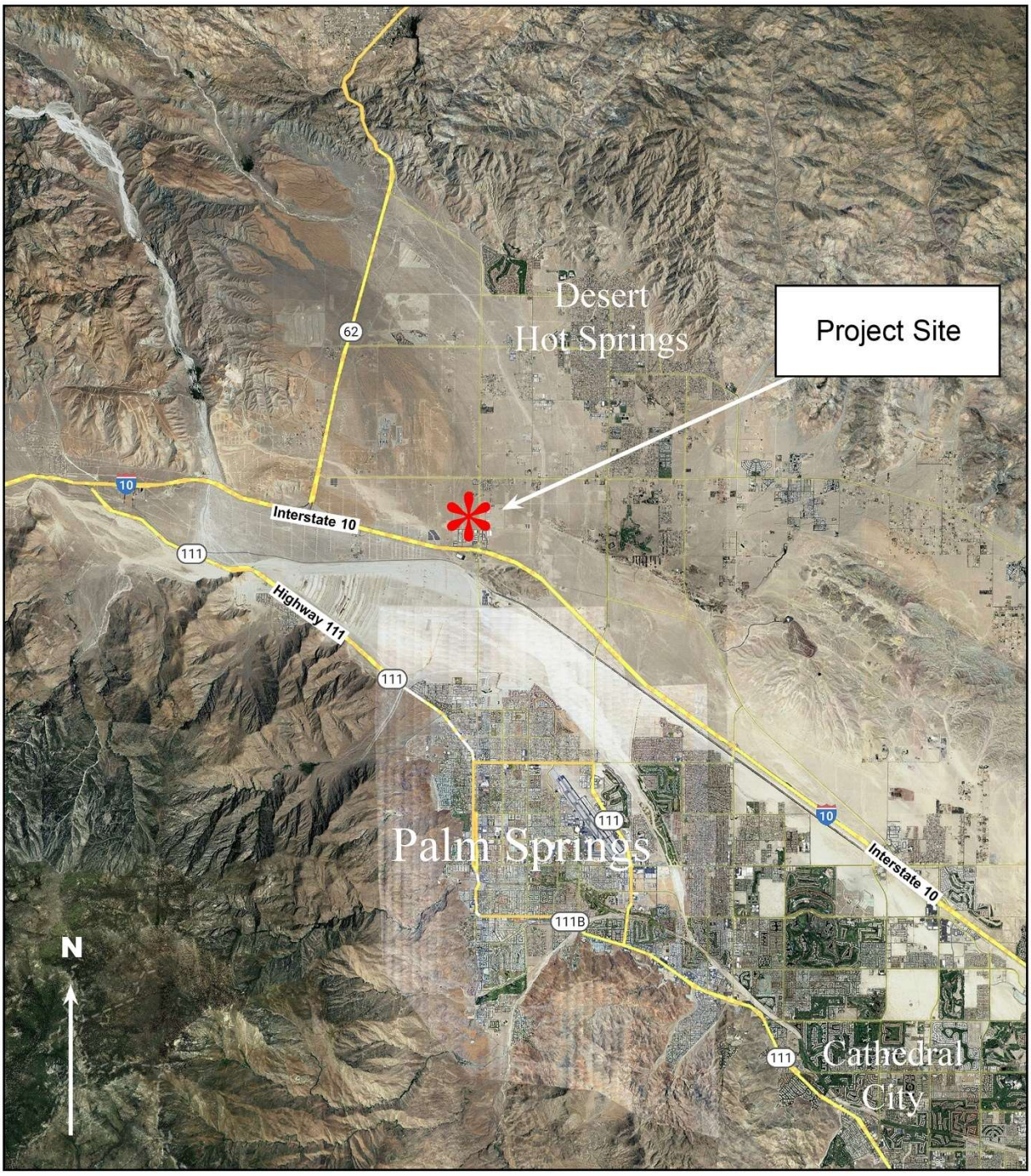


Figure 2. Area Location

Figure 3. Project Site (in red)

BO = Active burrowing owl tunnel

Figures 4-7. Project Site Images

Figure 4. View across site to northheast.

Figure 5. View across site to northwest.

Figure 6. View across site to southwest.

Figure 7. View across site to southeast.

II. SITE AND PROJECT DESCRIPTIONS

Climate

The project area lies within the confines of a geographical region known as the Colorado Desert (Jaeger, 1957). As is typical of this subdivision of the Sonoran Desert, annual rainfall averages just under six inches (National Climatic Center, 2021). Most precipitation falls during winter and early spring with occasional summer storms accounting for approximately one-fifth the annual total. Winter days are mild, averaging 71 degrees Fahrenheit. Winter nights occasionally drop to near freezing. July brings the hottest temperatures with daytime highs averaging 107 degrees F.

Physical Features

The elevation of the project site is approximately 780 feet above sea level. There is no topographical relief. The environment of the project site is part of the desert scrub habitat of the valley floor as described in the Coachella Valley Multiple Species Habitat Conservation Plan.

There are no naturally occurring springs or permanent aquatic habitats within or near the project site boundaries. Soil characteristics are relatively uniform over the entire site. Surface soil is sandy with pebbles, cobbles, and scattered large boulders.

Surrounding Lands

Indian Canyon Drive, an often busy four-lane roadway, forms the eastern boundary of the project site. A light industrial park lies to the immediate east of Indian Canyon Drive. Light industry also lies along the project site's southern boundary. Fenced electrical generating developments occur on the parcel to the immediate west. Undisturbed creosote scrub habitat occurs to the north of the site.

Existing Impacts

Off-road-vehicle tracks were noted over much of the site. They have impacted approximately 5% of the terrain. Some refuse was found but covers less than 1% of the site.

Project Description

The project proponent desires to grade approximately 45% of the site and construct a 771,100 square foot warehouse and distribution center.

III. STUDY METHODS

Prior to the initiation of field work, reviews of the literature and institutional records were conducted to determine the biological resources that might exist within the Coachella Valley and to determine the possible occurrence of special status species. Records, collections, websites and/or staff of the University of California at Riverside Herbarium, the Boyd Deep Canyon Desert Research Center, the Coachella Valley Association of Governments, and the Calflora website were consulted for specific information regarding the occurrence of sensitive species. The California Department of Fish & Game Natural Diversity Database was also consulted.

Field surveys for plant and animal species were initiated on November 18, 2022. Daytime field surveys were conducted on November 18, 19, 20, 27, 28, 30 December 2, 3, 4, 2022. Night surveys were conducted on November 18, 21, and 22, 2022.

Survey dates were in fall when perennial plant species and resident bird and mammal species could be detected. Most ephemeral plant species, however, bloom in spring and would not be in evidence in November and December. This would also be true of most arthropod and reptile species. This limitation does not affect the findings in this report because (1) information on sensitive species has been described in other surveys in the area and (2) there was no available historical information indicating sensitive species, other than those described in this report, are present.

Surveys were conducted by walking north-south transects at 10-yard intervals through the project site and one hundred yards beyond the northern site boundary. Offsite surveys could not be conducted to the south, east and west of the project site as they are developed private properties. The survey pattern and intensity has been approved by the U.S. Fish & Wildlife Service and California Department of Fish & Wildlife for determining the presence or absence of the burrowing owl and desert tortoise.

Animal surveys were conducted simultaneously with plant surveys. In addition, twenty live-animal traps (which capture animals unharmed) for large and small mammals were set within the project site for twenty-four-hour periods on November 21 and 22, 2022.

Though scientific name changes occur as new discoveries are made in plant and animal taxonomy, the scientific names used in this report are taken from the standard and most available references describing the species found in the desert regions of Southern California—Bruce G. Baldwin's *The Jepson Manual* (Second Edition) published in 2012; D. P. Tibor's *Inventory of rare and endangered vascular plants of California* published in 2001; R. A. Stebbins and S. M. McGinnis' *Field guide to amphibians and reptiles of California* published in 2012; Peterson's *Birds of North America* published in 2008; and E. W. Jameson's and H. J. Peeters' *California mammals* published in 2004. Plant common names used in this report are taken from Baldwin

(2012), Jaeger (1969) and Tibor (2001). Animal common names are taken from Stebbins and McGinnis (2012), Peterson (2008) and Jameson and Peeter (2004).

Fieldwork was conducted by James Cornett (M.S.) and Blake Gonzales (B.S.). Andrew Sanders and Mr. Cornett made plant identifications. Terry Belknap conducted the literature review. Animal remains were identified by Mr. Cornett. The report was written by Mr. Cornett.

IV. PLANT SURVEY RESULTS

One climax plant community exists on site: the site Sonoran creosote bush scrub community as described by Sawyer Keeler-Wolf (1995). Sonoran creosote bush scrub community dominates vegetation beyond the project site and is the pervasive plant community throughout the Colorado Desert of southeastern California. The most abundant climax plant on the site was the creosote bush (*Larrea tridentata*) followed by burrobush (*Ambrosia dumosa*), Mojave indigo bush (*Psorothamnus arborescens*), brittlebush (*Encelia farinosa*), and Emory's Dalea (*Dalea emoryi*).

Soil disturbance in and around the project site resulted in intrusion of weed species that germinate and grow after damage or removal of native vegetation. On the project site, such species include Sahara mustard (*Brassica tournefortii*), bugseed (*Dicoria canescens*) and Schismus grass (*Schismus barbatus*). Each of these species occur in the Colorado Desert wherever the natural vegetation has been removed.

The Inventory of Rare and Endangered Vascular Plants of California, published by the California Native Plant Society (2001), the CNDDB Special Plant List (2021) or the *Endangered, Threatened, and Rare Plants of California* (2021) list a total of twenty-seven plants species occurring within the three U.S. G. S. quadrangles considered in this study (Palm Springs, Desert Hot Springs, and Seven Palms Valley). Seven of these species could conceivably occur on the project site. They are the glandular ditaxis (*Ditaxis clariana*), ribbed cryptantha (*Johnstonella costata*), flat-seeded spurge (*Chamaesyce platysperma*), Coachella Valley milk vetch (*Astragalus lentiginosus coachellae*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), slender cottonheads (*Nemacaulis denudate gracilis*), and Little San Bernardino Mountains Linanthus (*Linanthus maculatus*).

1. The glandular ditaxis is a rare perennial herb that blooms from December through March. It is restricted to sandy environments in the Sonoran Desert and has been found in the Coachella Valley at elevations like those found on the project site. Since the glandular ditaxis is a perennial, it likely would be detected during the plant surveys. It was not detected and therefore presumed to not occur onsite. The glandular ditaxis is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time.

2. The ribbed cryptantha is an uncommon ephemeral known to occur on sandy soils in the Coachella Valley. The project site can be considered suitable habitat for this species. It was not detected but the surveys were conducted in November and early December when it is unlikely that this winter- and spring-blooming species would be detected. The ribbed cryptantha is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time. Additionally, no records exist on or near the project site. For these reasons, no additional surveys are recommended.

3. The flat-seeded spurge is an extremely rare ephemeral herb known to occur on sandy soils in the Sonoran Desert. There has been at least one specimen found in the Coachella Valley. The species was not detected but the surveys were done in November when many ephemerals would not be in evidence. The flat-seeded spurge is not listed as rare, threatened, or endangered by state or federal governments nor is it proposed to be listed. Additionally, there are no records of its presence on or adjacent to the project site. For these reasons, no additional surveys for this species are recommended.

4. The Coachella Valley milk vetch is an uncommon, spring-blooming perennial herb that is known to occur on sandy soils in the Coachella Valley. No individuals were detected on or near the project site. This subspecies has been found less than a mile from the project site in similar habitat (Cornett, personal files). Seeds of this species may, therefore, occur on the project site. The milk vetch is listed as endangered by the U.S. Fish & Wildlife Service. Impacts to the milk vetch are fully mitigated by the CVMSHCP through the payment of the Plan mitigation fee. No further action is necessary.

5. White-bracted spineflower is a small ephemeral found on sand or gravel plains at middle elevations primarily west of Highway 62. A handful of specimens have been found in the northwestern Coachella Valley. It was not detected during surveys but would not be in bloom and unlikely to be detected in November or early December. It is not listed by state or federal government nor is it a candidate for listing. In addition, it has never been found on, or immediately adjacent to, the project site. Therefore, no additional surveys for this species are recommended.

6. The Little San Bernardino Mountains Linanthus is a small ephemeral found primarily in the northwestern Coachella Valley. It is not known to be in bloom and in evidence in November and early December when the field surveys were conducted. The species usually occurs on sandy benches adjoining washes, a habitat not found within, or immediately adjacent to, the project site. It is not officially listed by either state or federal governments though is considered a species of special concern by the state. It is a covered species under the CVMSHCP and, other than paying the mitigation fees, no other actions are required.

7. Slender cottonheads is a small ephemeral found across the Sonoran Desert of California. Several individuals have been found in the Coachella Valley though all were found south of the project site. There is a slight chance this subspecies could occur in the project area though no evidence of it was located. No records exist for its presence on, or immediately adjacent to, the project boundaries. The subspecies is not officially listed by either the state or federal government nor is it a candidate for listing. For these reasons, no additional surveys for this species are recommended.

In summary, there is no evidence or records that any plant species considered sensitive occurs within the project site boundaries. More importantly, any species that might occur on the project

site is either a covered species under the CVMSHCP or not listed (or a candidate for listing) by either the state or federal governments. Therefore, there are no recommendations for future botanical surveys or mitigation.

A complete list of vascular plant species found on the project site can be found in Table 1 of the Appendix. A complete list of sensitive vascular plants considered for inclusion in the report has been placed in Table 3. Taxonomic nomenclature follows Baldwin (2012). Common names are taken from Jaeger (1969), Baldwin (2012), Munz (1974) and Tibor (2001).

V. ANIMAL SURVEY RESULTS

The fauna of the project site and surrounding vicinity is composed of species typical of the Colorado Desert subdivision of the Sonoran Desert as defined by Jaeger (1957).

Arthropods

Encountered arthropods on the site included Becker's white butterfly (*Pontia beckerii*), sand scorpion (*Paruroctonus mesaensis*), ghost beetle (*Asbolus verrucosus*), and harvester ant (*Pogonomyrmex californicus*).

Two insect species known to occur within the Coachella Valley have been placed on the California Department of Fish and Game's *Special Animals* list. They are the Coachella giant sand treader cricket (*Macrobaenetes valgum*) and Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*). The United States Fish & Wildlife Service has listed as endangered a third insect species, Casey's June beetle, *Dinacoma caseyi*. (Casey's June beetle is not a covered species under the CVMSHCP.) None of these three insect species were found during the surveys. The former two would not be found within the project boundaries because they prefer areas of windblown sand, a habitat not found in the immediate area. Casey's June beetle is a federally listed species but has never been found north of Vista Chino Road in Palm Springs.

Amphibians and Reptiles

The only detected reptile within the project site boundaries was the side-blotched lizard (*Uta stansburiana*). No individuals of the officially threatened Coachella Valley fringe-toed lizard, *Uma inornata*, were observed, detected, or expected due to the absence of areas of loose, windblown sand.

A concerted effort was made to locate sign of the officially listed desert tortoise (*Goperhus agassizi*). However, no evidence of any kind (shell fragments, scat, tracks, burrows) was found and no direct observations were made. It is concluded this species does not occur within the project site and immediate vicinity at this time and no additional surveys for this species are recommended.

An intensive effort was also made to locate evidence of the flat-tailed horned lizard, *Phrynosoma mcallii.* However, no individuals were observed, and no sign (scat, tracks) was found. The lizard requires areas of loose windblown sand, a habitat not found within the project boundaries. The flat-tailed horned lizard was proposed to be listed by the federal government as threatened, but proposal has been rescinded. The state government considers the flat-tailed horned lizard a

Species of Special Concern. The lizard is a covered species under the CVMSHCP and specific mitigation for it is not required. No amphibian species were found during the surveys, and none are expected.

Birds

Frequently observed birds within the project area were the common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*) and house sparrow (*Passer domesticus*).

No observations or calls of LeConte's thrasher (*Toxostoma lecontei*) were recorded during the surveys. In the Coachella Valley, this species is strongly associated with golden cholla in which it nests. The golden cholla cacti within the project boundaries are considered to small (less than two feet in height) to provide nesting or roosting sites for the thrasher. The LeConte's thrasher is a covered species under the CVMSHCP.

Two special-status avian species, potentially occurring within the project boundaries, are the burrowing owl (*Athene cunicularia*) and loggerhead shrike (*Lanius ludovicianus*).

Burrowing Owl

The burrowing owl was observed five times during the field surveys and one active burrow with one owl was found within the site boundaries (see Figure 3 for location). The entire site is considered suitable burrowing owl habitat with friable soil and rodent burrows that could be expanded in size by the owls. Expanded rodent burrows are used as shelter and for nesting by the owls. No active nests were found during the survey days.

Loggerhead Shrike

No observations of the loggerhead shrike were recorded. Shrikes nest in dense shrubs or trees that are at least three four feet in height. No such plants exist within or immediately adjacent to the project site. The shrike is a non-covered species and considered a Species of Special Concern by the state of California. Due to the lack of suitable nesting sites for the shrike, no spring breeding surveys for this species are recommended.

Mammals

Recorded mammals included the long-tailed pocket mouse (*Chaetodipus formosus*), cactus mouse (*Peromyscus eremicus*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis*

latrans). No individuals of the Palm Springs Pocket Mouse (*Perognathus longimembris bangsi*) were found.

No individuals of the desert kit fox (*Vulpes macrotis arsipus*) were observed or detected on or near the project site. Human activity in lands surrounding the site is the likely explanation for its absence. The desert kit fox is fully protected in California and is not a covered species under the Plan.

Bat roosting sites so not exist in or immediately adjacent to the project site.

One mammalian species that was detected (burrows) and contained within the California Department of Fish & Game *Special Animals List* is the Palm Springs ground squirrel (*Spermophilus tereticaudus chlorus*). The Palm Springs ground squirrel is considered a state Species of Special Concern. In the past, it was considered a candidate species for listing by the United States Fish & Wildlife Service. It likely occurs on or near the site but is a covered species under the CVMSHCP and mitigation is provided under the Plan.

Wildlife Corridors

No concentration of animal tracks was found on or near the project boundaries. Track concentrations can be an indicator of wildlife corridors.

A complete list of vertebrate species observed or detected on the project site can be found in Table 2 in the Appendix.

VI. FINDINGS AND RECOMMENDATIONS

Intensive plant and animal surveys were conducted within and to the north of the proposed project boundaries. The federally endangered Coachella Valley milk vetch may occur on site as it has been found in the general region. The Palm Springs ground squirrel was detected within site boundaries. Both organisms are "covered" under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHC). Mitigation for impacts to these species is accomplished through payment of a fee to the Coachella Valley Association of Governments. Fees vary depending upon the use to which the land is put, acreage and density. Contact the Coachella Valley Association of Governments to determine current fees.

The remaining comments are restricted to those species or habitats not covered under the CVMSHCP or that are only partially covered.

Casey's June Beetle

Though the federally endangered Casey's June beetle is known to occur in the Coachella Valley, it has not been found north of Ramon Road in Palm Springs, approximately ten miles south of the project site. Therefore, no focused surveys are recommended for Casey's June beetle and no mitigation is required or recommended.

Desert Tortoise

Though the desert tortoise is a covered species under the CVMSHCP, clearance surveys for the tortoise may be required by the United State Fish & Wildlife Service prior to grubbing, grading or other site disturbance. The desert tortoise occurs in the Coachella Valley but is not currently known to be present on the valley floor. The overwhelming majority of observations have been on upper bajadas surrounding the valley.

In keeping with this distribution pattern, protocol-level surveys revealed no evidence of the desert tortoise within or adjacent to the project site. Therefore, no additional surveys or actions regarding this species are recommended or required.

Burrowing Owl

The project site is suitable habitat for the protected burrowing owl and the owl was observed within the project boundaries on five occasions. An active burrow was also found with a single owl occupying it. For these reasons, the California Department of Fish and Wildlife recommends a burrowing owl clearance survey be undertaken from 14 to 30 days prior to site disturbance. A final clearance survey should be conducted 24 hours prior to ground disturbance. The purpose of the surveys is to make sure no owls are present during site disturbance. Should the surveys reveal an active burrow between February 1 and August 31 (the nesting period from spring into summer), the burrow must be protected with a buffer zone to be determined by a qualified biologist with documented burrowing owl experience. Formal consultation with the California Department of Fish & Wildlife may result in allowing the project proponent to relocate owls under certain circumstances. Should surveys reveal an active burrow between September 1 through January 31, an exclusion gate may be placed on the burrow which allows the occupying owl to leave, but not return to, the burrow.

Absence of natural shelters and surface water preclude the site being considered a significant resource for other migratory bird species.

Loggerhead Shrike

The loggerhead shrike is a state Species of Special Concern and not covered under the CVMSHCP. As there are no suitable nesting sites within the project boundaries, no additional surveys for this species are recommended.

Mitigation Summary

1. Contact CVAG to determine precise mitigation fees applicable under the CVMSHCP.

2. Conduct clearance surveys for the burrowing owl not less than 14 days prior to site disturbance and then again 24 hours prior to site disturbance.

Conclusion

Development of the proposed project site will not have significant adverse impacts upon biological resources in the region providing the mitigation and recommendations described above are implemented.

VII. REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken. 2012. *The Jepson Manual: Vascular Plants of California.* (Second Edition) University of California Press, Berkeley, California.

California Department of Fish & Game. February 2021. Natural Diversity Database.

California Department of Fish & Game. 2012. Staff Report on Burrowing Owl Mitigation. Natural Resources Agency, State of California.

California Department of Fish & Game *Special Animals List* (2021). Natural Resources Agency, State of California.

Coachella Valley Association of Governments. 2006. *The Coachella Valley Multiple Species Habitat Conservation Plan*. Coachella Valley Association of Governments, Palm Desert, California.

Cornett, J. W. 2009. *Wonders of the Coachella Valley.* Nature Trails Press, Palm Springs, California.

Cornett, J. W. 2021. *Wildflowers of Joshua Tree National Park*. Nature Trails Press, Palm Springs, California.

Fish and Wildlife Service. 2009. Department of the Interior, Fish and Wildlife Service 50 CFR Part 17. Federal Register Vol. 74, No. 215.

Garrett, K., and J. Dunn. 1981. *Birds of Southern California*. Los Angeles Audubon Society, Los Angeles, CA.

Jaeger, E. C. 1957. *The North American deserts*. Stanford University Press, Stanford, California.

Jaeger, E. C. 1969. *Desert wildflowers*. Stanford University Press, Stanford, California.

Jameson, E. W. Jr., and H. J. Peeters. 2004. *Mammals of California*. University of California Press, Berkeley, CA.

Munz, P. A. 1974. *Flora of Southern California.* University of California Press, Berkeley, California.

National Climatic Data Center. 2019. Climatic summaries, Asheville, North Carolina.

Peterson, R. T. 2008. *Peterson field guide to birds of North America.* Houghton Mifflin Company, New York, New York.

Sawyer, J. O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation.* California Native Plant Society, Sacramento, California.

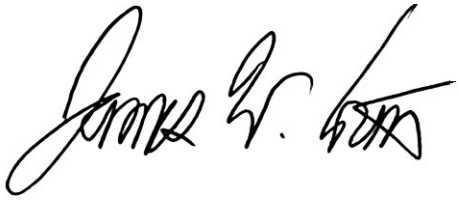
Stebbins, R. C., and S. M. McGinnis. 2012. *Field guide to amphibians and reptiles of California*. University of California Press, Berkeley, California.

Tibor, D. P. (editor). 2001. *Inventory of rare and endangered plants of California.* California Native Plant Society, Sacramento, California.

Zabriskie, J. G. 1979. *Plant of Deep Canyon*. Philip Boyd Deep Canyon Desert Research Center, University of California, Riverside.

VIII. CERTIFICATION STATEMENT

I, James W. Cornett, hereby certify the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.



December 20, 2022 _____

Date Principal Investigator

APPENDICES

TABLE 1
PLANT SPECIES RECORDED
38-ACRE SNIDER PALM SPRINGS SITE

ANGIOSPERMAE – DICOTYLEDONES

ASTERACEAE - SUNFLOWER FAMILY
Ambrosia dumosa - Burro-weed
Ambrosia salsola - Cheese-bush
Bebbia juncea - Sweet Bush
Chaenactis fremontii – Fremont Pincushion
Dicoria canescens - Desert Dicoria
Encelia farinosa – Brittlebush
Stephanomeria exigua - Mitra

BORAGINACEAE - BORAGE FAMILY
Cryptantha micrantha - Purple-rooted Forget-me-not
Tiquilia plicata - Plicate Coldenia

BRASSICACEAE - MUSTARD FAMILY
Brassica tournefortii - Sahara Mustard

CACTACEAE – CACTUS FAMILY
Cylindropuntia echinocarpa – Silver Cholla
Ferocactus cylindraceus - California Barrel Cactus
Opuntia basilaris – Beaver-tail Cactus

EUPHORBIACEAE - SPURGE FAMILY
Chamaesyce polycarpa - Sand-mat

FABACEAE - PEA FAMILY
Astragalus lentiginosus coachellae - Coachella Valley milk vetch ?
Psorothamnus arborescens – Mojave Indigo Bush
Psorothamnus emoryi - Emory Dalea

KRAMERIACEAE - RHATANY FAMILY
Krameria grayi - White Ratany

ONAGRACEAE – EVENING PRIMROSE FAMILY
Camissonia claviformis – Brown-eyed Primrose

ZYGOPHYLLACEAE - CALTROP FAMILY
Larrea tridentata - Creosote Bush
Tribulus terrestris – Puncture Vine

ANGIOSPERMAE - MONOCOTYLEDONES

POACEAE - GRASS FAMILY
Bromus madritensis - Foxtail Grass
Schismus barbatus - Abu-mashi

TABLE 2
EXPECTED BREEDING OR OBSERVED VERTEBRATES
38-ACRE SNIDER PALM SPRINGS SITE

REPTILES

GEKKONIDAE - GECKOS
Coleonyx variegatus - Western Banded Gecko *

PHRYNOSOMATIDAE – HORNED, SPINY, EARLESS LIZARDS
Callisaurus draconoides – Zebra-tailed Lizard
Phrynosoma platyrhinos – Desert Horned Lizard
Sceloporus magister - Desert Spiny Lizard
Urosaurus graciosus - Long-Tailed Bush Lizard
Uta stansburiana - Side-Blotched Lizard *

IGUANIDAE - IGUANIDS
Dipsosaurus dorsalis - Desert Iguana

TEIIDAE - WHIPTAILS
Cnemidophorus tigris - Western Whiptail

LEPTOTYPHLOPIDAE - BLIND SNAKES
Leptotyphlops humilis - Western Blind Snake

COLUBRIDAE – COLUBRIDS
Chionactis occipitalis - Western Shovel-nosed Snake
Lampropeltis getulus - Common Kingsnake
Masticophis flagellum – Coachwhip
Pituophis melanoleucus - Gopher Snake
Rhinocheilus lecontei - Long-nosed Snake *
Salvadora hexalepis - Western Patch-nosed Snake

VIPERIDAE - VIPERS
Crotalus cerastes - Sidewinder

BIRDS

ACCIPITRIDAE - OSPREY, HAWKS, EAGLES
Buteo jamaicensis - Red-Tailed Hawk *

FALCONIDAE - FALCONS
Falco sparverius - American Kestrel *

LARIDAE – GULLS
Larus delawarensis – Ring-Billed Gull *

COLUMBIDAE - PIGEONS AND DOVES
Columba livia - Rock Dove *
Zenaida macroura - Mourning Dove *

STRIGIDAE - TYPICAL OWLS
Bubo virginianus - Great Horned Owl *

TROCHILIDAE – HUMMINGBIRDS
Calypte costae – Costa's Hummingbird *

CUCULIDAE - CUCKOOS
Geococcyx californianus - Greater Roadrunner *

TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis saya - Say's Phoebe *

CORVIDAE - CROWS AND JAYS
Corvus corax - Common Raven *

REMIZIDAE - VERDIN
Auriparus flaviceps - Verdin *

MIMIDAE - MOCKINGBIRDS AND THRASHERS
Mimus polyglottos - Northern Mockingbird *

STURNIDAE - STARLINGS
Sturnus vulgaris - European Starling

BIRDS (CONTINUED)

PARULIDAE – WOOD-WARBLERS
Dendroica coronata – Yellow-Rumped Warbler *

EMBERIZIDAE – SPARROWS
Amphispiza bilineata - Black-throated Sparrow *
Zonotrichia leucophrys – White-Crowned Sparrow *

PLOCEIDAE - WEAVER FINCHES
Passer domesticus - House Sparrow *

FRINGILLIDAE - FINCHES
Carpodacus mexicanus - House Finch *

MAMMALS

PHYLLOSTOMATIDAE - LEAF-NOSED BATS
Macrotus californicus - California Leaf-nosed Bat ?

VESPERTILIONIDAE - EVENING BATS
Eptesicus fuscus - Big Brown Bat
Euderma maculata - Spotted Bat ?
Lasiurus cinereus - Hoary Bat ?
Pipistrellus hesperus - Western Pipistrelle

MOLOSSIDAE - FREE-TAILED BATS
Tadarida brasiliensis - Brazilian Free-tailed Bat

LEPORIDAE - HARES AND RABBITS
Lepus californicus - Black-tailed Jackrabbit *
Sylvilagus audubonii – Desert Cottontail *

SCIURIDAE - SQUIRRELS
Spermophilus tereticaudus chlorus – Palm Springs Ground Squirrel *

HETEROMYIDAE - POCKET MICE, KANGAROO RATS
Chaetodipus formosus – Long-tailed Pocket Mouse *
Dipodomys merriami – Merriam Kangaroo Rat *

CRICETIDAE - DEER MICE AND WOODRATS
Neotoma lepida lepida – Desert Woodrat *
Peromyscus eremicus – Cactus Mouse *

CANIDAE - FOXES, WOLVES, AND COYOTES
Canis latrans - Coyote *

FELIDAE - CATS
Lynx rufus – Bobcat

* = Sign or individual observed on site
? = Possible occurrence on or near site; not detected during surveys

TABLE 3
SENSITIVE PLANT/ANIMAL SPECIES
CONSIDERED AND REVIEWED FOR REPORT INCLUSION
CNDDB Quadrangle Map Species List

Considered/Reviewed Plant Species and Communities – Desert Hot Springs Quad

Community - Terrestrial	Mesquite Bosque	Mesquite Bosque	CTT61820CA	None	None	-	-	3311685	DESERT HOT SPRINGS	Mapped	Community - Terrestrial - Mesquite Bosque
Plants - Vascular	Euphorbia misera	cliff spurge	PDEUP0Q1B0	None	None	-	2B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia misera
Plants - Vascular	Astragalus lentiginosus var. coachellae	Coachella Valley milk-vetch	PDFAB0FB97	Endangered	None	-	1B.2	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Plants - Vascular - Fabaceae - Astragalus lentiginosus var. coachellae
Plants - Vascular	Astragalus tricarinatus	triple-ribbed milk-vetch	PDFAB0F920	Endangered	None	-	1B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Fabaceae - Astragalus tricarinatus
Plants - Vascular	Mentzelia tricuspis	spiny-hair blazing star	PDLOA031T0	None	None	-	2B.1	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Loasaceae - Mentzelia tricuspis
Plants - Vascular	Abronia villosa var. aurita	chaparral sand-verbena	PDNYC010P1	None	None	-	1B.1	3311685	DESERT HOT SPRINGS	Unprocessed	Plants - Vascular - Nyctaginaceae - Abronia villosa var. aurita
Plants - Vascular	Eschscholzia androuxii	Joshua Tree poppy	PDPAP0A0E0	None	None	-	4.3	3311685	DESERT HOT SPRINGS	Unprocessed	Plants - Vascular - Papaveraceae - Eschscholzia androuxii
Plants - Vascular	Eriastrum harwoodii	Harwood's eriastrum	PDPLM030B1	None	None	-	1B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Polemoniaceae - Eriastrum harwoodii
Plants - Vascular	Linanthus maculatus ssp. maculatus	Little San Bernardino Mtns. linanthus	PDPLM041Y1	None	None	-	1B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Polemoniaceae - Linanthus maculatus ssp. maculatus
Plants - Vascular	Chorizanthe xanti var. leucotheca	white-bracted spineflower	PDPGN040Z1	None	None	-	1B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Polygonaceae - Chorizanthe xanti var. leucotheca
Plants - Vascular	Dodecahema leptoceras	slender-horned spineflower	PDPGN0V010	Endangered	Endangered	-	1B.1	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Polygonaceae - Dodecahema leptoceras
Plants - Vascular	Nemacaulis denudata var. gracilis	slender cottonheads	PDPGN0G012	None	None	-	2B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Polygonaceae - Nemacaulis denudata var. gracilis
Plants - Vascular	Galium johnstonii	Johnston's bedstraw	PDRUB0N140	None	None	-	4.3	3311685	DESERT HOT SPRINGS	Unprocessed	Plants - Vascular - Rubiaceae - Galium johnstonii
Plants - Vascular	Selaginella eremophila	desert spike-moss	PPSEL010G0	None	None	-	2B.2	3311685	DESERT HOT SPRINGS	Mapped	Plants - Vascular - Selaginellaceae - Selaginella eremophila
Plants - Vascular	Aloysia wrightii	Wright's beebrush	PDVER02040	None	None	-	4.3	3311685	DESERT HOT SPRINGS	Unprocessed	Plants - Vascular - Verbenaceae - Aloysia wrightii

Considered/Reviewed Invertebrate Species – Desert Hot Springs Quad

Animals - Mollusks	Eremarionta morongoana	Morongo (=Colorado) desertsnail	IMGASB9070	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Mollusks - Helminthoglyptidae - Eremarionta morongoana
Animals - Insects	Habropoda pallida	white faced bee	IIHYM88010	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Insects - Apidae - Habropoda pallida
Animals - Insects	Macrobaenetes valgum	Coachella giant sand treader cricket	IIORT22020	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Insects - Rhaphidophoridae - Macrobaenetes valgum
Animals - Insects	Stenopelmatus cahuilaensis	Coachella Valley jerusalem cricket	IIORT26010	None	None	-	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Insects - Stenopelmatidae - Stenopelmatus cahuilaensis

Considered/Reviewed Reptiles Species -Desert Hot Springs Quad

Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma mcallii	flat-tailed horned lizard	ARACF12040	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma mcallii
Animals - Reptiles	Uma inornata	Coachella Valley fringe-toed lizard	ARACF15010	Threatened	Endangered	-	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Uma inornata
Animals - Reptiles	Uma notata	Colorado Desert fringe-toed lizard	ARACF15020	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Reptiles - Phrynosomatidae - Uma notata
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Testudinidae - Gopherus agassizii
Animals - Reptiles	Crotalus ruber	red-diamond rattlesnake	ARADE02090	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Viperidae - Crotalus ruber

Considered/Reviewed Bird Species- Desert Hot Springs Quad

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter striatus	sharp-shinned hawk	ABNKC12020	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Accipitridae - Accipiter striatus
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Eremophila alpestris actia	California horned lark	ABPAT02011	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Alaudidae - Eremophila alpestris actia
Animals - Birds	Aythya americana	redhead	ABNJB11030	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Anatidae - Aythya americana
Animals - Birds	Aythya valisineria	canvasback	ABNJB11020	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Anatidae - Aythya valisineria
Animals - Birds	Chaetura vauxi	Vaux's swift	ABNUA03020	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Gavia immer	common loon	ABNBA01030	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Gaviidae - Gavia immer
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Larus californicus	California gull	ABNNM03110	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Laridae - Larus californicus
Animals - Birds	Toxostoma lecontei	Le Conte's thrasher	ABPBK06100	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Birds - Mimidae - Toxostoma lecontei
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus

Birds- Desert Hot Springs Quad (continued)

Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Passerculus sandwichensis rostratus	large-billed savannah sparrow	ABPBX9901D	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Passerellidae - Passerculus sandwichensis rostratus
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Passerellidae - Spizella breweri
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Polioptila melanura	black-tailed gnatcatcher	ABPBJ08030	None	None	WL	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Polioptilidae - Polioptila melanura
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Calypte costae	Costa's hummingbird	ABNUC47020	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Calypte costae
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Contopus cooperi	olive-sided flycatcher	ABPAE32010	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Tyrannidae - Contopus cooperi
Animals - Birds	Empidonax traillii extimus	southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	-	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Birds - Tyrannidae - Empidonax traillii extimus

Considered/Reviewed Mammal Species – Desert Hot Springs Quad

Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Ovis canadensis nelsoni pop. 2	Peninsular bighorn sheep DPS	AMALE04012	Endangered	Threatened	FP	-	3311685	DESERT HOT SPRINGS	Mapped	Animals - Mammals - Bovidae - Ovis canadensis nelsoni pop. 2
Animals - Mammals	Neotoma lepida intermedia	San Diego desert woodrat	AMAFF08041	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped	Animals - Mammals - Cricetidae - Neotoma lepida intermedia
Animals - Mammals	Chaetodipus fallax pallidus	pallid San Diego pocket mouse	AMAFD05032	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped	Animals - Mammals - Heteromyidae - Chaetodipus fallax pallidus
Animals - Mammals	Perognathus longimembris bangsi	Palm Springs pocket mouse	AMAFD01043	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Mammals - Heteromyidae - Perognathus longimembris bangsi
Animals - Mammals	Lepus californicus bennettii	San Diego black-tailed jackrabbit	AMAEB03051	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Unprocessed	Animals - Mammals - Leporidae - Lepus californicus bennettii
Animals - Mammals	Xerospermophilus tereticaudus chlorus	Palm Springs round-tailed ground squirrel	AMAFB05161	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped and Unprocessed	Animals - Mammals - Sciuridae - Xerospermophilus tereticaudus chlorus
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	3311685	DESERT HOT SPRINGS	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii

Considered/Reviewed Plant Species and Communities – Palm Springs Quad

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Community - Terrestrial	Desert Fan Palm Oasis Woodland	Desert Fan Palm Oasis Woodland	CTT62300CA	None	None	-	-	3311675	PALM SPRINGS	Mapped	Community - Terrestrial - Desert Fan Palm Oasis Woodland
Community - Terrestrial	Southern Riparian Forest	Southern Riparian Forest	CTT61300CA	None	None	-	-	3311675	PALM SPRINGS	Mapped	Community - Terrestrial - Southern Riparian Forest
Plants - Vascular	Almutaster pauciflorus	alkali marsh aster	PDASTEL010	None	None	-	2B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Asteraceae - Almutaster pauciflorus
Plants - Vascular	Ambrosia monogyra	singlewhorl burrobrush	PDAST50010	None	None	-	2B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Asteraceae - Ambrosia monogyra
Plants - Vascular	Hulsea vestita ssp. callicarpha	beautiful hulsea	PDAST4Z074	None	None	-	4.2	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Hulsea vestita ssp. callicarpha
Plants - Vascular	Xylorhiza cognata	Mecca-aster	PDASTA1010	None	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Asteraceae - Xylorhiza cognata
Plants - Vascular	Johnstonella costata	ribbed cryptantha	PDBOR0A0M0	None	None	-	4.3	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Boraginaceae - Johnstonella costata
Plants - Vascular	Johnstonella holoptera	winged cryptantha	PDBOR0A180	None	None	-	4.3	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Boraginaceae - Johnstonella holoptera
Plants - Vascular	Caulanthus simulans	Payson's jewelflower	PDBRA0M0H0	None	None	-	4.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Brassicaceae - Caulanthus simulans
Plants - Vascular	Streptanthus campestris	southern jewelflower	PDBRA2G0B0	None	None	-	1B.3	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Brassicaceae - Streptanthus campestris
Plants - Vascular	Atriplex parishii	Parish's brittlescale	PDCHE041D0	None	None	-	1B.1	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Chenopodiaceae - Atriplex parishii
Plants - Vascular	Euphorbia arizonica	Arizona spurge	PDEUP0D060	None	None	-	2B.3	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia arizonica
Plants - Vascular	Acmispon haydonii	pygmy lotus	PDFAB2A0H0	None	None	-	1B.3	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Fabaceae - Acmispon haydonii
Plants - Vascular	Astragalus hornii var. hornii	Horn's milk-vetch	PDFAB0F421	None	None	-	1B.1	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Fabaceae - Astragalus hornii var. hornii
Plants - Vascular	Astragalus lentiginosus var. coachellae	Coachella Valley milk-vetch	PDFAB0FB97	Endangered	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Fabaceae - Astragalus lentiginosus var. coachellae
Plants - Vascular	Juncus acutus ssp. leopoldii	southwestern spiny rush	PMJUN01051	None	None	-	4.2	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Juncaceae - Juncus acutus ssp. leopoldii

Plant Species/Communities – Palm Springs Quad (continued)

Plants - Vascular	Lilium parryi	lemon lily	PMLIL1A0J0	None	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Liliaceae - Lilium parryi
Plants - Vascular	Ayenia compacta	California ayenia	PDSTE01020	None	None	-	2B.3	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Malvaceae - Ayenia compacta
Plants - Vascular	Horsfordia newberryi	Newberry's velvet-mallow	PDMAL0J020	None	None	-	4.3	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Malvaceae - Horsfordia newberryi
Plants - Vascular	Abronia villosa var. aurita	chaparral sand-verbena	PDNYC010P1	None	None	-	1B.1	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Nyctaginaceae - Abronia villosa var. aurita
Plants - Vascular	Penstemon clevelandii var. connatus	San Jacinto beardtongue	PDSCR1L1D2	None	None	-	4.3	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Plantaginaceae - Penstemon clevelandii var. connatus
Plants - Vascular	Stemodia durantifolia	purple stemodia	PDSCR1U010	None	None	-	2B.1	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Plantaginaceae - Stemodia durantifolia
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Linanthus jaegeri	San Jacinto linanthus	PDPLM08030	None	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Polemoniaceae - Linanthus jaegeri
Plants - Vascular	Linanthus maculatus ssp. maculatus	Little San Bernardino Mtns. linanthus	PDPLM041Y1	None	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Polemoniaceae - Linanthus maculatus ssp. maculatus
Plants - Vascular	Saltugilia latimeri	Latimer's woodland-gilia	PDPLM0H010	None	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Polemoniaceae - Saltugilia latimeri
Plants - Vascular	Chorizanthe parryi var. parryi	Parry's spineflower	PDPGN040J2	None	None	-	1B.1	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Polygonaceae - Chorizanthe parryi var. parryi
Plants - Vascular	Chorizanthe xanti var. leucotheca	white-bracted spineflower	PDPGN040Z1	None	None	-	1B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Polygonaceae - Chorizanthe xanti var. leucotheca
Plants - Vascular	Nemacaulis denudata var. gracilis	slender cottonheads	PDPGN0G012	None	None	-	2B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Polygonaceae - Nemacaulis denudata var. gracilis
Plants - Vascular	Galium angustifolium ssp. gracillimum	slender bedstraw	PDRUB0N04B	None	None	-	4.2	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Rubiaceae - Galium angustifolium ssp. gracillimum
Plants - Vascular	Heuchera hirsutissima	shaggy-haired alumroot	PDSAX0E0J0	None	None	-	1B.3	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Saxifragaceae - Heuchera hirsutissima
Plants - Vascular	Selaginella eremophila	desert spike-moss	PPSEL010G0	None	None	-	2B.2	3311675	PALM SPRINGS	Mapped	Plants - Vascular - Selaginellaceae - Selaginella eremophila
Plants - Vascular	Lycium torreyi	Torrey's box-thorn	PDSOL0G0K0	None	None	-	4.2	3311675	PALM SPRINGS	Unprocessed	Plants - Vascular - Solanaceae - Lycium torreyi

Considered/Reviewed Invertebrate Species – Palm Springs Quad

Animals - Arachnids	Calileptoneta oasa	Andreas Canyon leptonetid spider	ILARAU6020	None	None	-	-	3311675	PALM SPRINGS	Mapped	Animals - Arachnids - Leptonetidae - Calileptoneta oasa
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3311675	PALM SPRINGS	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Habropoda pallida	white faced bee	IIHYM88010	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Insects - Apidae - Habropoda pallida
Animals - Insects	Oliarces clara	cheeseweed owlfly (cheeseweed moth lacewing)	IINEU04010	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Insects - Ithonidae - Oliarces clara
Animals - Insects	Euphydryas editha quino	quino checkerspot butterfly	IILEPK405L	Endangered	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Insects - Nymphalidae - Euphydryas editha quino
Animals - Insects	Dinacoma caseyi	Casey's June beetle	IICOLX5010	Endangered	None	-	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Insects - Scarabaeidae - Dinacoma caseyi
Animals - Insects	Stenopelmatus cahuilaensis	Coachella Valley jerusalem cricket	IIORT26010	None	None	-	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Insects - Stenopelmatidae - Stenopelmatus cahuilaensis

Considered/Reviewed Amphibian Species – Palm Springs Quad

Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3311675	PALM SPRINGS	Mapped	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana muscosa	southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	WL	-	3311675	PALM SPRINGS	Mapped	Animals - Amphibians - Ranidae - Rana muscosa

Considered/Reviewed Reptile Species – Palm Springs Quad

Animals - Reptiles	Arizona elegans occidentalis	California glossy snake	ARADB01017	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Reptiles - Colubridae - Arizona elegans occidentalis
Animals - Reptiles	Coleonyx variegatus abbotti	San Diego banded gecko	ARACD01031	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Reptiles - Gekkonidae - Coleonyx variegatus abbotti
Animals - Reptiles	Thamnophis hammondii	two-striped gartersnake	ARADB36160	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Reptiles - Natricidae - Thamnophis hammondii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma mcallii	flat-tailed horned lizard	ARACF12040	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma mcallii
Animals - Reptiles	Uma inornata	Coachella Valley fringe-toed lizard	ARACF15010	Threatened	Endangered	-	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Uma inornata
Animals - Reptiles	Aspidoscelis tigris stejnegeri	coastal whiptail	ARACJ02143	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Reptiles - Teiidae - Aspidoscelis tigris stejnegeri
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Reptiles - Testudinidae - Gopherus agassizii
Animals - Reptiles	Crotalus ruber	red-diamond rattlesnake	ARADE02090	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Reptiles - Viperidae - Crotalus ruber

Considered/Reviewed Bird Species -Palm Springs Quad

Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter striatus	sharp-shinned hawk	ABNKC12020	None	None	WL	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Accipitridae - Accipiter striatus
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Chaetura vauxi	Vaux's swift	ABNUA03020	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Cypseloides niger	black swift	ABNUA01010	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Apodidae - Cypseloides niger
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Piranga rubra	summer tanager	ABPBX45030	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Cardinalidae - Piranga rubra
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Spinus lawrencei	Lawrence's goldfinch	ABPBY06100	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Fringillidae - Spinus lawrencei
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Toxostoma crissale	Crissal thrasher	ABPBK06090	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Mimidae - Toxostoma crissale
Animals - Birds	Toxostoma lecontei	Le Conte's thrasher	ABPBK06100	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Mimidae - Toxostoma lecontei
Animals - Birds	Leiothlypis luciae	Lucy's warbler	ABPBX01090	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Parulidae - Leiothlypis luciae
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Aimophila ruficeps canescens	southern California rufous-crowned sparrow	ABPBX91091	None	None	WL	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Passerellidae - Aimophila ruficeps canescens
Animals - Birds	Melozone aberti	Abert's towhee	ABPBX74050	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Passerellidae - Melozone aberti
Animals - Birds	Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	Threatened	None	SSC	-	3311675	PALM SPRINGS	Mapped	Animals - Birds - Polioptilidae - Polioptila californica californica
Animals - Birds	Polioptila melanura	black-tailed gnatcatcher	ABPBJ08030	None	None	WL	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Birds - Polioptilidae - Polioptila melanura

Birds -Palm Springs Quadrangle (continued)

Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Calypte costae	Costa's hummingbird	ABNUC47020	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Calypte costae
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Contopus cooperi	olive-sided flycatcher	ABPAE32010	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Tyrannidae - Contopus cooperi
Animals - Birds	Empidonax traillii extimus	southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Birds - Tyrannidae - Empidonax traillii extimus

Considered/Reviewed Mammal Species – Palm Springs Quad

Animals - Mammals	Ovis canadensis nelsoni pop. 2	Peninsular bighorn sheep DPS	AMALE04012	Endangered	Threatened	FP	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Mammals - Bovidae - Ovis canadensis nelsoni pop. 2
Animals - Mammals	Neotoma lepida intermedia	San Diego desert woodrat	AMAFF08041	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Mammals - Cricetidae - Neotoma lepida intermedia
Animals - Mammals	Chaetodipus fallax fallax	northwestern San Diego pocket mouse	AMAFD05031	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Mammals - Heteromyidae - Chaetodipus fallax fallax
Animals - Mammals	Chaetodipus fallax pallidus	pallid San Diego pocket mouse	AMAFD05032	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Mammals - Heteromyidae - Chaetodipus fallax pallidus
Animals - Mammals	Dipodomys merriami collinus	Earthquake Merriam's kangaroo rat	AMAFD03144	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Mammals - Heteromyidae - Dipodomys merriami collinus
Animals - Mammals	Dipodomys simulans	Dulzura kangaroo rat	AMAFD03170	None	None	-	-	3311675	PALM SPRINGS	Unprocessed	Animals - Mammals - Heteromyidae - Dipodomys simulans
Animals - Mammals	Perognathus longimembris bangsi	Palm Springs pocket mouse	AMAFD01043	None	None	SSC	-	3311675	PALM SPRINGS	Unprocessed	Animals - Mammals - Heteromyidae - Perognathus longimembris bangsi
Animals - Mammals	Nyctinomops femorosaccus	pocketed free-tailed bat	AMACD04010	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Mammals - Molossidae - Nyctinomops femorosaccus
Animals - Mammals	Nyctinomops macrotis	big free-tailed bat	AMACD04020	None	None	SSC	-	3311675	PALM SPRINGS	Mapped	Animals - Mammals - Molossidae - Nyctinomops macrotis
Animals - Mammals	Xerospermophilus tereticaudus chlorus	Palm Springs round-tailed ground squirrel	AMAFB05161	None	None	SSC	-	3311675	PALM SPRINGS	Mapped and Unprocessed	Animals - Mammals - Sciuridae - Xerospermophilus tereticaudus chlorus
Animals - Mammals	Lasiurus xanthinus	western yellow bat	AMACC05070	None	None	SSC	-	3311675	PALM SPRINGS	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus xanthinus

Considered/Reviewed Plant Species and Communities – Seven Palms Valley Quad

Community - Terrestrial	Desert Fan Palm Oasis Woodland	Desert Fan Palm Oasis Woodland	CTT62300CA	None	None	-	-	3311684	SEVEN PALMS VALLEY	Mapped	Community - Terrestrial - Desert Fan Palm Oasis Woodland
Plants - Vascular	Euphorbia arizonica	Arizona spurge	PDEUP0D060	None	None	-	2B.3	3311684	SEVEN PALMS VALLEY	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia arizonica
Plants - Vascular	Astragalus lentiginosus var. coachellae	Coachella Valley milk-vetch	PDFAB0FB97	Endangered	None	-	1B.2	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Plants - Vascular - Fabaceae - Astragalus lentiginosus var. coachellae
Plants - Vascular	Linanthus maculatus ssp. maculatus	Little San Bernardino Mtns. linanthus	PDPLM041Y1	None	None	-	1B.2	3311684	SEVEN PALMS VALLEY	Mapped	Plants - Vascular - Polemoniaceae - Linanthus maculatus ssp. maculatus
Plants - Vascular	Galium angustifolium ssp. gracillimum	slender bedstraw	PDRUB0N04B	None	None	-	4.2	3311684	SEVEN PALMS VALLEY	Unprocessed	Plants - Vascular - Rubiaceae - Galium angustifolium ssp. gracillimum
Plants - Vascular	Selaginella eremophila	desert spike-moss	PPSEL010G0	None	None	-	2B.2	3311684	SEVEN PALMS VALLEY	Mapped	Plants - Vascular - Selaginellaceae - Selaginella eremophila

Considered/Reviewed Invertebrate Species – Seven Palms Valley Quad

Animals - Insects	Macrobaenetes valgum	Coachella giant sand treader cricket	IIORT22020	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Insects - Rhaphidophoridae - Macrobaenetes valgum
Animals - Mollusks	Eremarionta morongoana	Morongo (=Colorado) desertsnail	IMGASB9070	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Mollusks - Helminthoglyptidae - Eremarionta morongoana

Considered/Reviewed Reptile Species – Seven Palms Valley Quad

Animals - Reptiles	Uma inornata	Coachella Valley fringe-toed lizard	ARACF15010	Threatened	Endangered	-	-	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Uma inornata
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Animals - Reptiles - Testudinidae - Gopherus agassizii

Considered/Reviewed Bird Species – Seven Palms Valley Quad

Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter striatus	sharp-shinned hawk	ABNKC12020	None	None	WL	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Accipitridae - Accipiter striatus
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Chaetura vauxi	Vaux's swift	ABNUA03020	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Spinus lawrencei	Lawrence's goldfinch	ABPBY06100	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Fringillidae - Spinus lawrencei
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Toxostoma lecontei	Le Conte's thrasher	ABPBK06100	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Animals - Birds - Mimidae - Toxostoma lecontei
Animals - Birds	Leiothlypis luciae	Lucy's warbler	ABPBX01090	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Parulidae - Leiothlypis luciae
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Passerculus sandwichensis rostratus	large-billed savannah sparrow	ABPBX9901D	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Passerellidae - Passerculus sandwichensis rostratus
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Passerellidae - Spizella breweri
Animals - Birds	Polioptila melanura	black-tailed gnatcatcher	ABPBJ08030	None	None	WL	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Polioptilidae - Polioptila melanura
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia

Bird Species – Seven Palms Valley Quad (continued)

Animals - Birds	Calypte costae	Costa's hummingbird	ABNUC47020	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Trochilidae - Calypte costae
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Contopus cooperi	olive-sided flycatcher	ABPAE32010	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Birds - Tyrannidae - Contopus cooperi
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3311684	SEVEN PALMS VALLEY	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus

Considered/Reviewed Mammal Species – Seven Palms Valley Quad

Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3311684	SEVEN PALMS VALLEY	Mapped and Unprocessed	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Neotoma lepida intermedia	San Diego desert woodrat	AMAFF08041	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Mapped	Animals - Mammals - Cricetidae - Neotoma lepida intermedia
Animals - Mammals	Chaetodipus fallax fallax	northwestern San Diego pocket mouse	AMAFD05031	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Mammals - Heteromyidae - Chaetodipus fallax fallax
Animals - Mammals	Chaetodipus fallax pallidus	pallid San Diego pocket mouse	AMAFD05032	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Mapped	Animals - Mammals - Heteromyidae - Chaetodipus fallax pallidus
Animals - Mammals	Perognathus longimembris bangsi	Palm Springs pocket mouse	AMAFD01043	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Mammals - Heteromyidae - Perognathus longimembris bangsi
Animals - Mammals	Xerospermophilus tereticaudus chlorus	Palm Springs round-tailed ground squirrel	AMAFB05161	None	None	SSC	-	3311684	SEVEN PALMS VALLEY	Unprocessed	Animals - Mammals - Sciuridae - Xerospermophilus tereticaudus chlorus

Appendix E

Cultural Report

Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California

Jeanine M. Hoy and Kenneth M. Becker

Prepared for
David Snider
Snider Interests, LLC
730 Arcady Road
Montecito, CA 93180

Technical Report 23-11
Statistical Research, Inc.
Redlands, California

STATISTICAL RESEARCH, Inc.
ARCHAEOLOGY • ANTHROPOLOGY • HISTORY • HISTORIC ARCHITECTURE • PALEONTOLOGY

January 24, 2024

Nicole Vann
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

Re: Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California

Dear Ms. Vann,

Enclosed please find a copy of *Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California.* The report presents the results of a cultural resource survey conducted by Statistical Research, Inc. (SRI) in support of the proposed Indian Canyon Warehouse and Distribution Center located within the city of Palm Springs, Riverside County, California. The project is proposing an approximately 739,360-square-foot (68,688.8-m2) fulfillment center on the 38-acre (15.4-ha) site (Assessor's Parcel No. [APN] 666-320-018). At the time of our study, we included an approximately 20-acre (8.1-ha) area to the west of the site (the southern half of APN 666-320-015) that the project proponent was considering acquiring at that time. After completion of our study, the project proponent no longer wishes to acquire the 20-acre optional area and it is not part of the proposed Indian Canyon Warehouse and Distribution Center Project.

Our study resulted in the identification and recording of one historical-period isolate on the 38-acre Project area and one prehistoric isolate on the 20-acre optional area. Both isolates fail to meet any of the four criteria to be eligible for listing in the California Register of Historical Resources (CRHR). The artifacts lack associations with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1); cannot be shown to be associated with lives of persons important in our past (Criterion 2); do not embody distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values (Criterion 3); and are unlikely to yield information important in prehistory or history (Criterion 4). For these reasons, both isolates are recommended not eligible for listing in the CRHR. Because the 20-acre option area is not part of the Project, the prehistoric isolate recorded there will not be affected by the project. The mitigation measures recommended in our cultural resources report are valid for the 38-acre Project.

Please let me know if you would like additional information. I can be reached by telephone at (909) 754-8274 and by Email at kbecker@sricrm.com.

Sincerely,

Kenneth M. Becker

Kenneth M. Becker, M.A., RPA
Senior Principal Investigator

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Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California

Jeanine M. Hoy and Kenneth M. Becker

Prepared for
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730 Arcady Road
Montecito, CA 93180

Technical Report 23-11
Statistical Research, Inc.
Redlands, California

February 2023

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACBCI	Agua Caliente Band of Cahuilla Indians
AMSL	above mean sea level
APN	Assessor's Parcel Number
CEQA	California Environmental Quality Act
CHL	California Historical Landmark
CHRIS	California Historical Resources Information System
City	City of Palm Springs
EIC	Eastern Information Center
GNSS	Global Navigation Satellite System
HSC	*Health and Safety Code*
NAHC	Native American Heritage Commission
PRC	*Public Resources Code*
RPA	Registered Professional Archaeologist
Snider Interests	Snider Interests, LLC
SRI	Statistical Research, Inc.
THPO	Tribal Historic Preservation Officer
USC	*U.S. Code*
USGS	U.S. Geological Survey

MANAGEMENT SUMMARY

Statistical Research, Inc. (SRI), conducted a cultural resource survey in support of the proposed Indian Canyon Warehouse and Distribution Center located within the city of Palm Springs, Riverside County, California. The project is proposing an approximately 700,000-square-foot (65,032.1-m^2) logistics center on the 38-acre (15.4-ha) site. An approximately 20-acre (8.1-ha) area to the west of the site (the southern half of Assessor's Parcel No. 666-320-015) is also included, as an option to increase the size of the logistics center to 1,000,000 square feet (92,903.0 m^2). The cultural resource study discussed in this report covers both of these properties, for a combined total of 58 acres (23.5 ha). The project area is in Section 15 of Township 3 South, Range 4 East, on the 2021 Desert Hot Springs, California, 7.5-minute U.S. Geological Survey topographic map.

The proposed project is entirely on privately owned land and is considered a project under the California Environmental Quality Act (CEQA; *Public Resources Code*, Sections 21000 *et seq.* [PRC 21000 *et seq.*]), and the City of Palm Springs is acting as the CEQA lead agency. The cultural resource study was performed pursuant to PRC 21000–21177, as amended, which mandates that the lead agency consider the potential impacts of the project on historical and archaeological resources.

As part of the project, SRI conducted a records search with the California Historical Resources Information System Eastern Information Center. The goals of the records search were to review any previous archaeological projects that may have been conducted within the project area and to identify any previously recorded archaeological resources located on the property. The records search found no previous studies involving the project area and no previously recorded resources in the project area.

SRI also submitted a request for a Sacred Lands File search to the Native American Heritage Commission (NAHC), and the search produced negative results. The NAHC provided a list of 21 contacts that could provide additional information regarding cultural resources within the project area. SRI reached out to all 21 contacts. Lacy Padilla, Tribal Historic Preservation Officer for the Agua Caliente Band of Cahuilla Indians, responded, stating that although the project area is not within the boundaries of the Agua Caliente Band of Cahuilla Indians Reservation, it is within the Tribe's traditional use area.

SRI surveyed the combined 58-acre (23.5-ha) project area, which is dominated by sandy soils and sparse desert vegetation and afforded good ground visibility. SRI personnel identified one historical-period isolate and one prehistoric isolate during the survey. SRI recommends that an archaeological monitoring plan be prepared and implemented prior to the start of ground-disturbing activities, in order to properly treat any unanticipated discoveries made during project construction.

Introduction and Setting

Snider Interests, LLC (Snider Interests), is proposing construction of the Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California. The project area includes a 38-acre (15.4-ha) property located on the northwest corner of Indian Canyon Drive and 19th Avenue in Palm Springs (Assessor's Parcel No. [APN] 666-320-018). The proposed project includes an approximately 700,000-square-foot (65,032.1-m^2) logistics center on the 38-acre (15.4-ha) site. An approximately 20-acre (8.1-ha) area to the west of the site (the southern half of APN 666-320-015) is also included, as an option to increase the size of the logistics center to 1,000,000 square feet (92,903.0 m^2). The area of the cultural resource study consisted of both properties, for a combined total of 58 acres (23.5 ha). The project area is in Section 15 of Township 3 South, Range 4 East, as shown on the 2021 Desert Hot Springs, California, 7.5-minute U.S. Geological Survey (USGS) topographic map (Figures 1 and 2).

Snider Interests contracted with Statistical Research, Inc. (SRI), to conduct a Phase I cultural resource study of the entire 58-acre (23.5-ha) project area. The purpose of the study was to provide a cultural resource technical report in support of the California Environmental Quality Act (CEQA; *Public Resources Code*, Sections 21000 *et seq.* [PRC 21000 *et seq*.]) environmental document being prepared for the project. The cultural resource study included (1) a records search via the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC), (2) a Native American Heritage Commission Sacred Lands File search and related coordination with Native American Tribes, (3) archaeological survey, and (4) report preparation.

Regulatory Environment

The proposed project is located entirely on privately owned land and is considered a project under CEQA, and the City of Palm Springs (City) is acting as the CEQA lead agency. The cultural resource study was performed pursuant to PRC 21000–21177, as amended, which mandates that the lead agency consider the potential impacts of the project on historical and archaeological resources.

Changes to CEQA pursuant to Assembly Bill (AB) 52 require lead CEQA agencies to consult with California Native American Tribes and to consider the effects of a project on Tribal cultural resources. A substantial adverse change to a Tribal cultural resource is considered a significant impact. PRC 21074 describes the criteria for what constitutes a Tribal cultural resource. Formal government-to-government consultation regarding the project, as required by AB 52, takes place between the City and affected Tribes. It is our understanding that there is no federal involvement with the project that would require the cultural resource studies to be performed pursuant to either the National Environmental Policy Act of 1969, as amended (*U.S. Code*, Title 42, Section 4321 *et seq.* [42 USC 4321]), or the National Historical Preservation Act of 1966, as amended (54 USC 300101 *et seq*.). Also, because the project is entirely within Palm Springs, it is not subject to the County of Riverside Memorandum of Understanding regarding cultural resource procedures.

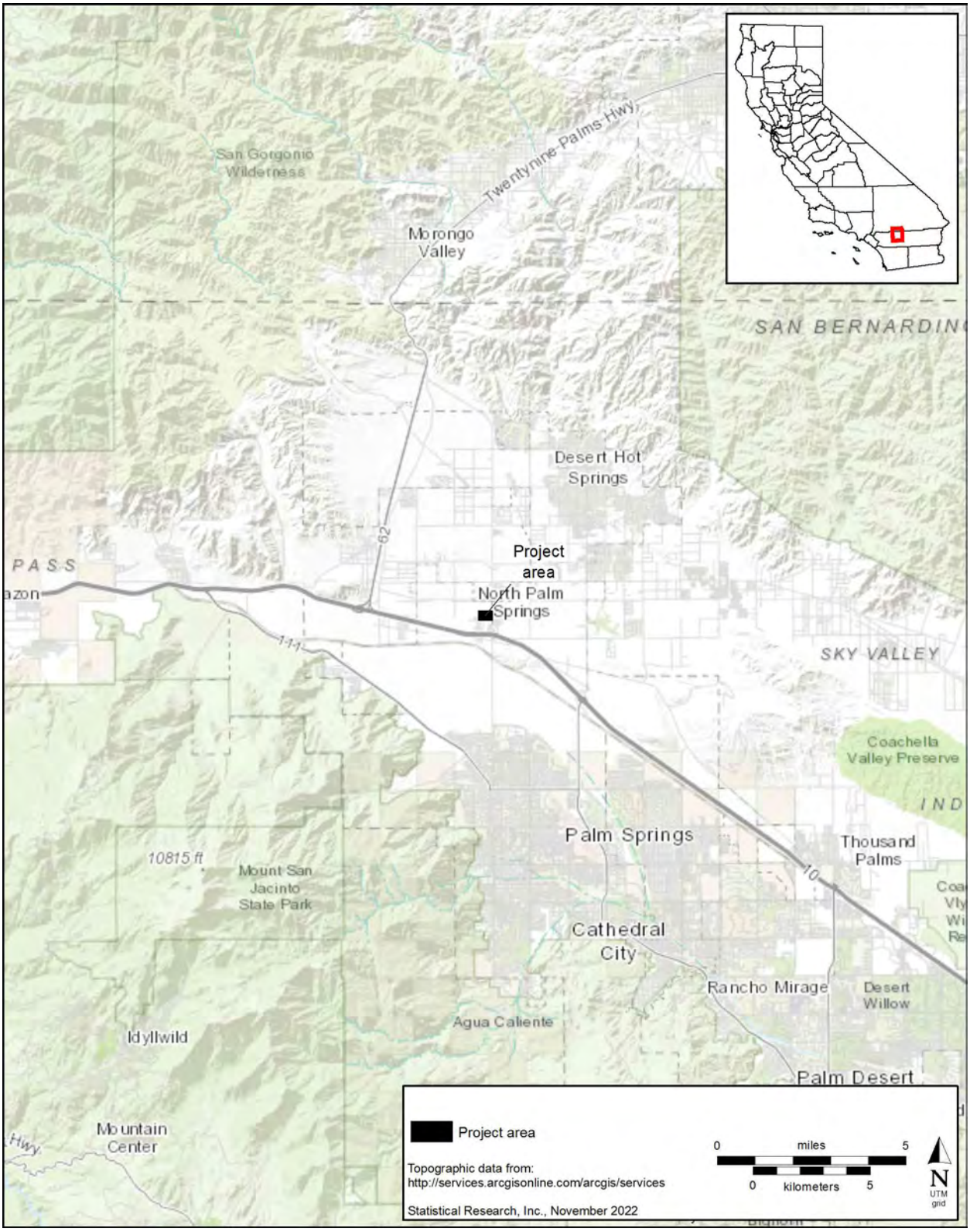

Figure 1. Project area vicinity map.

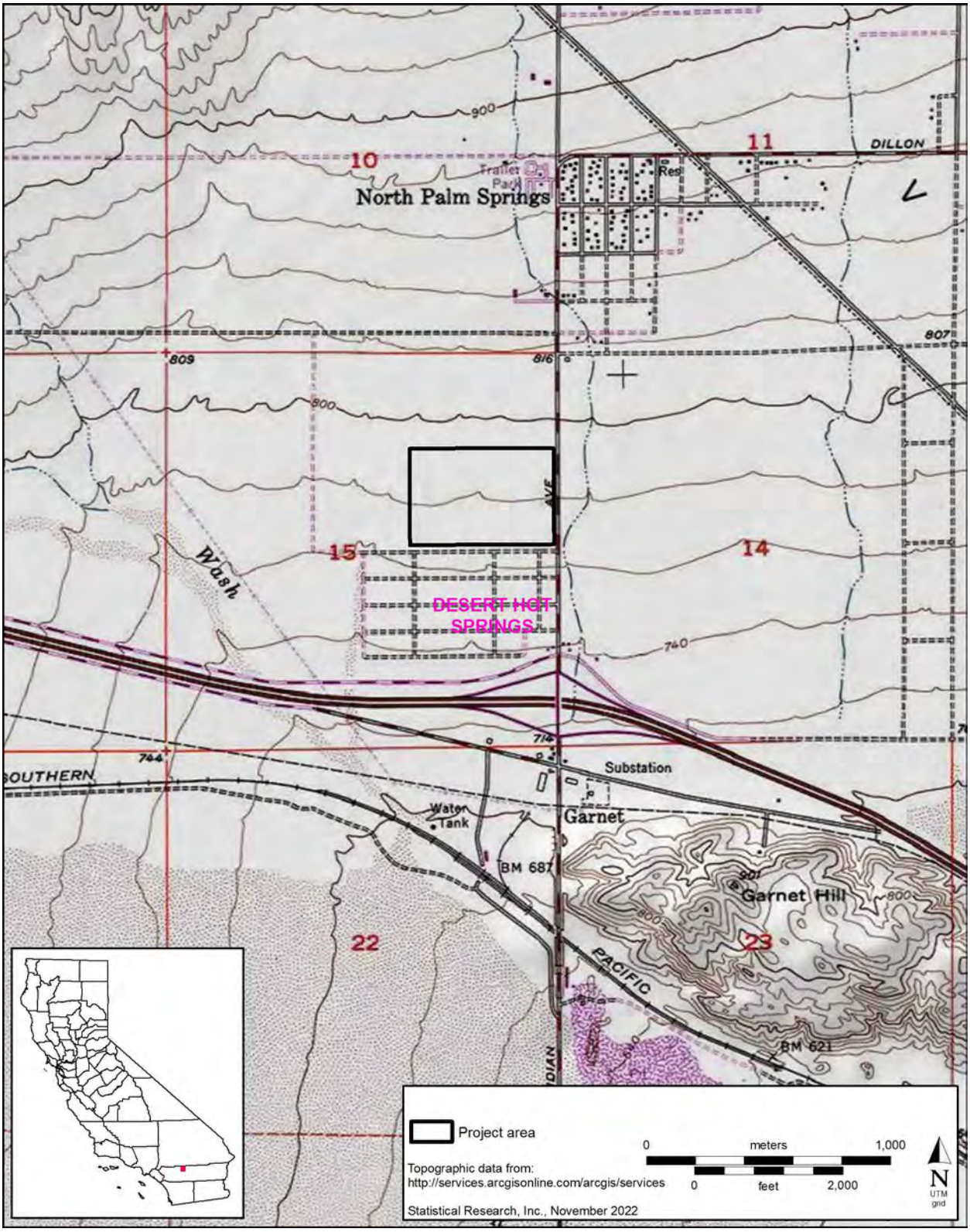

Figure 2. Project area location map.

Project Personnel

All SRI project personnel meet the Secretary of the Interior's Historic Preservation Professional Qualifications Standards (48 *Federal Register* 44738–44739 [September 29, 1983]) in their respective disciplines. The SRI personnel involved with the implementation of the cultural resource study have extensive experience in the region and have worked on a number of cultural resource surveys across southern California. The following are SRI's key project personnel:

- Kenneth M. Becker, M.A., Registered Professional Archaeologist (RPA), project manager;
- Jeanine Hoy, M.A., RPA, project director; and
- Kaitlin Harstine, M.A., RPA, assistant project director.

Environmental Setting

The project area is in the central part of the Coachella Valley, a low valley sandwiched between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. The valley is part of the Colorado Desert geomorphic province, an area that includes both sides of the lower Colorado River and the Coachella and Imperial Valleys of California (Jenkins 1980).

High temperatures during the summer months average between 39°C and 42°C (102°F and 108°F). During the winter, the mean temperature falls to about 22°C (71°F) during the day, and lows reach near 7°C (44°F) at night. The average annual precipitation in the area is 12.4 cm (4.9 inches), most of which falls between December and March (WorldClimate.com 2016), although occasional summer thunderstorms in August and September provide additional rainfall.

Geology

The Coachella Valley forms the northern extent of the Salton Trough, a northwest–southeast-trending depression that reaches from the San Gorgonio Pass to the Gulf of California, 280 km (174 miles) to the south. The valley has been heavily shaped by tectonic forces involving interaction of the Pacific Plate and the North American Plate along the San Andreas Fault system (Harden 2004). The valley is a fault-bound depression, and the San Andreas Fault runs along the northern margin of the valley. The Banning Fault, a subordinate fault to the San Andreas Fault, runs east–west through the valley, between the San Andreas Fault and the San Jacinto Fault to the west. Folding in the earth's crust caused by the faults has blocked the flow of underground aquifers and has resulted in numerous springs and pools. These water sources were crucial resources for prehistoric groups (Wilke 1978). The Whitewater River was the other major source of water in the Coachella Valley. The river starts on the flanks of Mount San Gorgonio and enters the Coachella Valley through the Banning Pass. It runs along the southern edge of the valley, approximately 3.8 km (6.1 miles) south of the project area.

The mountain ranges surrounding the Coachella Valley are uplifted blocks of continental crust. The Santa Rosa Mountains are at the northern end of the Peninsular Ranges, a series of mountain ranges running southeastward from the Los Angeles Basin to the tip of the Baja Peninsula (Jahns 1954:3) that forms a natural border between the coastal areas to the west and the deserts to the east. The mountains are composed of plutonic intrusions that have been uplifted through tectonic activity. The highest point is San Jacinto Mountain, which, at 3,307 m (10,849 feet) above mean sea level (AMSL), towers above the present-day Palm Springs. The Little San Bernardino Mountains are part of the Transverse Ranges, a series of east–west-trending mountains that are similar in composition to the Peninsular Ranges and include large masses of Mesozoic-era plutonic rocks. The summits of the Transverse Ranges exceed 3,500 m (11,483 feet) AMSL at San Gorgonio Peak (Bailey and Jahns 1954).

Much of the valley bottom is at or below sea level, with the deepest areas dipping to 80 m (263 feet) below sea level. The project area is situated at an elevation of approximately 76 m (249 feet) AMSL, in the middle of the valley. Both alluvial and aeolian sediments are present within the valley. Geologic mapping of Quaternary sediments in the area by Lundstrom et al. (2001) indicated that alluvial-fan surfaces of probable late Holocene age are extensive and show very weak, nonoxidized soils. Recent aeolian sand is also common in the area and is mapped as dunes and sand ramps forming mantles on slopes in the valley (Lundstrom et al. 2001).

The hot and dry climate of the Coachella Valley would normally place significant restrictions on human activities. However, the valley has been repeatedly inundated in the past as a result of flooding brought on by changes in the course of the Colorado River. Over many episodes, the river left its banks and flooded the Salton Trough, resulting in the creation of ancient Lake Cahuilla, also referred to as Blake's Sea or Lake LaConte (Wilke 1978). At its maximum, the lake reached 184 km (114.3 miles) long, 54 km (33.6 miles) wide, and 96 m (315 feet) in depth, and it inundated a considerable portion of the valley. When the Colorado River resumed its normal course, the lake would begin to dry. Recent studies have suggested that it would have taken approximately 56 years for the lake to be completely dry after having reached the high-water mark (Laylander 1997).

Between 800 and 300 B.P., there were at least three documented cycles of flooding and desiccation, but it is not clear whether the lake during that time was primarily full and experiencing only minor drying episodes, mostly empty and only occasionally inundated, or somewhere in-between (Laylander 1997; Waters 1983; Wilke 1978; see also Schaefer and Laylander 2007). The most-recent stand of Lake Cahuilla may have been brief, occurring between 700 and 500 B.P.

Much of the prehistoric occupation of the Coachella Valley appears to have been correlated to the presence of Lake Cahuilla. The earliest known sites in the valley date to the Late Archaic period, roughly 4000–1500 B.P. (Love and Dahdul 2002). Most of these sites are at or near the ancient lakeshore, as are several sites dating to the Late Prehistoric period (Sutton and Wilke 1988; Wilke 1978). The project area is approximately 9 km (5.6 miles) northwest of the maximum shoreline of Lake Cahuilla. Human use of the project area would have focused primarily on resources available in the desert, at nearby oases, and along the Whitewater River wash, instead of the lacustrine resources available at the lakeside.

Plant Communities

The Coachella Valley is part of the Sonoran Life Zone and is characterized by the Creosote Bush Scrub plant community (Hall and Grinnell 1919; Munz 1974; Schoenherr 1992). This life zone is characterized by the presence of creosote bush (*Larrea tridentata*), mesquite (*Prosopis glandulosa*), brittlebush (*Encelia farinosa*), cholla and pricklypear cacti (*Opuntia* spp.), chuparosa (*Beloperone californica*), desert lavender (*Hyptis emoryi*), sage (*Salvia* spp.), and various grasses. California fan palm (*Washingtonia filifera*), the only species of palm native to California, is present in oases surrounding the valley. Desert oases also provide habitat for a number of other species, including screwbean mesquite (*Prosopis pubescens*) and Fremont cottonwood (*Populus fremontii*). Many of the plants known to the historical-period Cahuilla, the cultural group that occupied the Coachella Valley at the time of European contact, were medicinal or therapeutic in nature (for a detailed discussion, see Bean and Saubel [1972]).

Animal Communities

A number of desert animals inhabit the greater Coachella Valley. They include mammals such as coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida*

macroura), and ravens (*Corvus corax*). During prehistoric times and up to the early twentieth century, pronghorn (*Antilocapra americana*) was common in the Coachella Valley but has since been pushed out by modern development (Jaeger 1965). Besides representing sources of food, many animals were important components of Cahuilla rituals, and their bones have been found in ritual contexts at sites in Tahquitz Canyon (see Bean et al. 1995).

Cultural Setting

The following section describes the general chronological sequence of cultural development in the Colorado Desert as it is currently understood.

Prehistoric Background

The prehistory of the Colorado Desert, including the northern Coachella Valley, is poorly understood, although a number of recent studies have greatly improved our knowledge. Treatments of the region include the classic work of Rogers (1945, 1966) and the more-recent works of Schaefer (1994), Love and Dahdul (2002), and Schaefer and Laylander (2007). Schaefer (1994) defined three principal prehistoric periods: the Paleoindian, Archaic, and Late Prehistoric periods (see also Love and Dahdul 2002); that sequence is generally followed below.

The Paleoindian Period (12,000–8000 B.P.)

Paleoindian period groups, probably with Clovis complex technology, occupied much of what is now California beginning about 12,000 years ago. However, there is very little evidence of Paleoindian period occupation of the northern Coachella Valley. The reasons for this are unclear but may be related to a lack of habitat for the large game hunted by Clovis people.

Across much of western North America, the Clovis complex developed into the Western Stemmed Point tradition or Western Pluvial Lakes tradition after 10,000 B.P. (Bedwell 1973), probably in response to the warming and drying climate of the early Holocene. This tradition is characterized by crescents and large stemmed, shouldered, and lanceolate points (Willig and Aikens 1988:3). This cultural assemblage is commonly referred to as San Dieguito in southern California and had an economy presumably based on the exploitation of marsh plants, fish, freshwater shellfish, and large and small game (Rogers 1966). Rogers (1966) had originally defined three distinct phases associated with the San Dieguito cultures, but further excavations at the sites where he worked have failed to find evidence of these distinctions (Vaughan 1982; Warren 1967:171).

There is little evidence of a San Dieguito presence in the northern Coachella Valley, where the occupants were probably just a few "small, mobile bands exploiting small and large game and collecting seasonally available wild plants" (Schaefer 1994:63; see also Schaefer and Laylander 2007). The reasons for this are unclear, but the lack of an early occupation may indicate that Lake Cahuilla was not inundated during that time.

The Archaic Period (8000–1500 B.P.)

Beginning about 8,000 years ago, the climate became hotter and drier, and it appears that the northern Coachella Valley was basically abandoned during that time (Schaefer 1994:64). At best, the record suggests only minor occupation by relatively few people. It appears that the Colorado Desert was reoccupied when

the climate began to cool, after about 4,000 years ago, during the Late Archaic period (Love and Dahdul 2002; Schaefer 1994:64), and several archaeological sites in the northern Coachella Valley are dated to this time. It seems that, as with later occupations, much of the occupation centered on the shores of Lake Cahuilla. However, very little is known about overall Late Archaic period adaptations or social structure.

One of the best-documented Late Archaic period sites in the Colorado Desert is the Indian Hill Rockshelter near Anza-Borrego State Park (McDonald 1992; Wilke et al. 1986), approximately 50 km (31 miles) south of the project area. Excavators found a number of rock-lined storage pits as well as hearths and Elko Eared projectile points. Radiocarbon dates from these levels indicated that they were occupied approximately 4,000 years ago. McDonald (1992) postulated that the rockshelter was a base camp for hunter-gatherers who likely roamed over a large area in search of food. A rockshelter from Tahquitz Canyon also contained rock-lined pits and similar artifacts, but no radiocarbon dates were taken at the site; so, its true age is unclear (Schaefer 2002). Taken together, these sites suggest that people lived in highly mobile bands and took advantage of a variety of resources in the area.

Excavations at two sites (CA-RIV-1827 and CA-RIV-2642) near Desert Hot Springs, 20 km (12.4 miles) northwest of the project area, encountered deposits dating to the transition from the Late Archaic period to the Late Prehistoric period, approximately 1200–1000 B.P. (Dahdul et al. 2008; Drover 1982, 1988; Hogan et al. 2010). These sites contained evidence of habitation, including hearth features; activity surfaces and a variety of artifact types, such as flaked stone debitage; faunal remains; and possible human remains. The sites are adjacent to the ethnohistorically known Seven Palms Rancheria (CA-RIV-154), and it is likely that they represent an early occupation of that village.

The Late Prehistoric Period (1500–200 B.P.)

Beginning about 1500 B.P., Yuman (or Patayan) agricultural groups in the Colorado River area began to influence Colorado Desert groups, particularly in the Coachella Valley. This Patayan pattern included a preceramic phase (Rogers 1945:170; Warren 1984; Waters 1982a, 1982b) and three ceramic phases, Patayan I (ca. 1500–1000 B.P.), II (ca. 1000–500 B.P.), and III (after ca. 500 B.P.). After about 1000 B.P. (Patayan II), a number of cultural traits, including new ceramic types, small triangular points, and cremations, moved westward from the Colorado River, either spreading through diffusion or perhaps carried by some migrating Yuman people. Whichever the case, long-distance trade networks were established between the Coachella Valley and the Colorado River.

Agricultural crops were also probably introduced into the area during this time. Along the Colorado River, domesticated crops constituted up to half of the Yuman diet (Castetter and Bell 1951). Ethnographically (see below), the Cahuilla were known to have large walk-in wells that could have been used in pot irrigation (Bean and Mason 1962), although small check dams and other simple irrigation technologies likely also were used (Wilke and Lawton 1975:28).

The Late Prehistoric period groups that occupied the Coachella Valley were the direct ancestors of the ethnographic Cahuilla. This period represents a significant increase in human occupation of the valley, and several large archaeological sites from the period have been identified (see Bean et al. 1995; Schaefer 1994; Sutton and Wilke 1988; Wilke 1978).

Ethnographic Background

The Aboriginal group that occupied the northern Coachella Valley during the historical period was the Desert Cahuilla, who, along with the Mountain and Pass Cahuilla, constituted the ethnographic Cahuilla. The Cahuilla spoke a language of the Takic branch of Northern Uto-Aztecan (see Goddard 1996:Table 3), and the Desert Cahuilla spoke a distinct dialect of Cahuilla. Descriptions of Cahuilla culture have been presented by Barrows (1900), Hooper (1920), Curtis (1926), Strong (1929), and Bean (1972, 1978). There have been few archaeological studies of the historical-period Cahuilla, but testing at the former Mission Creek Indian Reservation, approximately 42 km (26.1 miles) northwest of the project area, identified

occupations stretching from the Late Prehistoric period into the early twentieth century (Altschul 1986). Similarly, excavations at Tahquitz Canyon (Bean et al. 1995), 20 km (12.4 miles) west of the project area, found a large village complex dating to A.D. 1600–1870.

Villages were in areas with access to a number of resources, either at springs or where wells could be easily dug. As a result, most villages relied on hand-excavated walk-in wells for water. These wells were dug to a depth of about 6 m (20 feet), to reach the water table. Villages were loose clusters of houses spread over an area up to 1 km (0.6 m miles) across. Some of the houses were large (e.g., 6 m [20 feet] in length), and others were smaller; at least one large ceremonial structure was present in each village (Bean 1972:72). Once established, villages were considered permanent (Bean 1972:74) and were occupied by lineages. Villages were connected to each other by a complex system of trails.

The Cahuilla were organized into moieties, tribelets (i.e., clans), and then lineages. The two moieties were the *túktem* (Wildcats) and *'istam* (Coyotes; Bean 1978; Garcia et al. 2011). The lineages were landholding groups, and each occupied its own village. The adjacent lineage, with its own village, would generally belong to the other moiety. This arrangement served to ensure access to different habitats. Each village was economically independent.

The Desert Cahuilla exploited a large number of plant species (Barrows 1900; Bean and Saubel 1972), of which mesquite (*Prosopis* spp.) on the valley floor was the primary staple. Other important resources, such as agave (*Agave deserti*), pinyon (*Pinus* spp.), and acorns (*Quercus* spp.), were obtained in the mountains to the west. More than 150 species of plants were used for food, fibers, medicines, manufacturing, and dyes. The Cahuilla exploited a variety of animals from mountain habitats, including deer (*Odocoileus* sp.), mountain sheep (*Ovis canadensis*), and pronghorn, and smaller animals, such as rabbits and rodents, from desert habitats.

The Desert Cahuilla also grew a few agricultural crops, namely corn, beans, and squash, which were probably obtained from native peoples along the Colorado River to the east. Crops were irrigated from springs (Wilke and Lawton 1975); with the arrival of Europeans, wheat, melons, barley, and fruit trees were added (Bean and Mason 1962; Lawton and Bean 1968). By the late eighteenth century, the Cahuilla had adopted ranching as an important industry and worked as wage laborers on railroads, farms, and ranches.

After the smallpox and measles epidemic of 1863, the Cahuilla population, originally perhaps as many as 3,000 people, declined rapidly. In addition, the emigration of young people seeking work in the metropolitan areas of southern California caused many Cahuilla to move away from their traditional areas (Harvey 1967). In 1974, approximately 900 people claimed Cahuilla descent, most of whom lived on one of the many Cahuilla reservations in inland southern California (Garcia et al. 2011:21).

The Agua Caliente Indian Reservation was founded in 1876 by an Executive Order of President Ulysses S. Grant and was expanded in 1877 and 1907. The reservation covers roughly 31,420 acres (12,715.2 ha) and consists of all even-numbered sections and all unsurveyed portions of Township 4 South, Ranges 4 and 5 East, and Township 5 South, Range 4 East, on the San Bernardino Meridian, with the exception of sections that already had been given out by the government (Garcia et al. 2011:21). The odd-numbered sections had already been given to railroads as an incentive to develop cross-country rail lines, and so, the reservation appears as a checkerboard pattern on maps. In 1891, Congress passed the Mission Indian Relief Act, which authorized allotments of reservation land to be given to individuals. The allotment elections were finally approved by the Secretary of the Interior as part of the Equalization Act in 1959 (Public Law 86-339), which finalized the individual allotments and set aside certain lands for Tribal use and cemeteries. The Agua Caliente Band of Cahuilla Indians (ACBCI) has a land-exchange agreement with the U.S. Department of the Interior Bureau of Land Management and is actively acquiring other non-reservation land.

Historical-Period Background

The extreme aridity of the Colorado Desert acted as a deterrent to many early explorers. The earliest recorded European visit to the Coachella Valley was in the winter of 1823–1824 by José Romero, the leader of an expedition attempting to reach the Colorado River by a new route (Bean and Mason 1962). Until the

mid-nineteenth century, however, most nonnative forays into the area were confined to the established prehistoric trail systems. A number of those trails passed through the western Coachella Valley, including the important Cocomaricopa Trail, which connected Arizona with the cultures along the southern California coast (Bean and Vane 1995).

In 1853, William P. Blake (1857) described the Coachella Valley during the Pacific Railroad Survey expedition, recording the general environment, noting the locations of Indian villages, describing native agriculture in the valley, and recording some oral traditions of the Indians concerning life around ancient Lake Cahuilla. In 1855 and 1856, the U.S. Land Office Survey surveyed the valley and divided it into townships and sections (Wilke and Lawton 1975).

European settlement of the valley intensified after the completion of the Southern Pacific Railroad in 1877 (Heath 1945). In the 1880s, the Homestead Act and the Desert Land Act opened much of the public land in the area to private development. Farming was the primary economic activity in the valley, supported by a variety of wells that accessed sizable underground water resources. In 1948–1949, construction of the Coachella Canal supplied additional water to the valley. Much of the area to the east of the project area, in the area around the town of Indio, is still an important agricultural center. Vegetables, cotton, citrus, and particularly dates were, and still are, important cash crops.

The development of the state highway system in the early twentieth century opened the valley to further development. State Route 99 (now Varner Road) was completed through the area in 1912. The Coachella Valley became a popular vacation spot for the well-to-do in the Los Angeles Basin. Resorts and hotels, equestrian centers, and, by the mid-twentieth century, country clubs appeared throughout the valley. In particular, the Palm Springs area was made famous by Cary Grant, Bob Hope, and Lucille Ball, among others.

During the late twentieth century, development in the Coachella Valley expanded rapidly, with scores of country clubs and housing developments appearing along U.S. Highway 111 and Interstate 10. The northern and eastern sides of the project area are surrounded by such developments. Native American–led development, with several casino resorts, golf courses, and other developments, has also driven economic expansion in the valley.

Records Search and Literature Review

Records searches and other archival research were conducted at the CHRIS EIC, Department of Anthropology, University of California, Riverside, on September 22, 2022. The goals of the records search were to review any previous archaeological projects that may have been conducted within the project area and to identify any previously recorded archaeological resources located on the property. The records search looked at all reports of archaeological work executed within a 1-mile (1.6-km) radius of the project area. The records search was conducted by examining USGS topographic maps held by the EIC that show the locations of previous cultural resource surveys and known archaeological sites. Survey reports and site records for previously recorded sites were gathered. The records search also included consultation of the catalogs of sites listed in the National Register of Historic Places (NRHP) and/or designated California Historical Landmarks (CHLs). Because of current COVID-19 restrictions, all record searches conducted at the EIC were conducted by EIC staff.

Records-Search Results

The results of the records search indicated that 62 previous cultural resource projects had been conducted within the records-search area (Figure 3; Table 1). No previous studies involving the project area had been completed.

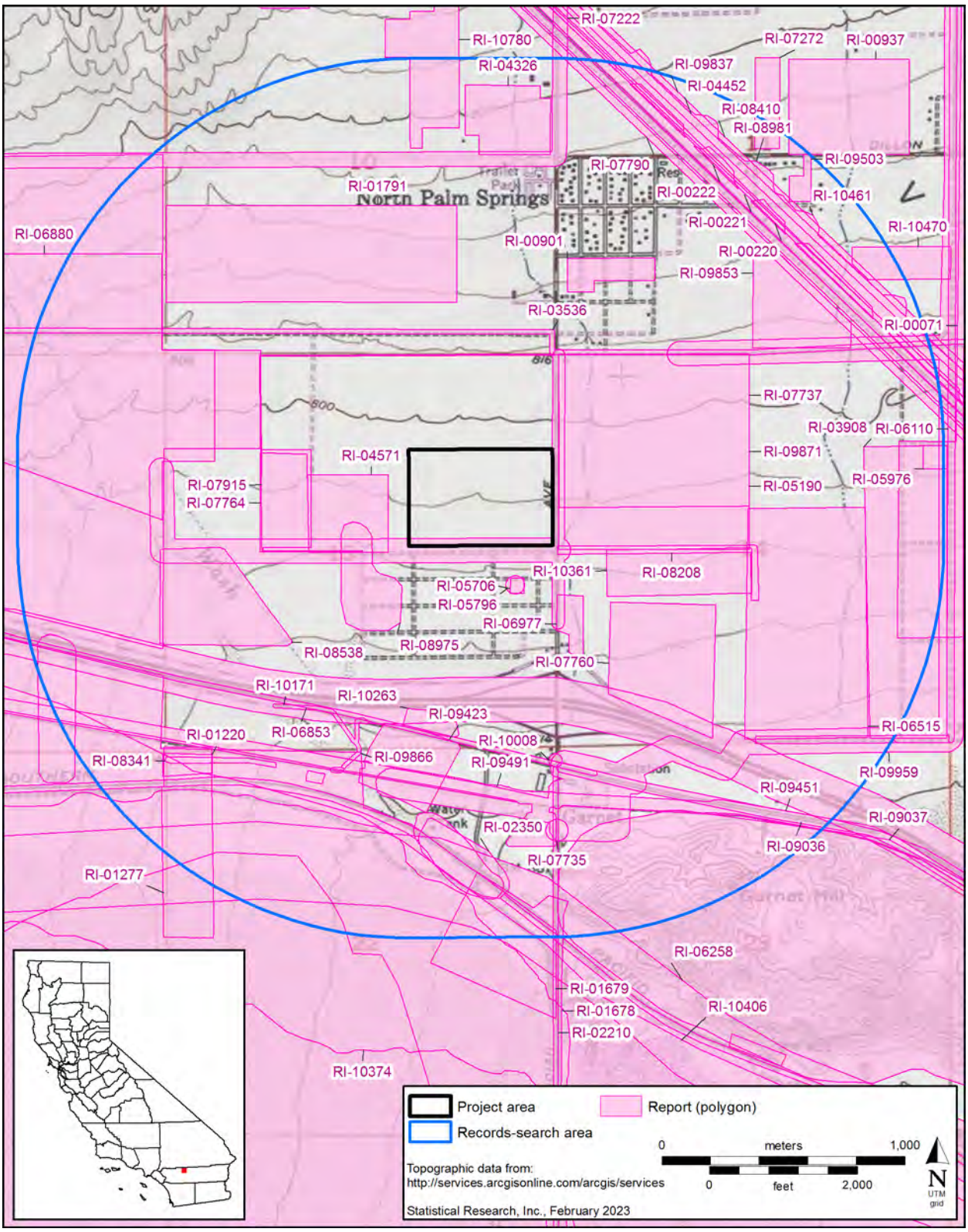

Figure 3. Records-search-results map.

Table 1. Records-Search Results: Previous Projects

Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-00071	Phillip J. Wilke	1972	*Flood Control on Lower Mission Creek: Expected Impact on Archaeological Resources.*	survey	positive	records-search buffer
RI-00220	Richard A. Cowan and Kurt Wallof	1977	*Interim Report Field Work and Data Analysis: Cultural Resource Survey of the Proposed Southern California Edison Palo Verde–Devers 500 kV Transmission Line*	survey	negative	records-search buffer
RI-00221	Richard L. Carrico, Dennis K. Quillen, and Dennis Gallegos	1982	*Cultural Resource Inventory and National Register Assessment of the Southern California Edison Palo Verde to Devers Transmission Line Corridor (California Portion)*	survey	negative	records-search buffer
RI-00222	Kurt Wallof and Richard A. Cowan	1977	*Final Report: Cultural Resource Survey of the Proposed Southern California Edison Palo Verde–Devers 500 kV Power Transmission Line*	survey	negative	records-search buffer
RI-00901	Jean A. Salpas	1980	*An Archaeological Assessment of Tract 15688*	survey	negative	records-search buffer
RI-00937	James Swenson	1980	*An Archaeological Evaluation of a 48.23 Acre Parcel near North Palm Springs, Riverside County, California*	survey	positive	records-search buffer
RI-01220	William Self	2000	*Letter Report: Inspection of Pipeline Relocation Area in Union Pacific Railroad Corridor, Line Section, Riverside, California*	survey	negative	records-search buffer
RI-01277	Eric W. Ritter	1981	*Initial Archaeological Field Investigations for the San Gorgonio Pass Wind Program, California*	survey	positive	records-search buffer
RI-01678	Thomas T. Taylor	1983	*Report of an Intensive Archaeological Survey of Various Private and Public Land Parcels for the San Gorgonio Pass Wind Program, Riverside County, California*	survey	negative	records-search buffer
RI-01679	Brian D. Dillon	1994	*Archaeological Assessment of the City of Palm Springs Railroad Station Project, a 13-Acre Property near Palm Springs, Riverside County, California*	survey	positive	records-search buffer
RI-01791	James D. Swenson	1984	*A Cultural Resources Survey of a Portion of Section 10, T. 3S, R. 4E, North of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-02210	J. Underwood, J. Cleland, C. M. Wood, and R. Apple	1986	*Preliminary Cultural Resources Survey Report for the US Telecom Fiber Optic Cable Project from San Timoteo Canyon to Socorro, Texas: the California Segment*	survey	positive	records-search buffer

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Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-02350	Rebecca McCorkle Apple and Jan E. Wooley	1988	*MCI Rialto to El Paso Fiber Optics Project—Intensive Cultural Resource Survey—San Bernardino and Riverside Counties, California*	survey	positive	records-search buffer
RI-03536	Michael Hogan	1992	*Cultural Resources Assessment, 26+ Mile Segment of the AT&T Fiber-Optics Line Replacement Project, Whitewater to Coachella, Riverside County, California*	survey	positive	records-search buffer
RI-03908	Bruce Love and Bai "Tom" Tang	1995	*Cultural Resources Report: Mission Creek Wastewater Treatment Plant Neat the City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-04326	Mark C. Robinson	1999	*Cultural Resources Survey and Assessment of Approximately 16 Acres: Mars Construction Project in Indian Avenue & Dillon Road, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-04452	Bruce Love	1993	*Cultural Resources Reconnaissance, Eagle Mountain Pumped Storage Transmission Corridor, Riverside County, California*	survey	negative	records-search buffer
RI-04571	Bryon Bass	2001	*Cultural Resources Technical Report: Indigo Energy Facility*	survey	negative	records-search buffer
RI-05190	Roger D. Mason	2005	*Phase I Archaeological Survey Report for a Property Located on the Southeast Corner of Indian Avenue and 18th Avenue, APN 66-340-004, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-05706	Erika Thal	2005	*Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Name/Number: CA-7282B/Painted Hills*	survey	negative	records-search buffer
RI-05976	Bai "Tom" Tang, Michael Hogan, Casey Tibbet, and Daniel Ballester	2003	*Historical/Archaeological Resources Survey Report, Mission Springs Water District, Garnet Basin Test Well Project near the City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-06110	Michael Dice and Marnie Vianna	2003	*Phase 1 Cultural Resources Assessment and Paleontological Records Search: Mission Springs Water District Pipeline Project, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-06258	Chambers Group, Inc., Irvine, California	2006	*Cultural Resources Survey Report: Union Pacific Railroad, Fingal-Thermal Phase II Expansion, Riverside County, California*	survey	positive	records-search buffer
RI-06515	Bai "Tom" Tang	2006	*Historical/Archaeological Resources Survey Report, Interstate West Business Park, near the City Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer

Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-06853	Katherine H. Pollock and Michael K. Lerch	2005	*Archaeological Survey of the Stubby and Townhall Transmission Lines, Banning to Desert Hot Springs, Riverside County, California*	survey	positive	records-search buffer
RI-06880	Tetra Tech EC, Inc.	2006	*A Class III Archaeological Survey of Approximately 1,500 Acres in Portions of S34 T2S, R4E, San Bernardino Base Line Meridian (SBBM), and Sections 3,4,5,8,9,15, and 16 T. 3S., R. 4.E., SBBM, for the Proposed Dillon Wind Farm, Unincorporated Land in the Vicinity*	survey	negative	records-search buffer
RI-06977	Philip de Barros	2007	*Phase 1 Archaeological Assessment of a 4.4-Acre Parcel along Indian Avenue South of North Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-07222	Stacey C. Jordan	2007	*Archaeological Survey Report for Southern California Edison Company Invader 12kV-Devers Jr. Project in Riverside County, California*	survey	negative	records-search buffer
RI-07272	Robert S. White and Laura S. White	2006	*A Cultural Resource Assessment of Plot Plan 22086, A 9.48-Acre Parcel Located Adjacent to Dillon Road Midway between Indian Avenue and Little Morongo Road, North Palm Springs, Unincorporated Riverside County*	survey	negative	records-search buffer
RI-07735	Koji Tsunoda	2008	*Archaeological Survey Report for Southern California Edison Company O&M-Plant Betterment Project on an H-Frame Structure (Pole Nos. 333301S and 2228238E) on the Tram 33KV Circuit, Riverside County, California (WO No. 6279-5491, AI No. 7-5007, JO No. 6361)*	survey	negative	records-search buffer
RI-07737	Clarence Bodmer, Daniel Ballester, and Laura H. Shaker	2008	*Phase 1 Archaeological Assessment: RCI Industrial Park, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-07760	Clarence Bodmer, Daniel Ballester, and Laura H. Shaker	2008	*Phase 1 Archaeological Assessment: Tentative Parcel Map No. 35962, I-10 Distribution Center Project, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-07764	Dierdre Encarnacion, Daniel Ballester, and Laura Shaker	2008	*Historical/Archaeological Resources Survey Report: BP Palm Springs Fuel Logistics Center, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-07790	Jerry Schaefer	2003	*A Class II Cultural Resources Assessment for the Desert-Southwest Transmission Line, Colorado Desert, Riverside and Imperial Counties, California*	survey	negative	records-search buffer

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Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-07915	Bai "Tom" Tang and Harry M. Quinn	2008	*Letter Report: Addendum to Historical/Archaeological/Paleontological Resources Studies BP Palm Springs Fuel Logistics Center Project, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-08208	Bai "Tom" Tang	2009	*Letter Report: Addendum to Phase I Archaeological Resources Assessment and Paleontological Resources Assessment Reports, Tentative Parcel Map No. 35962, I-10 Distribution Center Project, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-08341	Bai "Tom" Tang	2009	*Letter Report: Addendum to Historical/Archaeological Resources Survey Mountain Valley IV Windfarm Project (CACA 49286), City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-08410	William T. Eckhardt, Kristen E. Walker, and Richard L. Carrico	2004	*Draft Cultural Resources Inventory of the Proposed Devers to Palo Verde II 500 kV Transmission Line, Riverside County, California*	survey	positive	records-search buffer
RI-08538	Bai "Tom" Tang, Dirdre Encarnacion, Daniel Ballester, and Laura H. Shaker	2010	*North Palm Springs 4 Phase A Solar Power Project*	survey	positive	records-search buffer
RI-08975	James T. Daniels, Jr.	2011	*Additional Intensive Survey for SCE DPV2: Three Additional Helicopter Landing Zones and Two Alternate Construction Yards, Riverside County, California*	survey	positive	records-search buffer
RI-08981	Matthew M. DeCarlo, Scott C. Justus, and William T. Eckhardt	2013	*Summary Class III Cultural Resource Inventory, Proposed Southern California Edison Devers–Palo Verde 2 500kV Transmission Line Project, Riverside County, California*	survey	positive	records-search buffer
RI-09036	Bai "Tom" Tang and Michael Hogan	2012	*Historical/Archaeological Resources Survey Report, Wild Sands I Project (Jones/Sirota Properties and Transmission Line Right-of-Way), City of Palm Springs, Riverside County, California*	survey/ evaluation	positive	records-search buffer
RI-09037	Desireé Reneé Martinez	2013	*Report and Evaluation of Hoon wit ten ca va, "Hills of the Roasted Bear," as a Traditional Cultural Property*	evaluation	negative	records-search buffer
RI-09423	Brian F. Smith	2014	*A Phase I Cultural Resources Survey of the FedEx Ground Distribution Facility Project*	survey	negative	records-search buffer
RI-09451	Christine Ward and Scott H. Kremkau	2015	*Class III Cultural Resources Inventory of the Southern California Gas Company Pipeline Safety Enhancement Plan Line 2000C Hydrotest Project, Riverside County, California*	survey	negative	records-search buffer

Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-09491	Christine Ward and Scott H. Kremkau	2015	*Class III Cultural Resource Inventory of the Southern California Gas Company Pipeline Safety Enhancement Plan Line 2001W-C Hydrotest Project, Riverside County, California*	survey	negative	records-search buffer
RI-09503	Ben Kerridge, Daniel Ballester, and Nina Gallardo	2015	*Angel View Salvage and Recycling Facility, Assessor's Parcel Numbers 666-280-009 through -012, City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-09837	Douglas W. Mengers and Shannon E. Foglia	2017	*Class III Cultural Resources Inventory Report for the Proposed Southern California Edison Company's Devers–Colorado River No. 1 Transmission Line Rating Remediation Project, Riverside County, California.*	survey	positive	records-search buffer
RI-09853	Ryan Tubbs and Wendy Blumel	2016	*Cultural Resources Investigation of a 27-Acre Parcel in the City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-09866	Sherri Gust	2011	*Cultural Resources Monitoring Compliance Report AES Seawest Mountainview IV Generation Project in Riverside County, California*	monitoring	negative	records-search buffer
RI-09871	Bai "Tom" Tang	2016	*Update to Historical/Archaeological Resources Survey the Coachillin' Holdings Project; Tentative Parcel Map No. 37158, Assessor's Parcel Numbers (APNs) 666-340-004 and -006, City of Palm Springs, Riverside County, California, CRM TECH, Contract No. 3074*	survey	negative	records-search buffer
RI-09959	Zach Wilson	2017	*Cultural Resources Assessment for Southern California Edison's Garnet Submission Expansion Project, Riverside County, CA*	other research	negative	records-search buffer
RI-10008	Amy Glover, Sherri Gust, Melinda C Horne, and Janell Mort	2012	*Archaeological Survey Report, Palm Springs Signal Synchronize Project, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-10171	Amy Glover, Sherri Gust, and Kim Scott	2010	*Paleontological and Archaeological Resources Assessment Report for the AES Seawest Mountainview IV Generation Project in Riverside County, California*	survey	positive	records-search buffer
RI-10263	Terri Jacquemain, Daniel Ballester, and Nina Gallardo	2018	*Historical/Archaeological Resources Survey Report: Garnet Properties 2014 Project, Assessor's Parcel Nos. 666-430-001 to -005, -007, -009, and-012, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer

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Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-10361	Fred Lange, Matthew Stever, and Benjamin Scherzer	2016	*Cultural and Paleontological Resources Assessment, Blackstar DHS Project, City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-10374	Joan George and Venessa Mirro	2013	*Phase 1 Cultural Resources Assessment for the Coachella Valley Water District's Whitewater River–Coachella Valley Stormwater Channel Project, Riverside County, California*	survey	positive	records-search buffer
RI-10406	Michael Mirro	2012	*Archaeological Sensitivity Model for the Whitewater River Stormwater Channel, Riverside County, California*	evaluation	negative	records-search buffer
RI-10461	William T. Eckhardt, Matthew M. DeCarlo, Doug Mengers, Sherri Andrews, Don Laylander, and Tony Quach	2015	*Archaeological Investigations and Monitoring for the Construction of the Devers-Palo Verde No. 2 Transmission Line Project, Riverside County, California*	survey/ monitoring	positive	records-search buffer
RI-10470	Robert Cunningham and Wendy Blumel	2017	*Cultural Resources Investigation, 13-Acre Parcel in the City of Desert Hot Springs*	survey	positive	records-search buffer
RI-10780	Scott M. Hudlow	2019	*A Phase I Cultural Resource Survey for Three Properties North of Dillon Road, Desert Hot Springs, Riverside County, California*	survey	positive	records-search buffer

[a] Site location not shown on the records-search-results map (Figure 3).

The records search identified 37 previously recorded cultural resources within the records-search area (Table 2). No previously recorded resources were identified within the project area. The 37 previously recorded resources identified within the 1-mile (1.6-km) records-search buffer consisted of 33 historical period resources and 4 prehistoric resources. The historical period resources are 10 sites (7 refuse scatters; 1 site with foundations, a reservoir, footings for a water tank, and a refuse scatter; 1 transmission corridor; and 1 electrical substation), 4 roads/highways, 1 railroad structure, and 18 isolates (hole-in-top cans, glass bottles/fragments, porcelain insulators, and a ceramic doll head). The prehistoric resources are a ceramic-scatter site, 2 debitage isolates, and 1 percussion-tool isolate. None of the resources was found to be listed in the NRHP or the catalog of CHLs.

Native American Heritage Commission Sacred Lands File Search

Part of the records search and literature review involved contacting the Native American Heritage Commission (NAHC) for a list of traditional use areas or sacred sites within the project area and a list of specific Native American groups or individuals who could provide additional information regarding cultural resources within the project area. SRI submitted a Sacred Lands File search request on September 20, 2022, and on November 3, 2022, the results came back negative. The NAHC provided a list of 21 contacts that could provide additional information regarding cultural resources within the project area (Appendix A), and SRI began informal discussions with the contacts provided by the NAHC at that time.

On November 10, 2022, SRI sent a letter to all 21 contacts, describing the proposed project and requesting any information that they could provide. The letters arrived between November 14 and 18, 2022. SRI also attempted to contact by phone and/or e-mail any individuals who did not respond to the letter. The contact letter and documentation of the contact efforts are presented in Appendix A.

On November 28, 2022, the Quechan Tribe of the Fort Yuma Reservation indicated that they did not wish to comment. On December 5, 2022, the San Manuel Band of Mission Indians indicated that they would defer to local Tribes. On December 8, 2022, the Augustine Band of Cahuilla Indians responded that they have no specific archival information on the project area that would indicate sacred/religious or other Native American cultural importance. On December 6, 2022, the Los Coyotes Band of Cahuilla and Cupeño Indians, the Santa Rosa Band of Cahuilla Indians, and the Soboba Band of Luiseño Indians stated that their lack of response meant that they did not wish to comment and requested that comments be deferred to the ACBCI.

On January 3, 2023, Lacy Padilla, Tribal Historic Preservation Officer (THPO) for the ACBCI, responded by letter stating that although the project area is not within the boundaries of the ACBCI Reservation, it is within the Tribe's traditional use area. For this reason, the ACBCI THPO requests the following:

- a copy of the records search, with associated survey reports and site records, from the CHRIS EIC;
- a cultural resource inventory of the project area by a qualified archaeologist before any development activities are conducted in the area;
- copies of any cultural resource documentation (report and site records) generated in connection with this project; and
- the presence of an approved ACBCI Native American cultural resource monitor or monitors during any ground-disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the monitor may request that the destructive construction halt and shall notify a qualified archaeologist (qualified per the Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the ACBCI THPO.

Table 2. Records-Search Results: Previously Recorded Cultural Resources

Primary No.	Trinomial	Resource Type	Age	Description	Location
P-33-001808	CA-RIV-001808	site	prehistoric	ceramic scatter	records-search buffer
P-33-003441	CA-RIV-003441	site	historical period	site: foundations, a reservoir, footings for a water tank, and a refuse scatter	records-search buffer
P-33-008410	CA-RIV-013015	structure	historical period	highway/road	records-search buffer
P-33-009498	CA-RIV-006381	structure	historical period	railroad	records-search buffer
P-33-015035	CA-RIV-013001	site	historical period	transmission corridor with refuse	records-search buffer
P-33-015298		isolate	historical period	1 amethyst-glass bottle neck	records-search buffer
P-33-018094		isolate	prehistoric	1 piece of jasper shatter	records-search buffer
P-33-018665		isolate	historical period	2 porcelain insulators	records-search buffer
P-33-018666		isolate	historical period	1 ceramic doll head	records-search buffer
P-33-024705	CA-RIV-012230	other	historical period	road	records-search buffer
P-33-024713	CA-RIV-012237	other	historical period	road	records-search buffer
P-33-024714		other	historical period	road	records-search buffer
P-33-024715	CA-RIV-012238	site	historical period	refuse scatter	records-search buffer
P-33-024716	CA-RIV-012239	structure, site	historical period	electrical substation	records-search buffer
P-33-024717		isolate	historical period	four isolates:1 church key–opened sanitary can, 1 amber-glass bottle base, 1 amethyst glass fragment and 1 church key–opened beer can, and 1 sanitary can	records-search buffer
P-33-026872		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-026873		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-026874		isolate	historical period	steel flat-top beverage can	records-search buffer
P-33-026875		isolate	historical period	2 steel flat-top beverage cans	records-search buffer
P-33-028014		isolate	prehistoric	1 piece of obsidian debitage	records-search buffer
P-33-028015		site	historical period	refuse scatter	records-search buffer
P-33-028574	CA-RIV-012874	site	historical period	refuse scatter	records-search buffer
P-33-028585		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028586		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028587		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028591	CA-RIV-012879	site	historical period	refuse scatter	records-search buffer
P-33-028592	CA-RIV-012880	site	historical period	refuse scatter	records-search buffer
P-33-028593		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028594		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028595	CA-RIV-012881	site	historical period	refuse scatter	records-search buffer
P-33-028596		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028597		isolate	historical period	2 hole-in-top cans	records-search buffer
P-33-028598	CA-RIV-012882	site	historical period	refuse scatter	records-search buffer
P-33-028599		isolate	historical period	1 amethyst-glass beverage bottle	records-search buffer
P-33-028600		isolate	historical period	1 hole-in-top can and 1 aqua-glass bottle fragment	records-search buffer

Primary No.	Trinomial	Resource Type	Age	Description	Location
P-33-028601		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028969		isolate	prehistoric	1 metavolcanic percussion tool	records-search buffer

Survey Methods

A pedestrian survey of the project area was conducted on October 31, 2022, by two SRI field archaeologists: Jeanine Hoy and Kaitlin Harstine. The survey was completed by walking north–south-oriented transects spaced at 15-m (49.2-foot) intervals across the project site. The progress of the survey was monitored using a Global Navigation Satellite System (GNSS) unit and high-resolution aerial photographs. During the survey, transect starting and stopping points were guided using the GNSS technology. The field crew also used the GNSS unit to record and map all identified cultural resources encountered within each transect and photographed each artifact with a digital camera. Photographs documented the artifacts within their geologic and locational contexts as well as the surrounding area. Field observations were made at each site and included relevant data such as measurements and a detailed description of each artifact encountered.

Survey Results

SRI surveyed the entirety of the 38-acre (15.4-ha) main project area as well as the 20-acre (8.1-ha) expansion area. Soils within the combined project area consist of sandy sediments that support sparse desert vegetation, primarily creosote bush, brittlebush, and various desert grasses. Ground visibility is excellent across all portions of the project area, which was ideal for the cultural resource survey. A series of off-highway-vehicle trails cross the landscape, and as a result, much of the project area exhibits some degree of surface disturbance. Modern refuse litters the ground surface throughout the project area.

The 20-acre (8.1-ha) expansion area is entirely fenced. Stacked wooden utility poles and hay bales are stored in this area. Several large mechanically disturbed areas are also present. Aerial photographs from 2020 (Historic Aerials 2020) show two windmills in the 20-acre (8.1-ha) area at that time, but those are no longer present and were reportedly removed on July 15, 2022 (Spiglanin 2023). The mechanically disturbed areas are likely results of the windmill removal. Additionally, in the southwestern portion of the 20-acre (8.1-ha) expansion area is an 800-square-foot (74.3-m^2) AT&T telecommunications facility consisting of a 100-foot (30-5-m) monopole and associated equipment, enclosed by a gated fence (Figure 4).

No archaeological sites or historical-period built-environment resources were identified during the survey, but the SRI field crew recorded two isolates within the combined 58-acre (23.5-ha) survey area (Appendix B). The first isolate (ISO 1) was discovered in the 38-acre (15.4-ha) main project area, near the eastern boundary. ISO 1 is an amber-glass bottle base with an Owens-Illinois Glass Company manufacturer's mark. The upper area of the base is embossed with an "I" inside an "O" with the factory number "21" to the left of the mark and the year code "70" to the right, indicating that the bottle was manufactured in Portland, Oregon, in 1970 (Lockhart and Hoenig 2018:7). The lower area of the base is embossed with "15419-6B 2·MM", which could potentially include liquor-permit and/or mold numbers, but records of such features are incomplete (Lockhart and Hoenig 2018; Figures 5 and 6).

Figure 4. AT&T telecommunications facility.

Figure 5. ISO 1, an Owens-Illinois Glass Company amber-glass bottle base.

Figure 6. Close-up of ISO 1, the Owens-Illinois Glass Company amber-glass bottle base.

The second isolate, ISO 2, consists of two ceramic sherds found within approximately 6 m (19.7 feet) of each other in the southwestern corner of the 20-acre (8.1-ha) expansion area (near 19th Avenue). Both are Lower Colorado Buff Ware sherds. One sherd was found as three pieces that all refit (Figure 7) and appears to have been recently broken. This refitted sherd is an indeterminate body sherd with some black staining, either from the firing process or from burning. The other sherd is an indeterminate body sherd exhibiting a slightly curved cross section. This sherd appears to have faded dark-red paint on the exterior side (Figure 8). The paint is too deteriorated to distinguish any design. Both sherds are similar enough in appearance that they may be from the same vessel, but only one appears painted. Both sherds were found on the ground surface, among modern refuse.

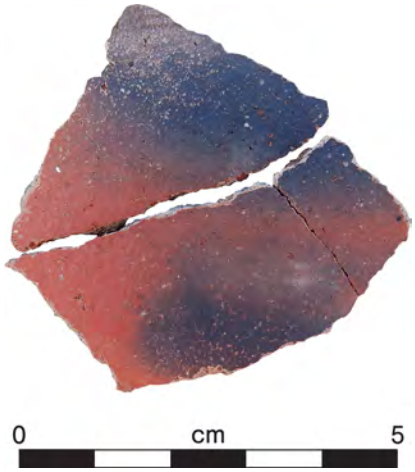

Figure 7. Refitted ceramic sherd from ISO 2.

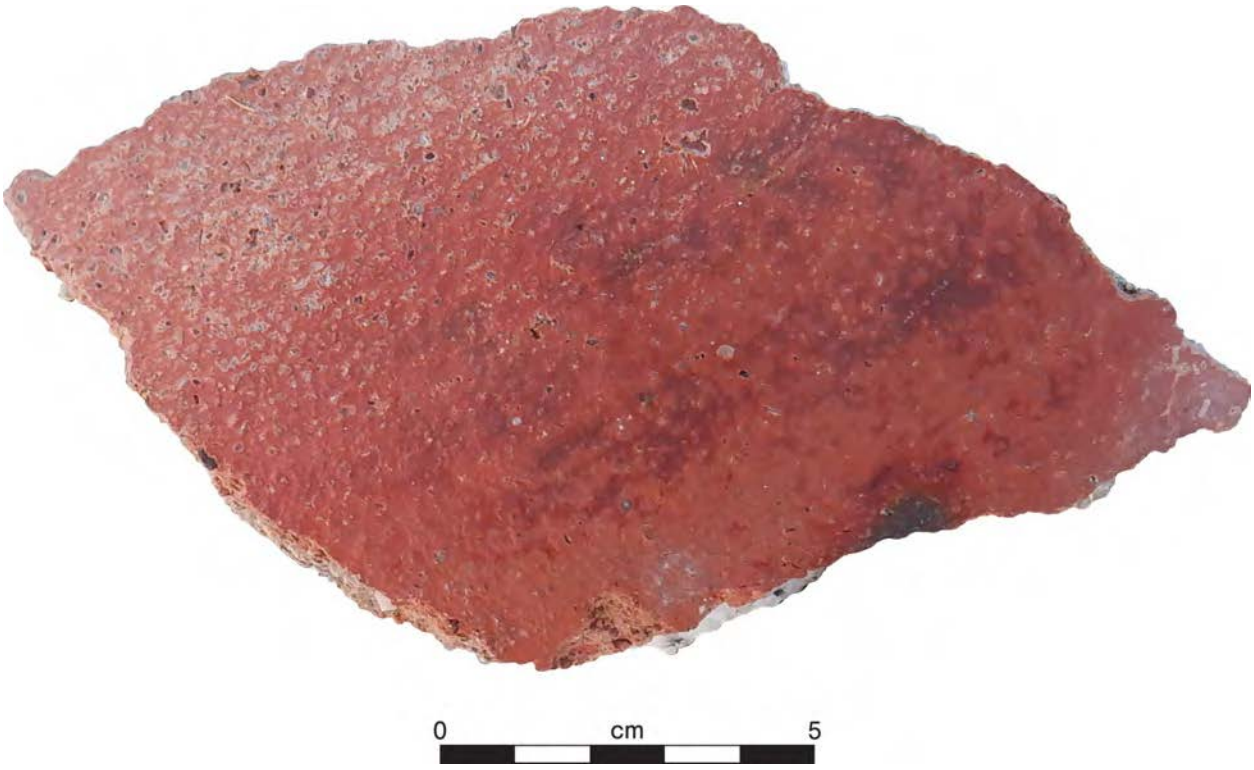

Figure 8. Painted ceramic sherd from ISO 2.

Summary and Management Recommendations

SRI's project survey resulted in the recording of two isolates. ISO 1 consists of a historical-period bottle base, and ISO 2 consists of two prehistoric ceramic sherds. SRI did not identify any prehistoric or historical-period archaeological sites or features within the project area. The two isolates are recommended not eligible for listing in the California Register of Historical Resources (CRHR). The surface of the project area exhibits general disturbance from off-highway-vehicle traffic and past construction activities, and modern trash is found across the project area. The area where the isolates were found was closely examined, and no indications of an archaeological deposit were found to be present. However, the prehistoric ceramic sherds found in the project area and the isolated prehistoric artifacts previously documented in the records-search area suggest that the project area may be sensitive for buried archaeological resources. Furthermore, the ACBCI has requested that a cultural resource monitor from the Tribe be present during ground-disturbing activities related to the project. SRI recommends that an archaeological monitoring plan be developed and implemented to ensure that any unanticipated discoveries made during project-related ground-disturbing activities are properly treated. The monitoring plan shall include provisions for a qualified archaeologist and a Tribe-approved Native American cultural resource monitor to be present during ground-disturbing activities. The monitoring plan should also be flexible and allow for the archaeologist, in consultation with the ACBCI, to reduce or terminate monitoring when it is indicated by field conditions that doing so would be appropriate.

Unanticipated Discoveries

If any prehistoric or historical-period artifact or feature is found during project activities, work near the discovery should cease, and a qualified archaeologist should be brought in to examine the find. Additional fieldwork may be required to evaluate the resource for eligibility for listing in the CRHR.

Human Remains

If human remains are identified during construction, all construction near the remains must cease immediately, and the area must be secured. The Riverside County Coroner's Office must be contacted immediately, in accordance with Section 7050.5(b) of the California *Health and Safety Code* (HSC 7050.5[b]). If the determination is made by the coroner that the remains are those of a Native American, HSC 7050.5(c) requires that the coroner contact the NAHC by telephone within 24 hours. The NAHC will then select the Most Likely Descendant and will coordinate with that individual regarding the treatment and final disposition (repatriation) of the human remains, according to the provisions of PRC 5097.98 and any other legal requirements. Human remains will be treated with the proper dignity and respect.

REFERENCES CITED

Altschul, Jeffrey H.
1986 *Significance Evaluations for Three Cultural Resources on the Ditz-Crane Mission Creek Property, Riverside County, California*. Technical Series 5. Statistical Research, Tucson.

Bailey, Thomas L., and Richard H. Jahns
1954 Geology of the Transverse Range Province, Southern California. In *Geology of Southern California*, edited by Richard H. Jahns, pp. 83–106. Bulletin 170. California Division of Mines, San Francisco.

Barrows, David Prescott
1900 *The Ethno-botany of the Cahuilla Indians of Southern California*. University of Chicago Press, Chicago.

Bean, Lowell John
1972 *Mukat's People: The Cahuilla Indians of Southern California*. University of California Press, Berkeley.

1978 Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575–587. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Lowell John, and William M. Mason
1962 *Diaries & Accounts of the Romero Expeditions in Arizona and California, 1823–1826.* Palm Springs Desert Museum, Palm Springs, California.

Bean, Lowell John, and Katherine S. Saubel
1972 Temalpakh *(from the Earth): Cahuilla Indian Knowledge and Usage of Plants*. Malki Museum Press, Banning, California.

Bean, Lowell John, Jerry D. Schaefer, and Silvia Brakke Vane
1995 *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California*, vol. 1. Cultural Systems Research, Menlo Park, California. Prepared for Riverside County Flood Control and Water Conservation District. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Bean, Lowell John, and Sylvia Brakke Vane
1995 Ethnography and Ethnohistory. In *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California,* edited by Lowell John Bean and Sylvia Brakke Vane, pp. V10–V19. Cultural Systems Research, Menlo Park, California. Prepared for Riverside County Flood Control and Water Conservation District. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Bedwell, Stephen F.
1973 *Fort Rock Basin: Prehistory and Environment*. University of Oregon, Eugene.

Blake, William P.
1857 Geological Report. In *Reports of Explorations in California for Railroad Routes to Connect with Routes near the 35th and 32nd Parallels of North Latitude*, by Lt. R. S. Williamson, Corps of Topographical Engineers. Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, Made under the Direction of the Secretary of War in 1853–4, According to Acts of Congress of March 3, 1985, May 31, 1854, and August 5, 1854, vol. 5, pt. 2, by the U.S. War Department. Senate Executive Document, 33rd Cong., 2nd sess., no. 78, pt. 5. U.S. Congress, Senate. U.S. Congressional Serial Set No. 762. Beverly Tucker, Washington, D.C.

Castetter, Edward F., and Willis H. Bell
1951 *Yuman Indian Agriculture: Primitive Subsistence on the Lower Colorado and Gila Rivers*. University of New Mexico School of Inter-American Affairs, Inter-American Series, Studies 2. University of New Mexico Press, Albuquerque.

Curtis, Edward S.
1926 *The North American Indian*, vol. 15. Cambridge University Press, Cambridge, England.

Dahdul, Mariam, Harry M. Quinn, and Zachary X. Hruby
2008 *Final Report, Archaeological Testing and Evaluation Program at Sites CA-RIV-2642, -2643, and a Portion of -2646, near the City of Desert Hot Springs, Riverside County, California*. CRM TECH, Colton, California. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Dahdul, Mariam, Harry M. Quinn, and Adrián Sánchez Moreno
2003 *Final Cultural Resources Report: Archaeological Testing and Evaluation at CA-RIV-1530 and a Portion of CA-RIV-5876, City of Indian Wells, Riverside County, California*. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Drover, Christopher E.
1982 *An Environmental Test Phase of RIV-1825 and -1827, Seven Palms Ranch, Desert Hot Springs, California*. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

1988 *An Environmental Impact Evaluation, Mitigation by Data Collection: RIV-1825; -1827; -2645 and -2648, Seven Palms Ranch, Desert Hot Springs, California*. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Garcia, Patricia, Kim Maeyama, and Rachael Nixon
2011 *Agua Caliente Band of Cahuilla Indians Historic Preservation Management Plan*. Agua Caliente Band of Cahuilla Indians, Palm Springs, California, and URS Corporation, La Jolla, California.

Goddard, Ives
1996 Introduction. In *Languages*, edited by Ives Goddard, pp. 1–16. Handbook of North American Indians, vol. 17, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Hall, Harvey Monroe, and Joseph Grinnell
1919 Life-Zone Indicators in California. *Proceedings of the California Academy of Science,* 4th series 9:37–67.

Harden, Deborah R.
2004 *California Geology*. 2nd ed. Prentice Hall, Upper Saddle River, New Jersey.

Harvey, Herbert R.
1967 Population of the Cahuilla Indians: Decline and Causes. *Eugenics Quarterly* 14:185–198.

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

Historic Aerials
2020 Indian Canyon Drive and 19th Avenue, Palm Springs, California. Aerial image. Available online from Historic Aerials by NETROnline, Nationwide Environmental Title Research, Tempe, Arizona, https://www.historicaerials.com/viewer.com, accessed November 3, 2022.

Hogan, Michael, Mariam Dahdul, John D. Goodman II, Zachary X. Hruby, and Harry M. Quinn
2010 *Report on the Findings: Archaeological Investigations on a Portion of Locus 1, Site CA-RIV-2642, near the City of Desert Hot Springs, Riverside County, California*. CRM TECH, Colton, California. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Hooper, Lucile
1920 *The Cahuilla Indians*. University of California Publications in American Archaeology and Ethnology, vol. 16, no. 6. University of California Press, Berkeley.

Jaeger, Edmund C.
1965 *The California Deserts*. 4th ed. Stanford University Press, Palo Alto, California.

Jahns, Richard H.
1954 *Northern Part of the Peninsular Range Province*. Geology of Southern California, Geologic Guide No. 5. Bulletin 170, vol. 2, pt. 5. California Division of Mines, San Francisco.

Jenkins, Olaf P.
1980 Geomorphic Provinces Map of California. *California Geology* 32:40–41.

Lawton, Harry W., and Lowell John Bean
1968 A Preliminary Reconstruction of Aboriginal Agricultural Technology among the Cahuilla. *The Indian Historian* 1(5):18–24, 29.

Laylander, Don
1997 The Last Days of Lake Cahuilla: The Elmore Site. *Pacific Coast Archeological Society Quarterly* 33(1–2):1–138.

Lockhart, Bill, and Russ Hoenig
2018 The Bewildering Array of Owens-Illinois Glass Co. Logos and Codes. Society for Historical Archaeology. Electronic document, https://sha.org/bottle/pdffiles/OwensIll_BLockhart.pdf, November 3, 2022.

Love, Bruce, and Mariam Dahdul
2002 Desert Chronologies and the Archaic Period in the Coachella Valley. *Pacific Coast Archaeological Society Quarterly* 38(2–3):65–86.

Lundstrom, Scott C., Ralph R. Shroba, and Jonathan C. Matti
2001 Quaternary Geologic Mapping in the Desert Hot Springs Area, Riverside County, California: Data to Address the Societal Needs and Geoscience Issues. Abstract 3982. Paper presented at the 97th Annual Meeting of the Geological Society of America, Cordilleran Section, and American Association of Petroleum Geologists, Pacific Section, Universal City, California.

McDonald, Alison M.
1992 Indian Hill Rockshelter and Aboriginal Cultural Adaptation in Anza-Borrego Desert State Park, Southeastern California. Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

Munz, Philip A.
1974 *A Flora of Southern California*. University of California Press, Berkeley.

Rogers, Malcolm J.
1945 An Outline of Yuman Prehistory. *Southwestern Journal of Anthropology* 1:167–198.

1966 *Ancient Hunters of the Far West*. Edited by Richard F. Pourade. Union-Tribune and San Diego Museum of Man, San Diego.

Schaefer, Jerry (Jerome) D.
1994 The Challenge of Archaeological Research in the Colorado Desert: Recent Approaches and Discoveries. *Journal of California and Great Basin Anthropology* 16:60–80.

2002 The Chronology and Distribution of Site Types at Tahquitz Canyon. Paper presented at the Annual Meeting of the Society of California Archaeology, Pasadena.

Schaefer, Jerry D., and Don Laylander
2007 The Colorado Desert: Ancient Adaptations to Wetlands and Wastelands. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 247–257. AltaMira, Lanham, Maryland.

Schoenherr, Allan A.
1992 *A Natural History of California*. University of California Press, Berkeley.

Spiglanin, Tom
2023 Disappearing Windmills. Palm Springs Windmill Tours, Palm Springs, California. Electronic document, https://www.windmilltours.com/blog/disappearing-windmills/, accessed November 3, 2022.

Strong, William D.
1929 *Aboriginal Society in Southern California*. University of California Publications in American Archaeology and Ethnology, vol. 26. University of California Press, Berkeley.

Sutton, Mark Q., and Philip J. Wilke (editors)
1988 *Archaeological Investigations at CA-RIV-1179, CA-RIV-2823, and CA-RIV-2827, La Quinta, Riverside County, California*. Archives of California Prehistory No. 20. Coyote Press, Salinas, California.

Vaughan, Sheila J.
1982 A Replicative Systems Analysis of the San Dieguito Component at the C. W. Harris Site. Master's thesis, Department of Anthropology, University of Nevada, Las Vegas.

Warren, Claude N.
1967 The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32:168–185.

1984 The Desert Region. In *California Archaeology*, by Michael J. Moratto, pp. 339–430. Academic Press, Orlando, Florida.

Waters, Michael R.
1982a The Lowland Patayan Ceramic Tradition. In *Hohokam and Patayan: Prehistory of Southwestern Arizona*, edited by Randall H. McGuire and Michael B. Schiffer, pp. 275–297. Academic Press, New York.

1982b The Lowland Patayan Ceramic Typology. In *Hohokam and Patayan: Prehistory of Southwestern Arizona*, edited by Randall. H. McGuire and Michael B. Schiffer, pp. 537–570. Academic Press, New York.

1983 Late Holocene Lacustrine Chronology and Archaeology of Ancient Lake Cahuilla, California. *Quaternary Research* 19:373–387.

Wilke, Philip J.
1978 *Late Prehistoric Human Ecology at Lake Cahuilla, Coachella Valley, California*. Contributions of the University of California Archaeological Research Facility No. 38. Department of Anthropology, University of California, Berkeley.

Wilke, Philip J., and Harry W. Lawton
1975 Early Observations on the Cultural Geography of Coachella Valley. In *The Cahuilla Indians of the Colorado Desert: Ethnohistory and Prehistory*, edited by Philip J. Wilke, pp. 9–43. Anthropological Papers No. 3. Ballena Press, Ramona, California.

Wilke, Philip J., Alison M. McDonald, and L. A. Payen
1986 *Excavations at Indian Hill Rockshelter, Anza-Borrego Desert State Park, California, 1984–1985.* Archaeological Research Unit, University of California, Riverside.

Willig, Judith A., and C. Melvin Aikens
1988 The Clovis-Archaic Interface in Far Western North America. In *Early Human Occupation in Far Western North America: The Clovis-Archaic Interface*, edited by Judith A. Willig, C. Melvin Aikens, and John L. Fagan, pp. 1–40. Anthropological Papers No. 21. Nevada State Museum, Carson City.

WorldClimate.com
2016 Average Weather Data for Palm Springs, California. Electronic document, http://www.worldclimate.com/climate/us/california/palm-springs, accessed November 3, 2022.

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November 3, 2022

Scott Kremkau
Statistical Research, Inc.

Via Email to: skremkau@sricrm.com

Re: Indian Canyon Warehouse Project, Riverside County

Dear Dr. Kremkau:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
11/3/2022

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5401 Dinah Shore Drive — Cahuilla
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Agua Caliente Band of Cahuilla Indians
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ACBCI-THPO@aguacaliente.net

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Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Los Coyotes Band of Cahuilla and Cupeño Indians
Ray Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Indian Canyon Warehouse Project, Riverside County.

Native American Heritage Commission
Native American Contact List
Riverside County
11/3/2022

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

Ramona Band of Cahuilla
John Gomez, Environmental Coordinator
P. O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramona-nsn.gov

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Cultural Committee,
P.O. Box 1160 — Cahuilla
Thermal, CA, 92274
Phone: (760) 397 - 0300
Fax: (760) 397-8146
Cultural-Committee@torresmartinez-nsn.gov

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place — Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place — Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Indian Canyon Warehouse Project, Riverside County.

STATISTICAL RESEARCH, Inc.
ARCHAEOLOGY • ANTHROPOLOGY • HISTORY • HISTORIC ARCHITECTURE • PALEONTOLOGY

November 09, 2022

«Name»
«Title»
«Affiliation»
«Address_1»
«Address_2»

CALIFORNIA
Redlands
617 Texas Street
Redlands, CA
92374
P.O. Box 390
Redlands, CA
92373-0123
(909) 335-1896

San Diego
121 Broadway
Suite 554
San Diego, CA
92101
(619) 299-9766
(619) 299-9774 (fax)

ARIZONA
Tucson
3170 E. Fort Lowell Rd.
Tucson, AZ
85716-1615
(520) 721-4309

COLORADO
Fort Collins
416 W. Oak St.
Fort Collins, CO
80521
(303) 589-9779

NEW MEXICO
Albuquerque
117 Bryn Mawr Drive SE
Albuquerque, NM
87106
(505) 323-8300
(505) 331-2491 (cell)

WASHINGTON
Lacey
1110 Golf Club Rd. SE
Suite 102
Lacey, WA
98503
(360) 918-8621
(360) 915-6531 (fax)

www.sricrm.com

Subject: Indian Canyon Warehouse and Distribution Center Survey, Palm Springs, Riverside County, California

Dear «Name»,

Snider Interests, LLC proposes construction of the Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County (Figure 1). The project area includes a 38-acre property located on the northwest corner of Indian Canyon Drive and 19th Avenue in Palm Springs (APN 666-320-018). The project is proposing a 700,000-square-foot logistics center on the 38-acre site. Approximately 20 acres adjoining to the west (southern half of APN 666-320-015) is also included as an option to increase the size of the Logistics Center to 1,000,000 square feet. The project area is located in Section 15 of Township 3 South, Range 4 East, as shown on the 2021 Desert Hot Springs, California, 7.5-minute U.S. Geological Survey topographic map (Figure 2).

The proposed project is located entirely on privately owned land and is considered a project under the California Environmental Quality Act (CEQA), with the City of Palm Springs (City) acting as the CEQA lead agency. Statistical Research, Inc. (SRI), has been contracted by Snider Interests, LLC to provide a cultural resources technical report to support the CEQA environmental review. The cultural resource study is being performed pursuant to California *Public Resources Code* (PRC) 21000–21177, as amended, which mandates the lead agency to consider the potential impacts of the project on historical and archaeological resources. The area of the cultural resources study consists of both APN 666-320-018 and the southern half of 666-320-015 for a combined total of 58 acres.

As part of its information-gathering process to identify cultural resources within the project area, SRI requested a Sacred Lands File search from the California Native American Heritage Commission (NAHC). The NAHC responded that the Sacred Lands File search was negative and provided a contact list of individuals who have cultural and traditional affiliations with the project area and who may also have knowledge of cultural resources on the property. Your name was on this list, and we respectfully request your assistance in identifying tribal or cultural resources within the project area.

If you know of any cultural or tribal resources that could be affected by the project, please contact me so that the resources are considered during the planning process. If you would like further information, please call me at (909) 754-8274 or contact me by

E-mail at kbecker@sricrm.com. Thank you very much for your assistance. I look forward to hearing from you at your earliest convenience.

Sincerely,

Kenneth M. Becker, M.A., RPA
Senior Principal Investigator

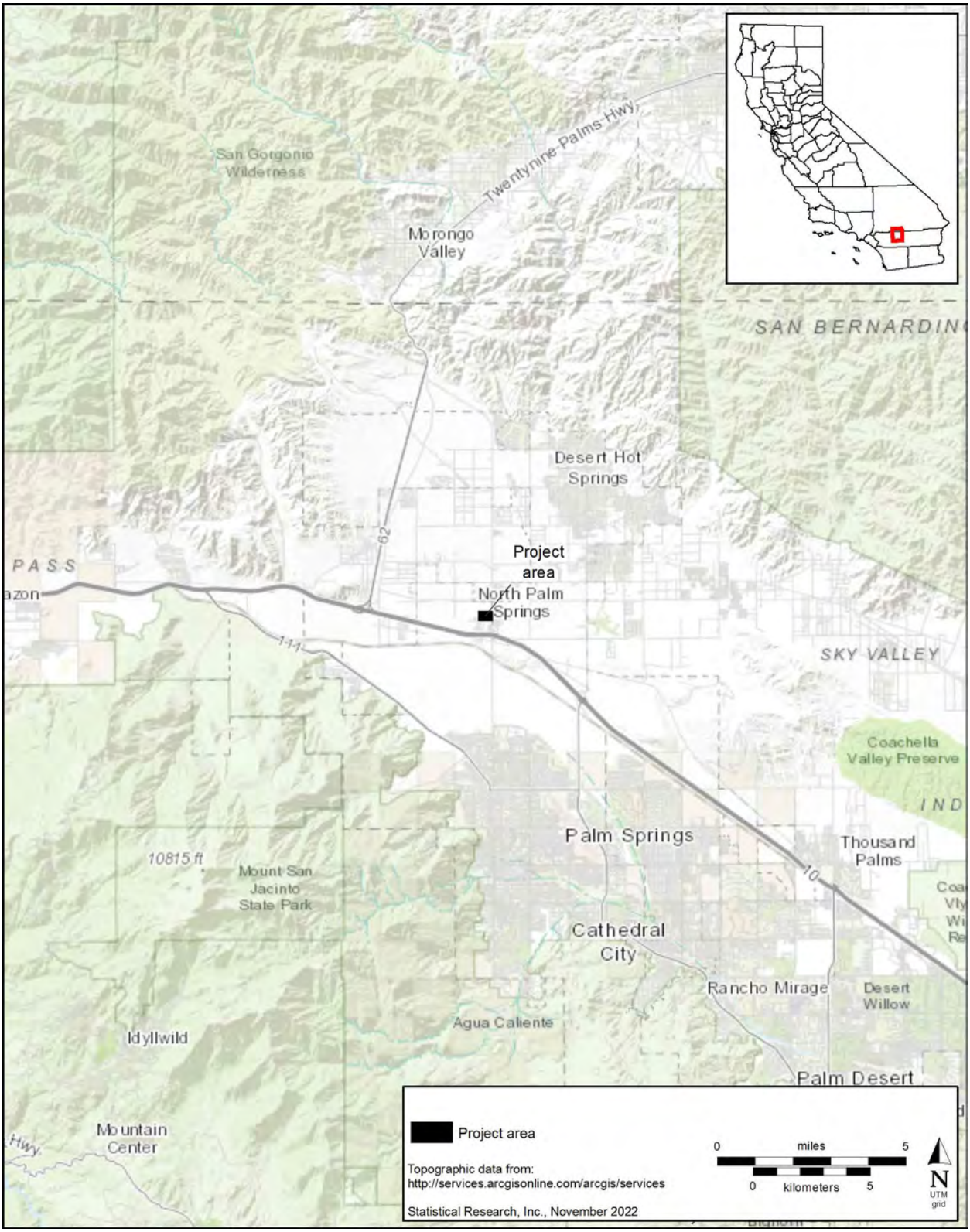

Figure 2. Project vicinity map.

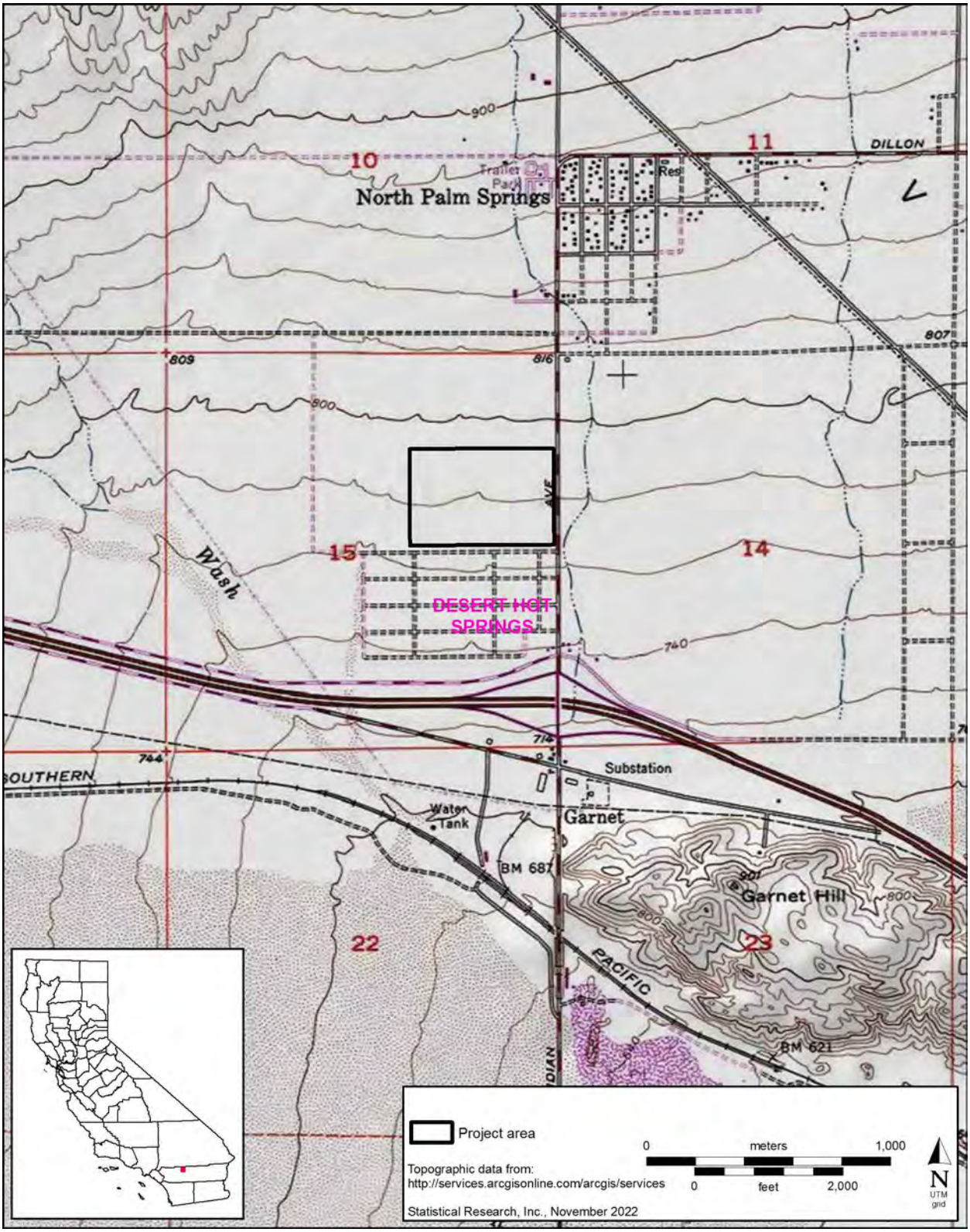

Figure 2. Project location map.

Appendix A. Native American Coordination Notes

Name	Reid Milanovich
Organization	Agua Caliente Band of Cahuilla Indians (ACBCI)
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	-
Date of Follow-up E-mail	-
Comments	Jeanine Hoy called Patricia Garcia-Plotkin and left a voice mail message briefly explaining the reason for the call and requesting that Ms. Garcia-Plotkin return the call if she wishes to respond to the information request.

Name	Patricia Garcia-Plotkin
Organization	Agua Caliente Band of Cahuilla Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Patricia Garcia-Plotkin and left a voice mail message briefly explaining the reason for the call and requesting that Ms. Garcia-Plotkin return the call if she wishes to respond to the information request. On January 3, 2023, Lacy Padilla, Tribal Historic Preservation Officer (THPO) for the ACBCI, responded by letter stating that although the project area is not within the boundaries of the ACBCI Reservation, it is within the Tribe's traditional use area. For this reason, the ACBCI THPO requests the following: (1) a copy of the records search, with associated survey reports and site records, from the California Historical Resources Information System Eastern Information Center; (2) a cultural resource inventory of the project area by a qualified archaeologist before any development activities are conducted in the area; (3) copies of any cultural resource documentation (report and site records) generated in connection with this project; and (4) the presence of an approved ACBCI Native American cultural resource monitor or monitors during any ground-disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the monitor may request that the destructive construction halt and shall notify a qualified archaeologist (qualified per the Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the ACBCI THPO.

Name	Amanda Vance
Organization	Augustine Band of Cahuilla Mission Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022

Comments	Jeanine Hoy called Amanda Vance and spoke with a receptionist who answered the phone. They asked for the letter to be resent via e-mail to info@augustinetribe-nsn.gov. Omar Aceves and Victoria Martin responded by e-mail on December 8, 2022. Ms. Martin wrote that the Tribe is unaware of specific cultural resources that may be affected by the proposed project; however, in the event that any cultural resources are discovered during the development of this project, to please contact their office for further evaluation.

Name	Doug Welmas
Organization	Cabazon Band of Mission Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Doug Welmas and left a voice mail message briefly explaining the reason for the call and requesting that Mr. Welmas return the call if he wishes to respond to the information request.

Name	Daniel Salgado
Organization	Cahuilla Band of Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Daniel Salgado and spoke with the receptionist who answered the phone. They first suggested a follow-up e-mail to be sent but then forwarded Ms. Hoy to another person to leave a voice mail as well.

Name	Raymond Chapparosa
Organization	Los Coyotes Band of Cahuilla and Cupeño Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Comments	Jeanine Hoy called Ray Chapparosa and spoke with Tracy, who requested she call (760)-782-0712 and speak with either Jacob or Dorothy. Jeanine Hoy called the new number and spoke with Dorothy. She said that the request had been received and logged but that there will likely not be a response because of the location of the project in Palm Springs. She also said that in the future to contact her (Dorothy Willis) via e-mail at dwillis@loscoyotesband.org or by phone at (760)-782-0712.

Name	Robert Martin
Organization	Morongo Band of Mission Indians
Affiliation	Cahuilla and Serrano
Date of Request Letter	November 9, 2022

Date of Follow-up Phone Call	-
Date of Follow-up E-mail	-
Comments	Jeanine Hoy called Ann Brierty and left a voice mail message briefly explaining the reason for the call and requesting that Ms. Brierty return the call if she wishes to respond to the information request.

Name	Ann Brierty
Organization	Morongo Band of Mission Indians
Affiliation	Cahuilla and Serrano
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Ann Brierty and left a voice mail message briefly explaining the reason for the call and requesting that Ms. Brierty return the call if she wishes to respond to the information request.

Name	Jill McCormick
Organization	Quechan Tribe of the Fort Yuma Reservation
Affiliation	Quechan
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	-
Comments	Jill McCormick, Historic Preservation Officer for the Tribe, responded by e-mail on November 28, 2022. Ms. McCormick wrote that the Quechan Indian Tribe does not wish to comment on this project.

Name	Manfred Scott
Organization	Quechan Tribe of the Fort Yuma Reservation
Affiliation	Quechan
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	-
Comments	Jill McCormick, Historic Preservation Officer for the Tribe, responded by e-mail on November 28, 2022. Ms. McCormick wrote that the Quechan Indian Tribe does not wish to comment on this project.

Name	Joseph Hamilton
Organization	Ramona Band of Cahuilla
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called John Gomez and spoke with the receptionist who answered the phone. They requested that a follow-up e-mail be sent to John Gomez (jgomez@ramona-nsn.gov) and Danae Hamilton Vega (dhamiltonvega@ramona-nsn.gov). If no response to the follow-up e-mails is received, the receptionist explained, then there is no response.

	They also explained that Joseph Hamilton passed away last year, and Danae Hamilton Vega is now the Chairperson.

Name	John Gomez
Organization	Ramona Band of Cahuilla
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called John Gomez and spoke with the receptionist who answered the phone. They requested that a follow-up e-mail be sent to John Gomez (jgomez@ramona-nsn.gov) and Danae Hamilton Vega (dhamiltonvega@ramona-nsn.gov). If no response to the follow-up e-mails is received, the receptionist explained, then there is no response. They also explained that Joseph Hamilton passed away last year, and Danae Hamilton Vega is now the Chairperson.
Name	Jessica Mauck
Organization	San Manuel Band of Mission Indians
Affiliation	Serrano
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	-
Comments	Mr. Bonnie Bryant, Cultual Resource Technician for the Tribe, responded by e-mail on December 5, 2022, on behalf of the Tribe. Mr. Bryant wrote that the San Manuel Band of Mission Indians (SMBMI) appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on November 15, 2022, but the proposed project is located outside Serrano ancestral territory, and therefore, the SMBMI will not be requesting to receive consulting-party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Name	Lovina Redner
Organization	Santa Rosa Band of Cahuilla Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Comments	Jeanine Hoy called Lovina Reder and spoke with the receptionist, who explained that the Tribe's response is no comment/response and requested to defer the project to the ACBCI.

Name	Mark Cochrane
Organization	Serrano Nation of Mission Indians
Affiliation	Serrano
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022

Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Mark Cochrane and received an automated message that the call cannot be completed as dialed.

Name	Wayne Walker
Organization	Serrano Nation of Mission Indians
Affiliation	Serrano
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Wayne Walker and left a voice mail message briefly explaining the reason for the call and requesting that Mr. Walker return the call if he wishes to respond to the information request.

Name	Joseph Ontiveros
Organization	Soboba Band of Luiseño Indians
Affiliation	Cahuilla and Luiseño
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Comments	Jeanine Hoy called and spoke with Joseph Ontiveros. Mr. Ontiveros answered that based on the project location, it is the Tribe's request to defer the project to the ACBCI and to let them know that they deferred.

Name	Isaiah Vivanco
Organization	Soboba Band of Luiseño Indians
Affiliation	Cahuilla and Luiseño
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Comments	Jeanine Hoy called and spoke with Joseph Ontiveros. Mr. Ontiveros answered that based on the project location, it is the Tribe's request to defer the project to the ACBCI and to let them know that they deferred.

Name	Cultural Committee
Organization	Torres-Martinez Desert Cahuilla Indians
Affiliation	Cahuilla
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called and spoke with a receiptionist by telephone. They said the chair of the committee was out of town, but then Ms. Hoy was transfered to another person, who requested that a follow-up e-mail be sent for the Cultural Committee to review.

Name	Anthony Madrigal
Organization	Twenty-Nine Palms Band of Mission Indians

Affiliation	Chemehuevi
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Anthony Madrigal and left a voice mail message briefly explaining the reason for the call and requesting that Mr. Madrigal return the call if he wishes to respond to the information request.

Name	Darrell Mike
Organization	Twenty-Nine Palms Band of Mission Indians
Affiliation	Chemehuevi
Date of Request Letter	November 9, 2022
Date of Follow-up Phone Call	December 6, 2022
Date of Follow-up E-mail	December 8, 2022
Comments	Jeanine Hoy called Darrell Mike and left a voice mail message briefly explaining the reason for the call and requesting that Mr. Mike return the call if he wishes to respond to the information request.

Jeanine Hoy

From: Jill McCormick <historicpreservation@quechantribe.com>
Sent: Monday, November 28, 2022 9:44 AM
To: Ken Becker
Subject: Indian Canyon Warehouse and Distribution Center Survey

This email is to inform you that we do not wish to comment to SRI on this project.

H. Jill McCormick, M.A.
Historic Preservation Officer
Ft. Yuma Quechan Tribe
P.O. Box 1899
Yuma, AZ 85366
Office: 760-572-2423
Cell: 928-261-0254

Jeanine Hoy

From: Mr. Bonnie Bryant <Bonnie.Bryant@sanmanuel-nsn.gov>
Sent: Monday, December 5, 2022 10:39 AM
To: Ken Becker
Cc: Ryan Nordness
Subject: Indian Canyon Warehouse and Distribution Center Survey

Dear Mr. Becker,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above-referenced project. SMBMI appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on November 15,2022. The proposed project is located outside of Serrano ancestral territory and, as such, SMBMI will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Respectfully,
Mr. Bonnie Bryant
Cultural Resource technician
San Manuel Band of Mission Indians
Bonnie.Bryant@sanmanuel-nsn.gov

Mr. Bonnie Bryant
Cultural Resources Tech
Bonnie.Bryant@sanmanuel-nsn.gov
O:(909) 864-8933 x 50-2033
M:(909) 633-6615
26569 Community Center Dr Highland, California 92346

AUGUSTINE BAND OF CAHUILLA INDIANS
PO Box 846 84-481 Avenue 54 Coachella CA 92236
Telephone: (760) 398-4722
Fax (760) 369-7161
Tribal Chairperson: Amanda Vance
Tribal Vice-Chairperson: Victoria Martin
Tribal Secretary: Geramy Martin

Date: December 8, 2022

RE: Indian Canyon Warehouse and Distribution Center Survey, Palm Springs, Riverside County, California

Dear: Kenneth M. Becker
Senior Principal Investigator

Thank you for the opportunity to offer input concerning the development of the above-identified project. We appreciate your sensitivity to the cultural resources that may be impacted by your project and the importance of these cultural resources to the Native American peoples that have occupied the land surrounding the area of your project for thousands of years. Unfortunately, increased development and lack of sensitivity to cultural resources have resulted in many significant cultural resources being destroyed or substantially altered and impacted. Your invitation to consult on this project is greatly appreciated.

At this time, we are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, you should discover any cultural resources during the development of this project please contact our office immediately for further evaluation.

Very truly yours,

Victoria Martin

Victoria Martin, Tribal Vice-Chairperson
Augustine Band of Cahuilla Indians

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

03-004-2022-034

January 03, 2023

[VIA EMAIL TO:jhoy@sricrm.com]
Statistical Research, Inc.
Ms. Jeanine Hoy
617 Texas Street
Redlands, California 92374

Re: Indian Canyon Warehouse and Distribution Center

Dear Ms. Jeanine Hoy,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Indian Canyon Warehouse and Distribution Center project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area.

*A copy of the records search with associated survey reports and site records from the information center.

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6956. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

Lacy Padilla
Operations Manager
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

California Department of Parks and Recreation Primary Records

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): ISO 1

P1. Other Identifier: _____

***P2. Location:** ☑ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside County **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Desert Hot Springs **Date** 2021 **T** 3 ;**R** 4 ; NE ¼ **of** SE ¼ of **Sec** 15 ; SB **B.M.**

c. Address northwest corner of Indian Canyon Drive and 19th Avenue City Palm Springs Zip 92240

d. UTM (Give more than one for large and/or linear resources): Zone 11 S , 542011 mE/ 3752508 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate): northwest corner of Indian Canyon Drive and 19th Avenue; Assessor's Parcel No. (APN) 666-320-018 and the southern half of APN 666-320-015; 58 acres (23.5 ha)

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

ISO 1 is an amber-glass bottle base with an Owens-Illinois Glass Company manufacturer's mark. The upper area of the base is embossed with an "I" inside an "O" with the factory number "21" to the left of the mark and the year code "70" to the right, indicating that the bottle was manufactured in Portland, Oregon, in 1970. The lower area of the base is embossed with "15419-6B 2·MM", which could potentially include liquor-permit and/or mold numbers.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):
AH16-Other, isolate

***P4. Resources Present:**
☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
☑ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #): DSCF4953, plan view of ISO 1

***P6. Date Constructed/Age and Source:**
☑ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
Snider Interests, LLC
730 Arcady Road
Montecito, CA 93180

***P8. Recorded by** (Name, affiliation, and address):
Jeanine M. Hoy, M.A., RPA, and
Kaitlin Harstine, M.A., RPA,
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** October 31, 2022

***P10. Survey Type** (Describe): Pedestrian survey using 15-meter spaced transects.

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):
Hoy, Jeanine M., and Kenneth M. Becker

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or #:** (Assigned by recorder) ISO 1

2023 *Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California.* Technical Report 23-11. Draft. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ☑ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

***Map Name:** Desert Hot Springs, California, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2021

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 3 ***Resource Name or #** (Assigned by recorder): ISO 2

P1. Other Identifier: _____

***P2. Location:** ☑ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside County **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Desert Hot Springs **Date** 2021 **T** 3 ; **R** 4 ; NE ¼ **of** SW ¼ of **Sec** 15 ; SB **B.M.**

c. Address northwest corner of Indian Canyon Drive and 19th Avenue City Palm Springs Zip 92240

d. UTM (Give more than one for large and/or linear resources): Zone 11 S , 541446 mE/ 3752311 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

northwest corner of Indian Canyon Drive and 19th Avenue; Assessor's Parcel No. (APN) 666-320-018 and the southern half of APN 666-320-015; 58 acres (23.5 ha)

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

ISO 2 consists of two ceramic sherds found within approximately 6 m (19.7 feet) of each other. Both ceramic sherds are lower Colorado Buff Ware sherds. One ceramic sherd (Sherd 1) is an indeterminate body sherd with black staining; it is broken into three pieces that refit together. The other ceramic sherd (Sherd 2) is also an indeterminate body sherd but appears to be painted. This sherd appears to have faded dark-red paint on the exterior side. The paint is too deteriorated to distinguish any design. The two pieces look similar enough that they could be from the same vessel, but only one is painted.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP16-Other, isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
☑ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #): DSCF4978, plan view of ISO 2, Sherd 1

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

Snider Interests, LLC
730 Arcady Road
Montecito, CA 93180

***P8. Recorded by** (Name, affiliation, and address):

Jeanine M. Hoy, M.A., RPA, and
Kaitlin Harstine, M.A., RPA,
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** October 31, 2022

***P10. Survey Type** (Describe): Pedestrian survey using 15-meter spaced transects.

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) ISO 2

Hoy, Jeanine M., and Kenneth M. Becker
2023 *Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California.* Technical Report 23-11. Draft. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ☑ Location Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): Photo of Sherd 2 on Continuation Sheet

***Map Name:** Desert Hot Springs, California, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2021

Description of Photo (view, date, accession #): DSCF4985, plan view of ISO 2, Sherd 2

Appendix F

Energy Report

N Indian Canyon/19th Ave High-Cube Warehouse

ENERGY ANALYSIS

CITY OF PALM SPRINGS

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DECEMBER 15, 2023

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AGSP	Airport Gateway Specific Plan
AQIA	*N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis*
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Palm Springs
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MARB/IPA	March Air Reserve Base/Inland Port Airport
MDV	Medium Duty Trucks

MHDT	Medium-Heavy Duty Trucks
MMcfd	Million Cubic Feet Per Day
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	N Indian Canyon/19th Ave High-Cube Warehouse
PV	Photovoltaic
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21st Century
U.S.	United States
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *N Indian Canyon/19th Ave High-Cube Warehouse Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the 2020 California Environmental Quality Act (CEQA) Statute and Guidelines (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations is discussed in detail in section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed N Indian Canyon/19th Ave High-Cube Warehouse Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Palm Springs (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed N Indian Canyon/19th Ave High-Cube Warehouse Project is located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet. It is anticipated that the Project would be fully developed by year 2025. The preliminary site plan for the proposed Project is shown on Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2020, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (2):

- As of 2020, approximately 6,923 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2021, approximately 605 million barrels of petroleum
- As of 2021, approximately 2,101 billion cubic feet of natural gas
- As of 2021, approximately 1 million short tons of coal

According to the EIA, in 2021 the U.S. petroleum consumption comprised about 77% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (3). In 2022, about 251,923 million gallons (or about 5.99 million barrels) of finished petroleum products were consumed in the U.S., an average of about 690 million gallons per day (or about 16.4 million barrels per day) (4). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day) (5).

The most recent data provided by the EIA for energy use in California is reported from 2021 and provided by demand sectors as follows:

- Approximately 37.8% transportation sector
- Approximately 23.2% industrial sector
- Approximately 20.0% residential sector
- Approximately 19.0% commercial sector (6)

According to the EIA, California used approximately 247,250 gigawatt hours of electricity in 2021 (7). By sector in 2021, residential uses utilized 36.5% of the state's electricity, followed by 43.9% for commercial uses, 19.2% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building (7).

According to the EIA, California used approximately 200,871 million therms of natural gas in 2021 (8). In 2021 (the most recent year for which data is available), by sector, industrial uses utilized 33% of the state's natural gas, followed by 30% used as fuel in the electric power sector, 21% from residential, 11% from commercial, 1% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself (8). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (8).

In 2021, total system electric generation for California was 277,764 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 194,127 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (18%) (9). Natural gas is the main source for electricity generation at 50.2% of the total in-state electric generation system power as shown in Table 2-1.

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (10):

- In 2022, California was the seventh-largest producer of crude oil among the 50 states, and, as of January 2022, the state ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states.
- In 2020, California was the second-largest total energy consumer among the states, but its per capita energy consumption was less than in all but three other states.
- In 2022, renewable resources, including hydroelectric power and small-scale, customer-sited solar power, accounted for 49% of California's in-state electricity generation. Natural gas fueled another 42%. Nuclear power supplied almost all the rest.
- In 2022, California was the fourth-largest electricity producer in the nation. The state was also the nation's third-largest electricity consumer, and additional needed electricity supplies came from out-of-state generators.

As indicated below, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2021)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	% of Imports	Total California Energy Mix	Total California Power Mix
Coal	303	0.2%	181	7,788	7,969	9.5%	8,272	3.0%
Natural Gas	97,431	50.2%	45	7,880	7,925	9.5%	105,356	379.0%
Oil	37	0.0%	-	-	-	0.0%	37	0.0%
Other (Waste Heat/Petroleum Coke)	382	0.2%	68	15	83	0.1%	465	0.2%
Nuclear	16,477	8.5%	524	8,756	9,281	11.1%	25,758	9.3%
Large Hydro	12,036	6.2%	12,042	1,578	13,620	16.3%	25,656	9.2%
Unspecified	-	0.0%	8,156	10,731	18,887	22.6%	18,887	6.8%
Total Thermal and Non-Renewables	**126,666**	**65.2%**	**21,017**	**36,748**	**57,764**	**6910.0%**	**184,431**	**66.4%**
Biomass	5,381	2.8%	864	26	890	1.1%	6,271	2.3%
Geothermal	11,116	5.7%	192	1,906	2,098	2.5%	13,214	4.8%
Small Hydro	2,531	1.3%	304	1	304	0.4%	2,835	1.0%
Solar	33,260	17.1%	220	5,979	6,199	7.4%	39,458	14.2%
Wind	15,173	7.8%	9,976	6,405	16,381	19.6%	31,555	11.4%
Total Renewables	**67,461**	**34.8%**	**11,555**	**14,317**	**25,872**	**3090.0%**	**93,333**	**33.6%**
SYSTEM TOTALS	***194,127***	***100.0%***	***32,572***	***51,064***	***83,636***	***100.0%***	***277,764***	***100.0%***

2.2 ELECTRICITY

The usage associated with electricity use were calculated using CalEEMod Version 2022.1. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California Independent Service Operator (ISO) studies revealed the extent to which the South Coast Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (12). Similarly, the subsequent 2022 IEPR's provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California ISO is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (13).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Electricity is currently provided to the Project site by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2021 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (14).

Table 2-2, SCE's specific proportional shares of electricity sources in 2021. As indicated in Table 2-2, the 2021 SCE Power Mix has renewable energy at 31.4% of the overall energy resources.

Geothermal resources are at 5.7%, wind power is at 10.2%, large hydroelectric sources are at 2.3%, solar energy is at 14.9%, and coal is at 0% (15).

TABLE 2-2: SCE 2021 POWER CONTENT MIX

Energy Resources	2021 SCE Power Mix
Eligible Renewable	**31.4%**
Biomass & Waste	0.1%
Geothermal	5.7%
Eligible Hydroelectric	0.5%
Solar	14.9%
Wind	10.2%
Coal	**0.0%**
Large Hydroelectric	**2.3%**
Natural Gas	**22.3%**
Nuclear	**9.2%**
Other	**0.2%**
Unspecified Sources of power*	34.6%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers*

consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure

natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore

transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (16)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (17), and those vehicles consume an estimated 17.2 billion gallons of fuel each year[1]. Gasoline (and other vehicle fuels) are

[1] Fuel consumptions estimated utilizing information from EMFAC2021.

commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (17). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 10% of the nation's total consumption. The state is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector (18).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2019, about 37% of the natural gas delivered to consumers went to the state's industrial sector, and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the state's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1% (18).

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

3.1.2 THE TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

3.2.1 INTEGRATED ENERGY POLICY REPORT (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2022 IEPR was adopted February 2023, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2022 IEPR introduces a new

framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2022 IEPR (19).

3.2.2 State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 California Code Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (20). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (21):

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).

- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).

- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

3.2.4 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.5 CALIFORNIA'S RENEWABLE PORTFOLIO STANDARD (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020 (22).

3.2.6 CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

3.2.7 100 PERCENT CLEAN ENERGY ACT OF 2018 (SB 100)

In September 2018, the legislature approved, and the Governor signed SB 100, which builds on the targets established in SB 1078 and SB 350. Most notably, SB 100 sets a goal of powering all retail electricity sold in California with renewable and zero-carbon resources. Additionally, SB 100 updates the interim renewables target from 50% to 60% by 2030.

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

Per Appendix F of the *State CEQA Guidelines* (23), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

In compliance with Appendix G of the *State CEQA Guidelines* (1), this report analyzes the project's anticipated energy use during construction and operations to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.2 METHODOLOGY

Information from the CalEEMod Version 2021.1. outputs for the *N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis* (AQIA) (24) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

4.2.1 CALEEMOD

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of the CalEEMod Version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage (25). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1.

4.2.2 EMISSION FACTORS MODEL

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (26). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of

analysis, 2024 and 2025 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2021 model run is provided in Appendix 4.2.

4.3 CONSTRUCTION ENERGY DEMANDS

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

4.3.1 CONSTRUCTION POWER COST

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

CONSTRUCTION DURATION

Construction is anticipated to begin in January 2024 and will last through April 2025 (24). The construction schedule utilized in the analysis, shown in Table 4-1, represents a "worst-case" analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (27).

TABLE 4-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	1/8/2024	2/2/2024	20
Grading	2/5/2024	5/17/2024	75
Building Construction	4/5/2024	5/12/2025	287
Paving	3/3/2025	4/11/2025	30
Architectural Coating	2/7/2025	4/24/2025	55

PROJECT CONSTRUCTION POWER COST

The *2023 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.50, which was used to calculate the Project's total construction power cost (28).

As shown on Table 4-2, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $59,709.94.

TABLE 4-2: CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
High-Cube Fulfillment Center Warehouse	$2.50	739.360	15	$27,726.00
Parking Lot	$2.50	308.405	15	$11,565.19
Other Non-Asphalt Surfaces	$2.50	544.500	15	$20,418.75
CONSTRUCTION POWER COST				***$59,709.94***

4.3.2 CONSTRUCTION ELECTRICITY USAGE

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-2) by the utility provider cost per kilowatt hour (kWh) of electricity.

PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule was used to determine the Project's electrical usage. As of January 1, 2023, SCE's general service rate is $0.13 per kilowatt hours (kWh) of electricity for industrial services (29). As shown on Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 453,310 kWh.

TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
High-Cube Fulfillment Center Warehouse	$0.13	210,492
Parking Lot	$0.13	87,801
Other Non-Asphalt Surfaces	$0.13	155,016
CONSTRUCTION ELECTRICITY USAGE		***453,310***

4.3.3 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

CONSTRUCTION EQUIPMENT

A summary of construction equipment by phase is provided on Table 4-4. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the Code.

TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	2	8
	Crawler Tractors	2	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	2	8
	Forklifts	6	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

PROJECT CONSTRUCTION EQUIPMENT FUEL CONSUMPTION

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (30). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region[2]. As presented in Table 4-5, Project construction activities would consume an estimated 98,374 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

[2] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Site Preparation	20	Rubber Tired Dozers	367	2	8	0.4	2,349	2,539
		Crawler Tractors	87	2	8	0.43	599	647
Grading	75	Excavators	36	2	8	0.38	219	887
		Graders	148	1	8	0.41	485	1,968
		Rubber Tired Dozers	367	1	8	0.4	1,174	4,761
		Scrapers	423	2	8	0.48	3,249	13,170
		Crawler Tractors	87	2	8	0.43	599	2,427
Building Construction	287	Cranes	367	2	8	0.29	1,703	26,418
		Forklifts	82	6	8	0.2	787	12,212
		Generator Sets	14	2	8	0.74	166	2,572
		Tractors/Loaders/Backhoes	84	6	8	0.37	1,492	23,144
		Welders	46	2	8	0.45	331	5,138
Paving	30	Pavers	81	2	8	0.42	544	883
		Paving Equipment	89	2	8	0.36	513	831
		Rollers	36	2	8	0.38	219	355
Architectural Coating	55	Air Compressors	37	1	8	0.48	142	422
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								***98,374***

4.3.3 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul truck commuting to and from the site. The number of workers, vendor, and haul trips are presented below in Table 4-6. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 4-6: CONSTRUCTION TRIPS AND VMT

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	10	6	0
Grading	20	24	0
Building Construction	311	91	0
Paving	15	0	0
Architectural Coating	62	0	0

4.3.4 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips (personal vehicles used by workers commuting to the Project from home) would generate an estimated 1,761,367 VMT during the 15 months of construction (24). Based on CalEEMod methodology, it is assumed that 50% of all construction worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[3]), and 25% are from light-duty-trucks (LDT2[4]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (26). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the Riverside (SS) sub-area for the 2024 through 2025 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 64,768 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

[3] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Worker Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2024	LDA						
	Site Preparation	20	5	18.5	1,850	31.15	59
	Grading	75	10	18.5	13,875	31.15	445
	Building Construction	193	156	18.5	556,998	31.15	17,882
	LDT1						
	Site Preparation	20	3	18.5	1,110	23.65	47
	Grading	75	5	18.5	6,938	23.65	293
	Building Construction	193	78	18.5	278,499	23.65	11,775
	LDT2						
	Site Preparation	20	3	18.5	1,110	23.77	47
	Grading	75	5	18.5	6,938	23.77	292
	Building Construction	193	78	18.5	278,499	23.77	11,716
2025	LDA						
	Building Construction	94	156	18.5	271,284	32.28	8,405
	Paving	30	8	18.5	4,440	32.28	138
	Architectural Coating	55	31	18.5	31,543	32.28	977
	LDT1						
	Building Construction	94	78	18.5	135,642	24.14	5,619
	Paving	30	4	18.5	2,220	24.14	92
	Architectural Coating	55	16	18.5	16,280	24.14	674
	LDT2						
	Building Construction	94	78	18.5	135,642	24.44	5,550
	Paving	30	4	18.5	2,220	24.44	91
	Architectural Coating	55	16	18.5	16,280	24.44	666
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION							***64,768***

It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

4.3.5 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 144,452 VMT along area roadways for

the Project over the duration of construction activity (24). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHD), 50% of all vendor trips are from heavy-heavy duty trucks (HHD), and 100% of all hauling trips are from HHDs. These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (24). Vehicle fuel efficiencies for MHDs and HHDs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHD and HHD vehicle classes within the Riverside (SS) sub-area for the 2024 and 2025 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

Based on Table 4-8, it is estimated that 42,168 gallons of fuel will be consumed related to construction vendor trips during full construction of the Project. It should be noted that Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Vendor/ Hauling Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2024	MHDT						
	Site Preparation	20	3	10.2	612	7.58	81
	Grading	75	12	10.2	9,180	7.58	1,211
	Building Construction	193	46	10.2	90,556	7.58	11,945
	HHDT (Vendor)						
	Site Preparation	20	3	10.2	612	6.19	99
	Grading	75	12	10.2	9,180	6.19	1,482
	Building Construction	193	46	10.2	90,556	6.19	14,621
2025	MHDT						
	Building Construction	94	46	10.2	44,105	7.67	5,747
	HHDT (Vendor)						
	Building Construction	94	46	10.2	44,105	6.32	6,983
TOTAL CONSTRUCTION VENDOR/HAULING FUEL CONSUMPTION							***42,168***

4.3.6 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that there are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel

efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation fuel demands (fuel consumed by passenger car and truck vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION FUEL DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class

can be determined by evaluated in the vehicle fleet mix and the total VMT. As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (26). EMFAC2021 was run for the Riverside (SS) sub-area for the 2024 and 2025 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	32.28	5,672,062	175,736
LDT1	24.14	508,827	21,076
LDT2	24.44	2,808,597	114,913
MDV	20.03	1,965,451	98,108
MCY	42.88	222,190	5,182
LHD1	16.40	253,324	15,450
LHD2	14.96	77,101	5,155
MHDT	7.67	330,425	43,054
HHDT	6.32	2,423,114	383,635
	TOTAL (ALL VEHICLES)	***14,261,090***	***862,311***

The estimated transportation energy demands were previously summarized on Table 4-9. As summarized on Table 4-9, the Project would result in a net total of 14,261,090 annual VMT and an estimated net total in annual fuel consumption of 862,311 gallons of fuel.

4.4.2 ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to four (4) 200 horsepower (hp), natural gas-powered cargo handling equipment – port tractors operating at 4 hours a day[5] for 365 days of the year.

Project operational activity estimates and associated fuel consumption estimates are based on the annual EMFAC2021 offroad emissions for the 2025 operational year and was used to derive the total annual fuel consumption associated on-site equipment. As presented in Table 4-10, Project on-site equipment would consume an estimated 13,926 gallons of natural gas.

[5] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

TABLE 4-10: ON-SITE CARGO HANDLING EQUIPMENT FUEL CONSUMPTION ESTIMATES

Equipment	Quantity	Usage Hours	Days of Operation	EMFAC2021 Fuel Consumption (gal./yr)	EMFAC2021 Activity (hrs./yr)	Total Fuel Consumption
Cargo Handling Equipment	2	4	365	18,339	5,768	13,926
ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMAND (GALLONS FUEL)						***13,926***

4.4.3 FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of electricity, which would be supplied to the Project by SCE, respectively. As summarized on Table 4-11 the Project would result in 3,673,072 kWh/year of electricity.

Based on information provided by the Project Applicant, the Project would not use natural gas for the building envelope. As such, natural gas consumption has not been analyzed in this study.

TABLE 4-11: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY

Land Use	Electricity Demand (kWh/year)
High-Cube Fulfillment Center Warehouse	3,402,795
Parking Lot	270,277
TOTAL PROJECT ENERGY DEMAND	***3,673,072***

kBTU – kilo-British Thermal Units

4.4.4 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Standards Code).

ENHANCED VEHICLE FUEL EFFICIENCIES

Project annual fuel consumption estimates presented previously in Table 4-9 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $59,709.94. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 453,310 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 98,374 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 64,768 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDTs and HHDTs) will total approximately 42,168 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2022 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (19). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 OPERATIONAL ENERGY DEMANDS

TRANSPORTATION ENERGY DEMANDS

Annual vehicular trips and related VMT generated by the operation of the Project would result in a total fuel demand of 862,311 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021) and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other industrial uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent (31).
- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code and City requirements, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS

As previously stated, it is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. On-site cargo handling equipment used by the Project would result in approximately 13,926 gallons of natural gas. On-site equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed operations that are unusual or energy-intensive, and Project on-site equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated at: 3,673,072 kWh/year of electricity. and would be supplied by SCE. Based on information provided by the Project Applicant, the Project would not use natural gas. As such, natural gas consumption has not been analyzed in this study. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

A significant impact would occur if the proposed Project would result in the inefficient, wasteful, or unnecessary use of energy.

Construction

Based on CalEEMod estimations within the modeling output files used to estimate GHG emissions associated with future development projects, construction-related vehicle trips would result in approximately 2.05 million VMT and consume an estimated 106,936 gallons of gasoline and diesel combined during future development projects construction phases. Additionally, on-site construction equipment would consume an estimated 98,374 gallons of diesel fuel. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California Code of Regulations, Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel- powered equipment and are enforced by the ARB. Additionally, given the cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy. Therefore, the construction-related impacts related to electricity and fuel consumption would be less than significant.

Operation

Electricity and Natural Gas

Operation of the proposed project would consume energy as part of building operations and transportation activities. Building operations would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations for the Project would result in approximately 3,673,072 kWh of electricity annually.

Future development projects would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of

lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Fuel

Operational energy would also be consumed during vehicle trips associated with future development projects envisioned under the proposed project. Fuel consumption would be primarily related to vehicle use by residents, visitors, and employees associated with future development projects. Based on CalEEMod energy use estimations, project-related vehicle trips would result in approximately 14.26 million VMT and consume an estimated 862,311 gallons of gasoline and diesel combined, annually (see Appendix 3.3). Additionally, on-site cargo handling equipment used by the Project would result in approximately 13,926 gallons of natural gas.

The Project is surrounded by existing urban uses, the existing transportation facilities and infrastructure would provide future visitors and employees associated with the Project access to a mix of land uses in close proximity to the Project, thus further reducing fuel consumption demand. Additionally, the Project will also be providing parking and EV infrastructure that would further promote fuel efficient vehicles. For these reasons, operational-related transportation fuel consumption would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the operational impact related to vehicle fuel consumption would be less than significant.

5.2 ENERGY IMPACT 2

Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis

A significant impact would occur if the proposed Project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Construction

As discussed in Section 5.1, above, the proposed project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the ARB. The proposed project would comply with these regulations. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction- related energy efficiency and renewable energy standards consistency impacts would be less than significant.

Operation

California's Renewable Portfolio Standard (RPS) establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly, the State is promoting renewable energy targets to meet the 2022 Scoping Plan greenhouse gas emissions reductions. As discussed in Section 5.1, above, the Project would result in approximately 3,673,072 kWh of electricity annually.

Future development projects would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Compliance with the aforementioned mandatory measures would ensure that future development projects would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

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6 REFERENCES

1. **Association of Environmental Professionals.** *2020 CEQA California Environmental Quality Act.* 2020.
2. **Administration, U.S. Energy Information.** California State Profile and Energy Estimates. [Online] https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures.
3. **U.S. Energy Information Administration.** Use of Energy in the United States Explained Energy Use for Transportation. [Online] https://www.eia.gov/energyexplained/use-of-energy/transportation.php.
4. —. Use of Energy in the United States Explained Energy Use for Transportation. [Online] https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTPUPUS1&f=A.
5. —. Prime Supplier Sales Volume, California, Annual. [Online] 2020. https://www.eia.gov/dnav/pet/pet_cons_prim_dcu_SCA_a.htm.
6. —. California Energy Consumption by End-Use Sector. *California State Profile and Energy Estimates.* [Online] https://www.eia.gov/state/?sid=CA#tabs-2.
7. —. California State Profile and Energy Estimates. [Online] https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_es.pdf.
8. —. California State Profile and Energy Estimates. [Online] https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm.
9. **California Energy Commission.** 2021 Total System Electric Generation. *CA.gov.* [Online] https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation#:~:text=Total%20generation%20for%20California%20was,from%2090%2C208%20GWh%20in%202020)..
10. **U.S. Energy Information Administration.** California State Profile and Energy Estimates. [Online] https://www.eia.gov/state/?sid=CA.
11. —. California State Profile and Energy Estimates. [Online] https://www.eia.gov/state/?sid=CA.
12. **California Energy Commission.** *2013 Integrated Energy Policy Report.* 2013.
13. **California ISO.** Understanding the ISO. [Online] http://www.caiso.com/about/Pages/OurBusiness/UnderstandingtheISO/default.aspx.
14. **Southern California Edison.** ***Southern California Edison's Service Area.*** **[Online] https://download.newsroom.edison.com/create_memory_file/?f_id=5cc32d492cfac24d21aecf4c&content_verified=True.**
15. **Southern Californai Edison. 2021 Power Content Label.** ***Southern California Edison.*** **[Online] https://www.sce.com/sites/default/files/custom-files/Web%20files/2021%20Power%20Content%20Label.pdf.**
16. **California Public Utilities Commission. Natural Gas and California. [Online] http://www.cpuc.ca.gov/general.aspx?id=4802.**
17. **Department of Motor Vehicles.** ***State of California Department of Motor Vehicles Statistics For Publication January Through December 2021.*** **2021.**
18. **United States Energy Information Administration. California Analysis.** ***Energy Information Administration.*** **[Online] https://www.eia.gov/beta/states/states/ca/analysis.**

19. California Energy Commission Staff. 2022 Integrated Energy Policy Report Update. [Online] 2022. https://www.energy.ca.gov/sites/default/files/2023-02/Adopted_2022_IEPR_Update_with_errata_ada.pdf.

20. California Energy Commission. Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses. [Online] August 11, 2021. https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0.

21. California Department of General Services. 2022 CALGreen Code. *CALGreen.* [Online] https://codes.iccsafe.org/content/CAGBC2022P1.

22. California Energy Commission. Renewables Portfolio Standard (RPS). [Online] 2002. http://www.energy.ca.gov/portfolio/.

23. State of California. *California Environmental Quality Act Guideline, California Public Resources Code, Title 14, Division 6, Chapter 3,.*

24. Urban Crossroads, Inc. *N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis.* 2023.

25. California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod). [Online] May 2022. www.caleemod.com.

26. California Department of Transportation. EMFAC Software. [Online] http://www.dot.ca.gov/hq/env/air/pages/emfac.htm.

27. State of California. *2019 CEQA California Environmental Quality Act.* 2019.

28. Pray, Richard. *2023 National Construction Estimator.* Carlsbad : Craftsman Book Company, 2023.

29. Southern California Edison. Schedule GS-1 General Service. *Regulatory Information - Rates Pricing.* [Online] https://library.sce.com/content/dam/sce-doclib/public/regulatory/tariff/electric/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1.pdf.

30. California Air Resources Board. *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects For Evaluating Motor Vehicle Registration Fee Projects And Congestion Mitigation and Air Quality Improvement (CMAQ) Projects, Emission Factor Tables.* 2018.

31. —. Truck and Bus Regulation. [Online] https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation.

32. The California Energy Commission. 2022 Building Energy Efficiency Standards. *California Energy Commission.* [Online] 2022. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.

33. Administration, U.S. Energy Information. California State Profile and Energy Estimates. [Online] https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures.

34. U.S. Energy Information Administration. Use of Energy in the United States Explained Energy Use for Transportation. [Online] https://www.eia.gov/dnav/pet/PET_CONS_PSUP_DC_NUS_MBBLPD_A.htm.

35. —. *Prime Supplier Sales Volume, California, Annual.* 2020.

36. —. California State Profile and Energy Estimates. [Online] https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_nus_m.htm.

37. Urban Crossroads, Inc. *N Indian Canyon/19th Ave High-Cube Warehouse Trip Generation Assessment.* 2023.

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7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed N Indian Canyon/19th Ave High-Cube Warehouse. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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Master of Science in Environmental Studies
California State University, Fullerton • May 2010

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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 4.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

15097 - N Indian Canyon & 19th Ave Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15097 - N Indian Canyon & 19th Ave
Construction Start Date	1/8/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.911458, -116.546215
County	Riverside-Salton Sea
City	Palm Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5694
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	739	1000sqft	17.0	739,360	0.00	—	—	—
Parking Lot	787	Space	7.08	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.5	Acre	12.5	0.00	0.00	—	—	—
User Defined Industrial	739	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.83	73.9	66.9	94.9	0.14	2.83	7.97	10.8	2.61	2.26	4.87	—	20,576	20,576	0.72	0.77	28.8	20,853
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.93	73.4	37.6	62.2	0.09	1.71	5.85	7.20	1.58	1.83	3.01	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.74	11.3	24.8	35.8	0.05	1.01	3.40	4.42	0.94	0.94	1.87	—	8,389	8,389	0.30	0.36	6.15	8,509
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	2.06	4.52	6.53	0.01	0.19	0.62	0.81	0.17	0.17	0.34	—	1,389	1,389	0.05	0.06	1.02	1,409

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	9.83	8.40	66.9	94.9	0.14	2.83	7.97	10.8	2.61	2.26	4.87	—	20,576	20,576	0.72	0.77	28.8	20,853
2025	6.43	73.9	36.3	78.1	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	15,587	15,587	0.54	0.64	27.8	15,817
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.80	3.97	37.6	48.2	0.07	1.71	4.84	5.95	1.58	1.83	3.01	—	12,200	12,200	0.44	0.60	0.66	12,392
2025	5.93	73.4	36.7	62.2	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.74	3.19	24.8	35.8	0.05	1.01	3.40	4.42	0.94	0.94	1.87	—	8,389	8,389	0.30	0.36	6.15	8,509
2025	1.32	11.3	7.94	14.9	0.02	0.29	1.38	1.66	0.26	0.33	0.59	—	3,481	3,481	0.12	0.16	2.90	3,533
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.68	0.58	4.52	6.53	0.01	0.19	0.62	0.81	0.17	0.17	0.34	—	1,389	1,389	0.05	0.06	1.02	1,409
2025	0.24	2.06	1.45	2.71	< 0.005	0.05	0.25	0.30	0.05	0.06	0.11	—	576	576	0.02	0.03	0.48	585

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	29.1	35.4	166	0.55	0.76	32.8	33.6	0.71	8.41	9.12	702	60,845	61,547	72.3	5.80	164	65,248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.03	22.9	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	702	56,897	57,599	72.3	5.85	4.26	61,154
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.18	24.9	32.4	104	0.46	0.64	28.5	29.1	0.61	7.30	7.90	702	51,633	52,335	72.2	5.19	61.9	55,749
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.68	4.55	5.92	19.0	0.08	0.12	5.20	5.32	0.11	1.33	1.44	116	8,548	8,665	12.0	0.86	10.3	9,230

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.04	6.97	35.1	134	0.54	0.70	32.8	33.6	0.67	8.41	9.08	—	56,431	56,431	0.86	4.95	164	58,092
Area	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	13.8	29.1	35.4	166	0.55	0.76	32.8	33.6	0.71	8.41	9.12	702	60,845	61,547	72.3	5.80	164	65,248
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.03	5.99	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	—	52,615	52,615	0.86	5.00	4.26	54,131
Area	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529

Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	7.03	22.9	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	702	56,897	57,599	72.3	5.85	4.26	61,154
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.36	5.45	32.3	88.3	0.46	0.61	28.5	29.1	0.58	7.30	7.88	—	47,286	47,286	0.74	4.35	61.9	48,661
Area	2.82	19.5	0.13	15.9	< 0.005	0.03	—	0.03	0.02	—	0.02	—	65.2	65.2	< 0.005	< 0.005	—	65.4
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	9.18	24.9	32.4	104	0.46	0.64	28.5	29.1	0.61	7.30	7.90	702	51,633	52,335	72.2	5.19	61.9	55,749
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.00	5.90	16.1	0.08	0.11	5.20	5.31	0.11	1.33	1.44	—	7,829	7,829	0.12	0.72	10.3	8,056
Area	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	581	581	0.05	0.01	—	584
Water	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Waste	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Total	1.68	4.55	5.92	19.0	0.08	0.12	5.20	5.32	0.11	1.33	1.44	116	8,548	8,665	12.0	0.86	10.3	9,230

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.17	2.66	25.5	21.0	0.03	1.28	—	1.28	1.18	—	1.18	—	3,335	3,335	0.14	0.03	—	3,347
Dust From Material Movement	—	—	—	—	—	—	3.68	3.68	—	1.78	1.78	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.40	1.15	< 0.005	0.07	—	0.07	0.06	—	0.06	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.01	0.01	0.23	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.01	201
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	36.6	30.5	0.06	1.70	—	1.70	1.56	—	1.56	—	6,597	6,597	0.27	0.05	—	6,619
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	36.6	30.5	0.06	1.70	—	1.70	1.56	—	1.56	—	6,597	6,597	0.27	0.05	—	6,619
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.79	7.52	6.27	0.01	0.35	—	0.35	0.32	—	0.32	—	1,356	1,356	0.05	0.01	—	1,360
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.37	1.14	< 0.005	0.06	—	0.06	0.06	—	0.06	—	224	224	0.01	< 0.005	—	225
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	2.07	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	304	304	0.01	0.01	1.13	308

Vendor	0.04	0.03	0.84	0.38	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	772	772	0.01	0.11	2.10	807
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.12	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	261
Vendor	0.04	0.03	0.91	0.39	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	773	773	0.01	0.11	0.05	805
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	56.7	56.7	< 0.005	< 0.005	0.10	57.5
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	159	159	< 0.005	0.02	0.19	166
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.39	9.39	< 0.005	< 0.005	0.02	9.52
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.3	26.3	< 0.005	< 0.005	0.03	27.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	12.9	15.1	0.03	0.57	—	0.57	0.52	—	0.52	—	2,790	2,790	0.11	0.02	—	2,799
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.36	2.75	< 0.005	0.10	—	0.10	0.10	—	0.10	—	462	462	0.02	< 0.005	—	463
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.87	1.72	1.77	32.1	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,714	4,714	0.18	0.15	17.6	4,782
Vendor	0.15	0.11	3.19	1.44	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,929	2,929	0.03	0.41	7.96	3,059
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.57	1.28	1.89	18.3	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,008	4,008	0.20	0.15	0.45	4,059
Vendor	0.14	0.10	3.44	1.47	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,931	2,931	0.03	0.41	0.21	3,054
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.87	0.79	0.93	12.1	0.00	0.00	2.14	2.14	0.00	0.50	0.50	—	2,273	2,273	0.10	0.08	4.02	2,304
Vendor	0.08	0.06	1.78	0.77	0.01	0.02	0.41	0.43	0.02	0.11	0.14	—	1,554	1,554	0.02	0.22	1.82	1,620
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.20	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	376	376	0.02	0.01	0.67	381
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	257	257	< 0.005	0.04	0.30	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.85	7.31	0.01	0.24	—	0.24	0.22	—	0.22	—	1,359	1,359	0.06	0.01	—	1,364

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.07	1.33	< 0.005	0.04	—	0.04	0.04	—	0.04	—	225	225	0.01	< 0.005	—	226
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.78	1.63	1.63	29.6	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,611	4,611	0.18	0.15	16.0	4,678
Vendor	0.15	0.11	3.04	1.35	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,880	2,880	0.03	0.39	7.93	3,004
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.39	1.23	1.75	16.8	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	3,924	3,924	0.19	0.15	0.41	3,975
Vendor	0.14	0.10	3.27	1.38	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,883	2,883	0.03	0.39	0.21	2,999
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.42	5.44	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,083	1,083	0.05	0.04	1.78	1,098
Vendor	0.04	0.03	0.83	0.35	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	744	744	0.01	0.10	0.88	775
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.99	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	179	179	0.01	0.01	0.29	182
Vendor	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	< 0.005	0.02	0.15	128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.81	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	190	190	0.01	0.01	0.02	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Architectural Coatings	—	10.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.44	4.44	< 0.005	< 0.005	—	4.46
Architectural Coatings	—	1.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.33	0.33	5.92	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	922	922	0.04	0.03	3.19	936
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.35	3.36	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	785	785	0.04	0.03	0.08	795
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.63	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	126	126	0.01	< 0.005	0.21	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.9	20.9	< 0.005	< 0.005	0.03	21.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	7.13	6.34	5.63	127	0.27	0.10	24.3	24.4	0.09	6.13	6.22	—	26,849	26,849	0.64	0.54	87.0	27,112
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.91	0.63	29.5	7.04	0.28	0.60	8.52	9.12	0.58	2.28	2.85	—	29,582	29,582	0.22	4.41	77.2	30,980
Total	8.04	6.97	35.1	134	0.54	0.70	32.8	33.6	0.67	8.41	9.08	—	56,431	56,431	0.86	4.95	164	58,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	6.16	5.40	6.29	78.0	0.23	0.10	24.3	24.4	0.09	6.13	6.22	—	23,019	23,019	0.64	0.58	2.25	23,211
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.87	0.59	31.7	7.08	0.28	0.60	8.52	9.12	0.58	2.28	2.85	—	29,595	29,595	0.22	4.42	2.00	30,920

Total	7.03	5.99	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	—	52,615	52,615	0.86	5.00	4.26	54,131
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.02	0.90	0.94	15.0	0.04	0.02	3.85	3.87	0.01	0.97	0.99	—	3,549	3,549	0.09	0.08	5.43	3,580
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.14	0.10	4.96	1.13	0.04	0.10	1.35	1.45	0.09	0.36	0.45	—	4,280	4,280	0.03	0.64	4.82	4,476
Total	1.16	1.00	5.90	16.1	0.08	0.11	5.20	5.31	0.11	1.33	1.44	—	7,829	7,829	0.12	0.72	10.3	8,056

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	538	538	0.05	0.01	—	541
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	42.7	42.7	< 0.005	< 0.005	—	43.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	581	581	0.05	0.01	—	584

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.72	5.28	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Total	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Total	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Site Preparation	Site Preparation	1/8/2024	2/2/2024	5.00	20.0	30
Grading	Grading	2/5/2024	5/17/2024	5.00	75.0	75
Building Construction	Building Construction	4/5/2024	5/12/2025	5.00	287	740
Paving	Paving	3/3/2025	4/11/2025	5.00	30.0	55
Architectural Coating	Architectural Coating	2/7/2025	4/24/2025	5.00	55.0	55

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	24.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	311	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	91.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	62.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	1,109,040	369,680	51,323

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	40.0	0.00	—
Grading	—	—	300	0.00	—
Paving	0.00	0.00	0.00	0.00	19.6

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	7.08	100%
Other Asphalt Surfaces	12.5	100%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	1,294	738	707	412,664	35,045	19,986	19,145	11,177,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	280	160	153	89,364	9,670	5,511	5,282	3,083,963

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	1,109,040	369,680	51,323

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	3,402,795	349	0.0330	0.0040	0.00
Parking Lot	270,277	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	170,977,000	0.00
Parking Lot	0.00	0.00

Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	695	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1

AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6
Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7
Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186
Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459
Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123
Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—

Insured adults	2.55357372
Arthritis	0.0
Asthma ER Admissions	54.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4
Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0

Elderly	5.7
English Speaking	42.6
Foreign-born	50.4
Outdoor Workers	10.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.
Operations: Energy Use	Per client data, no natural gas will be utilized

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APPENDIX 4.2:

EMFAC 2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SS)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calenc	Vehicle Cate	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SS)	2024	HHDT	Aggregate	Aggregate	Gasoline	1.694970735	323.4783748	323.47837	0	33.912974	0.086446128	86.44612819	222609.0511	323.4783748	1378732.637	6.19	HHDT
Riverside (SS)	2024	HHDT	Aggregate	Aggregate	Diesel	7165.670505	1364722.681	1364722.7	0	143912.23	220.7753998	220775.3998		1364722.681			
Riverside (SS)	2024	HHDT	Aggregate	Aggregate	Electricity	19.52575568	2989.108891	0	2989.1089	393.55708	0	0		2989.108891			
Riverside (SS)	2024	HHDT	Aggregate	Aggregate	Natural Gas	133.9314321	10697.36825	10697.368	0	1399.3772	1.747205086	1747.205086		10697.36825			
Riverside (SS)	2024	LDA	Aggregate	Aggregate	Gasoline	129411.5712	4345619.721	4345619.7	0	605087.76	150.9355556	150935.5556	153659.1337	4345619.721	4786244.636	31.15	LDA
Riverside (SS)	2024	LDA	Aggregate	Aggregate	Diesel	376.3624609	9902.273882	9902.2739	0	1614.4783	0.229115808	229.1158082		9902.273882			
Riverside (SS)	2024	LDA	Aggregate	Aggregate	Electricity	6001.099881	279235.0425	0	279235.04	30229.061	0	0		279235.0425			
Riverside (SS)	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	3735.708861	151487.5992	74100.52	77387.08	15447.156	2.494462287	2494.462287		151487.5992			
Riverside (SS)	2024	LDT1	Aggregate	Aggregate	Gasoline	12678.72514	449801.1364	449801.14	0	55587.537	19.07600777	19076.00777	19094.25845	449801.1364	451604.7505	23.65	LDT1
Riverside (SS)	2024	LDT1	Aggregate	Aggregate	Diesel	6.043919794	141.5572296	141.55723	0	17.354748	0.005673758	5.673757581		141.5572296			
Riverside (SS)	2024	LDT1	Aggregate	Aggregate	Electricity	17.11596488	831.2049649	0	831.20496	87.37931	0	0		831.2049649			
Riverside (SS)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	18.39559274	830.8518891	371.52786	459.32402	76.065776	0.012576921	12.57692107		830.8518891			
Riverside (SS)	2024	LDT2	Aggregate	Aggregate	Gasoline	65701.08074	2572111.481	2572111.5	0	310325.07	109.6138728	109613.8728	110305.51	2572111.481	2622106.694	23.77	LDT2
Riverside (SS)	2024	LDT2	Aggregate	Aggregate	Diesel	237.4831158	9576.401702	9576.4017	0	1147.2523	0.290350384	290.3503844		9576.401702			
Riverside (SS)	2024	LDT2	Aggregate	Aggregate	Electricity	435.5197806	15142.38002	0	15142.38	2225.3036	0	0		15142.38002			
Riverside (SS)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	575.57264	25276.43056	11828.156	13448.275	2379.9929	0.40128681	401.28681		25276.43056			
Riverside (SS)	2024	LHDT1	Aggregate	Aggregate	Gasoline	4958.5701	185628.5819	185628.58	0	73875.306	13.44003017	13440.03017	19015.43783	185628.5819	302934.5694	15.93	LHDT1
Riverside (SS)	2024	LHDT1	Aggregate	Aggregate	Diesel	2972.622209	115954.0229	115954.02	0	37391.848	5.575407664	5575.407664		115954.0229			
Riverside (SS)	2024	LHDT1	Aggregate	Aggregate	Electricity	18.80735131	1351.964611	0	1351.9646	262.72679	0	0		1351.964611			
Riverside (SS)	2024	LHDT2	Aggregate	Aggregate	Gasoline	1058.386283	35678.69083	35678.691	0	15768.379	3.061100595	3061.100595	6050.667554	35678.69083	88285.87522	14.59	LHDT2
Riverside (SS)	2024	LHDT2	Aggregate	Aggregate	Diesel	1374.214004	52275.63483	52275.635	0	17285.883	2.989566959	2989.566959		52275.63483			
Riverside (SS)	2024	LHDT2	Aggregate	Aggregate	Electricity	4.867930642	331.5495561	0	331.54956	64.436657	0	0		331.5495561			
Riverside (SS)	2024	MCY	Aggregate	Aggregate	Gasoline	5362.75917	33193.79366	33193.794	0	10725.518	0.777887593	777.8875927	777.8875927	33193.79366	33193.79366	42.67	MCY
Riverside (SS)	2024	MDV	Aggregate	Aggregate	Gasoline	46508.53518	1809141.418	1809141.4	0	214573.15	94.57524433	94575.24433	95687.56714	1809141.418	1862721.405	19.47	MDV
Riverside (SS)	2024	MDV	Aggregate	Aggregate	Diesel	511.855903	20915.33225	20915.332	0	2429.7538	0.846465042	846.4650417		20915.33225			
Riverside (SS)	2024	MDV	Aggregate	Aggregate	Electricity	472.7411123	16463.44954	0	16463.45	2416.7615	0	0		16463.44954			
Riverside (SS)	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	355.2430454	16201.20469	7775.451	8425.7537	1468.93	0.265857768	265.8577684		16201.20469			
Riverside (SS)	2024	MH	Aggregate	Aggregate	Gasoline	874.8575896	7917.110329	7917.1103	0	87.520753	1.63877354	1638.77354	2101.535014	7917.110329	12726.4515	6.06	MH
Riverside (SS)	2024	MH	Aggregate	Aggregate	Diesel	530.1935862	4809.341169	4809.3412	0	53.019359	0.462761475	462.7614746		4809.341169			
Riverside (SS)	2024	MHDT	Aggregate	Aggregate	Gasoline	593.3401071	44910.84293	44910.843	0	11871.549	8.6669245	8666.9245	22461.226	44910.84293	170285.5359	7.58	MHDT
Riverside (SS)	2024	MHDT	Aggregate	Aggregate	Diesel	2434.068308	123232.2009	123232.2	0	30456.351	13.62244171	13622.44171		123232.2009			
Riverside (SS)	2024	MHDT	Aggregate	Aggregate	Electricity	9.063849127	601.932743	0	601.93274	124.26356	0	0		601.932743			
Riverside (SS)	2024	MHDT	Aggregate	Aggregate	Natural Gas	34.38039422	1540.559274	1540.5593	0	270.82212	0.171859781	171.859781		1540.559274			
Riverside (SS)	2024	OBUS	Aggregate	Aggregate	Gasoline	115.2262318	8507.162402	8507.1624	0	2305.4464	1.644215831	1644.215831	2297.613172	8507.162402	13089.73139	5.70	OBUS
Riverside (SS)	2024	OBUS	Aggregate	Aggregate	Diesel	52.07146797	4239.217141	4239.2171	0	701.87245	0.622212746	622.2127457		4239.217141			
Riverside (SS)	2024	OBUS	Aggregate	Aggregate	Electricity	0.288763506	36.99915584	0	36.999156	5.7775802	0	0		36.99915584			
Riverside (SS)	2024	OBUS	Aggregate	Aggregate	Natural Gas	5.738015022	306.3526924	306.35269	0	51.068334	0.031184595	31.18459493		306.3526924			
Riverside (SS)	2024	SBUS	Aggregate	Aggregate	Gasoline	88.59079155	6633.806683	6633.8067	0	354.36317	0.718561302	718.5613017	2041.728667	6633.806683	13543.88345	6.63	SBUS
Riverside (SS)	2024	SBUS	Aggregate	Aggregate	Diesel	149.1836183	3115.426108	3115.4261	0	2160.1788	0.425112862	425.1128624		3115.426108			
Riverside (SS)	2024	SBUS	Aggregate	Aggregate	Electricity	0.731557601	26.35215916	0	26.352159	8.9333722	0	0		26.35215916			
Riverside (SS)	2024	SBUS	Aggregate	Aggregate	Natural Gas	150.4685446	3768.2985	3768.2985	0	2178.7845	0.898054503	898.0545025		3768.2985			
Riverside (SS)	2024	UBUS	Aggregate	Aggregate	Electricity	22.20573053	812.7748029	0	812.7748	88.822922	0	0	3893.917141	812.7748029	16341.47028	4.20	UBUS
Riverside (SS)	2024	UBUS	Aggregate	Aggregate	Natural Gas	116.8520109	15528.69548	15528.695	0	467.40804	3.893917141	3893.917141		15528.69548			

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SS)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calenc	Vehicle Cate	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SS)	2025	HHDT	Aggregate	Aggregate	Gasoline	1.738670363	315.5777359	315.57774	0	34.787317	0.083654026	83.65402613	223623.4549	315.5777359	1412449.225	6.32	HHDT
Riverside (SS)	2025	HHDT	Aggregate	Aggregate	Diesel	7387.545816	1394439.606	1394439.6	0	148136.91	221.7595315	221759.5315		1394439.606			
Riverside (SS)	2025	HHDT	Aggregate	Aggregate	Electricity	40.8902936	6691.549844	0	6691.5498	811.11715	0	0		6691.549844			
Riverside (SS)	2025	HHDT	Aggregate	Aggregate	Natural Gas	141.5240901	11002.49216	11002.492	0	1470.3674	1.780269363	1780.269363		11002.49216			
Riverside (SS)	2025	LDA	Aggregate	Aggregate	Gasoline	128813.5656	4293886.826	4293886.8	0	601914.58	145.9017666	145901.7666	148703.8796	4293886.826	4799568.659	32.28	LDA
Riverside (SS)	2025	LDA	Aggregate	Aggregate	Diesel	350.4560259	8955.46383	8955.4638	0	1494.7694	0.205286822	205.2868221		8955.46383			
Riverside (SS)	2025	LDA	Aggregate	Aggregate	Electricity	7072.521617	334891.7525	0	334891.75	35506.715	0	0		334891.7525			
Riverside (SS)	2025	LDA	Aggregate	Aggregate	Plug-in Hybrid	4051.991735	161834.616	77073.822	84760.794	16754.986	2.596826159	2596.826159		161834.616			
Riverside (SS)	2025	LDT1	Aggregate	Aggregate	Gasoline	12526.97195	442743.1717	442743.17	0	54978.451	18.42400625	18424.00625	18446.54633	442743.1717	445337.0183	24.14	LDT1
Riverside (SS)	2025	LDT1	Aggregate	Aggregate	Diesel	5.403906711	124.1909651	124.19097	0	15.229088	0.004975822	4.975821731		124.1909651			
Riverside (SS)	2025	LDT1	Aggregate	Aggregate	Electricity	25.70285487	1275.456569	0	1275.4566	130.95267	0	0		1275.456569			
Riverside (SS)	2025	LDT1	Aggregate	Aggregate	Plug-in Hybrid	26.77385241	1194.199153	518.57122	675.62794	110.70988	0.017564261	17.56426115		1194.199153			
Riverside (SS)	2025	LDT2	Aggregate	Aggregate	Gasoline	67927.42298	2642156.909	2642156.9	0	320739.32	109.8065669	109806.5669	110568.0539	2642156.909	2702396.347	24.44	LDT2
Riverside (SS)	2025	LDT2	Aggregate	Aggregate	Diesel	249.1813217	9931.690761	9931.6908	0	1200.3356	0.295107964	295.1079642		9931.690761			
Riverside (SS)	2025	LDT2	Aggregate	Aggregate	Electricity	591.9610922	20181.21713	0	20181.217	3011.9333	0	0		20181.21713			
Riverside (SS)	2025	LDT2	Aggregate	Aggregate	Plug-in Hybrid	697.0666985	30126.53093	13738.055	16388.476	2882.3708	0.466379002	466.3790021		30126.53093			
Riverside (SS)	2025	LHDT1	Aggregate	Aggregate	Gasoline	4977.62585	186761.6835	186761.68	0	74159.209	13.15434809	13154.34809	18782.52406	186761.6835	307967.1264	16.40	LHDT1
Riverside (SS)	2025	LHDT1	Aggregate	Aggregate	Diesel	3039.535608	117720.154	117720.15	0	38233.534	5.628175977	5628.175977		117720.154			
Riverside (SS)	2025	LHDT1	Aggregate	Aggregate	Electricity	52.61905184	3485.288879	0	3485.2889	736.21367	0	0		3485.288879			
Riverside (SS)	2025	LHDT2	Aggregate	Aggregate	Gasoline	1032.988781	34486.83468	34486.835	0	15389.994	2.9005526	2900.5526	5918.297848	34486.83468	88510.07112	14.96	LHDT2
Riverside (SS)	2025	LHDT2	Aggregate	Aggregate	Diesel	1409.681403	53178.02104	53178.021	0	17732.019	3.017745248	3017.745248		53178.02104			
Riverside (SS)	2025	LHDT2	Aggregate	Aggregate	Electricity	13.42085508	845.215405	0	845.2154	177.97295	0	0		845.215405			
Riverside (SS)	2025	MCY	Aggregate	Aggregate	Gasoline	5495.478525	33838.99591	33838.996	0	10990.957	0.789166027	789.1660271	789.1660271	33838.99591	33838.99591	42.88	MCY
Riverside (SS)	2025	MDV	Aggregate	Aggregate	Gasoline	47008.1694	1820036.65	1820036.7	0	216941	92.82930845	92829.30845	93980.86046	1820036.65	1882765.328	20.03	MDV
Riverside (SS)	2025	MDV	Aggregate	Aggregate	Diesel	524.0209195	21097.10846	21097.108	0	2476.4056	0.838513329	838.513329		21097.10846			
Riverside (SS)	2025	MDV	Aggregate	Aggregate	Electricity	642.5958619	21918.96047	0	21918.96	3270.1598	0	0		21918.96047			
Riverside (SS)	2025	MDV	Aggregate	Aggregate	Plug-in Hybrid	437.2183089	19712.6086	9146.5997	10566.009	1807.8977	0.313038674	313.0386744		19712.6086			
Riverside (SS)	2025	MH	Aggregate	Aggregate	Gasoline	840.9059347	7564.783522	7564.7835	0	84.12423	1.565661263	1565.661263	2015.162343	7564.783522	12235.08303	6.07	MH
Riverside (SS)	2025	MH	Aggregate	Aggregate	Diesel	527.5594314	4670.299508	4670.2995	0	52.755943	0.449501079	449.5010795		4670.299508			
Riverside (SS)	2025	MHDT	Aggregate	Aggregate	Gasoline	607.5308099	45898.57023	45898.57	0	12155.476	8.764483248	8764.483248	22656.87139	45898.57023	173882.0797	7.67	MHDT
Riverside (SS)	2025	MHDT	Aggregate	Aggregate	Diesel	2488.159403	124731.247	124731.25	0	31186.099	13.71086011	13710.86011		124731.247			
Riverside (SS)	2025	MHDT	Aggregate	Aggregate	Electricity	24.67140399	1622.30978	0	1622.3098	334.15913	0	0		1622.30978			
Riverside (SS)	2025	MHDT	Aggregate	Aggregate	Natural Gas	36.88783793	1629.952746	1629.9527	0	290.38692	0.181528027	181.5280265		1629.952746			
Riverside (SS)	2025	OBUS	Aggregate	Aggregate	Gasoline	112.4809417	8087.483773	8087.4838	0	2250.5187	1.547475848	1547.475848	2200.096097	8087.483773	12756.24782	5.80	OBUS
Riverside (SS)	2025	OBUS	Aggregate	Aggregate	Diesel	54.30854928	4258.87876	4258.8788	0	733.42404	0.620273256	620.2732564		4258.87876			
Riverside (SS)	2025	OBUS	Aggregate	Aggregate	Electricity	0.710626991	88.74376403	0	88.743764	14.218225	0	0		88.74376403			
Riverside (SS)	2025	OBUS	Aggregate	Aggregate	Natural Gas	6.303348957	321.1415255	321.14153	0	56.099806	0.032346993	32.34699253		321.1415255			
Riverside (SS)	2025	SBUS	Aggregate	Aggregate	Gasoline	90.1050451	6702.874323	6702.8743	0	360.42018	0.724212744	724.2127441	2047.446128	6702.874323	13626.8468	6.66	SBUS
Riverside (SS)	2025	SBUS	Aggregate	Aggregate	Diesel	146.0792796	3020.494338	3020.4943	0	2115.228	0.411409838	411.4098383		3020.494338			
Riverside (SS)	2025	SBUS	Aggregate	Aggregate	Electricity	1.651404579	60.05182383	0	60.051824	20.284155	0	0		60.05182383			
Riverside (SS)	2025	SBUS	Aggregate	Aggregate	Natural Gas	155.2280767	3843.426317	3843.4263	0	2247.7026	0.911823545	911.8235453		3843.426317			
Riverside (SS)	2025	UBUS	Aggregate	Aggregate	Electricity	22.20573053	812.7748029	0	812.7748	88.822922	0	0	3901.028601	812.7748029	16374.45434	4.20	UBUS
Riverside (SS)	2025	UBUS	Aggregate	Aggregate	Natural Gas	117.1326887	15561.67953	15561.68	0	468.53075	3.901028601	3901.028601		15561.67953			

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Appendix G

Geotechnical Report

PETRA GEOSCIENCES INC.

SOLID AS A ROCK

ENGINEERS + GEOLOGISTS + ENVIRONMENTAL SCIENTISTS

REVISED DESIGN PHASE GEOTECHNICAL INVESTIGATION REPORT PROPOSED INDUSTRIAL BUILDING DEVELOPMENT, APPROXIMATE 38-ACRE SITE NORTHWEST CORNER OF 19TH AVENUE AND NORTH INDIAN CANYON DRIVE ASSESSOR PARCEL NUMBER (APN) 666-320-018 PALM SPRINGS, RIVERSIDE COUNTY, CALIFORNIA

SNIDER INTERESTS

March 16, 2023
J.N. 22-229

March 16, 2023
J.N. 22-229
Revision 1

SNIDER INTERESTS
730 Arcady Road
Santa Barbara, California 93108

Attention: Mr. David Snider

Subject: Revised Design-Phase Geotechnical Investigation Report, Proposed Industrial Building Development, Approximate 38-Acre Site, Northwest Corner of 19th Avenue and North Indian Canyon Drive, Assessor Parcel Number (APN) 666-320-018, Palm Springs, Riverside County, California

Dear Mr. Snider:

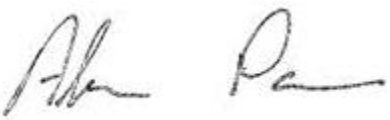
Petra Geosciences, Inc. (Petra) is submitting herewith our revised geotechnical investigation report for the proposed development of the subject site. We understand the development is anticipated to consist of single-story industrial structures of varying size up to several hundred thousand square-feet. Additionally, associated site development such as property walls, streets, driveways and a retention basin are anticipated. This work was performed in general accordance with the scope of services outlined in our Proposal No. 22-229P, Revision 2, dated August 8, 2022, and that outlined in our Amendment No. 1, dated December 27, 2022.

This report presents the results of our field investigation, laboratory testing, and our engineering and geologic analysis judgment, opinions, conclusions and recommendations pertaining to geotechnical design aspects of the assumed proposed improvements.

It is a pleasure to be of service to you on this project. Should you have any questions regarding the contents of this report, or should you require additional information, please do not hesitate to contact us.

Respectfully submitted,

PETRA GEOSCIENCES, INC.



Alan Pace
Senior Associate Geologist

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REVISED DESIGN PHASE GEOTECHNICAL INVESTIGATION REPORT
PROPOSED INDUSTRIAL BUILDING DEVELOPMENT, APPROXIMATE 38-ACRE SITE
NORTHWEST CORNER OF 19TH AVENUE AND NORTH INDIAN CANYON DRIVE
ASSESSOR PARCEL NUMBER (APN) 666-320-018
PALM SPRINGS, RIVERSIDE COUNTY, CALIFORNIA

Petra Geosciences, Inc. (Petra) is presenting herein our revised design-phase geotechnical investigation report for various improvements that are currently proposed at the approximately 38-acre site located at the northwest corner of 19th Avenue and North Indian Canyon Drive (Assessor Parcel Number 666-320-018) in the city of Palm Springs, Riverside County, California. The reason for preparation of this revised report is to incorporate the results of the more recent field investigation in our previous recommendations.

The improvements have been planned as industrial buildings of varying size up to several hundred thousand square-feet, and related appurtenant structures such as roads, driveways, parking areas, and landscaping. Additionally, an on-site storm water retention basin is under consideration for the proposed project.

PURPOSE AND SCOPE OF SERVICES

The purposes of this investigation were to 1) obtain information regarding surface and subsurface geologic conditions within the area of the proposed construction, 2) evaluate the engineering properties of the onsite soil materials, and 3) provide conclusions and recommendations for design and construction of the proposed improvements. To accomplish these objectives, our scope of services included the following:

1. Collecting and reviewing readily available literature and maps about soil and geologic conditions within and adjacent to the site.

2. Reviewing aerial imagery to evaluate the potential for active faulting.

3. Performing a subsurface investigation within the area of proposed construction. The investigation consisted of drilling 5 borings, including one boring to a depth of 65 feet below the existing surface and 4 borings 15 - 20 feet below ground surface. All borings were drilled utilizing a truck-mounted hollow-stem auger drilling rig. Borings were backfilled with excavated soils. Two borings were converted to a percolation test for storm water retention design.

4. Logging and field-classifying soil materials encountered in each boring in accordance with the visual-manual procedures outlined in the Unified Soil Classification System and the American Society for Testing and Materials (ASTM) Procedure D 2488-90. All field activities were performed by or under the direct observation of a State of California Certified Engineering Geologist.

5. Collecting representative bulk and relatively undisturbed soil samples for laboratory analysis. Undisturbed samples were retrieved at 3- to 10-foot depth intervals utilizing a 2.4-inch inside diameter, modified-California split-spoon sampler. In addition, when granular soils were encountered these materials were selectively sampled using the Standard Penetration Test (SPT) method in accordance with ASTM Procedure D 1586-92.

6. Performing appropriate laboratory analysis on soil samples which included the following: in-situ and maximum dry density; in-situ and optimum moisture content; soluble sulfate and chloride content; general soil corrosivity (Sulfate, Chloride, pH and minimum resistivity), grain size distribution, consolidation and hydro-collapse potential, and remolded direct shear strength.
7. Performing geologic and engineering analysis on data collected.

8. Analyzing seismic settlement (dry sand) to accommodate 2022 California Building Code Requirements.

9. Preparing this geotechnical report presenting the results of our evaluation and recommendations for the proposed development in general conformance with the 2022 California Building Code (CBC) and in accordance with applicable state and local jurisdictional requirements.

Based on the results of the aforementioned initial field and laboratory testing, Petra performed additional field and laboratory testing to evaluate on-site soil for potential of hydro-collapse. Information obtained therefrom has been incorporated into this revised report. To accomplish these additional objectives, the scope of our services was expanded to include:

10. Performing additional subsurface investigation consisting of 6 backhoe-excavated exploratory trenches to a maximum depth of 5 feet.

11. Logging and field-classifying soil materials encountered in each boring in accordance with the visual-manual procedures outlined in the Unified Soil Classification System and the American Society for Testing and Materials (ASTM) Procedure D 2488-90. All field activities were performed by or under the direct observation of a State of California Certified Engineering Geologist.

12. Conducting nuclear density and moisture content testing at select elevations within the exploratory trenches.

13. Collecting additional undisturbed soil samples at select locations and elevations.

14. Performing additional hydro-collapse testing on new and existing soil samples.

Additionally, Petra has updated all California Building Code (CBC) references to version 2022 CBC due to the code cycle change that occurred after publication of the original version of this report.

LOCATION AND SITE DESCRIPTION

The area of study considered under the scope of this investigation consists of an approximately rectangular parcel of land around 38 acres in size located north of Palm Springs. The site is currently undeveloped with sparse vegetation. The site is generally flat and slopes gently to the south with elevations of about 790 feet above mean sea level (MSL) along the northern boundary to about 765 feet MSL along the southern margin.

The location of the site with respect to nearby roadways and other landmarks is shown on the Site Location Map, Figure 1.

The area surrounding the site is sparsely developed, with 19th Avenue to the south with commercial storage beyond, Indian Canyon Drive to the east with commercial and industrial buildings, and predominantly undeveloped land to the north and west.

PROPOSED IMPROVEMENTS

Petra understands that the proposed improvements will likely consist of single-story industrial buildings varying in size up to several hundred thousand square-feet with appurtenant infrastructure improvements including roads, driveways, parking areas, concrete flatwork, and landscaping. A retention basin to handle surficial water runoff is also anticipated. Neither grading plans nor building design details have been provided to Petra as of the time this report was prepared. Typical construction methods for industrial buildings of this size could include prefabricated steel buildings or concrete tilt-up buildings, although other types of structures may be utilized. When design has progressed to the point where a grading plan is available and building construction methods are known Petra should be provided the opportunity to review the plans and details to verify that the recommendations contained herein are both appropriate to the design and have been implemented in accordance with the assumptions upon which they are predicated.

Based on the provided proposed development concepts and the relatively flat topography of the site, Petra assumes that earthwork is generally limited to minor cuts and fills to establish desired finished grade elevations. It should be noted, however, that remedial grading (i.e., excavation and re-compaction of any existing undocumented fill soils that may be present on the site and loose native soils) will entail deeper cuts from exiting grades as recommended in subsequent sections of this report. Petra has assumed that the buildings will be supported on conventional shallow foundations consisting of continuous and isolated pad footings and concrete slabs constructed at grade. No extensive subterranean construction is anticipated.

FIELD EXPLORATION AND TESTING

Subsurface Exploration

Petra performed the subsurface exploration for the proposed improvements on September 16, 2022. A total of five hollow stem borings (identified herein as B-1 through B-5) were conducted. One boring, Boring B-5, was advanced to a depth of 66 feet below the surface, the remaining borings were advanced from 16 to 26 feet below ground surface (bgs) using a conventional truck-mounted, eight-inch diameter, hollow-

stem auger drill rig. The approximate locations of the exploratory borings are shown on the Boring Location Map (Figure 2). Descriptive boring logs are provided in Appendix A of this report.

Earth materials encountered in the exploratory borings were classified and logged in accordance with Unified Soil Classification System procedures. In addition, bulk (disturbed) and relatively undisturbed samples of subsurface soil materials were collected for laboratory testing purposes. Bulk samples consisted of composite earth materials obtained at selected depth intervals from the borings. Relatively undisturbed samples were collected using a 3-inch outside-diameter, modified California split-spoon soil sampler lined with 1-inch high brass rings. Additionally, Standard Penetration Test (SPT) samples were obtained at selected locations in substantial conformance to ASTM D 1586 using a 2-inch diameter unlined split sampler. The samplers were advanced using an automatic hammer weighing 140 pounds with a 30 inch drop. The central portions of the driven core samples were placed in sealed containers and transported to our laboratory for testing.

Based on the results of the initial field exploration and laboratory testing, Petra returned to the site on January 31, 2023 to perform a limited additional subsurface exploration consisting of 6 backhoe-excavated exploratory trenches to a maximum depth of 5 feet below existing grade (identified herein as T-1 through T-6) and shown on Figure 2. Nuclear density and moisture content tests were conducted at select elevations within the trenches. Additional undisturbed ring samples and disturbed bulk samples were obtained during the exploration as detailed above. The trenches were logged and sampled as described above. Descriptive trenching logs are provided in Appendix A of this report.

Laboratory Testing

In order to evaluate the engineering properties of onsite soils, a number of laboratory tests were performed on selected samples considered representative of the materials encountered within the study area. These laboratory tests were performed shortly after completion of our field investigation and included determination of moisture content, maximum dry density and optimum moisture content, consolidation (including hydro-collapse potential), remolded shear strength, and grain-size distribution as well as chemical activity (soluble sulfate and chloride content, pH, and minimum resistivity). A description of laboratory test methods is provided in the Laboratory Test Procedures section of this report (Appendix B). Summaries of the test data are presented on the exploration logs (Appendix A) and in Appendix B of this report.

It should be noted that, owing to cohesionless nature and low moisture content of the samples retrieved, only limited tests on undisturbed specimens could be performed. As such, our interpretation of site soils behavior under the field condition was limited to a handful of good quality specimens.

FINDINGS

Regional Geology

The Site lies within the Coachella Valley in the northern portion of the Colorado Desert Geomorphic Province (CDGP) (Norris and Webb, 1990). The Coachella Valley lies within the northern portion of the Salton Trough. The Salton Trough is a large northwest-trending structural basin that extends approximately 180 miles from San Gorgonio Pass to the Gulf of California. Part of this basin, including the Salton Sea, lies below sea level and has progressively been filling with sediments eroded from local bounding mountain ranges, sediments from the Colorado River, and by incursions by the Gulf of California since at least the late-Miocene Epoch. Sediments within the Salton Trough are estimated to be two to five miles thick (Kohler and Fuis, 1986; Fuis and Kohler, 1984; Biehler, et. al., 1964). The San Andreas Fault zone is considered the dominant feature of the geomorphic province and is well known for its exposures and related fault systems that form the margin between the Pacific and North American Plates.

In the Coachella Valley, the San Andreas Fault bounds the north-northeastern margin of the valley and exhibits primarily right-lateral strike-slip movement. The closest major active earthquake fault is the Banning Branch of the South San Andreas Fault zone. The subject Site does not lie within a State of California Special Studies - Alquist Priolo Special Studies Zone (Bryant and Hart, 2007).

Local Geology and Subsurface Soil Conditions

A regional geologic map of the Palm Springs 30'x 60' Quadrangle indicates that Holocene to Late Pleistocene young Alluvial Fan Deposits are mapped underlying the subject property (Lancaster, Hayhurst, and Bedrossian, 2012). These deposits are described as unconsolidated to slightly consolidated, undissected to slightly dissected boulder, cobble, gravel, sand, and silt deposits issued from a confining valley or canyon. The presence of such deposits is confirmed by our drilling and sampling program. The log of our borings is provided in Appendix A.

Groundwater

The Site is located within the Garnet Hill Subbasin (DWR Basin #7-21.02) of the Indio Groundwater Basin (California Department of Water Resources [CDWR], Water Data Library, 2018). Groundwater depth varies within the area, and although flow direction beneath the subject site is unknown, it is believed to be

toward the south-southeast and the Salton Sea. Borings in the at the adjacent Coachillin site (ESS, 2004; SCG, 2006; Petra, 2017b) did not encountered groundwater at a depth of approximately 51 feet below the ground surface (bgs). In-situ soil moisture contents found is samples from depths of 40 to 50 feet bgs reported in-situ moisture at 1 percent (SCG, 2006). Further, no groundwater was encountered to a maximum depth of 66 feet below ground surface during the subsurface exploration of this site on September 16, 2022.

Groundwater contour maps provided in the Mission Creek and Garnet Hill Subbasins Water Management Plan (MWH, 2012) depicted groundwater elevations in the subject site vicinity at approximately 550 feet above mean sea level (msl) in 1936 and at approximately 575 feet above msl in 1951, 2003 and 2009. Compared with the elevation of the subject property at approximately 790 feet above msl, water depths in 1936 were approximately 240 feet bgs and 215 feet bgs in 1951, 2003 and 2009. Water levels are higher on the north side of the Banning fault (MWH, 2012).

One active groundwater well was mapped east of the subject site near Little Morongo Road (CDWR Water Data Library, 2016). Between August 2015 and June 2017, groundwater was reported at depths of approximately 223 to 230 feet bgs. This well appears to be on the same side of the Banning Fault as the subject property.

Faulting and Nearby Seismic Sources

Based on our review of the referenced geologic maps and literature, no active faults are known to project through the subject site. Furthermore, the Site does not lie within the boundaries of an "Earthquake Fault Zone" as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act (Bryant and Hart, 2007; CDMG, 1980). In addition, the Site is not located in a Riverside County Fault Zone. Published geologic maps and literature indicate that the Site lies within 50 miles of a number of significant active and potentially active faults (including the various segments of the San Andreas Fault zone and San Jacinto Fault zone) that are considered capable of generating strong ground motion at the subject site.

The surface trace of the Banning Branch of the South San Andreas Fault zone is located approximately 2,000 feet northeast of the subject site (Petra, 2017a). According to maps of known active fault near-source zones, the trace of the Garnet Hill segment of the San Andreas Fault zone is mapped approximately 5,000 feet south-southwest of the subject site (CSG, 2002). These faults have been placed within a State of California Alquist-Priolo Earthquake Fault Zone (Bryant and Hart, 2007; CGS 1980). The Alquist-Priolo Earthquake Fault Zoning Act (A.P. Act) defines an *active fault* as one that "has had surface displacement within Holocene time (about the last 11,000 years)". The main objective of the A.P. Act is to prevent the construction of dwellings on top of active faults that could displace the ground surface resulting in loss of

life and property. A "potentially active" fault is a fault that does not have evidence of movement within the last 11,000 years, but has moved within Quaternary period, the last 2.6 million years. "Potentially active" faults are not placed within Alquist-Priolo Earthquake Fault Zones, but are considered when conducting siting studies for such critical structures as dams and nuclear power plants, etc.

Based on our evaluation, the San Gorgonio Pass-Garnet Hill segment of the San Andreas fault (located approximately 5,000 feet southwest from the Site) would probably generate the most severe site ground motions, and is therefore, the majority contributor to the deterministic minimum component of the ground motion models. This is according to the 2008 USGS PSHA (probabilistic seismic hazard assessment) Interactive Deaggregation web site tool and/or the 2010 CGS 'Fault Activity Map of California'.

Riverside County has identified the San Jacinto Valley segment of the San Jacinto Fault zone with a higher probability (43 percent vs. 28 percent) of an earthquake occurring on a fault segment in the next 30 years than the San Bernardino Segment (which includes the Mission Creek Fault) of the San Andreas Fault zone (Riverside County, 2014). The San Jacinto Fault zone is approximately 18 miles southwest of the subject property. The more active branch of the San Andreas Fault is situated approximately 3.8 miles northeast of the subject property.

Fault Rupture

The subject site is not located within a currently designated State of California Alquist-Priolo Earthquake Fault Zone (CDMG, 1980). In addition, no known active faults have been identified on the Site. While fault rupture would most likely occur along previously established fault traces, fault rupture could occur at other locations. The potential for active fault rupture at the Site is considered to be low.

Strong Ground Motions

The Site is located in a seismically active area of southern California and will likely be subjected to strong seismically related ground shaking during the anticipated life span of the project. Structures within the Site should therefore be designed and constructed to resist the effects of strong ground motion in accordance with the 2022 California Building Code (2022 CBC).

Secondary Seismic Hazards

The site and immediate area exhibit graded slopes less than 10 feet in height between parcels and level mass graded parcels that are not typically prone to landsliding. Secondary effects of seismic activity normally considered as possible hazards to a site include several types of ground failure. Various general types of

ground failures, which might occur as a consequence of severe ground shaking at the Site, include ground subsidence, ground lurching and lateral spreading. The probability of occurrence of each type of ground failure depends on the severity of the earthquake, distance from faults, topography, subsoil and groundwater conditions, in addition to other factors. Based on site conditions and gentle topography across the Site, landsliding, significant ground lurching, and lateral spreading are considered unlikely at the Site. Due to the overall density of the alluvial soils encountered in borings onsite (medium dense to dense), the potential for ground subsidence due to seismic shaking is anticipated to be low. Riverside County has mapped the Desert Hot Springs area as susceptible to subsidence (Riverside County, 2014).

Seismically Induced Flooding

The types of seismically-induced flooding that are generally considered as potential hazards to a particular site normally include flooding due to a tsunami (seismic sea wave), a seiche, or failure of a major reservoir or other water retention structure upstream of the site. Because of the inland location of the site, flooding due to a tsunami is considered negligible at the site. The Salton Sea is situated approximately 40 miles southeast of the site with an elevation over 1,000 feet lower than the subject site. In addition, no major reservoir is located near, or upstream of the site. There is a private agricultural reservoir located on Parcel 14 of Coachillin northeast of the subject property. Reservoir design data provide on the A.G. Water Reservoir Plan by Olsen Engineering System, Inc. (dated April 17th, 2017), indicated the usable capacity of the reservoir is 13.55 acre-feet. The potential for seiche is considered very low. The potential for severe inundation is considered low based upon the usable capacity.

Seismically Induced Deformation

Liquefaction

Liquefaction occurs when strong seismic shaking of a saturated sand or silt causes intergranular fluid (pore-water) pressures to increase to levels where grain-to-grain contact is lost, and material temporarily behaves as a viscous fluid. Liquefaction can cause settlement of the ground surface, loss of bearing, settlement and tilting of structures, flotation and buoyancy of buried structures and fissuring of the ground surface. A common surface manifestation of liquefaction is the formation of sand boils – short-lived fountains of soil and water that emerge from fissures or vents and leave freshly deposited, usually conical mounds of sand or silt on the ground surface.

Assessment of liquefaction settlement potential for a particular site requires knowledge of several regional as well as site-specific parameters, including the estimated design earthquake magnitude, and the associated probable peak horizontal ground acceleration at the site, subsurface stratigraphy and soil characteristics.

Parameters such as estimated probable peak horizontal ground acceleration can readily be determined using published references, or by utilizing a commercially available computer program specifically designed to perform a probabilistic analysis. In contrast, stratigraphy and soil characteristics can only be accurately determined by means of a site-specific subsurface investigation combined with appropriate laboratory analysis of representative samples of onsite soils.

Liquefaction potential is evaluated in accordance with the guidelines provided in the California Geological Survey Special Publication 117A (CGS, 2008). Initial screening for liquefaction potential consists of evaluating the density of the subsurface soils and the groundwater conditions; historical high ground water levels are generally considered conservative and appropriate for use in the evaluation. Although the site soils exhibit low density at various depths, the historical high ground water level is reported to be greater than 200 feet below ground surface. The depth of groundwater, both historical and anticipated, is sufficient to establish on a screening level that liquefaction is not anticipated to be a concern.

Lateral Spreading

Lateral spreading is the tendency of liquefied soils to move, either downslope in the case of gently sloping ground, or toward an open face such as a channel. An essential element of lateral spreading is the potential for liquefaction. Inasmuch as the site meets the preliminary screening requirements to rule out the potential for liquefaction, lateral spreading is not considered to be concern for the project site.

'Dry Sand'

Propagating earthquake waves induce shearing stresses and strains in soil materials during strong ground shaking. This process rearranges the structure of granular soils such that there is an increase in density, with a corresponding decrease in volume, which results in ground settlement and settlement and tilting of superstructures. Seismically-induced settlement has been well documented in wet, sandy deposits undergoing liquefaction (see Tokimatsu and Seed, 1987) and in relatively dry sediments as well (Stewart et al, 1996). Specific methods to analyze potential wet and dry dynamic settlement are reported in Tokimatsu and Seed (1987), Pradel (1998), and Stewart et al. (2001; 2002). Most of the referenced papers focus on the seismic effects on dry, clean sands of a uniform grain size, though several reports extend the literature to fine-grained soils (Stewart et al., 2001 & 2002). State guidelines for evaluating dynamic settlement are provided in the California Geological Survey Special Publication 117A (CGS, 2008).

Petra used the above information, a moment magnitude, M_w, of 7.51 and a peak ground acceleration, adjusted for site class effect, PGA_M, of 1.16 g from the results of a seismic hazard analysis presented below (please see Table 1, discussed later in this report), and the blow count data from the subsurface exploration

to perform an evaluation of the seismically-induced 'dry sand' settlement. The following steps and considerations were incorporated in the 'dry sand' settlement calculations:

- Blow count data from Boring B-5 was used in our 'dry sand' settlement analysis.
- The calculated settlements were then weighted for depth per Cetin (2009).
- Total seismic 'Dry sand' settlement calculated for Boring B-5 was found to be on the order of ½ to 1 inch. Seismic differential settlement due to 'Dry Sand' is estimated to be ¾ inch.

Compressible Soils

One geotechnical condition affecting the subject site is the presence of near-surface compressible native soils underlying undocumented fill soils. Such materials consist of surficial topsoil/colluvium/alluvium and are not considered suitable for support of fill or structural loads in their current state. Accordingly, these materials will require removal to competent alluvial deposit soils and replacement with properly compacted fill.

Subsurface Soil Hydro-Consolidation

Soil hydro-consolidation (also referred to as hydro-collapse) is a condition where subsurface soil exhibits relatively high in-situ strength and stability until inundated with water. Under applied load when saturated, the soil's structure loses strength and is subject to an excessive level of consolidation, potentially resulting in settlement and subsidence at the ground surface. This condition is frequently associated with porous, lightly cemented soils. Cemented soils are resistant to consolidation from applied loads until the cementation is destroyed/dissolved. When the ground becomes saturated, the cemented bonds in the saturated soil are lost, and the soil consolidates. The degree of consolidation is related to the porosity of the cemented soil and the level of the applied loads. Susceptible soils are identified using consolidation testing, where a representative soil sample is first subject to anticipated loading until stabilized, then the sample is saturated, and the resulting deformation measured.

Initial testing on one specimen from 10 feet below ground surface showed excessive deformation/settlement when inundated. This same sample showed similar deformation during initial loading, contraindicative of cemented soils, and lacked other objective signs associated with hydro-consolidation. Petra returned to the site to perform an additional limited subsurface exploration and obtain additional soil samples to further evaluate the hydro-consolidation potential. An additional specimen from the initial exploration, at the same boring location and elevation as the preliminary consolidation test (B-1 at 10 feet), was also tested. None of the specimens – new or original – exhibited excessive hydro-consolidation during this set of tests. Petra has concluded that the original, preliminary test was a potentially disturbed specimen, which would explain

the anomalously high hydro-consolidation result. All hydro-consolidation test results are presented in Appendix B.

Based on the results of the additional tests performed and data obtained from the additional field exploration, hazards from hydro-consolidation are limited and should be sufficiently mitigated by the grading recommendations which follow.

Flooding

The subject property is depicted in Zone X (FEMA, 2008) on Map Number 06065C0895G, Panel 895 of 3805. This zone is defined as areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.

Areal Subsidence

Based on a review of the Riverside County Land Information System website (RCLIS, 2014), the subject site is situated in an area susceptible to ground subsidence due to withdrawal of groundwater. Our review of aerial photographs for the Site and immediate vicinity indicated no readily discernable features (i.e., ground fissures, linearity of depressions, radial directed drainages, etc.) that would indicate subsidence is occurring at this time. Ground fissures are generally associated with excessive groundwater withdrawal and associated subsidence, or active faulting. Our review did not reveal any information that ground fissures, or hydro-consolidation in the specific site vicinity, is occurring at this time. Due to the absence of a clay layer in the groundwater basin hydrogeology, land subsidence is less likely to occur in regions overlying the Garnet Hill and Mission Creek subbasins (MWH, 2012). Therefore, the potential for areal subsidence to affect the Site is considered low and would generally be no greater than that for existing residential development in the immediate site vicinity.

Oversize Material

Based upon our previous observations during rough grading at the Coachillin Site, oversize rock fragments will be encountered during grading of the project site. It is likely that special handling and placement of oversize rock will be needed during rough grading.

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches in diameter, shall be taken offsite or placed in accordance with the recommendations of the Geotechnical Consultant in areas designated as suitable for rock disposal.

Rock fragments less than 12 inches in diameter may be utilized in the fill provided, they are not nested or placed in concentrated pockets; they are surrounded by compacted fine grained soil material and the distribution of rocks is approved by the Geotechnical Consultant.

CONCLUSIONS AND RECOMMENDATIONS

General Feasibility

From a soils engineering and engineering geologic point of view and based on our current knowledge of the project, the subject property is considered suitable for the proposed development. Based on our geotechnical evaluation of the Site, it is our opinion the site is free of hazard from landslide, liquefaction, settlement, and slippage and will remain so provided the recommendations of this report are incorporated into the design criteria and project specifications. Furthermore, it is our opinion that the proposed grading and construction will not adversely affect the geologic stability of adjoining properties in an adverse manner provided grading and construction are performed in accordance with current standards of practice, all applicable grading ordinances and the recommendations presented in this report.

Earthwork and Grading

General Specifications

All earthwork and grading should be performed in accordance with all applicable requirements of the grading and excavation codes of the County of Riverside, and in compliance with all applicable provisions of the 2022 California Building Code (2022 CBC). Grading should also be performed in accordance with the recommendations provided in this report.

Geotechnical Observations and Testing

Prior to the start of earthwork, a meeting should be held at the site with the owner's representative, contractor and geotechnical consultant to discuss the work schedule and geotechnical aspects of the grading. Earthwork, which in this instance will generally entail removal and re-compaction of the near surface soils, should be accomplished under full-time observation and testing by the geotechnical consultant. A representative of the project geotechnical consultant should be present onsite during all earthwork operations to document placement and compaction of fills, as well as to document compliance with the other recommendations presented herein.

Demolition, Clearing and Grubbing

All existing structures (if any), including foundations, asphalt or concrete pavements, vegetation or subsurface utility lines throughout the site should be demolished and removed from the site. Following demolition, clearing operations should also include the removal of any remaining trash, debris, vegetation and similar deleterious materials including the root balls from any trees. Any cavities or excavations created upon removal of any unknown subsurface structures or inclusions should be cleared of loose soil, shaped to provide access for backfilling and compaction equipment and then backfilled with engineered fill. Note that buried deleterious materials may be encountered within the site (i.e., buried organics or debris) due to the past site usage and may need to be removed by hand (i.e. root pickers), during grading operations.

The project geotechnical consultant should provide periodic observation and testing services during final clearing and grubbing operations to document compliance with the above recommendations. In addition, should unusual or adverse soil conditions or buried structures be encountered during grading that are not described herein, these conditions should be brought to the immediate attention of the project geotechnical consultant for corrective recommendations.

Unsuitable Soil Removals and Bottom Processing

Any existing undocumented fill and near surface native soils are considered unsuitable for support of proposed structures and should be removed to underlying competent alluvial materials as approved by the project geotechnical consultant. The estimated depth of removal is recommended to be approximately 6 feet below the existing ground surface in proposed building areas. Consideration should be given to locally deepening the excavation at the location of tree roots or proposed subterranean features (if any) in order to provide a uniform depth of compacted fill in all areas. Soil removals could be locally deeper depending upon the actual exposed conditions encountered during grading. At a minimum, the over-excavation should extend a distance beyond the perimeter of the structure equal to the depth of the over-excavation. The actual depths and horizontal limits of removals and over-excavations should be evaluated upon availability of the site grading plan and during grading on the basis of observations and testing performed by the project geotechnical consultant. Excavated soils, if free of deleterious materials, are considered acceptable for use as compacted fill.

Prior to placing engineered fill, the exposed bottom surfaces in the removal areas should be approved by a representative of project geotechnical consultant. The exposed bottom(s) should be scarified to a minimum depth of 12 inches, moisture-conditioned or air-dried to achieve approximately two percent above optimum moisture content and then compacted with a heavy construction equipment prior to placement of fill.

Minimum compaction of the upper 12 inches of the removal bottom should meet or exceed 90 percent relative compaction. The laboratory maximum dry density, the standard for determining relative compaction, and optimum moisture content for each change in soil type should be determined in accordance with Test Method ASTM D 1557.

Grading at Site Boundaries

Average remedial removals within the building pad areas of the subject site are anticipated to be on the order of 6 feet below the existing ground surface, although locally deeper over-excavation is possible. If remedial grading is necessary immediately adjacent to the property boundaries, temporary backcut slopes should generally be restricted to a slope ratio of 1:1 (h:v) or flatter to protect adjacent offsite improvements (including pavement, sidewalks, walls, buried utilities, etc.). Depending on the actual horizontal extent of necessary remedial grading, a wedge of unsuitable soil may remain in place along the site perimeter that will extend into the site. Any new perimeter site improvements that are anticipated to be within this zone may need to be designed and constructed with deepened and/or strengthened foundation systems designed to withstand relative movement that is likely to result from settlement of these likely compressible surficial soils. Alternately, the remedial grading adjacent to the site boundaries may be accomplished by the slot-cutting method. More specific recommendations may be appropriate once the rough grading plan is available for review.

Excavation Characteristics

Based on the observed soils types in the reported borings, shallow excavation of soils within the site are expected to be readily excavatable with conventional earthmoving equipment.

Fill Placement

All fill materials should be placed in approximately 6- to 8-inch thick loose lifts, watered or air-dried as necessary to achieve a minimum moisture content at least 2 percent above the optimum moisture condition, and then compacted in-place to a minimum relative compaction of 90 percent. The laboratory maximum dry density and optimum moisture content for each change in soil type should be determined in accordance with ASTM D 1557.

Imported Soils

If imported soils are required to complete the planned grading, these soils should consist of clean materials devoid of rock exceeding a maximum dimension of 4 inches, organics, trash and other deleterious materials. To avoid making revisions to the foundation design, imported soils should also be granular and exhibit a

very low expansion potential (Expansion Index 0-20). Prospective import soils should be observed at the source, tested and approved by the geotechnical consultant prior to importing the soils to the site. It is recommended that the project environmental consultant should also be notified so that they can confirm the suitability of the proposed import material from an environmental standpoint.

Volumetric Changes - Bulking, Shrinkage and Subsidence

An average shrinkage factor estimated at 14 to 20 percent is anticipated when excavated on-site soils are replaced as properly compacted fill. A subsidence, estimated at 0.15 to 0.25 feet may also occur when exposed bottom surfaces in removal areas are scarified and re-compacted as recommended herein. These estimates of shrinkage and subsidence are intended for use by project planners in estimating earthwork quantities and should not be considered absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that will occur during grading.

Temporary Excavations

Temporary excavations varying up to a depth of up to roughly eight feet below existing grades may be required to accomplish the recommended over-excavation of existing soils. Based on the physical properties of the onsite soils, temporary excavations which are constructed exceeding 4 feet in height should be cut back to an inclination of 1:1 (h:v) or flatter for the duration of the over-excavation of unsuitable soil material and replacement as compacted fill, as well as placement of underground utilities. The 1:1 (h:v) recommendation may possibly be adjusted, depending of conditions observed by a representative of the project geotechnical consultant. Other factors which should be considered with respect to the stability of the temporary slopes include construction traffic and/or storage of materials on or near the tops of the slopes, construction scheduling, presence of nearby walls or structures on adjacent properties and weather conditions at the time of construction. Applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health act of 1970 and the Construction Safety Act should also be followed.

PRELIMINARY FOUNDATION DESIGN CONSIDERATIONS

Seismic Design Coefficients

Earthquake loads on earthen structures and buildings are a function of ground acceleration which may be determined from the site-specific ground motion analysis. Alternatively, a design response spectrum can be developed for certain sites based on the code guidelines. To provide the design team with the parameters necessary to construct the design acceleration response spectrum for this project, we used two computer

applications. Specifically, the first computer application, which was jointly developed by Structural Engineering Association of California (SEAOC) and California's Office of Statewide Health Planning and Development (OSHPD), the SEA/OSHPD Seismic Design Maps Tool website, https://seismicmaps.org, is used to calculate the ground motion parameters. The second computer application, the United Stated Geological Survey (USGS) Unified Hazard Tool website, https://earthquake.usgs.gov/hazards/interactive/, is used to estimate the earthquake magnitude and the distance to surface projection of the fault. The results obtained from these websites is presented in Appendix D.

To run the above computer applications, site latitude and longitude, seismic risk category and knowledge of site class are required. The site class definition depends on the direct measurement of certain soil properties and the ASCE 7-16 recommended procedure for calculating the average shear wave velocity within the upper 30 meters (approximately 100 feet) of site soils. Several methods exist to determine the shear wave velocity, including correlation with SPT blow counts. Based on the blow counts obtained in boring B-5 (including converting California Modified Sampler blow counts to SPT after Burmister (1948)) and Petra's knowledge of site geologic conditions, Site Class D-Stiff is appropriate for this project.

A seismic risk category of II was assumed to apply to the proposed project in accordance with 2022 CBC, Table 1604.5. If the specifics of the proposed project warrant a different Risk Category, the members of the design team responsible for this determination may assign the appropriate Risk Category. Seismic design parameters provided below are not impacted by the assumed Risk Category. Table 1, below, provides parameters required to construct the design acceleration response spectrum based the 2022 CBC guidelines.

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TABLE 1

Seismic Design Parameters

Ground Motion Parameters	Specific Reference	Parameter Value	Unit
Site Latitude (North)	-	33.9111	°
Site Longitude (West)	-	-116.5466	°
Site Class Definition	Section 1613.2.2 (1), Chapter 20 (2)	D-Stiff (4)	-
Assumed Seismic Risk Category	Table 1604.5 (1)	II	-
M_w - Earthquake Magnitude	USGS Unified Hazard Tool (3)	7.51 (3)	-
R – Distance to Surface Projection of Fault	USGS Unified Hazard Tool (3)	1.91 (3)	km
S_s - Mapped Spectral Response Acceleration Short Period (0.2 second)	Figure 1613.2.1(1) (1)	2.49 (4)	g
S_1 - Mapped Spectral Response Acceleration Long Period (1.0 second)	Figure 1613.2.1(3) (1)	1.02 (4)	g
F_a – Short Period (0.2 second) Site Coefficient	Table 1613.2.3(1) (1)	1.0 (4)	-
F_v – Long Period (1.0 second) Site Coefficient	Table 1613.2.3(2) (1)	Null (4)	-
S_{MS} – MCE_R Spectral Response Acceleration Parameter Adjusted for Site Class Effect (0.2 second)	Equation 16-20 (1)	2.49 (4)	g
S_{M1} - MCE_R Spectral Response Acceleration Parameter Adjusted for Site Class Effect (1.0 second)	Equation 16-21 (1)	Null (4)	g
S_{DS} - Design Spectral Response Acceleration at 0.2-s	Equation 16-22 (1)	1.66 (4)	g
S_{D1} - Design Spectral Response Acceleration at 1-s	Equation 16-23 (1)	Null (4)	g
$T_o = 0.2\ S_{D1}/\ S_{DS}$	Section 11.4.6 (2)	Null	s
$T_s = S_{D1}/\ S_{DS}$	Section 11.4.6 (2)	Null	s
T_L - Long Period Transition Period	Figure 22-14 (2)	8 (4)	s
PGA - Peak Ground Acceleration Maximum Considered Earthquake Geometric Mean, MCE_G (*)	Figure 22-9 (2)	1.06	g
F_{PGA} - Site Coefficient Adjusted for Site Class Effect (2)	Table 11.8-1 (2)	1.1 (4)	-
PGA_M –Peak Ground Acceleration (2) Adjusted for Site Class Effect	Equation 11.8-1 (2)	1.16 (4)	g
Design PGA ≈ (⅔ PGA_M) - Slope Stability (†)	Similar to Eqs. 16-22 & 16-23 (2)	0.77	g
Design PGA ≈ (0.4 S_{DS}) – Short Retaining Walls (‡)	Equation 11.4-5 (2)	0.66	g
C_{RS} - Short Period Risk Coefficient	Figure 22-18A (2)	0.893 (4)	-
C_{R1} - Long Period Risk Coefficient	Figure 22-19A (2)	0.878 (4)	-
SDC - Seismic Design Category (§)	Section 1613.2.5 (1)	Null (4)	-

References:
(1) California Building Code (CBC), 2022, California Code of Regulations, Title 24, Part 2, Volume I and II.
(2) American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI), 2016, Minimum Design Loads and Associated Criteria for Buildings and Other Structures, Standards 7-16.
(3) USGS Unified Hazard Tool - https://earthquake.usgs.gov/hazards/interactive/ [Dynamic: Conterminous U.S. 2014 (update) (v4.2.0)]
(4) SEI/OSHPD Seismic Design Map Application – https://seismicmaps.org [Reference: ASCE 7-16]
Related References:
Federal Emergency Management Agency (FEMA), 2015, NEHRP (National Earthquake Hazards Reduction Program) Recommended Seismic Provision for New Building and Other Structures (FEMA P-1050).

Notes:
* PGA Calculated at the MCE return period of 2475 years (2 percent chance of exceedance in 50 years).
† PGA Calculated at the Design Level of ⅔ of MCE; approximately equivalent to a return period of 475 years (10 percent chance of exceedance in 50 years).
‡ PGA Calculated for short, stubby retaining walls with an infinitesimal (zero) fundamental period.
§ The designation provided herein may be superseded by the structural engineer in accordance with Section 1613.2.5.1, if applicable.

Discussion

Owing to the characteristics of the subsurface soils, as defined by Site Class D-Stiff designation, and proximity of the site to the sources of major ground shaking, the site is expected to experience strong ground shaking during its anticipated life span. Under these circumstances, where the code-specified design response spectrum may not adequately characterize site response, the 2022 CBC typically requires a ground motion hazard analysis to be performed. This requirement is signified/identified by the "null" values that are output using SEA/OSHPD software in determination of short period, but mostly, in determination of long period seismic parameters, and reported in Table 1 above. If the exceptions specified in ASCE 7-16, §11.4.8 are applicable to this project the appropriate procedures specified therein should be followed to develop the design response spectrum. Alternatively, a ground motion hazard analysis is permitted to be performed; please contact Petra for additional information should the design team elect this approach.

Expansive Soil Conditions

Based on available data, including the non-plastic, granular nature of the soils encountered in the subsurface exploration, near-surface soils are considered Very Low in expansion potential (Expansion Index less than 20). Additional sampling and testing should be performed during site grading for determining actual expansion potential of the supporting building pad soils.

FOUNDATION DESIGN GUIDELINES

Allowable Bearing Capacity, Estimated Settlement and Lateral Resistance

Foundation System

In consideration of the existing surficial soils and the recommended remedial grading herein, conventional shallow foundations, consisting of isolated column footings interconnected with tie beams and continuous footings, may be used for support of the proposed structures. Final foundation loads are currently unknown. Petra has assumed 5 kip per foot line loads for continuous footings and 10 kip point loads for columns, combined dead and live loads. Foundation loads may vary significantly based on the type of construction, therefore Petra should review design plans to verify the following recommendations.

Allowable Soil Bearing Capacity, Anticipated Settlement and lateral Resistance

Pad Footings

Based on laboratory test results from a remolded shear test (friction angle of 33 degrees and cohesion of 50 psf) an allowable soil bearing capacity of 2,000 pounds per square foot may be utilized for design of isolated 24-inch-square pad footings founded at a minimum depth of 12 inches below the lowest adjacent final grade

for pad footings that are not a part of the slab system and are used for support of such features as roof overhang, second-story decks, patio covers, etc. This bearing capacity is also applicable to 24-inch-square pad footings that are a part of the slab system. This value may be increased by 20 percent for each additional foot of embedment and by 10 percent for each additional foot of width, to a maximum value of 3,000 pounds per square foot. The recommended allowable bearing value includes both dead and live loads and may be increased by one-third for short duration wind and seismic forces.

Continuous Footings

An allowable soil bearing capacity of 2,000 pounds per square foot may be utilized for design of continuous footings founded at a minimum depth of 12 inches below the lowest adjacent final grade. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 3,000 pounds per square foot. The recommended allowable bearing value includes both dead and live loads and may be increased by one-third for short duration wind and seismic forces.

Construction Joints

Owing to the anticipated areal extent of the proposed building and potential changes in loading pattern of walls and columns, construction joints and/or block-out cuts around the columns are expected to be necessary. The details of these features should be provided by the project structural engineers with a potential input from the project geotechnical engineer.

Estimated Static Settlement

Based on the allowable bearing values provided above, total static settlement of the footings under the anticipated loads is expected to be on the order of 1 inch. Differential settlement is expected to be ¾ inch over a horizontal span of 30 feet (angular distortion of 1:480). The majority of static settlement is likely to take place as footing loads are applied or shortly thereafter.

Seismically-Induced Settlement

As previously noted, if remedial grading removes and replaces the upper 6 feet of existing soils as compacted fill, the total seismic settlement is estimated at approximately 1 inch. Differential seismic settlement is estimated to be around ¾ inches over a span of 30 feet.

Lateral Resistance

A passive earth pressure of 250 pounds per square foot per foot of depth, to a maximum value of 2,500 pounds per square foot, may be used to determine lateral bearing resistance for footings. In addition, a

coefficient of friction of 0.30 times the dead load forces may be used between concrete and the supporting soils to determine lateral sliding resistance. The above values may be increased by one-third when designing for transient wind or seismic forces. It should be noted that the above values are based on the condition where footings are cast in direct contact with compacted fill or competent native soils. In cases where the footing sides are formed, all backfill placed against the footings upon removal of forms should be compacted to at least 90 percent of the applicable maximum dry density.

Guidelines for Footings and Slabs on-Grade Design and Construction

The following minimum recommendations are presented for conditions where the project design team may require geotechnical engineering guidelines for design and construction of footings and slabs on-grade the project site. These recommendations are based on the non-plastic, granular nature of the site soils, which appear to be non-expansive. Expansion index tests should be performed on the compacted fill soils during grading to verify the validity of these recommendations. For non-expansive soils, , the design of slabs on-grade is considered to be exempt from the procedures outlined in Sections 1808A.6.2 of the 2022 CBC and may be performed using any method deemed rational and appropriate by the project structural engineer.

The design and construction guidelines that follow are based on the above soil conditions and may be considered for reducing the effects of variability in fabric, composition and, therefore, the detrimental behavior of the site soils such as excessive short- and long-term total and differential heave or settlement. These guidelines have been developed on the basis of the previous experience of this firm on projects with similar soil conditions. Although construction performed in accordance with these guidelines has been found to reduce post-construction movement and/or distress, they generally do not positively eliminate all potential effects of variability in soils characteristics and future heave or settlement.

It should also be noted that the suggestions for dimension and reinforcement provided herein are performance-based and intended only as preliminary guidelines to achieve adequate performance under the anticipated soil conditions. However, they should not be construed as replacement for structural engineering analyses, experience, and judgment. The project structural engineer, architect and/or civil engineer should make appropriate adjustments to slab and footing dimensions, and reinforcement type, size and spacing to account for internal concrete forces (e.g., thermal, shrinkage and expansion) as well as external forces (e.g., applied loads) as deemed necessary. Consideration should also be given to minimum design criteria as dictated by local building code requirements.

Conventional Slab-on-Grade System

Given the non-expansive nature of the near-surface onsite soils, we recommend that footings and floor slabs be designed and constructed in accordance with the following minimum criteria.

Footings

1. Exterior continuous footings supporting one- and two-story light-weight construction should be founded at a minimum depth of 15 inches below the lowest adjacent final grade. For concrete tilt up structures, continuous footings should be founded at a minimum depth of 24 inches. Interior continuous footings may be founded at a minimum depth of 12 inches below the top of the adjacent finish floor slabs.

2. In accordance with Table 1809.7 of 2022 CBC, all continuous footings should have minimum widths of 12 inches for one- and two-story construction. We recommend all continuous footings should be reinforced with a minimum of two No. 4 bars, one top and one bottom.

3. A minimum 12-inch-wide grade beam founded at the same depth as adjacent footings should be provided across openings such as large doors or bay windows. The grade beam should be reinforced in a similar manner as provided above.

4. Interior isolated pad footings, if required, should be a minimum of 24 inches square and founded at a minimum depth of 12 inches below the bottoms of the adjacent floor slabs. Pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings.

5. Exterior isolated pad footings intended for support of roof overhangs such as patio covers and similar construction should be a minimum of 24 inches square, and founded at a minimum depth of 18 inches below the lowest adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad and/or continuous footings via tie beams at the discretion of the project structural engineer.

6. The minimum footing dimensions and reinforcement recommended herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2022 CBC) by the structural engineer responsible for foundation design based on calculations, engineering experience, and judgment.

Building Floor Slabs

1. For office areas, and areas with light floor loading, concrete floor slabs should be a minimum 4 inches thick and reinforced with a minimum No. 3 bars spaced a maximum of 18 inches on centers, both ways. For warehouse floors the slabs should be a minimum of 5 inches thick and reinforced with a minimum No. 4 bars spaced a maximum of 18 inches on centers, both ways. All slab reinforcement should be supported on concrete chairs or brick to ensure the desired placement near mid-depth.

2. Slab dimension, reinforcement type, size and spacing need to account for internal concrete forces (e.g., thermal, shrinkage and expansion) as well as external forces (e.g., applied loads), as deemed necessary.

3. Moisture sensitive concrete floor slabs and areas to receive moisture sensitive floor covering should be underlain with a moisture vapor retarder consisting of a minimum 10-mil-thick polyethylene or polyolefin membrane that meets the minimum requirements of ASTM E96 and ASTM E1745 for vapor retarders (such as Husky Yellow Guard®, Stego® Wrap, or equivalent). All laps within the membrane should be sealed, and at least 2 inches of clean sand should be placed over the membrane to promote uniform curing of the concrete. To reduce the potential for punctures, the membrane should be placed on a pad surface that has been graded smooth without any sharp protrusions. If a smooth surface cannot be achieved by grading, consideration should be given to lowering the pad finished grade an additional inch and then placing a 1-inch-thick leveling course of sand across the pad surface prior to the placement of the membrane.

   At the present time, some slab designers, geotechnical professionals and concrete experts view the sand layer below the slab (blotting sand) as a place for entrapment of excess moisture that could adversely impact moisture-sensitive floor coverings. As a preventive measure, the potential for moisture intrusion into the concrete slab could be reduced if the concrete is placed directly on the vapor retarder. However, if this sand layer is omitted, appropriate curing methods must be implemented to ensure that the concrete slab cures uniformly. A qualified materials engineer with experience in slab design and construction should provide recommendations for alternative methods of curing and supervise the construction process to ensure uniform slab curing. Additional steps would also need to be taken to prevent puncturing of the vapor retarder during concrete placement.

4. Prior to placing concrete, the subgrade soils below building and auxiliary area floor slabs should be moisture conditioned to achieve a moisture content that is at least 1.2 times the optimum moisture content. This moisture should penetrate to a depth of approximately 12 inches into the subgrade.

5. The modulus of subgrade reaction for design of load bearing elements depends on the size of the element and soil-structure interaction. As a first level of approximation, a modulus of subgrade reaction of 125 pounds per cubic inch may be assumed for floor slab design.

6. The minimum dimensions and reinforcement recommended herein for building floor slabs may be modified (increased or decreased) by the structural engineer responsible for foundation design based on calculations, engineering experience, and judgment.

Footing Observations

Foundation excavations should be observed by a representative of the project geotechnical consultant to verify that they have been excavated into competent fill materials. These observations should be performed prior to the placement of forms or reinforcement. The excavations should be trimmed neat, level and square. All loose, sloughed or moisture-softened materials and/or any construction debris should be removed prior to the placement of concrete. Excavated soils derived from footing and utility trenches should not be placed in slab-on-grade areas unless they are compacted to at least 90 percent of maximum dry density.

General Corrosivity Screening

As a screening level study, limited chemical and electrical tests were performed on samples considered representative of the onsite soils to identify potential corrosive characteristics of these soils. The common indicators associated with soil corrosivity include water-soluble sulfate and chloride levels, pH (a measure of acidity), and minimum electrical resistivity. Test methodology and results are presented in Appendix B.

> *It should be noted that Petra does not practice corrosion engineering; therefore, the test results, opinion and engineering judgment provided herein should be considered as general guidelines only. Additional analyses would be warranted, especially, for cases where buried metallic building materials (such as copper and cast or ductile iron pipes) in contact with site soils are planned for the project. In many cases, the project geotechnical engineer may not be informed of these choices. Therefore, for conditions where such elements are considered, we recommend that other, relevant project design professionals (e.g., the architect, landscape architect, civil and/or structural engineer) also consider recommending a qualified corrosion engineer to conduct additional sampling and testing of near-surface soils during the final stages of site grading to provide a complete assessment of soil corrosivity. Recommendations to mitigate the detrimental effects of corrosive soils on buried metallic and other building materials that may be exposed to corrosive soils should be provided by the corrosion engineer as deemed appropriate.*

In general, a soil's water-soluble sulfate levels and pH relate to the potential for concrete degradation; water-soluble chlorides in soils impact ferrous metals embedded or encased in concrete, e.g., reinforcing steel; and electrical resistivity is a measure of a soil's corrosion potential to a variety of buried metals used in the building industry, such as copper tubing and cast or ductile iron pipes. Table 2, below, presents a single value of individual test results with an interpretation of current code indicators and guidelines that are commonly used in this industry. The table includes the code-related classifications of the soils as they relate to the various tests, as well as a general recommendation for possible mitigation measures in view of the potential adverse impact on various components of the proposed structures in direct contact with site soils. The guidelines provided herein should be evaluated and confirmed, or modified, in their entirety by the project structural engineer, corrosion engineer and/or the contractor responsible for concrete placement for structural concrete used in exterior and interior footings, interior slabs on-ground, garage or warehouse slabs, wall foundations and concrete exposed to weather such as driveways, patios, porches, walkways, ramps, steps, curbs, etc.

TABLE 2

Soil Corrosivity Screening Results

Test	Test Results	Classification	General Recommendations
Soluble Sulfate (Cal 417)	0.003 percent	S0[1]	Minimum unconfined compressive strength f'$_c$= 2,500 psi; no water/cement ratio restrictions
pH (Cal 643)	8.68	Strongly Alkaline	A corrosion engineer should be consulted for additional recommendations
Soluble Chloride (Cal 422)	255 ppm	C1[4]	No water/cement ratio restriction; minimum f'$_c$ = 2,500 psi
Resistivity (Cal 643)	13,000 ohm-cm	Mildly Corrosive[3]	Protection from corrosive soil required, such as wrapping/coating of buried pipes; corrosion resistant materials. A corrosion engineer should be consulted for additional recommendations

Notes:
1. ACI 318-14, Section 19.3
2. ACI 318-14, Section 19.3
3. Pierre R. Roberge, "Handbook of Corrosion Engineering"
4. Exposure classification C2 applies specifically to swimming pools and appurtenant concrete elements

Post-Grading Considerations

Utility Trenches

All utility trench backfill should be compacted to a minimum relative compaction of 90 percent. Due to the nature of the upper onsite earth materials, flooding and jetting techniques should be avoided. Therefore, trench backfill materials should be placed in lifts no greater than approximately 12 inches in thickness, watered or air-dried as necessary to achieve near optimum moisture conditions, and then mechanically compacted in place to a minimum relative compaction of 90 percent. A representative of the project geotechnical consultant should probe and test the backfills to verify adequate compaction.

As an alternative for shallow trenches where pipe or utility lines may be damaged by mechanical compaction equipment, such as under building floor slabs, imported clean sand having a sand equivalent (SE) value of 30 or greater may be utilized. The sand backfill materials should be watered to achieve near optimum moisture conditions and then tamped into place. No specific relative compaction will be required; however, observation, probing, and if deemed necessary, testing should be performed by a representative of the project geotechnical consultant to verify an adequate degree of compaction.

If clean, imported sand is to be used for backfill of exterior utility trenches, it is recommended that the upper 12 inches of trench backfill materials consist of properly compacted onsite soil materials. This is to mitigate infiltration of irrigation and rainwater into granular trench backfill materials.

Where an exterior and/or interior utility trench is proposed in a direction parallel to a building footing, the bottom of the trench should not extend below a 1:1 (horizontal to vertical) plane projected downward from the bottom edge of the adjacent footing. Where this condition occurs, the adjacent footing should be deepened or the utility constructed and the trench backfilled and compacted prior to footing construction. Where utility trenches cross under a building footing, these trenches should be backfilled with on-site soils at the point where the trench crosses under the footing to reduce the potential for water to migrate under the floor slabs.

Site Drainage

Positive surface drainage systems consisting of a combination of sloped concrete flatwork/asphalt pavement, sheet flow gradients, swales and surface area drains (where needed) should be provided around the building and within any planter areas to collect and direct all surface waters to an appropriate drainage facility as determined by the project civil engineer. The ground surfaces of planter and landscape areas that are located within 10 feet of building foundations should be sloped at a minimum gradient of 5 percent away from the foundations and towards the nearest area drains. The ground surface of planter and landscape areas that are located more than 10 feet away from building foundations may be sloped at a minimum gradient of 2 percent away from the foundations and towards the nearest area drains.

Concrete flatwork surfaces that are located within 10 feet of building foundations should be inclined at a minimum gradient of one percent away from the building foundations and towards the nearest area drains. Concrete flatwork surfaces that are located more than 10 feet away from building foundations may be sloped at a minimum gradient of 1 percent towards the nearest area drains. Surface waters should not be allowed to collect or pond against building foundations and within the level areas of the site. All drainage devices should be properly maintained throughout the lifetime of the development. Future changes to site improvements, or planting and watering practices, should not be allowed to cause over-saturation of site soils adjacent to the structures.

On-site Storm Water Infiltration System

Petra understands that a storm water infiltration system, in the form of a retention basin, is proposed for this project. Details were not available at the time this report was repaired; however, it is assumed the goal is to collect storm water site-wide for infiltration into the subsurface. This concept, if done at the close proximity of the proposed buildings, is in direct conflict with the geotechnical drainage recommendations presented above. Therefore, the goal should be to collect surface runoff and transfer this water to a basin located away from buildings and structures. As regulatory guidelines must be met, the project civil engineer

will be required to design the site to meet the appropriate regulatory standards; however the project civil engineer must also be cognizant of the geotechnical concerns with water infiltration adjacent to buildings and structure and design accordingly. Further, the recommended remedial grading will result is a compacted fill zone of around six feet beyond the buildings' footprints. As such, minimum setback of at least 12 feet between infiltration systems and the edge of the building compacted fill zone is suggested to help alleviate this conflict (i.e. setback of 18 to 20 feet away from all proposed building footprints). If this setback distance cannot be maintained, then modified foundation recommendations may be required to alleviate any distress that could be caused by infiltration of water near the foundation systems.

Field Exploration and Preliminary Infiltration Rate

Two of the five exploratory borings used for the subsurface investigation were utilized for infiltration testing (Borings B-2 and B-4). Percolation tests were performed within the lower 3± feet of the holes on September 16, 2022. Test locations and the depth intervals were selected by the project team. Natural alluvial soils were encountered in the test borings and generally consisted of loose, very fine- to medium-grained silty sands with traces of coarse sand, and gravelly sands. The boring logs are presented in Appendix A.

The falling-head percolation test data was utilized in determining the test infiltration rate, I_t, expressed in units of inches/hour, utilizing the Porchet Method (RCFCWCD, 2011). Field testing was conducted in a perforated-cased borehole (with pea gravel surrounding the pipe) at 10-minute intervals for a period of approximately 2 hours. The test data are attached in Appendix C.

The infiltration rate, I_t, was calculated by determining the volumetric water flow through the wetted borehole surface area, expressed in terms of inches per hour. Un-factored test results are summarized in the following Table 3.

TABLE 3

Summary of Percolation Test Results

Test Location	Test Zone (ft below Natural Grade)	Soil Description	Un-Factored Test Infiltration Rate, I_t (in/hr)
B-2	13	Silty Sand	11.34
B-4	13	Silty Sand	10.02

Suitability Assessment

In view of the test data and considering such factors as infiltration assessment method, soil texture and variability and depth to groundwater, a **Suitability Assessment Safety Factor** of 1.0 should be applied to the above infiltration rates. Please also note that the project civil engineer needs to consider a **Design Safety Factor**, which incorporates such items as tributary area size, level of pretreatment/expected sediment load, redundancy/contingency plan and compaction during construction, in combination with the suitability assessment safety factor for the design of the system.

Exterior Concrete Flatwork

General

Near-surface compacted fill soils within the site are expected to exhibit an expansion index of 0 to 20, i.e. non-expansive. Subgrade preparation for areas not supported by the compacted fill supporting building structures should follow the guidelines presented below for pavement design and construction. We recommend that all exterior concrete flatwork such as sidewalks, patio slabs, large decorative slabs, concrete subslabs that will be covered with decorative pavers, vehicular driveways and/or access roads within and adjacent to the site be designed by the project architect and/or structural engineer with consideration given to mitigating the potential cracking and uplift that can develop in soils exhibiting expansion index values that fall in the very low category. The guidelines that follow should be considered as minimums and are subject to review and revision by the project architect, structural engineer and/or landscape consultant as deemed appropriate.

Thickness and Joint Spacing

To reduce the potential of unsightly cracking, concrete walkways, patio-type slabs, large decorative slabs and concrete subslabs to be covered with decorative pavers should be at least 4 inches thick and provided with construction joints or expansion joints every 6 feet or less.

Reinforcement

All concrete flatwork having their largest plan-view panel dimension exceeding 10 feet should be reinforced with a minimum of No. 3 bars spaced 24 inches on centers, both ways. Alternatively, the slab reinforcement may consist of welded wire mesh of the sheet type (not rolled) with 6x6/W1.4xW1.4 designation in accordance with the Wire Reinforcement Institute (WRI). The reinforcement should be properly positioned near the middle of the slabs.

The reinforcement recommendations provided herein are intended as guidelines to achieve adequate performance for anticipated soil conditions. The project architect, civil and/or structural engineer should make appropriate adjustments in reinforcement type, size and spacing to account for concrete internal (e.g., shrinkage and thermal) and external (e.g., applied loads) forces as deemed necessary.

Edge Beams (Optional)

Where the outer edges of concrete flatwork are to be bordered by landscaping, it is recommended that consideration be given to the use of edge beams (thickened edges) to prevent excessive infiltration and accumulation of water under the slabs. Edge beams, if used, should be 6 to 8 inches wide, extend 8 inches below the tops of the finish slab surfaces. Edge beams are not mandatory; however, their inclusion in flatwork construction adjacent to landscaped areas is intended to reduce the potential for vertical and horizontal movement and subsequent cracking of the flatwork related to uplift forces that can develop in expansive soils.

Pre-Moistening

As a further measure to reduce the potential for concrete flatwork cracking, subgrade soils should be thoroughly moistened prior to placing concrete. The moisture content of the soils should be at least 1.2 times the optimum moisture content and penetrate to a minimum depth of 12 inches into the subgrade. Flooding or ponding of the subgrade is not considered feasible to achieve the above moisture conditions since this method would likely require construction of numerous earth berms to contain the water. Therefore, moisture conditioning should be achieved with sprinklers or a light spray applied to the subgrade over a period of few to several days just prior to pouring concrete. Pre-watering of the soils is intended to promote uniform curing of the concrete, reduce the development of shrinkage cracks and reduce the potential for differential expansion pressure on freshly poured flatwork. A representative of the project geotechnical consultant should observe and verify the density and moisture content of the soils, and the depth of moisture penetration prior to pouring concrete.

Drainage

Drainage from patios, entryways, and other flatwork areas should be directed to local area drains and/or graded earth swales designed to carry runoff water to the local retention basin or other approved drainage structures. The concrete flatwork should be sloped at a minimum gradient of one percent, or as prescribed by project civil engineer or local codes, away from building foundations, retaining walls, masonry garden walls and slope areas.

Tree Wells

Tree wells are not recommended in concrete flatwork areas since they introduce excessive water into the subgrade soils and allow root invasion, both of which can cause heaving and cracking of the flatwork.

PAVEMENT DESIGN AND CONSTRUCTION

Asphalt Pavement

The following pavement design recommendations are based on the assumption that surface drainage within the site will be collected and diverted offsite via sloped asphalt surfaces, swales and storm drain inlets. It should be noted that the pavement design provided herein is based on an assumed R-value. Samples of soil should be obtained during rough grading to determine the actual R-value of the near-surface soils.

Structural pavement section thicknesses for the parking lot and driveway improvements within the subject site were calculated based on an assumed R-Value of 50 and a range of Traffic Indices (T.I.) in accordance with Caltrans criteria. We recommend a structural pavement section consisting of hot mix asphalt (HMA) underlain by a suitable aggregate base (AB) for the proposed parking areas and driveways. Preliminary structural pavement sections for various T.I.'s are summarized in Table 4.

TABLE 4

Preliminary Structural Pavement Sections

Traffic Index	Hot Mix Asphalt (inches)	Aggregate Base (inches)
4.0	3	4
4.5	3	4
5.0	3	4
5.5	3	5
6.0	3	6
6.5	3	7
7.0	3.5	8

Subgrade soils should be properly compacted, smooth, and non-yielding prior to pavement construction. The subgrade soils should be compacted to at least 90 percent of ASTM D 1557-07. Subgrade preparation recommendations are provided below.

Aggregate base materials may consist of Crushed Aggregate Base, Crushed Miscellaneous Base, or Processed Miscellaneous Base conforming to Section 200-2 of the Standard Specifications for Public Works Construction (Greenbook). It should be noted that base thicknesses recommended above are based on the use of Crushed Aggregate base material. For conditions where either Crushed Miscellaneous Base or Processed Miscellaneous Base Materials are used, a 10 percent increase in base section thickness should be incorporated in the design and construction of the structural pavement section.

The base materials should be brought to a uniform moisture near optimum moisture then compacted to at least 95 percent of ASTM D 1557. Asphaltic concrete materials and construction should conform to Section 203 of the Greenbook.

Portland Cement Concrete Driveways

For concrete pavement that will be designed based on an unlimited number of applications of an 18-kip single-axle load, it is suggested that the pavement have a minimum thickness of 6 inches and a minimum 28-day compressive strength of 3,000 pounds per square inch. In addition, the pavement should have a minimum reinforcement of No. 3 bars spaced a maximum of 16 inches on center (each way), and individual slabs should be doweled together at control joints. Control joints should be spaced at maximum 10-foot intervals. A modulus of subgrade reaction of 125 pounds per cubic foot may be used for design purposes. It should again be noted that the minimum reinforcement suggested herein does not account for thermal and shrinkage characteristics of reinforced concrete. Additional steel reinforcement may be required by the project architect and/or structural engineer to account for these characteristics.

Subgrade Preparation

Compaction

To reduce the potential for distress to asphaltic concrete or Portland cement concrete flatwork, the subgrade soils below concrete flatwork areas to a minimum depth of 12 inches (or deeper, as either prescribed elsewhere in this report or determined in the field) should be moisture conditioned to at least equal to, or slightly greater than, the optimum moisture content and then compacted to a minimum relative compaction of 90 percent. Where all-weather fire department access roads (including stabilized deconstructed granite road material), concrete public roads, concrete segments of roads and/or concrete access driveways are proposed, the upper 6 inches of subgrade soil should be compacted to a minimum 95 percent relative compaction.

PLAN REVIEW

This report is based certain assumptions related to the proposed development, since no plans were available for Petra's review at the time this report was prepared. We recommend that our firm be engaged to review the final design drawings, specifications and grading plan prior to any new construction. If we are not provided the opportunity to review these documents with respect to the geotechnical aspects of new construction and grading, it should not be assumed that the recommendations provided herein are wholly or in part applicable to the proposed construction.

REPORT LIMITATIONS

This report is based on Petra's understanding of the proposed project and geotechnical data as described herein. The materials encountered on the project site, described in other literature, and utilized in our laboratory investigation are believed representative of the project area, and the conclusions and recommendations contained in this report are presented on that basis. However, soil materials can vary in characteristics between points of exploration, both laterally and vertically, and those variations could affect the conclusions and recommendations contained herein. As such, observation and testing by a geotechnical consultant during the grading and construction phases of the project are essential to confirming the basis of this report. To provide the greatest degree of continuity between the design and construction phases, consideration should be given to retaining Petra Geosciences, Inc. as geotechnical engineer of record for construction services.

This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and time period. The contents of this report are professional opinions and as such, are not to be considered a guarantee or warranty.

This report should be reviewed and updated after a period of one year or if the project concept changes from that described herein.

The information contained herein has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

This report is subject to review by the controlling authorities for this project. Should you have any questions, please do not hesitate to call.

Respectfully submitted,

PETRA GEOSCIENCES, INC.

3/16/23

Alan Pace
Senior Associate Geologist
CEG 1952

Siamak Jafroudi, PhD
Senior Principal Engineer
GE 2024

KB/AP/SJ/lv

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REFERENCES

American Concrete Institute (ACI), Building Code Requirements for Structural Concrete ACI 318-14.

American Society for Testing and Materials (ASTM) – Standard – Section Four – Construction, Volume 04.08 Soil and Rock.

American Society of Civil Engineers (ASCE) and Structural Engineering Institute (SEI), 2017, Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE 7-16).

Bryant, W.A., and Hart, E.W., 2007, Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps: California Geological Survey Special Publication 42 (Interim Revision).

California Building Standards Commission, 2022, California Building Code, California Code of Regulations, Title 24, Part 2, Volume 1 of 2, dated June.

California Building Standards Commission, 2022, California Building Code, California Code of Regulations, Title 24, Part 2, Volume 2 of 2, dated June.

California Department of Water Resources, 2017, Water Data Library, http://www.water.ca.gov/waterdatalibrary/

_____, 1964, Coachella Valley Investigation, Bulletin No. 108, dated July.

California Geological Survey, 2008, Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

_____, 2020, Earthquake Zones of Required Investigation, Rancho Mirage Quadrangle, accessed October, https://maps.conservation.ca.gov/cgs/EQZApp/app/

Cetin, K. et al, 2009, Probabilistic Model for the Assessment of Cyclically Induced Reconsolidation (Volumetric) Settlements, *in Journal of Geotechnical and Geoenvironmental Engineering*: Vol. 135, No. 3.

County of Riverside Safety Element, 2003, Chapter 6 of the General Plan (adopted October 7, 2003).

Dibblee, T.W., 1953, "Generalized geologic map of Imperial Valley region, California": *in* Jahns, R.A., (ed.), 1954, Geology of southern California: California Division of Mines and Geology Bulletin 170 (scale 1" = 6 miles).

Dillon, J.T., and Ehlig, P.L., 1993, Displacement on the Southern San Andreas Fault: *in* Powell, R.E., Weldon, R.J. II, and Matti, J.C., eds, The San Andreas Fault System: Displacement, Palinspastic Reconstruction, and Geologic Evolution: Geological Society of America Memoir 178.

Frost, E.G., Suitt, S.C., and Fattahipour, M., 1997, Emerging Perspectives of the Salton Trough Region with an Emphasis on Extensional Faulting and its Implications for Later San Andreas Deformation: South Coast Geological Society Annual Field Trip Guide Book no. 25, p. 57-97.

Fumal, T.E., Rymer, M.J., and Seitz, G.G., 2002, Timing of Large Earthquakes since A.D., 800 on the Mission Creek Strand of the San Andreas Fault Zone at Thousand Palms Oasis Near Palm Springs, California: Bulletin of the Seismological Society of America, v. 92, p. 2841- 2860.

Earth Systems Southwest, 2004, Geotechnical Engineering Report, Proposed Industrial Development, APN 666-340-004, North Palm Springs, Riverside County, California, File No. 09731-01, 04-08-732, dated August 5.

REFERENCES

_____, 2016, Geotechnical Engineering Feasibility Report Update, APN 666-340-004 & 006, Southeast Corner of North Indian Canyon Drive & 18th Avenue, North Palm Springs, California, File No. PID-000644-001, Document no. 16-05-700, dated May 3.

Google Earth™ 2022, by Google Earth, Inc., accessed November, http://www.google.com/earth/index.html

Ishihara, K., 1985, Stability of Natural Deposits During Earthquakes, 11th International Conference on Soil Mechanics and Foundation Engineering, Proceedings, San Francisco, Vol. 1., pp. 321-376.

Jennings, C.W., 1975, Fault map of California with location of volcanoes, Thermal Springs, and Thermal Wells: California Division of Mines and Geology, Geological Data Map Series, Map No. 2.

Jones, L.M., 1988, Focal Mechanisms and the State of Stress on the San Andreas Fault in Southern California: Journal of Geophysical Research, v. 93, p. 8869-8891.

Lancaster, J.T., CEG, Hayhurst, C.A., P.G. and Bedrossian, T.L., CEG, 2012, Preliminary Geologic Map of Quaternary Surficial Deposits in Southern California, Palm Springs 30' x 60' Quadrangle, CGS Special Report 217, Plate 24, dated December.

Macedo, J. and Bray, D., 2018, Key Trends in Liquefaction-Induced Building Settlement, *in Journal of Geotechnical and Geoenvironmental Engineering*: Vol. 144, No. 11.

MWH, Inc., 2012, Mission Creek and Garnet Hill Subbasins Water Management Plan, prepared for Coachella Valley Water District, Administrative Draft, dated April.

Petra Geosciences, Inc., 2017, Design-Phase Geotechnical Evaluation, Coachillin Project, Parcels 29, 32 and 33, Northeast Corner of North Indian Canyon and 19th Avenue, Desert Hot Springs, Riverside County, California, J.N. 16-413, *prepared for Ecomaster Corporation*, dated August 11.

_____, 2018a, Design-Phase Geotechnical Evaluation: *Coachillin' Business Park*, Parcel 28 of Parcel Map No. 37158, 18462 Skywalker Court, Desert Hot Springs, Riverside County, California, J.N. 18-200, *prepared for DHS Verde, LLC*, dated June 4.

_____, 2018b, Design-Phase Geotechnical Evaluation: *Coachillin' Business Park*, Parcel 10 of Tentative Parcel Map No. 37158, 18194 Blue Dream Crossing, Desert Hot Springs, Riverside County, California, J.N. 18-185*, prepared for Happy Hours, LLC*, dated June 6.

Philibosian, B., Fumal, T.E. & Weldon, R., 2011, San Andreas Fault earthquake chronology and Lake Cahuilla history at Coachella, California: Bulletin of the Seismological Society of America, Volume 101, No. 1, p13-38.

Pradel, D., 1998, Procedure to Evaluate Earthquake-Induced Settlements in Dry Sandy Soils: *in Journal of Geotechnical and Geoenvironmental Engineering*: Vol. 124, No. 4.

Riverside County RCIT, Map My County, 2022, accessed May, https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public

Sieh, K.E., and Williams, P.L., 1990, Behavior of the Southernmost San Andreas Fault during the Past 300 Years: Journal of Geophysical Research, v. 95, p. 6629-6645.

Smith, Merrit, 1964, Map Showing Distribution and Configuration of Basement Rocks in California (South Half), United States Geological Survey, Oil and Gas Investigations, Map OM-215 (Sheet 2 of 2).

REFERENCES

Sneed, 2001, Detection and Measurement of Land Subsidence Using Global Positioning System and Interferometric Synthetic Aperture Radar, Coachella Valley, California, 1996-1998, U.S. Geological Survey, Water-Resources Investigations Report 01-4193.

_____, 2007, Detection and Measurement of Land Subsidence Using Global Positioning System Surveying and Interferometric Synthetic Aperture Radar, Coachella Valley, California, 1996–2005, Scientific Investigations Report 2007–5251, United States Geological Survey.

Sneed, M., Brandt, J.T., Solt, M., 2014, Land Subsidence, Groundwater Levels, and Geology in the Coachella Valley, California, 1993-2010, USGS, Scientific Investigation Report 2014-5075.

Southern California Earthquake Center (SCEC), 1999, Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction Hazards in California: organized through the Southern California Earthquake Center, University of Southern California.

Southern California Geotechnical, 2006, Geotechnical Investigation and Liquefaction Evaluation, Proposed Commercial/Industrial development, SEC 18th Avenue and Indian Avenue, APNs 666-340-004 and 666-340-006, Palm Springs, California, Project No. 06G221-1, dated October 23.

Standard Specifications for Public Works Construction The "Greenbook", 2018 edition, BNi Publications, Inc.

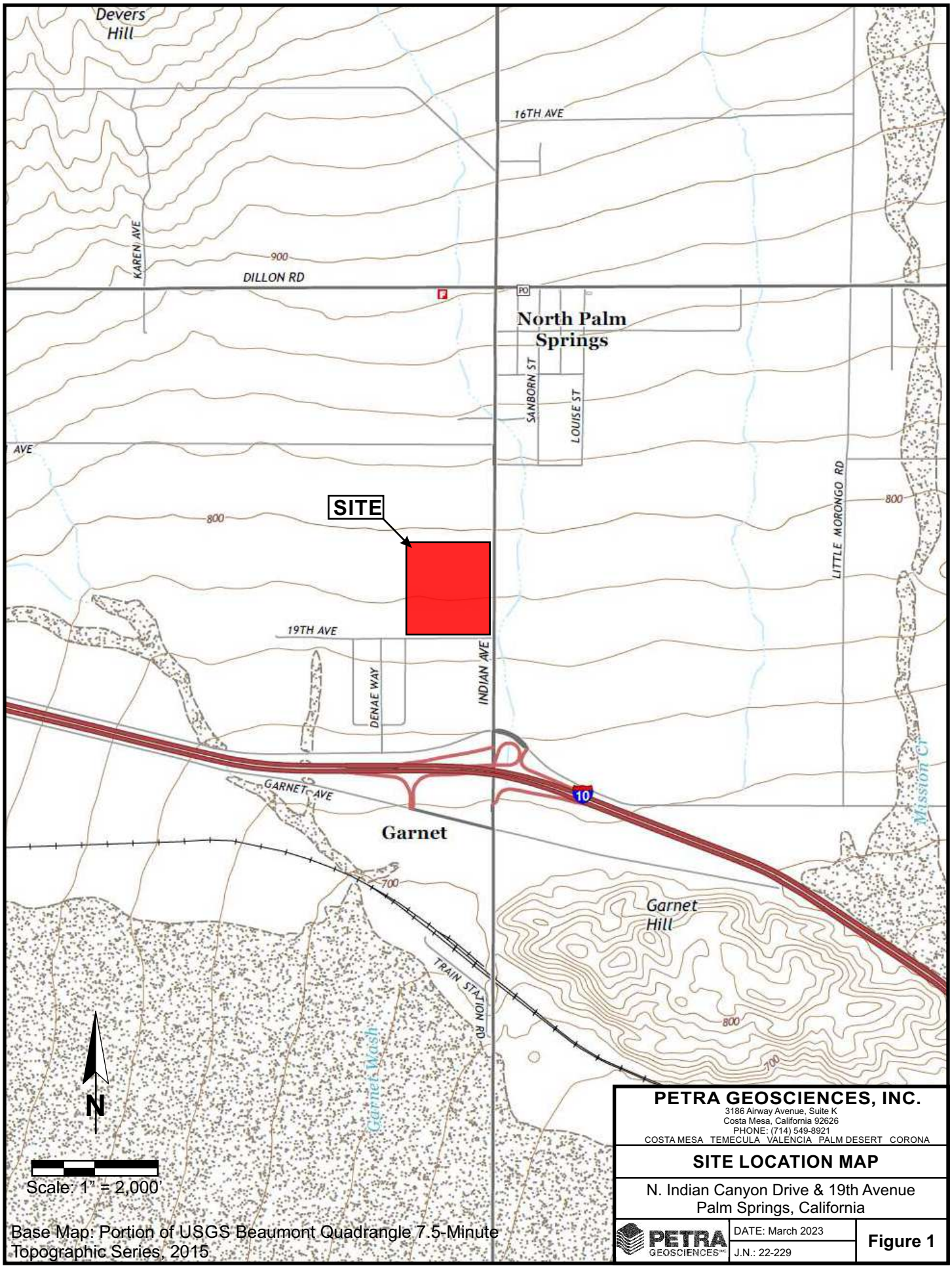
Structural Engineers Association of California (SEAOC)/Office of Statewide Health Planning and Development (OSHPD), 2018, U. S. Seismic Design Maps, https://seismicmaps.org/ .

Tokimatsu, K. and Seed, H.B., 1987; Evaluation of Settlements in Sands due to Earthquake Shaking: *in Journal of Geotechnical Engineering,* Vol. 113, No. 8, p. 861-879.

United States Geological Survey (USGS), 2014, Unified Hazard Tool, https://earthquake.usgs.gov/hazards/interactive/

Working Group on California Earthquake Probabilities (WGCEP), Field, E.H., Biasi, G.P., Bird, P., Dawson, T.E., Felzer, K.R., Jackson, D.D., Johnson, K.M., Jordan, T.H., Madden, C., Michael, A.J., Milner, K.R., Page, M.T., Parsons, T., Powers, P.M., Shaw, B.E., Thatcher, W.R., Weldon, R.J., II, and Zeng, Y., 2013, Uniform California earthquake rupture forecast, version 3 (UCERF3) — The time-independent model: U.S. Geological Survey Open-File Report 2013–1165, 97 p., California Geological Survey Special Report 228, and Southern California Earthquake Center Publication 1792, http://pubs.usgs.gov/of/2013/1165/.

FIGURES



Base Map: Portion of USGS Beaumont Quadrangle 7.5-Minute Topographic Series, 2015

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COSTA MESA TEMECULA VALENCIA PALM DESERT CORONA

SITE LOCATION MAP

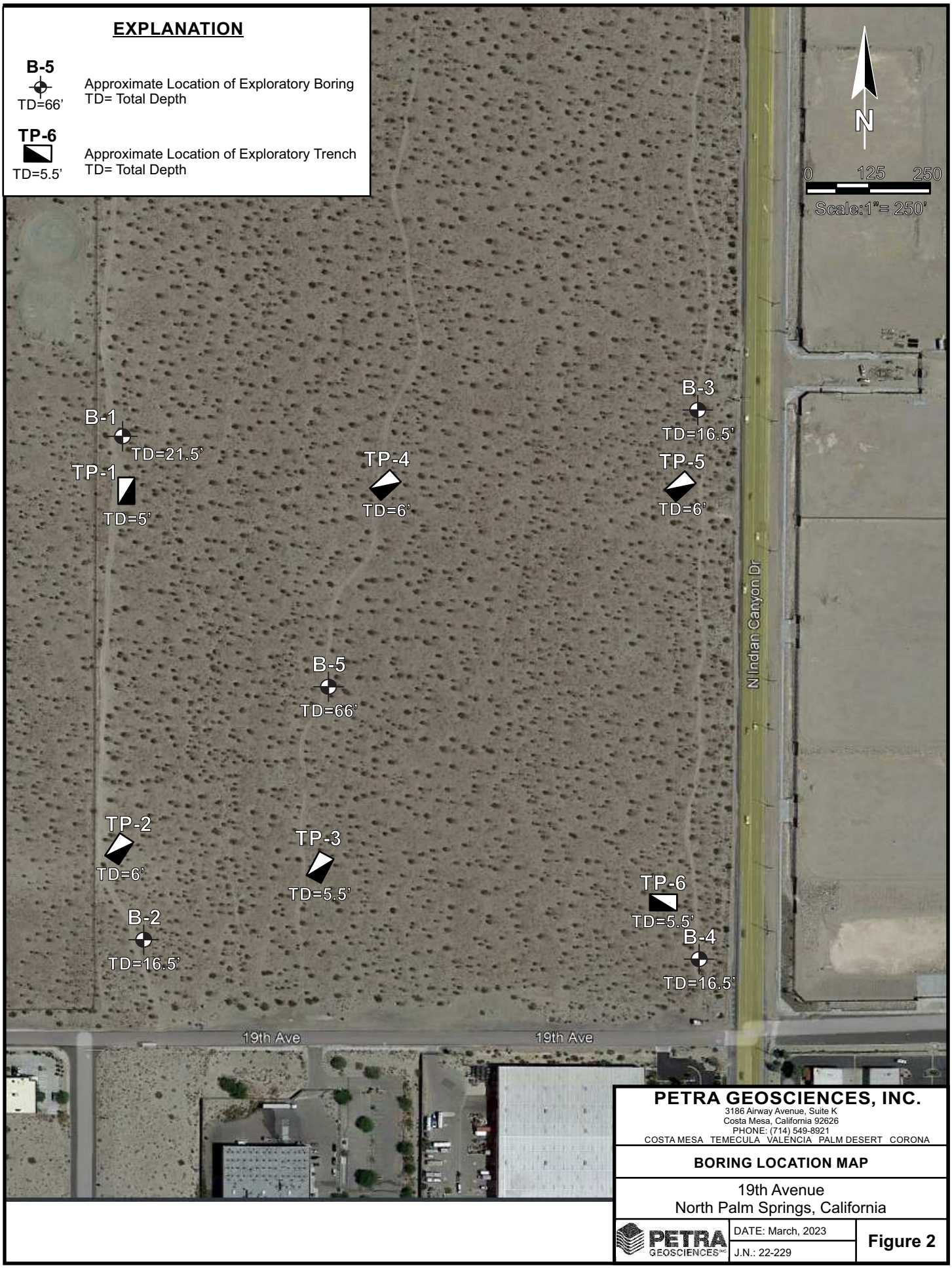
N. Indian Canyon Drive & 19th Avenue
Palm Springs, California

PETRA GEOSCIENCES

DATE: March 2023

J.N.: 22-229

Figure 1



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BORING LOCATION MAP

19th Avenue
North Palm Springs, California

PETRA GEOSCIENCES INC

DATE: March, 2023

J.N.: 22-229

Figure 2

APPENDIX A

BORING LOGS

Key to Soil and Bedrock Symbols and Terms

PETRA

Unified Soil Classification System

Coarse-grained Soils > 1/2 of materials is larger than #200 sieve	The No. 200 U.S. Standard Sieve is about the smallest particle visible to the naked eye	**GRAVELS** more than half of coarse fraction is larger than #4 sieve	Clean Gravels (less than 5% fines)	**GW** Well-graded gravels, gravel-sand mixtures, little or no fines
				GP Poorly-graded gravels, gravel-sand mixtures, little or no fines
			Gravels with fines	**GM** Silty Gravels, poorly-graded gravel-sand-silt mixtures
				GC Clayey Gravels, poorly-graded gravel-sand-clay mixtures
		SANDS more than half of coarse fraction is smaller than #4 sieve	Clean Sands (less than 5% fines)	**SW** Well-graded sands, gravelly sands, little or no fines
				SP Poorly-graded sands, gravelly sands, little or no fines
			Sands with fines	**SM** Silty Sands, poorly-graded sand-gravel-silt mixtures
				SC Clayey Sands, poorly-graded sand-gravel-clay mixtures
Fine-grained Soils > 1/2 of materials is smaller than #200 sieve		**SILTS & CLAYS** Liquid Limit Less Than 50		**ML** Inorganic silts & very fine sands, silty or clayey fine sands, clayey silts with slight plasticity
				CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
				OL Organic silts & clays of low plasticity
		SILTS & CLAYS Liquid Limit Greater Than 50		**MH** Inorganic silts, micaceous or diatomaceous fine sand or silt
				CH Inorganic clays of high plasticity, fat clays
				OH Organic silts and clays of medium-to-high plasticity
Highly Organic Soils				**PT** Peat, humus swamp soils with high organic content

Grain Size

Description		Sieve Size	Grain Size	Approximate Size
Boulders		>12"	>12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to fist-sized
	fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	coarse	#10 - #4	0.079 - 0.19"	Rock salt-sized to pea-sized
	medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock salt-sized
	fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized to
Fines		Passing #200	<0.0029"	Flour-sized and smaller

Modifiers

Trace	< 1 %
Few	1 - 5%
Some	5 - 12 %
Numerous	12 - 20 %

Laboratory Test Abbreviations

MAX	Maximum Dry Density	MA	Mechanical (Particle Size) Analysis
EXP	Expansion Potential	AT	Atterberg Limits
SO4	Soluble Sulfate Content	#200	#200 Screen Wash
RES	Resistivity	DSU	Direct Shear (Undisturbed Sample)
pH	Acidity	DSR	Direct Shear (Remolded Sample)
CON	Consolidation	HYD	Hydrometer Analysis
SW	Swell	SE	Sand Equivalent
CL	Chloride Content	OC	Organic Content
RV	R-Value	COMP	Mortar Cylinder Compression

Bedrock Hardness

Soft	Can be crushed and granulated by hand; "soil like" and structureless
Moderately Hard	Can be grooved with fingernails; gouged easily with butter knife; crumbles under light hammer blows
Hard	Cannot break by hand; can be grooved with a sharp knife; breaks with a moderate hammer blow
Very Hard	Sharp knife leaves scratch; chips with repeated hammer blows

Sampler and Symbol Descriptions

Approximate Depth of Groundwater Encountered

Approximate Depth of Standing Groundwater

Modified California Split Spoon Sample

No Recovery in Mod. Calif. Split Spoon Sample

Standard Penetration Test

Shelby Tube Sample

Bulk Sample

No Recovery in SPT Sampler

No Recovery in Shelby Tube

Notes:

Blows Per Foot: Number of blows required to advance sampler 1 foot (unless a lesser distance is specified). Samplers in general were driven into the soil or bedrock at the bottom of the hole with a standard (140 lb.) hammer dropping a standard 30 inches unless noted otherwise in Log Notes. Drive samples collected in bucket auger borings may be obtained by dropping non-standard weight from variable heights. When a SPT sampler is used the blow count conforms to ASTM D-1586

EXPLORATION LOG

Project:	**NWC 19th Avenue and North Indian Canyon Drive**		Boring No.: **B-1**
Location:	**Indian Canyon and 19th Avenue**		Elevation: **±786'**
Job No.:	**22-229**	Client: **Snider Interests**	Date: **9/16/22**
Drill Method:	**8" Hollow Stem Auger**	Driving Weight: **140 lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ALLUVIUM (Qal)**							
		Sand w/ Silt (Sp-Sm): Grey, dry, loose, gravel up to 1" in diameter.		7 13 15	■		0.3		
5		No Recovery.		6 25 50/5"	■				
		Becomes medium-dense.		8 11 23	■		0.4		
10				9 14 18	■		0.5		
15				10 17 28	■		0.5		
20				21 27 41	■		0.2		
		Total Depth - 21.5' No groundwater encountered Boring backfilled with cuttings.							
25									
30									

PLATE A-1

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**NWC 19th Avenue and North Indian Canyon Drive**		Boring No.: **B-2**
Location:	**Indian Canyon and 19th Avenue**		Elevation: **±770'**
Job No.:	**22-229**	Client: **Snider Interests**	Date: **9/16/22**
Drill Method:	**8" Hollow Stem Auger**	Driving Weight: **140 lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ALLUVIUM (Qal)**							
		Sand w/ Silt (Sp-Sm): Grey, dry, loose, very fine- to medium-grained sand, gravel up to 1" in diameter.		4 7 13	■		0.3		
5		With trace coarse grained sand.		6 8 13	■		0.4		MA
		Becomes medium-dense with fine rounded gravel up to 3/4" in diameter, approximately 5-10%.		6 12 17	■		0.6		
10				9 19 32	■		0.5		
15		Gravelly Sand (SP/GP): Gray, dry, medium dense, angular gravel up to 3/4" in diameter approximately 30%.		15 23 27	◪				
		Total Depth - 16.5' No groundwater encountered Boring backfilled with cuttings Perc test installed, Presoaked @7:50AM.							
20									
25									
30									

PLATE A-2

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**NWC 19th Avenue and North Indian Canyon Drive**		Boring No.: **B-3**
Location:	**Indian Canyon and 19th Avenue**		Elevation: **±789'**
Job No.:	**22-229**	Client: **Snider Interests**	Date: **9/16/22**
Drill Method:	**8" Hollow Stem Auger**	Driving Weight: **140 lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ALLUVIUM** Sand w/ Silt (Sp-Sm): Grey, dry, loose, fine- to medium-grained sand, trace gravel up to 1/2" in diameter.							
5				22 50/3"	■				
10				8 8 10	■				
15				7 13 18	■				
		Total Depth - 16.5' No groundwater encountered Boring backfilled with cuttings Perc test installed, Presoaked @12:52 PM.							
20									
25									
30									

PLATE A-3

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**NWC 19th Avenue and North Indian Canyon Drive**		Boring No.: **B-4**
Location:	**Indian Canyon and 19th Avenue**		Elevation: **±768'**
Job No.:	**22-229**	Client: **Snider Interests**	Date: **9/16/22**
Drill Method:	**8" Hollow Stem Auger**	Driving Weight: **140 lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ALLUVIUM** Sand w/ Silt (Sp-Sm): Grey, dry, loose, fine- to medium-grained sand.							
		Same as above with trace coarse grained sand.		6 18 25	■		0.6		
5				25 50/6"	■		1.0		
				23 32 36	■		0.3		
10				7 11 22	■		0.3		
15				13 27 25	■		0.4		
		Total Depth - 16.5' No groundwater encountered Boring backfilled with cuttings Perc test insallted, Presoaked @7:50AM.							
20									
25									
30									

PLATE A-4

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**NWC 19th Avenue and North Indian Canyon Drive**		Boring No.: **B-5**
Location:	**Indian Canyon and 19th Avenue**		Elevation: **±775'**
Job No.:	**22-229**	Client: **Snider Interests**	Date: **9/16/22**
Drill Method:	**8" Hollow Stem Auger**	Driving Weight: **140 lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ALLUVIUM** Sand w/ Silt (Sp-Sm): Grey, dry, loose, fine- to medium-grained sand, gravel up to 1/4" in diameter.		7 13 26	■	■	0.4		MAX,PH, RES ,CL, SO4, DSR
5		No recovery.		12 50/6"	■				
		No recovery.		35 50/4"	■				
10		With few angular fine to coarse grained gravel up to 1" in diameter.		22 50/5"	■		0.4		
15				20 20 30	■		0.4		MA
20		.		15 16 23	◪		0.4		
25				17 18 26	■		0.4		
30		No recovery.		12 17 17	◪				

PLATE A-5

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**NWC 19th Avenue and North Indian Canyon Drive**		Boring No.: **B-5**
Location:	**Indian Canyon and 19th Avenue**		Elevation: **±775'**
Job No.:	**22-229**	Client: **Snider Interests**	Date: **9/16/22**
Drill Method:	**8" Hollow Stem Auger**	Driving Weight: **140 lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
35				20 50/6"	■		0.5		
40				15 22 27	◪				
45				11 24 50/5"	■		0.6		
50		Sand (SP): Gray, dry, dense, fine- to medium-grained, trace coarse grained, gravel up to 1/2"n diameter angular.		20 27 29	◪				
55				12 50/5"	■		1.0		
60				17 20 21	◪				
65				32 50/5"	■		0.7		
		Total Depth - 66.0 No groundwater encountered Boring backfilled with cuttings.							

PLATE A-6

Petra Geosciences, Inc.

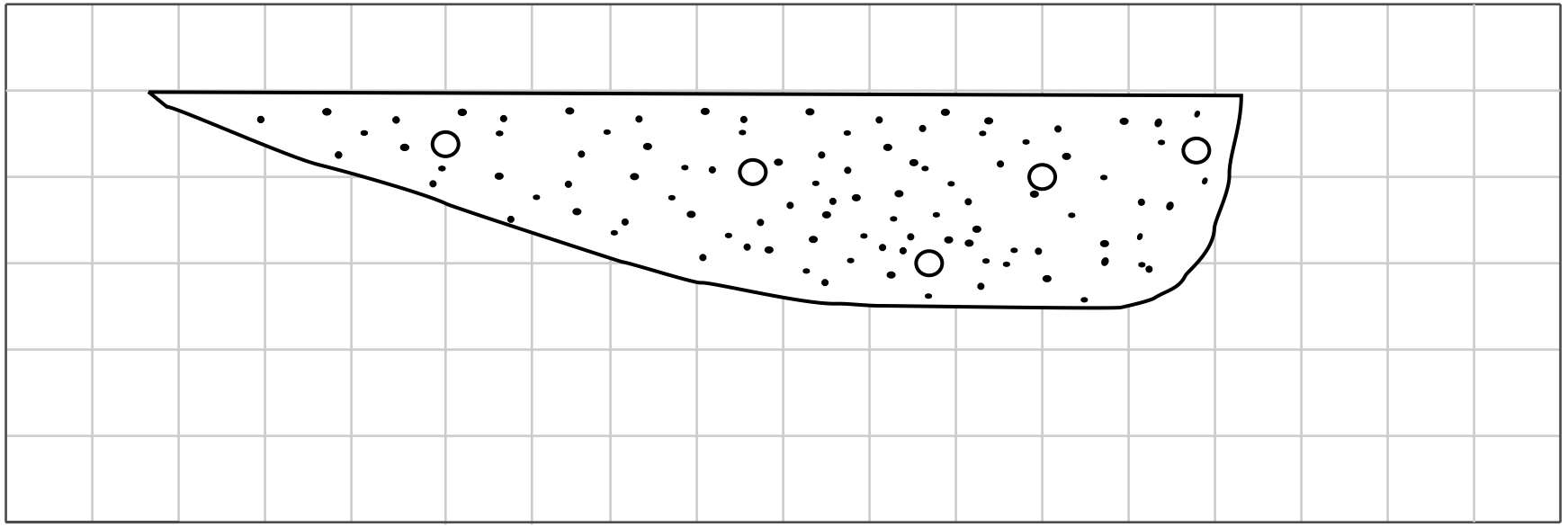
Logged By: KTM | Elevation: 773' | Project: NWC 19th & Indian | Equipment: Backhoe | **Trench No.**: T-1

J.N.: 22-229 | Date: 1/31/23 | Client: Snider Interests | Location: NWC or 19th Ave. & N. Indian Cyn Dr., DHS

Geologic Attitudes	GEOLOGIC DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
	ALLUVIUM (Qal) Sand (SP): Grayish-brown, dry, medium dense, fine- to coarse-grained sand, few gravel up to 2" in diameter= 5%.			
	@1': Becomes moist, Nuke and Ring test taken, No recovery on Cal Mod Ring Test.	2.2	106.3	
	@2.5': Becomes fine-grained sand.	4.9	109.1	
	@3': Nuke and Ring Test Taken, No recovery on Cal Mod Ring Test.			
	@4': Becomes fine- to coarse-grained, dry.	6.2	104.9	
	@5': Nuke and Ring test taken, No recovery on Cal Mod Ring Test.			
	Total Depth= 5' No groundwater encountered Trench backfilled with cuttings and rolled.			

GRAPHIC LOG

Scale: 1"=4' Surface Slope: 0 Trend: E-W



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GEOTECHNICAL TRENCH LOG

PETRA GEOSCIENCES INC.

Plate A-7

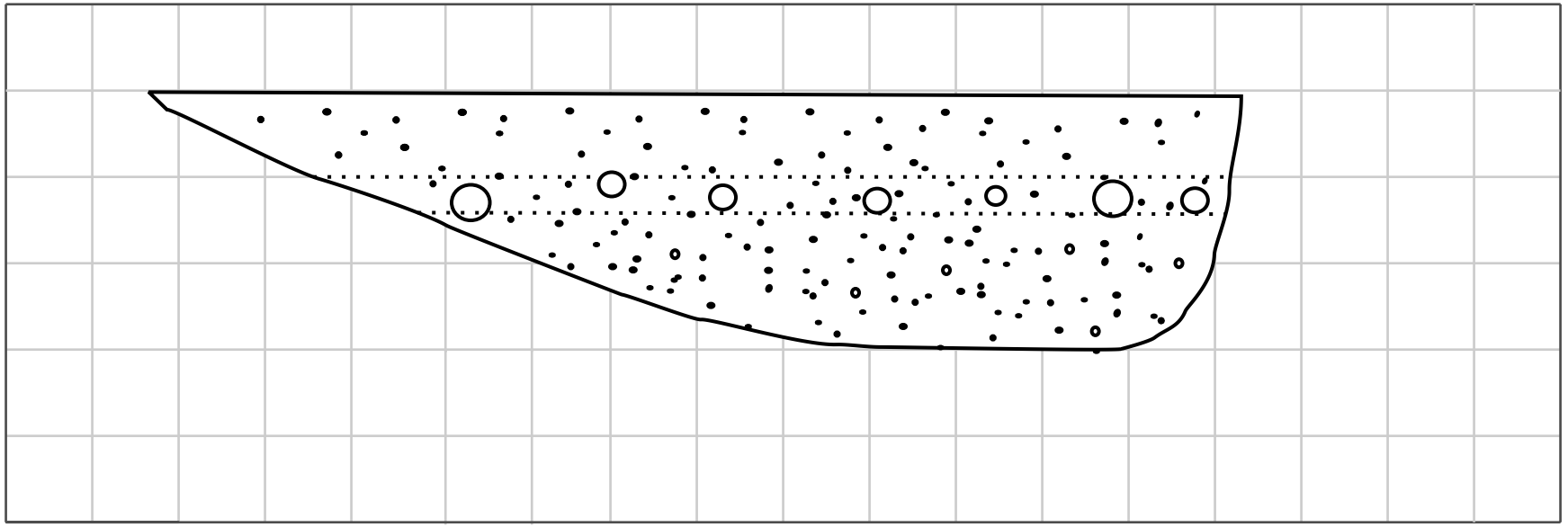
Logged By: KTM | Elevation: 785’ | Project: NWC 19th & Indian | Equipment: Backhoe | **Trench No.**: T-2

J.N.: 22-229 | Date: 1/31/23 | Client: Snider Interests | Location: NWC or 19th Ave. & N. Indian Cyn Dr., DHS

Geologic Attitudes	GEOLOGIC DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
	ALLUVIUM (Qal) Sand (SP): Gray, slightly moist, medium dense, fine- to medium-dense. @2': Becomes dry, Nuke & Ring Test Taken, No recovery on Cal Mod Ring Test.	3.1	118.0	
	Sand with Cobbles (GP-SP): Gray, dry, loose, fine- to coarse-grained sand, many cobbles up to 12" in diameter= 25%.	4.3	104.2	
	Sand (SP): Gray, dry, medium dense, fine- to coarse-grained sand, few rounded gravel up to 1" in diameter = 5-10%. @4': Nuke and ring test taken, No recovery on Cal Mod Ring Test. @6': Nuke test taken.	6.3	100.4	
	Total Depth= 6' No groundwater encountered Trench backfilled with cuttings and rolled.			

GRAPHIC LOG

Scale: 1”=4’ Surface Slope: 0 Trend: N45W



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GEOTECHNICAL TRENCH LOG

PETRA GEOSCIENCES INC.

Plate A-8

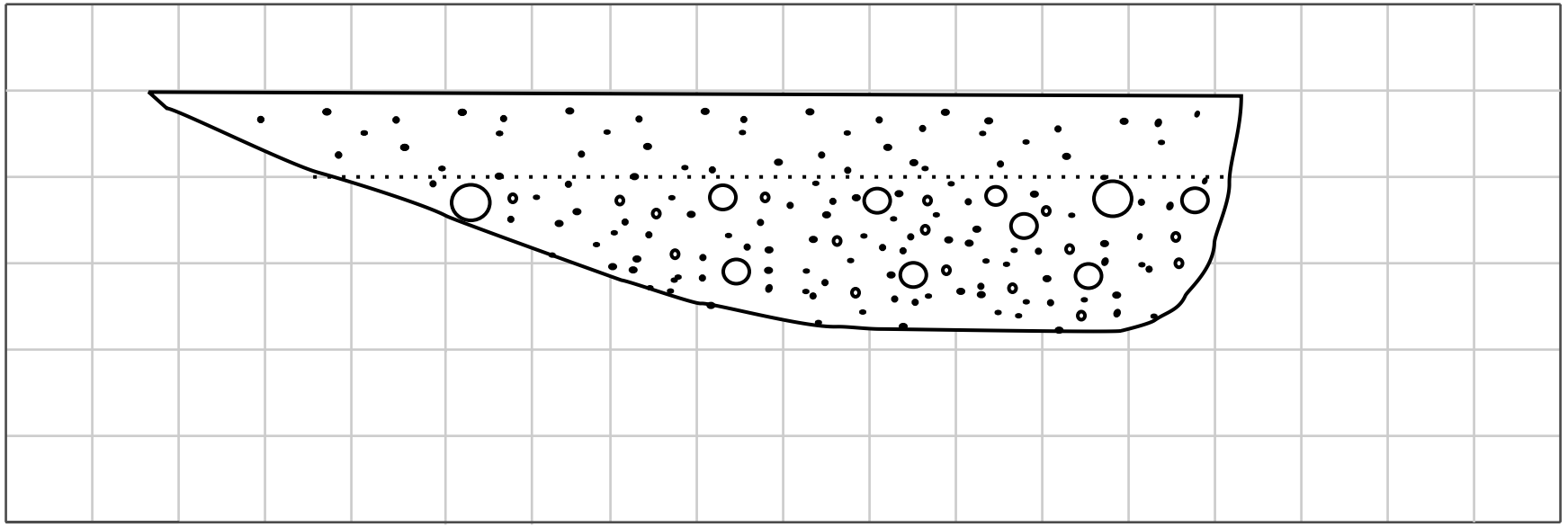
Logged By: KTM | Elevation: 769’ | Project: NWC 19th & Indian | Equipment: Backhoe | **Trench No.**: T-3

J.N.: 22-229 | Date: 1/31/23 | Client: Snider Interests | Location: NWC or 19th Ave. & N. Indian Cyn Dr., DHS

Geologic Attitudes	GEOLOGIC DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
	ALLUVIUM (Qal) Sand (SP): Grayish-brown, slightly moist, medium dense, fine-grained sand, trace coarse-grained sand, trace roots. @1': Nuke and Ring test taken. Sandy Gravel (GP/SP): Gray, dry, medium dense, medium- to coarse-grained sand, abundant gravel= 50%, and abundant cobbles up to 18" in diameter= 10%, trace roots. @3': Nuke test take, too rocky to take ring sample. @5': Nuke test taken, too rocky to take ring sample. Total Depth= 5.5' No groundwater encountered Trench backfilled with cuttings and rolled.	3.6 4.7 4.0	106.4 109.3 108.8	

GRAPHIC LOG

Scale: 1”=4’ Surface Slope: 0 Trend: N45E



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GEOTECHNICAL TRENCH LOG

PETRA GEOSCIENCES INC.

Plate A-9

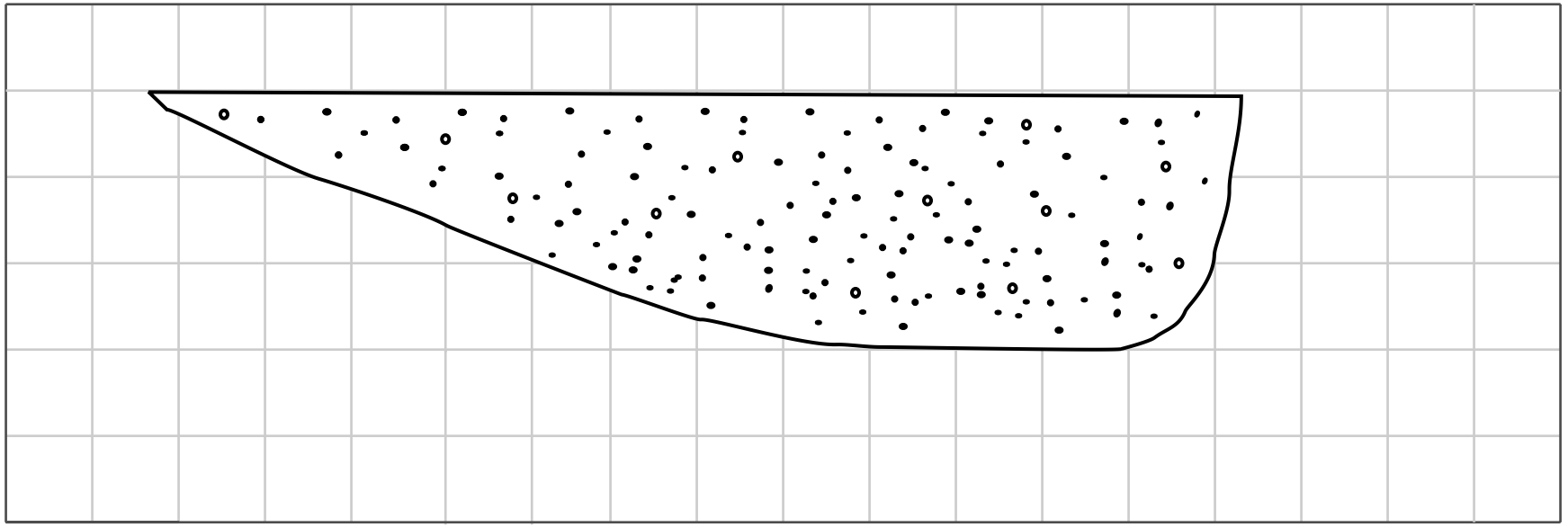
Logged By: KTM | Elevation: 787’ | Project: NWC 19th & Indian | Equipment: Backhoe | **Trench No.**: T-4

J.N.: 22-229 | Date: 1/31/23 | Client: Snider Interests | Location: NWC or 19th Ave. & N. Indian Cyn Dr., DHS

Geologic Attitudes	GEOLOGIC DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
	ALLUVIUM (Qal) Sand (SP): Gray, dry, loose, fine- to coarse-grained sand, trace rounded to angular gravel up to 2. 5"= 2%.			
	@2' Same as above with abundant gravel= 20%, trace cobbles up to 12"= 2%, Nuke and Ring test taken.	3.6	102.7	
	@4': Nuke and Ring test taken.	4.1	101.3	
	@6': Nuke and Ring test taken, No recovery on Cal Mod Ring Test..	5.3	106.9	
	Total Depth= 6' No groundwater encountered Trench backfilled with cuttings and rolled.			

GRAPHIC LOG

Scale: 1”=4’ Surface Slope: 0 Trend: E-W



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GEOTECHNICAL TRENCH LOG

PETRA GEOSCIENCES INC.

Plate A-10

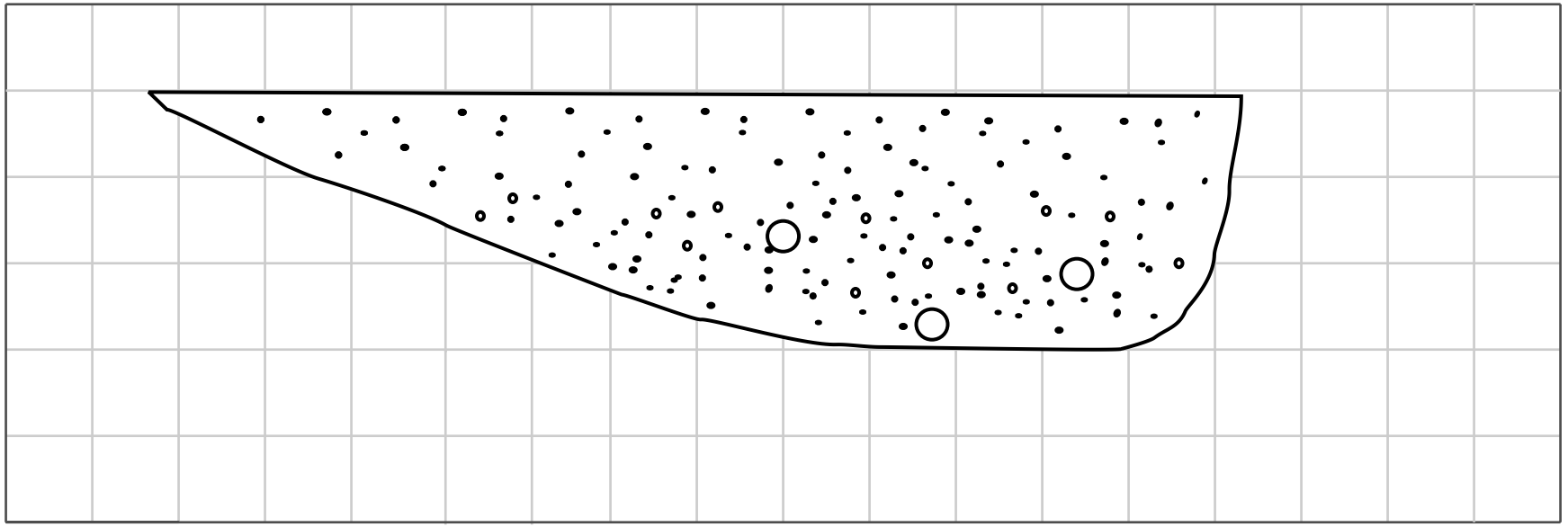
Logged By: KTM | Elevation: 786’ | Project: NWC 19th & Indian | Equipment: Backhoe | **Trench No.**: T-5

J.N.: 22-229 | Date: 1/31/23 | Client: Snider Interests | Location: NWC or 19th Ave. & N. Indian Cyn Dr., DHS

Geologic Attitudes	GEOLOGIC DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
	ALLUVIUM (Qal) Sand (SP): Gray, dry, medium dense, fine-grained sand, with trace mediumgrained sand. @1': Nuke and Ring Test taken.	2.9	100.5	
	@2': Becomes fine- to coarse-grained with abundant rounded gravel up to 2" in diameter= 35%. @3': Nuke and Ring Test taken, No recovery on Cal Mod Ring Test.	3.1	99.3	
	Sand (SP): Gray, dry, medium dense, fine- to medium-grained, trace gravel & cobbles up to 12" in diameter= 5%. @5':Nuke and Ring Test taken.	7.1	99.2	
	Total Depth= 6' No groundwater encountered Trench backfilled with cuttings and rolled.			

GRAPHIC LOG

Scale: 1”=4’ Surface Slope: 0 Trend: N45E



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GEOTECHNICAL TRENCH LOG

PETRA GEOSCIENCES INC.

Plate A-11

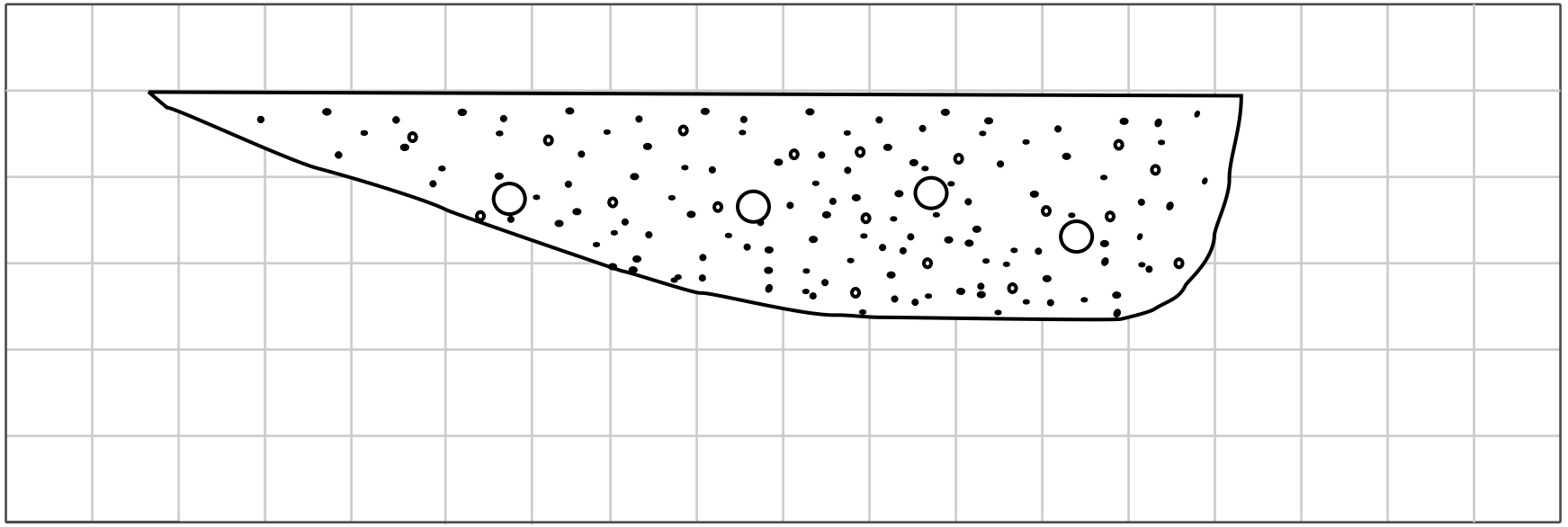
Logged By: KTM | Elevation: 771’ | Project: NWC 19th & Indian | Equipment: Backhoe | **Trench No.**: T-6

J.N.: 22-229 | Date: 1/31/23 | Client: Snider Interests | Location: NWC or 19th Ave. & N. Indian Cyn Dr., DHS

Geologic Attitudes	GEOLOGIC DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
	ALLUVIUM (Qal) Sand (SP): Gray, dry, loose, fine- to medium-grained, trace boulders up to 24" in diameter= 15%.			
	Sand (SP): Gray, dry, medium-dense, fine- to coarse-grained, trace rounded cobbles up to 12" in diameter= 5-10%, Nuke and Ring Test taken, No recovery with Cal Mod Ring Test.	4.7	95.9	
	@4': No cobbles, Nuke and Ring Test taken.	5.1	97.4	
	Total Depth= 5.5' No groundwater encountered Trench backfilled with cuttings and rolled.			

GRAPHIC LOG

Scale: 1”=4’ Surface Slope: 0 Trend: EW



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GEOTECHNICAL TRENCH LOG

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Plate A-12

APPENDIX B

LABORATORY TEST PROCEDURES

LABORATORY DATA SUMMARY

LABORATORY TESTING

Associated with the subsurface exploration was the collection of bulk and relatively undisturbed samples of soil materials for laboratory testing. The relatively undisturbed samples were obtained using a 2.4-inch, outside-diameter, modified California split-spoon soil sampler lined with 1-inch-high stainless-steel rings. The driven ring samples were placed in sealed containers and transported to our laboratory located at 1251 W. Pomona Road, Unit #103, Corona, CA 92882, for testing.

Our laboratory testing capabilities include Soil Classifications, Moisture Content and In-Situ Moisture Content and Dry Unit Weight, Grain Size Distribution, Direct Shear, Consolidation; all in accordance with the latest procedures of American Society for Testing and Materials (ASTM) and California Department of Transportation (Caltrans).

To evaluate the engineering properties of site soils, laboratory testing was performed on selected samples of soil considered representative of those encountered. Appropriate tests were assigned by the project engineer and geologist based on project plans and specifications including the level of anticipated loads, when available, and subsurface stratigraphy. Test results were reviewed by the laboratory manager and engineer-in-charge of the laboratory or his qualified designee for completeness and accuracy. A description of laboratory test procedures and summaries of the test data are presented in the following pages.

LABORATORY TEST PROCEDURES

Soil Classification

Soil materials encountered within the property were classified and described in accordance with the Unified Soil Classification System and in general accordance with the current version of Test Method ASTM D 2488. The assigned group symbols are presented in the exploration logs, Appendix A.

Moisture Content and In Situ Moisture Content and Dry Unit Weight

Moisture content of selected bulk samples and in- place moisture content and dry unit weight of selected, relatively undisturbed soil samples were determined in accordance with the current version of Test Method ASTM D 2435 and Test Method ASTM D 2216, respectively. Test data are presented in the exploration logs, Appendix A.

Laboratory Maximum Dry Unit Weight and Optimum Moisture Content

The maximum dry unit weight and optimum moisture content of the on-site soils were determined for selected bulk samples in accordance with current version of Method A of ASTM D 1557. The result of this test is presented on Plates B-1 and B-2.

Corrosivity Screening

Chemical and electrical analyses were performed on selected bulk samples of onsite soils to determine their soluble sulfate content, chloride content, pH (acidity) and minimum electrical resistivity. These tests were performed in accordance with the current versions of California Test Method Nos. CTM 417 (sulfate), CTM 422 (chloride), and CTM 643 (pH and resistivity) respectively. The results of these tests are included on Plate B-1.

Grain Size Distribution

Grain size analysis was performed on selected bulk samples of onsite soils in accordance with the latest versions of Test Method ASTM D 136 and/or ASTM C 117, or Test Method ASTM D 422 and/or ASTM D 6913. The test result is graphically presented on Plates B-3 and B-4.

Direct Shear

The Coulomb shear strength parameters, i.e., angle of internal friction and cohesion, were determined for selected reconstituted-bulk samples of onsite soil. This test was performed in general accordance with the current version of Test Method ASTM D 3080. Three specimens were prepared for each test. The test specimens were inundated and then sheared under various normal loads at a constant strain rate of 0.005 inch per minute. The results of the direct shear test are graphically presented on Plate B-5.

Consolidation

Volume change (settlement or heave) characteristics of select undisturbed soils were determined by one-dimensional consolidation tests. These tests were performed in general accordance with the current version of the Test Method ASTM D 2435. Additionally heave or hydro-consolidation tests were performed in general accordance with the current version of Test Method ASTM D 4546, or ASTM D 5333 respectively. Axial loads were applied in several increments to laterally restrained 1-inch-high samples. The resulting deformations were recorded at selected time intervals. The test samples were inundated at the approximate in-situ and/or anticipated design overburden pressure in order to evaluate the effect of an increase in moisture content, e.g., hydro-consolidation potential or heave. Results of these tests are graphically presented on Plates B-6.

LABORATORY DATA SUMMARY									
Boring/ Test Pit/ Sample/ Number	Sample Depth (ft.)	Soil/ Bedrock Description[1]	Compaction[2]		Corrosivity Screening				Percent Passing No. 200 Sieve[6]
			Maximum Dry Unit Weight (pcf)	Optimum Moisture (%)	Soluble Sulfate Content[3] (%)	Chloride Content[4] (ppm)	pH[5] (Acidity)	Minimum Resistivity[5] (Ohm-cm)	
B-2	5	SP/SM	-	-	-	-	-	-	4.9
B-5	0 -5	SP/SM	124.0	6.0	0.003	255	8.68	13,000	-
B-5	15	SP/SM	-	-	-	-	-	-	6.6

Test Procedures:

[1] Per Test Method ASTM D 2488

[2] Per Test Method ASTM D 1557

[3] Per California Test Method CTM 417

[4] Per California Test Method CTM 422

[5] Per California Test Method CTM 643

[6] Per Test Method ASTM C 117

COMPACTION TEST REPORT

Project No.: 22-229 **Date:** 9/19/22

Project: phase 110

Client: Snider Interests

Source of Sample: 22L301 **Depth:** 0-5

Sample Number: B-5

Remarks:

MATERIAL DESCRIPTION

Description: Light Grayish Brown Fine to Coarse Grained Sand

Classifications - **USCS:** **AASHTO:**

Nat. Moist. = **Sp.G. =**

Liquid Limit = **Plasticity Index =**

% < No.200 =

TEST RESULTS
Maximum dry density = 124.0 pcf
Optimum moisture = 6.0 %

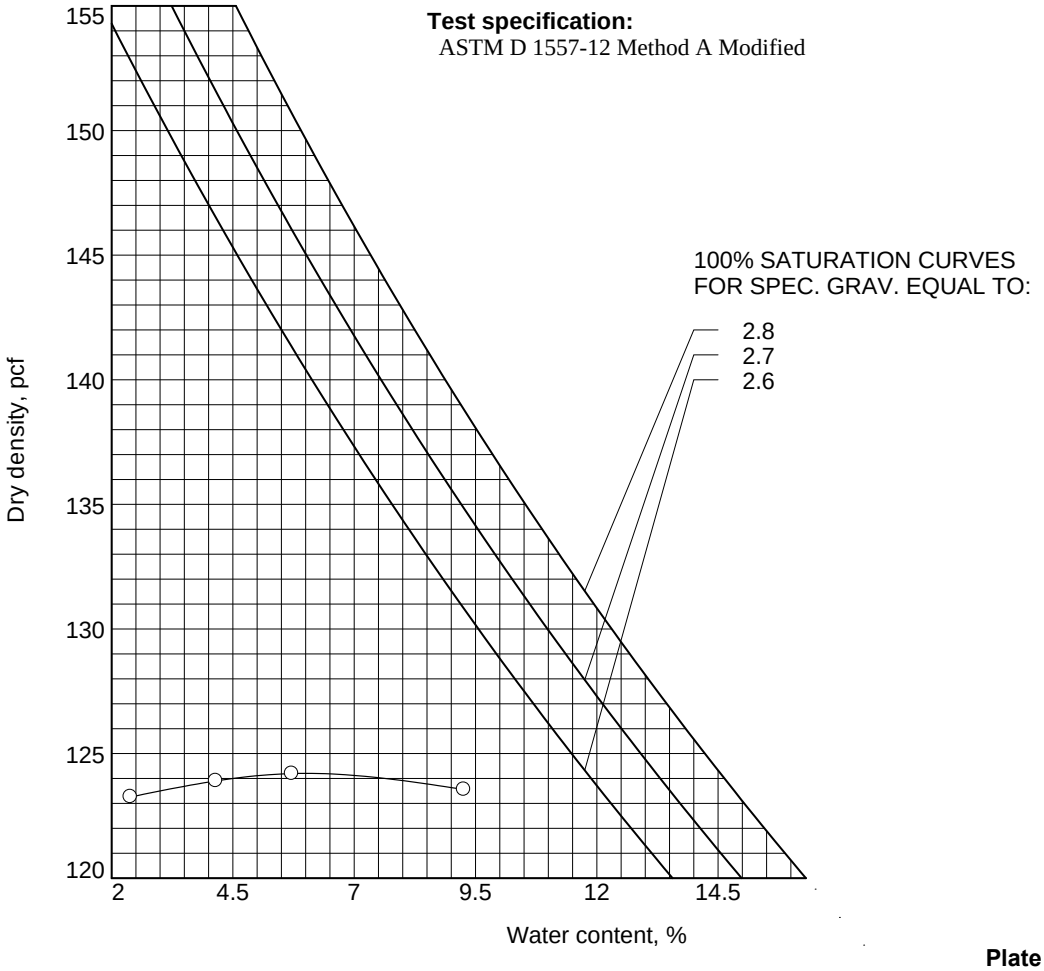

Plate B-2

Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #. 714.549.8921

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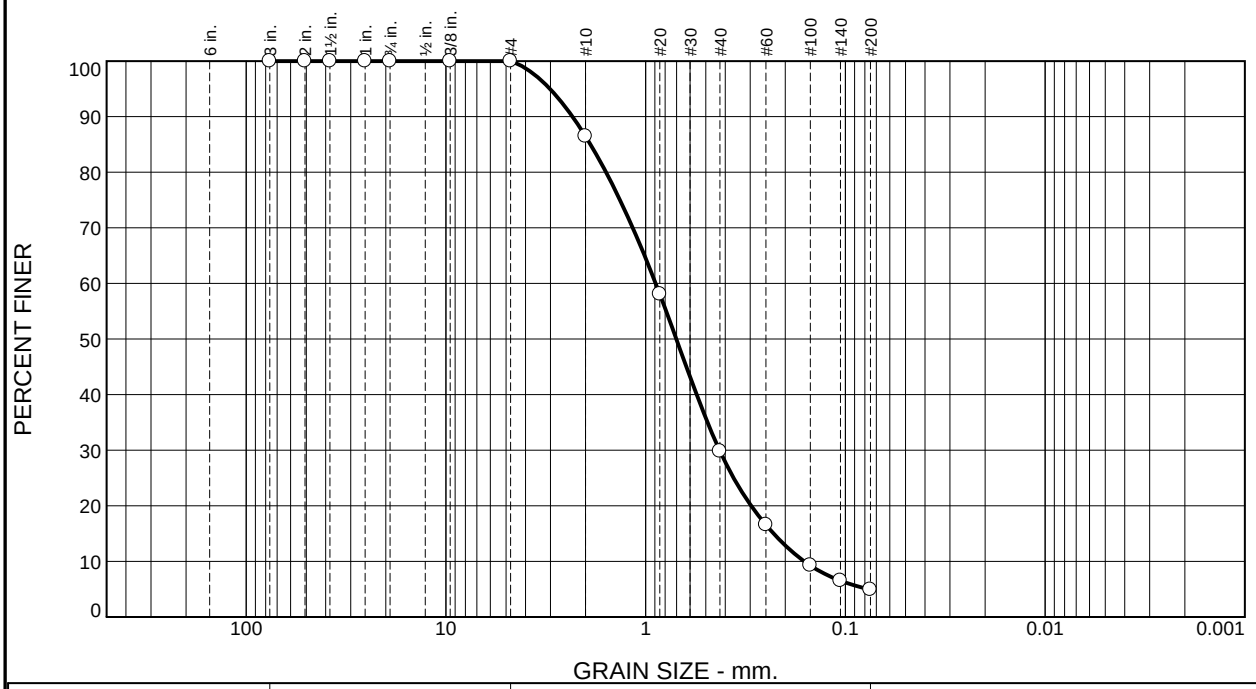
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	13.6	56.6	24.9	4.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100.0		
2	100.0		
1.5	100.0		
1	100.0		
.75	100.0		
.375	100.0		
#4	100.0		
#10	86.4		
#20	58.1		
#40	29.8		
#60	16.6		
#100	9.3		
#140	6.5		
#200	4.9		

* (no specification provided)

Material Description

Light Grayish Brown Fine to Coarse Grained Sand with trace Silt

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 2.3253 D_{85}= 1.8899 D_{60}= 0.8915
D_{50}= 0.7028 D_{30}= 0.4273 D_{15}= 0.2290
D_{10}= 0.1606 C_u= 5.55 C_c= 1.27

Remarks

Date Received: _____ **Date Tested:** _____

Tested By: _____

Checked By: _____

Title: _____

Source of Sample: 22L301 **Depth:** 5 **Date Sampled:**
Sample Number: B-2

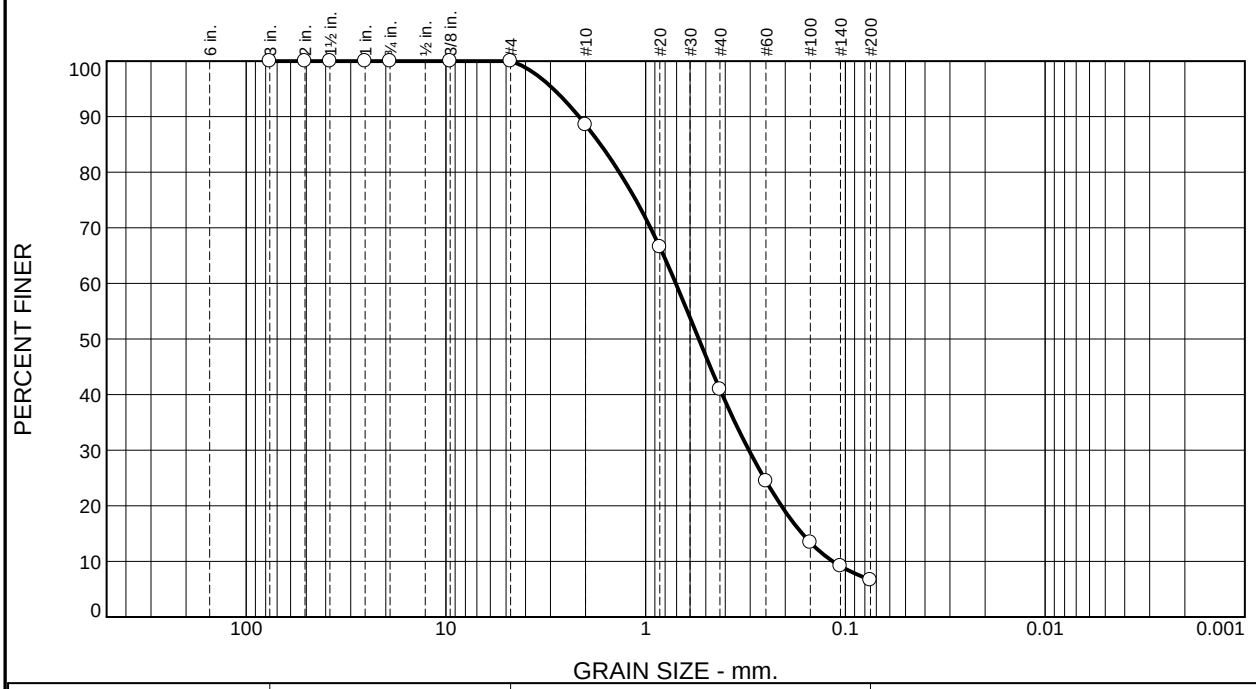
Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #: 714.549.8921

PETRA GEOSCIENCES INC.

Client: Snider Interests
Project: phase 110

Project No: 22-229 **Plate B-3**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	11.5	47.6	34.3	6.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100.0		
2	100.0		
1.5	100.0		
1	100.0		
.75	100.0		
.375	100.0		
#4	100.0		
#10	88.5		
#20	66.5		
#40	40.9		
#60	24.4		
#100	13.4		
#140	9.2		
#200	6.6		

* (no specification provided)

Material Description

Light Grayish Brown Fine to Coarse Grained Sand with some Silt

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 2.1581 D_{85}= 1.6837 D_{60}= 0.7068
D_{50}= 0.5425 D_{30}= 0.3044 D_{15}= 0.1647
D_{10}= 0.1156 C_u= 6.11 C_c= 1.13

Remarks

Date Received: _____ **Date Tested:** _____

Tested By: _____

Checked By: _____

Title: _____

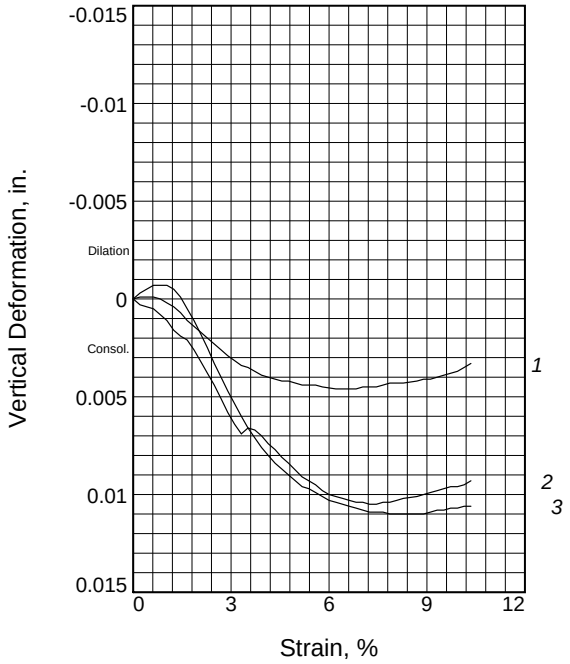
Source of Sample: 22L301 **Depth:** 15 **Date Sampled:**
Sample Number: B-5

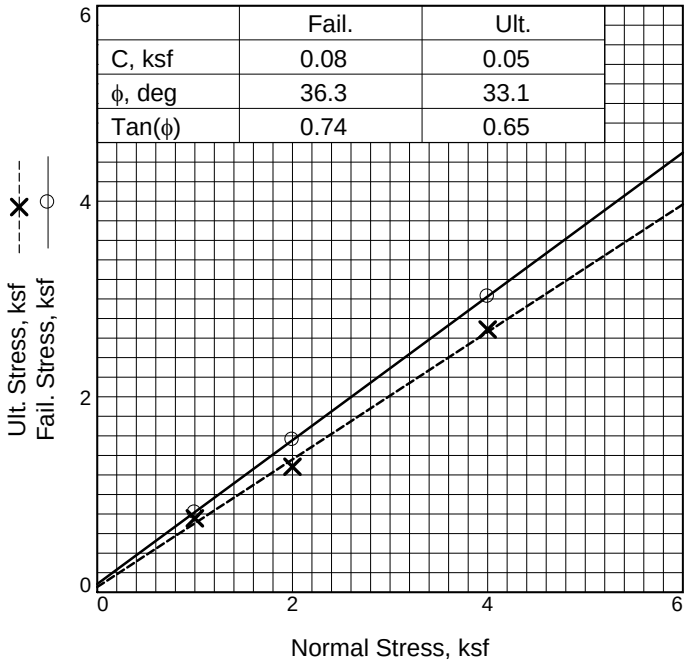
Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #: 714.549.8921

PETRA GEOSCIENCES INC.

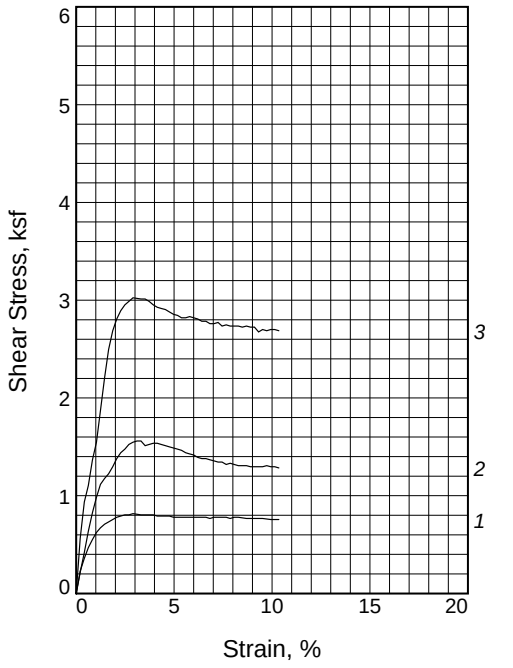
Client: Snider Interests
Project: phase 110

Project No: 22-229 **Plate B-4**





	Fail.	Ult.
C, ksf	0.08	0.05
ϕ, deg	36.3	33.1
Tan(ϕ)	0.74	0.65



Sample No.		1	2	3
Initial	Water Content, %	1.8	1.8	3.1
	Dry Density, pcf	110.0	113.5	114.8
	Saturation, %	9.5	10.5	18.6
	Void Ratio	0.5041	0.4581	0.4417
	Diameter, in.	2.42	2.42	2.42
	Height, in.	1.05	1.03	1.01
At Test	Water Content, %	18.9	17.2	16.6
	Dry Density, pcf	110.0	113.5	114.8
	Saturation, %	99.6	99.4	99.3
	Void Ratio	0.5041	0.4581	0.4417
	Diameter, in.	2.42	2.42	2.42
	Height, in.	1.05	1.03	1.01
Normal Stress, ksf		1.00	2.00	4.00
Fail. Stress, ksf		0.82	1.56	3.02
Strain, %		2.9	3.1	2.9
Ult. Stress, ksf		0.76	1.28	2.69
Strain, %		10.3	10.3	10.3
Strain rate, in./min.		0.005	0.005	0.005

Sample Type:

Description: Light Grayish Brown Fine to Coarse Grained Sand

Specific Gravity= 2.65

Remarks:

Client: Snider Interests

Project: phase 110

Source of Sample: 22L301 **Depth:** 0-5

Sample Number: B-5

Proj. No.: 22-229 **Date Sampled:**

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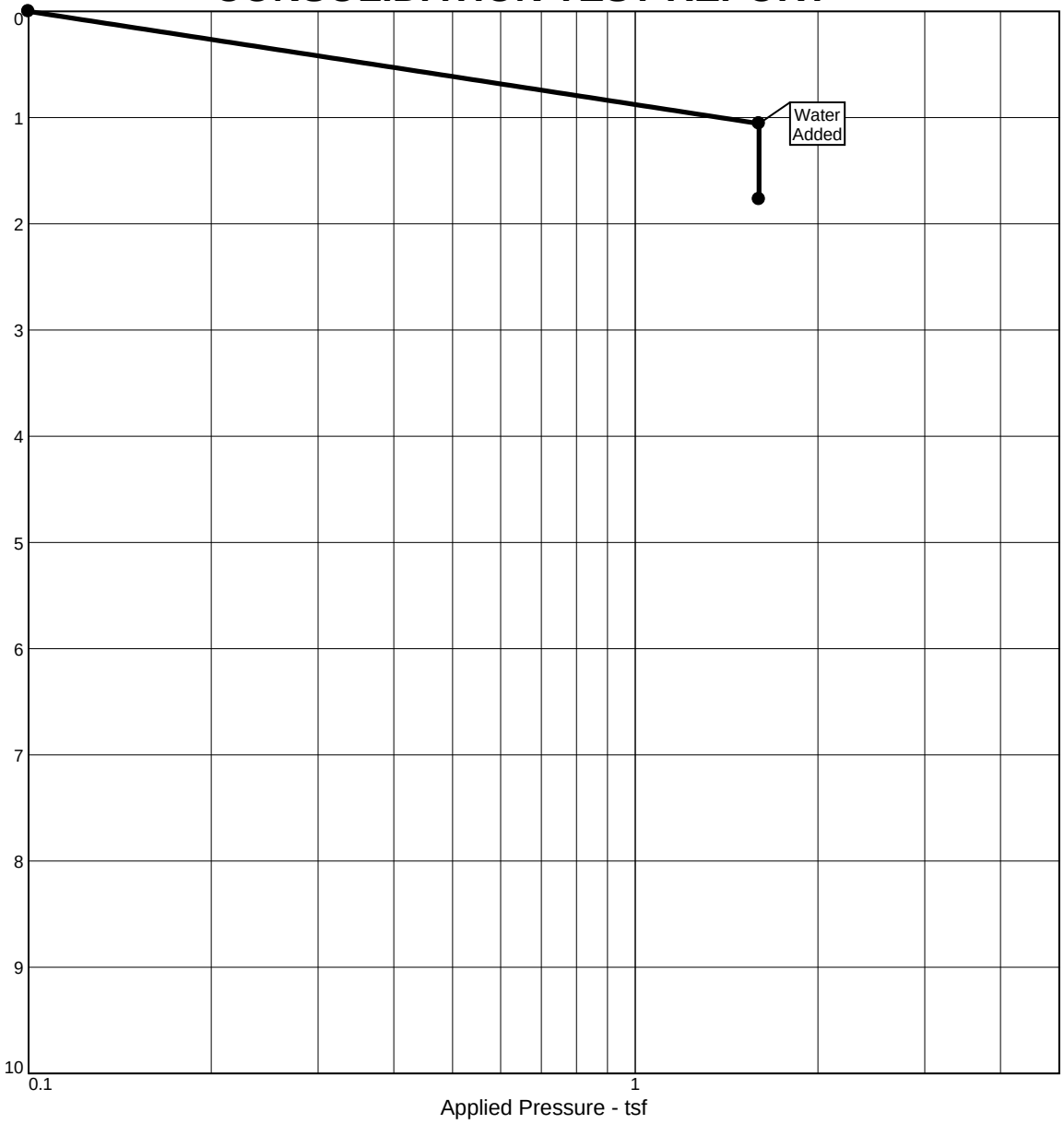
Plate B-5

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Initial Void Ratio
Saturation	Moisture									
4.5 %	1.1 %	110.4			2.75					0.653

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 22-229 **Client:** Snider Interests

Project: phase 110

Source of Sample: 22L301 **Depth:** 10 **Sample Number:** B-1

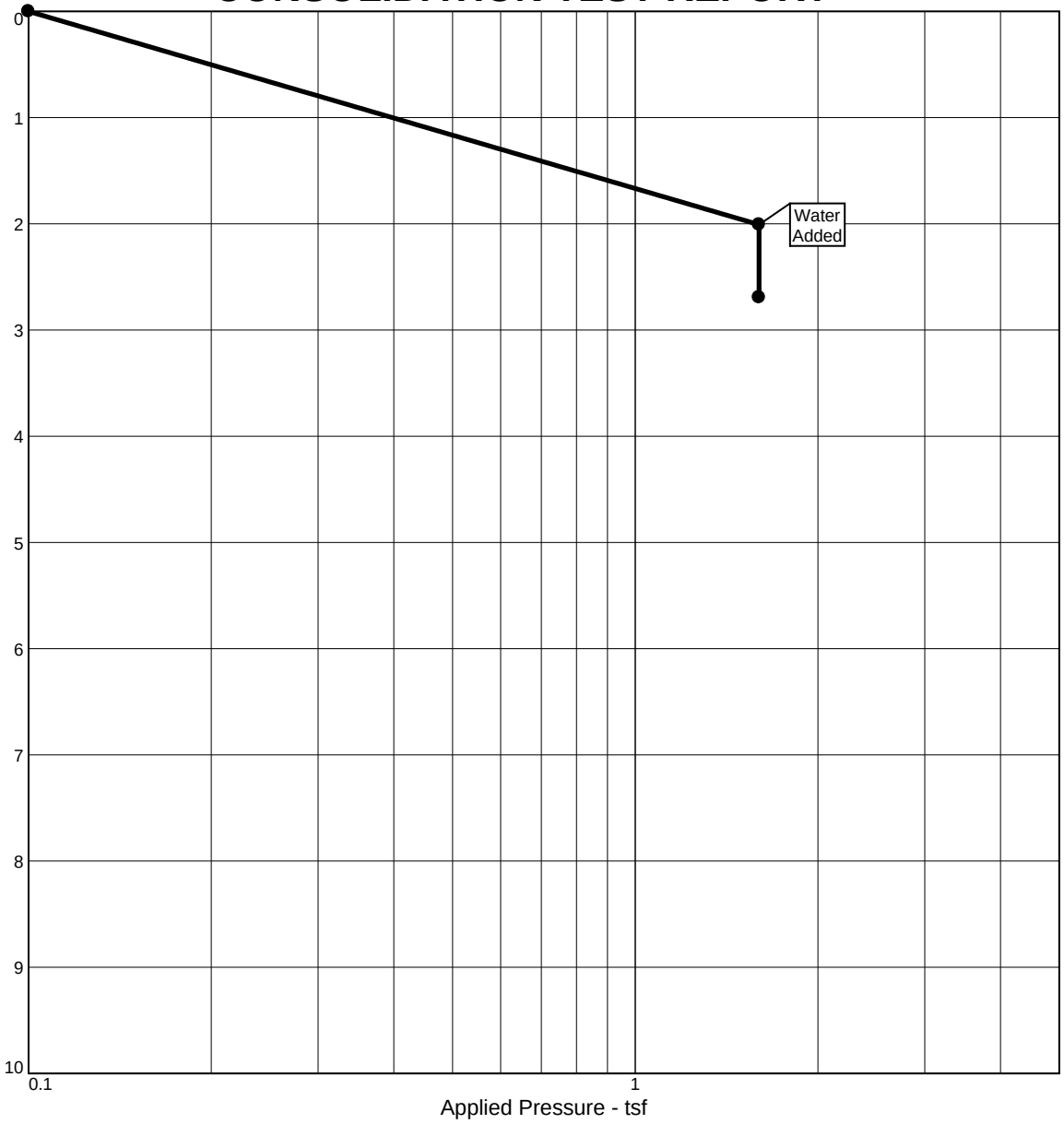
Remarks:

PETRA GEOSCIENCES INC.

Plate B-6

Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #. 714.549.8921

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Initial Void Ratio
Saturation	Moisture									
1.2 %	0.3 %	100.8			2.65	0.2022				0.641

MATERIAL DESCRIPTION	USCS	AASHTO
Gray brown fine to coarse Sand with Silt		

Project No. 22-229 **Client:** Snider Interests

Project: phase 110

Source of Sample: 22L301 **Depth:** 2 **Sample Number:** T-4

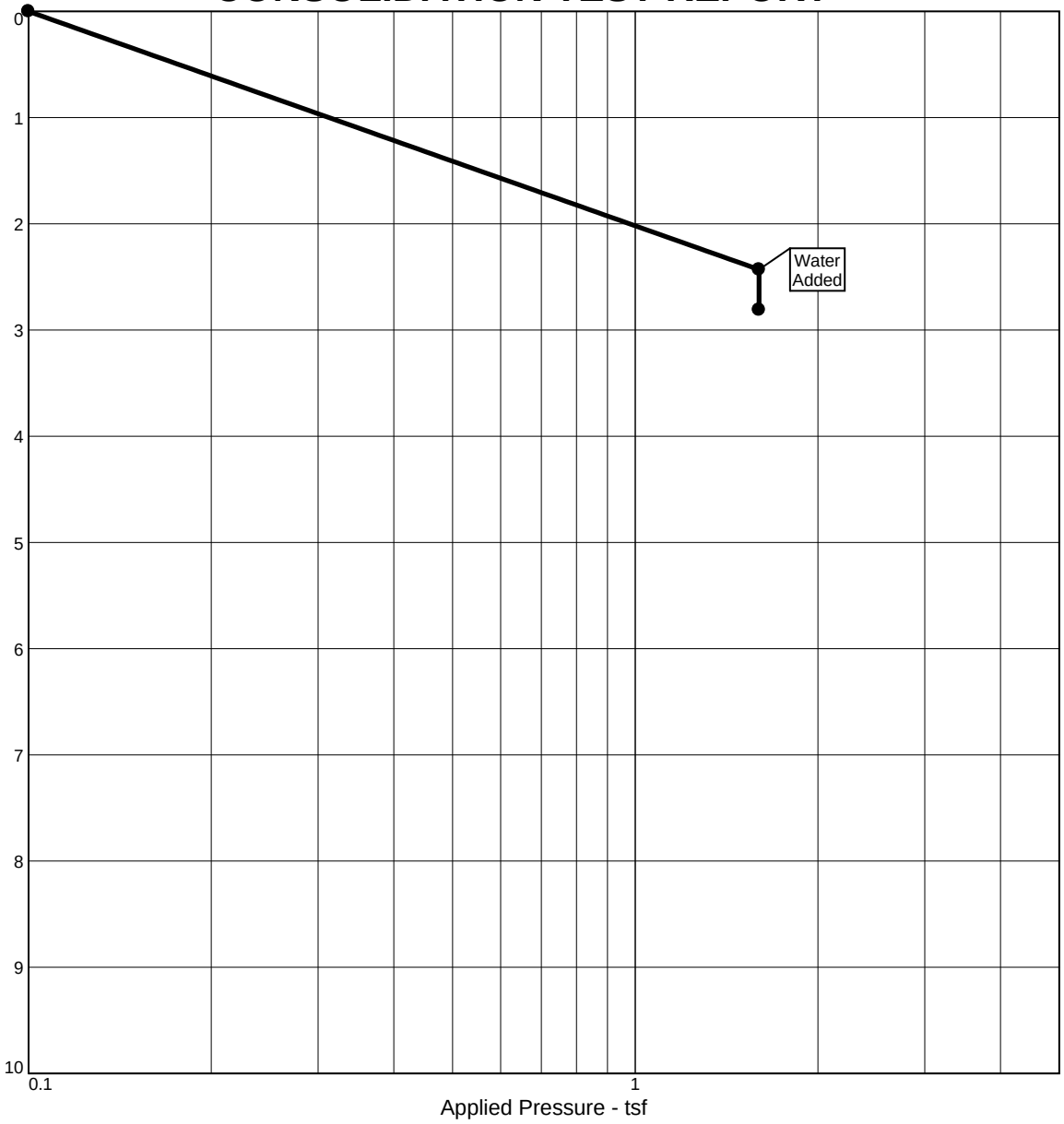
Remarks:

PETRA GEOSCIENCES INC.

Plate B-7

Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #. 714.549.8921

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Initial Void Ratio
Saturation	Moisture									
1.2 %	0.3 %	101.7			2.65	0.102				0.627

MATERIAL DESCRIPTION	USCS	AASHTO
Gray brown fine to coarse Sand with Silt		

Project No. 22-229 **Client:** Snider Interests

Project: phase 110

Source of Sample: 22L301 **Depth:** 1 **Sample Number:** T-5

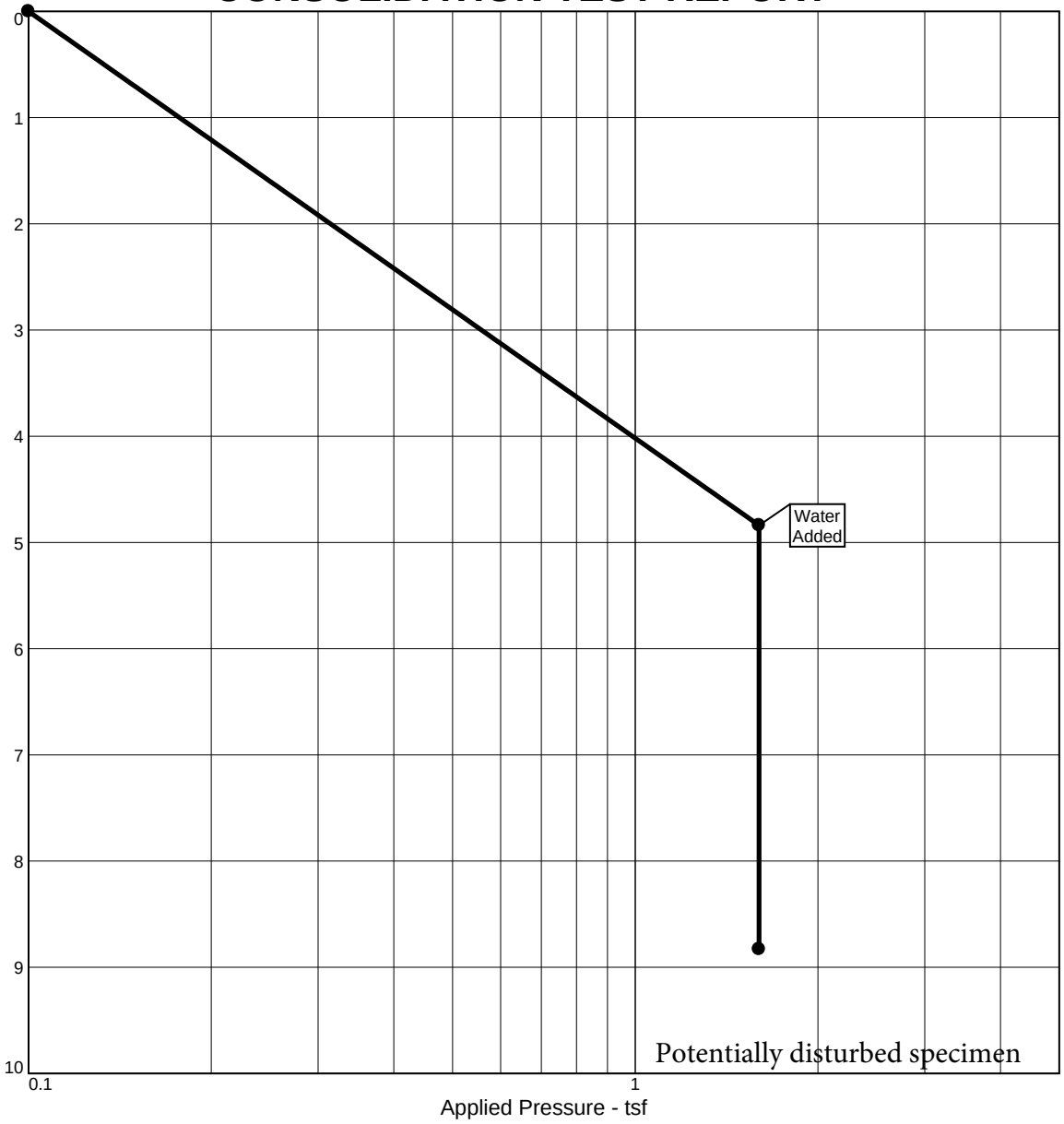
Remarks:

PETRA GEOSCIENCES INC.

Plate B-8

Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #. 714.549.8921

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Initial Void Ratio
Saturation	Moisture									
1.4 %	0.5 %	98.8			2.65	0.993				0.964

MATERIAL DESCRIPTION	USCS	AASHTO
Light Grayish Brown Fine to Coarse Grained Sand with some Silt		

Project No. 22-229 **Client:** Snider Interests

Project: phase 110

Source of Sample: 22L301 **Depth:** 11 **Sample Number:** B-1

Remarks:

PETRA GEOSCIENCES INC.

Plate B-9

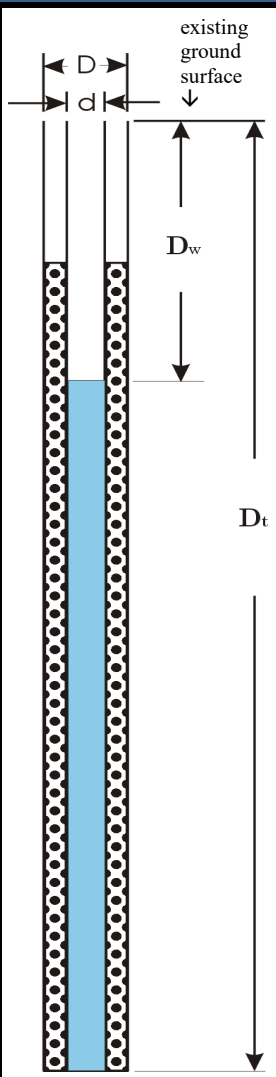
Laboratory:
1251 West Pomona Road, Unit #103, Corona, Ca 92882 Phone #. 714.549.8921

APPENDIX C

PERCOLATION TEST RESULTS

Boring/Test Number: B-2

Total Depth of Boring, D_T (ft):	14.9	**Test Date:**	9/16/2022
Diameter of Hole, D (in):	8	**Tested By:**	KTM
Diameter of Casing, d (in):	3	**USCS Soil Type:**	SM
Depth of Slotted Casing (ft):	0 to 14.9	**Depth to Groundwater (ft):**	?
Porosity of Annulus Material, *n* :	0.38	**Ground Elevation (msl ft):**	770
Depth from Existing Ground Surface to Bottom of Prop. Inflitration System (ft):			?



SANDY SOIL CRITERIA TEST

Trial No.	Time Interval Δt (min.)	Depth to Water, D_w		Change in Water Level ΔD (in.)	Change in Height of Water Greater Than or Equal to 6"? (Yes/No)*
		Initial, D_o (ft.)	Final, D_f (ft.)		
1	25	10	14.4	52.8	yes
2	25	11	14.9	46.8	yes
Standard Time Interval Between Readings (min.), [* if yes = 10, if no = 30]:					

PERCOLATION TEST

Trial No.	Time Interval Δt (min.)	Depth to Water, D_w		Change in Water Level ΔH (in.)	Percolation Rate	
		Initial, D_o (ft.)	Final, D_f (ft.)		(min/in.)	(gal/day/ft^2)
1	10	13.50	14.90	16.80	0.60	135.52
2	10	13.40	14.90	18.00	0.56	137.28
3	10	13.20	14.90	20.40	0.49	140.28
4	10	13.00	14.80	21.60	0.46	129.44
5	10	13.10	14.90	21.60	0.46	141.57
6	10	13.00	14.80	21.60	0.46	129.44

TEST RESULTS**

Inflitration Rate [Porchet Method]# (inches/hour)	Percolation Rate	
	(min/in.)	(gal/day/ft^2)
11.34	**0.46**	**129.44**

**Raw Results. Does Not Include a Factor of Safety

FACTOR OF SAFETY WORKSHEET

Factor Category[Φ]		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = (w) x (v)
A	Suitability Assessment	Soil Assessment Methods	0.25	1	0.25
		Predominant Soil Texture	0.25	1	0.25
		Site Soil Variability	0.25	1	0.25
		Depth to Groundwater / Impervious Layer	0.25	1	0.25
		Suitability Assessment Safety Factor, S_A = Σp			**1**

[Φ] Factor Category B Should Be Provided and Calculated by Project Civil Engineer

[#] Where Infiltration Rate, It = ΔH (60r) / Δt (r + 2Havg)

$r = D / 2$

$Ho = D_T - Do$

$H_f = D_T - D_f$

$\Delta H = \Delta D = H_o - H_f$

$H_{avg} = (H_o + H_f) / 2$

Reference:
RCFCWCD, Design Handbook for LID, dated June, 2014

PETRA GEOSCIENCES, INC.
3186 Airway Avenue, Suite K
Costa Mesa, California 92626
PHONE: (714) 549-8921
COSTA MESA TEMECULA LOS ANGELES PALM DESERT CORONA ESCONDIDO

PERCOLATION TEST SUMMARY

19th Avenue
North Palm Springs, California

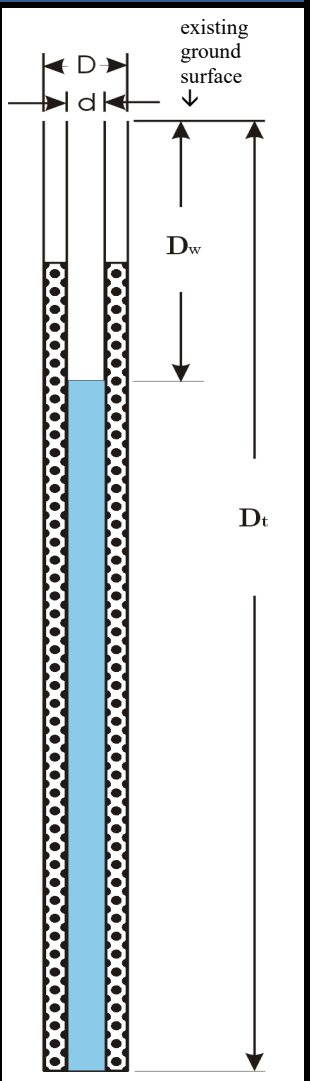
PETRA GEOSCIENCES

DATE: Nov., 2022
J.N.: 22-229

Figure C-1

Boring/Test Number: B-4

Total Depth of Boring, D_T (ft):	14.9	**Test Date:**	9/16/2022
Diameter of Hole, D (in):	8	**Tested By:**	KTM
Diameter of Casing, d (in):	3	**USCS Soil Type:**	SM
Depth of Slotted Casing (ft):	0 to 14.9	**Depth to Groundwater (ft):**	?
Porosity of Annulus Material, *n* :	0.38	**Ground Elevation (msl ft):**	768
Depth from Existing Ground Surface to Bottom of Prop. Inflitration System (ft):			?



SANDY SOIL CRITERIA TEST

Trial No.	Time Interval Δt (min.)	Depth to Water, D_w		Change in Water Level ΔD (in.)	Change in Height of Water Greater Than or Equal to 6"? (Yes/No)*
		Initial, D_o (ft.)	Final, D_f (ft.)		
1	25	13.9	14.9	12	yes
2	25	13.3	14.9	19.2	yes
Standard Time Interval Between Readings (min.), [* if yes = 10, if no = 30]:					

PERCOLATION TEST

Trial No.	Time Interval Δt (min.)	Depth to Water, D_w		Change in Water Level ΔH (in.)	Percolation Rate	
		Initial, D_o (ft.)	Final, D_f (ft.)		(min/in.)	(gal/day/ft^2)
1	10	14.00	14.90	10.80	0.93	122.44
2	10	13.50	14.90	16.80	0.60	135.52
3	10	13.00	14.90	22.80	0.44	142.75
4	10	12.80	14.80	24.00	0.42	132.47
5	10	12.70	14.70	24.00	0.42	122.77
6	10	12.60	14.60	24.00	0.42	114.40

TEST RESULTS**

Inflitration Rate [Porchet Method]# (inches/hour)	Percolation Rate	
	(min/in.)	(gal/day/ft^2)
10.02	**0.42**	**114.40**

**Raw Results. Does Not Include a Factor of Safety

FACTOR OF SAFETY WORKSHEET

Factor Category[Φ]		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = (w) x (v)
A	Suitability Assessment	Soil Assessment Methods	0.25	1	0.25
		Predominant Soil Texture	0.25	1	0.25
		Site Soil Variability	0.25	1	0.25
		Depth to Groundwater / Impervious Layer	0.25	1	0.25
		Suitability Assessment Safety Factor, S_A = Σp			**1**

[Φ] Factor Category B Should Be Provided and Calculated by Project Civil Engineer

[#] Where Infiltration Rate, It = ΔH (60r) / Δt (r + 2Havg)

$r = D / 2$

$Ho = D_T - Do$

$H_f = D_T - D_f$

$\Delta H = \Delta D = H_o - H_f$

$H_{avg} = (H_o + H_f) / 2$

Reference:
RCFCWCD, Design Handbook for LID, dated June, 2014

PETRA GEOSCIENCES, INC.
3186 Airway Avenue, Suite K
Costa Mesa, California 92626
PHONE: (714) 549-8921
COSTA MESA TEMECULA LOS ANGELES PALM DESERT CORONA ESCONDIDO

PERCOLATION TEST SUMMARY

19th Avenue
North Palm Springs, California

PETRA GEOSCIENCES

DATE: Nov., 2022
J.N.: 22-229

Figure C-2

APPENDIX D

SEISMIC HAZARD ANALYSIS

PETRA GEOSCIENCES INC.

SITE CLASSIFICATION DETERMINATION BASED ON N-SPT FOR SEISMIC DESIGN

Per Table 20.3-1 and Section 20.4.2 of ASCE 7-16

J.N: 22-229 **Project:** Snider Interests **Date:** 9/16/2022

Boring: B-5 Total Depth of Boring: 66 feet SPT Test Interval: every 5 feet

Layer No. (i)	Depth to Soil/Rock Layer		Layer Thickness (d_i)	$\sum_{i=1}^{n} d_i$	Mod. Cal. Sampler Blow Counts[1]	Equivalent N-SPT[2] (N_i)	N-SPT[3] (N_i)	$\sum_{i=1}^{n} \frac{d_i}{N_i}$
	Top	Bottom						
	ft	ft	ft	ft	blows/ft	blows/ft	blows/ft	
1	2.5	5	2.5	2.5	39	25		0.10
2	5	7.5	2.5	5.0	50	33		0.18
3	7.5	10	2.5	7.5	100	65		0.21
4	10	15	5	12.5	100	65		0.29
5	15	20	5	17.5	50	33		0.44
6	20	25	5	22.5	41	27		0.63
7	25	30	5	27.5	44	29		0.80
8	30	35	5	32.5		0	34	0.95
9	35	40	5	37.5	100	65		1.02
10	40	45	5	42.5		0	49	1.13
11	45	50	5	47.5	74	48		1.23
12	50	55	5	52.5		0	56	1.32
13	55	60	5	57.5	100	65		1.40
14	60	65	5	62.5		0	41	1.52
15	65	66	1	63.5	100	65		1.53

Average Field Standard Penetration Resistance (blows/ft)		Site Classification Per Table 20.3-1
$\bar{N} = \frac{\sum_{i=1}^{n} d_i}{\sum_{i=1}^{n} \frac{d_i}{N_i}}$	= 41	D

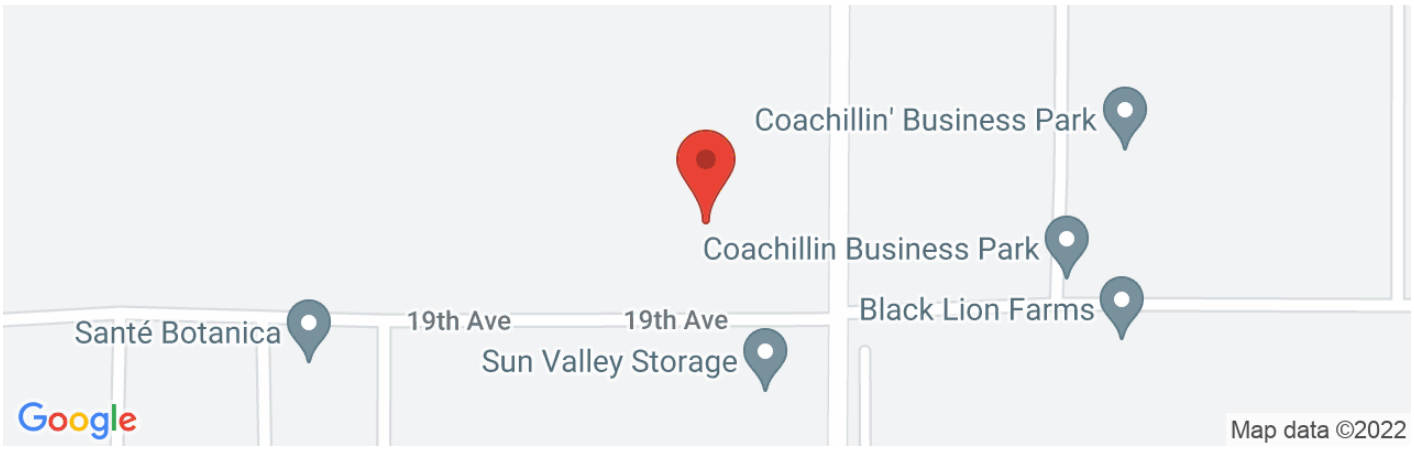
1 Modified California sampler blow counts as directly measured in the field without corrections.

2 Equivalent SPT blow counts are calculated from field measured Modified California sampler blow counts using the standard Burmister formula (Burmister, 1948).
Eq. N-SPT = 0.651 x (Mod. Cal. Sampler Blow Counts)

3 Standard penetration resistance (ASTM D1586) not to exceed 100 blows /ft (305 blows /m) as directly measured in the field without corrections. When Refusal is met for a rock layer, this value shall be taken as 100 blows /ft (305 blows /m).

22-229 Snider Interests

Latitude, Longitude: 33.911051, -116.546644



Date	9/22/2022, 9:54:48 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	2.486	MCE_R ground motion. (for 0.2 second period)
S_1	1.014	MCE_R ground motion. (for 1.0s period)
S_{MS}	2.486	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.657	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	1.056	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	1.162	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	2.496	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.795	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	2.486	Factored deterministic acceleration value. (0.2 second)
S1RT	1.014	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	1.155	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	1.046	Factored deterministic acceleration value. (1.0 second)
PGAd	1.056	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	1.115	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration

Type	Value	Description
C_{RS}	0.893	Mapped value of the risk coefficient at short periods
C_{R1}	0.878	Mapped value of the risk coefficient at a period of 1 s
C_V	1.5	Vertical coefficient

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U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2014 …

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

33.911051

Time Horizon

Return period in years

2475

Longitude

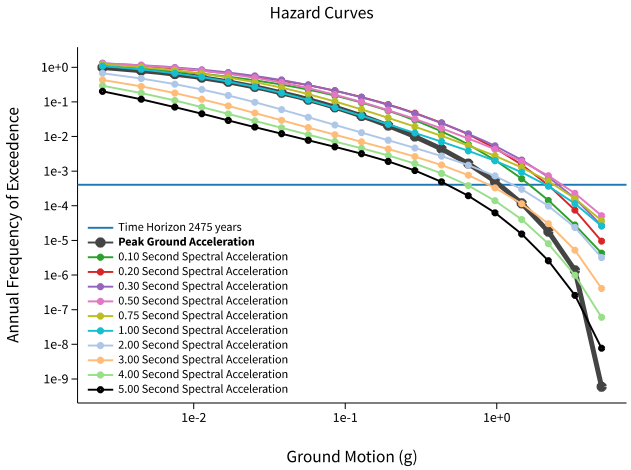
Decimal degrees, negative values for western longitudes

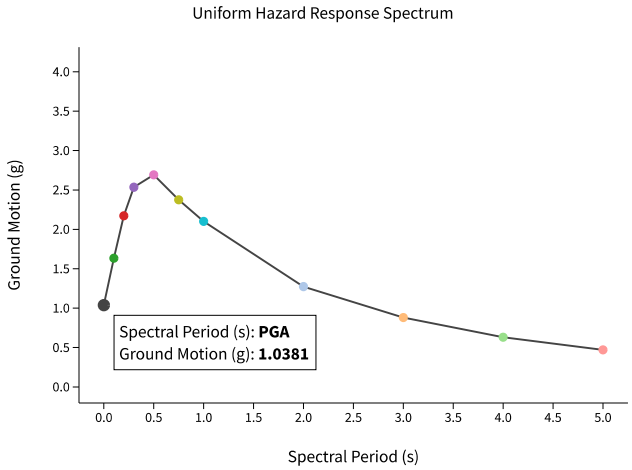
-116.546644

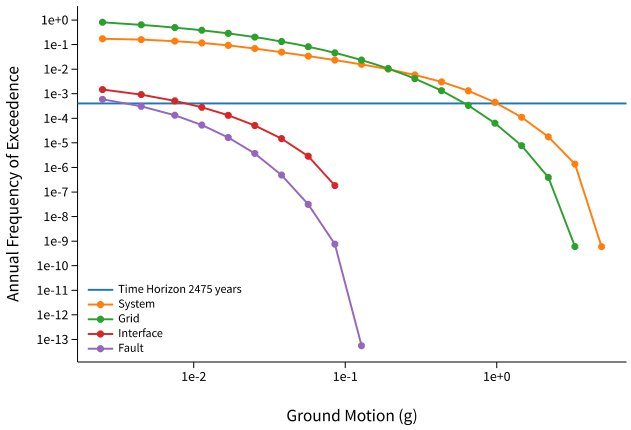
Site Class

259 m/s (Site class D)

Hazard Curve





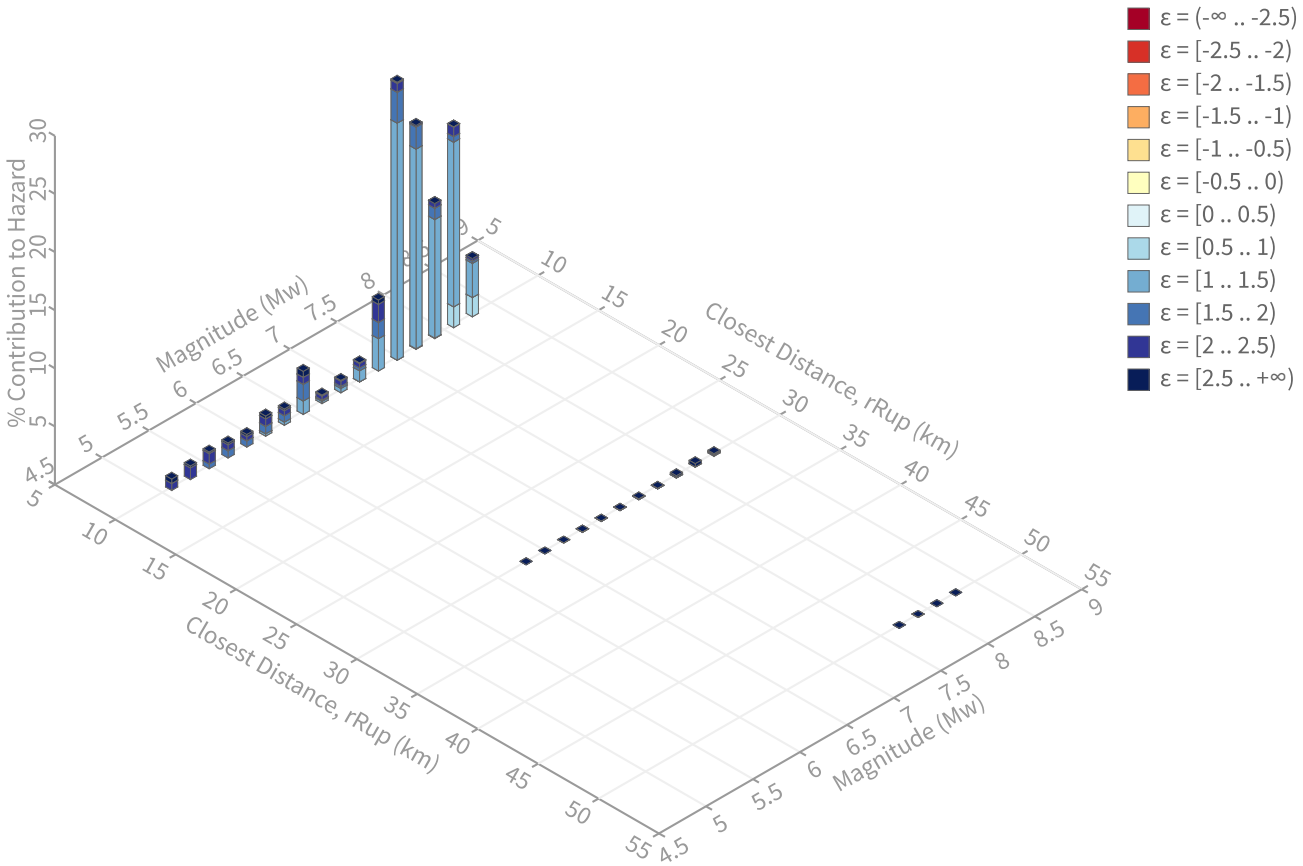


View Raw Data

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
PGA ground motion: 1.0380885 g

Recovered targets

Return period: 3109.7889 yrs
Exceedance rate: 0.00032156524 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.05 %

Mean (over all sources)

m: 7.5
r: 3.79 km
ε_0: 1.38 σ

Mode (largest m-r bin)

m: 7.5
r: 2.49 km
ε_0: 1.26 σ
Contribution: 23.89 %

Mode (largest m-r-ε_0 bin)

m: 7.51
r: 1.91 km
ε_0: 1.16 σ
Contribution: 20.39 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
UC33brAvg_FM32	System							45.12
San Andreas (San Gorgonio Pass-Garnet HIll) [4]		1.60	7.74	1.17	116.548°W	33.903°N	185.45	34.09
San Andreas (North Branch Mill Creek) [8]		6.81	7.89	1.36	116.497°W	33.949°N	47.71	3.28
San Andreas (San Gorgonio Pass-Garnet HIll) [3]		3.62	7.34	1.41	116.517°W	33.893°N	127.32	2.78
San Andreas (San Gorgonio Pass-Garnet HIll) [2]		10.40	7.25	2.05	116.449°W	33.865°N	119.49	1.16
UC33brAvg_FM31	System							44.82
San Andreas (San Gorgonio Pass-Garnet HIll) [4]		1.60	7.75	1.17	116.548°W	33.903°N	185.45	34.02
San Andreas (North Branch Mill Creek) [8]		6.81	7.91	1.36	116.497°W	33.949°N	47.71	3.23
San Andreas (San Gorgonio Pass-Garnet HIll) [3]		3.62	7.34	1.41	116.517°W	33.893°N	127.32	2.57
San Andreas (San Gorgonio Pass-Garnet HIll) [2]		10.40	7.26	2.04	116.449°W	33.865°N	119.49	1.22
UC33brAvg_FM31 (opt)	Grid							5.03
PointSourceFinite: -116.547, 33.952		6.78	5.66	2.05	116.547°W	33.952°N	0.00	1.18
PointSourceFinite: -116.547, 33.952		6.78	5.66	2.05	116.547°W	33.952°N	0.00	1.18
UC33brAvg_FM32 (opt)	Grid							5.03
PointSourceFinite: -116.547, 33.952		6.78	5.66	2.05	116.547°W	33.952°N	0.00	1.18
PointSourceFinite: -116.547, 33.952		6.78	5.66	2.05	116.547°W	33.952°N	0.00	1.18

*** Deaggregation of Seismic Hazard at One Period of Spectral Acceleration ***
*** Data from Dynamic: Conterminous U.S. 2014 (update) (v4.2.0) ****
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E
imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: Total
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:
  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr^{-1}
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr^{-1}
Totals:
  Binned: 100 %
  Residual: 0 %
  Trace: 0.05 %
Mean (over all sources):
  m: 7.5
  r: 3.79 km
  ε_0: 1.38 σ
Mode (largest m-r bin):
  m: 7.5
  r: 2.49 km
  ε_0: 1.26 σ
  Contribution: 23.89 %
Mode (largest m-r-ε_0 bin):
  m: 7.51
  r: 1.91 km
  ε_0: 1.16 σ
  Contribution: 20.39 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
50	7.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	7.9	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
50	8.1	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
50	8.3	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	6.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.5	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	6.7	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
30	6.9	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006
30	7.1	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.015
30	7.3	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.017
30	7.5	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.063
30	7.7	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.031
30	7.9	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052	0.136

30	8.1	0.293	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.274
30	8.3	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.108
10	5.1	0.961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.592	0.369
10	5.3	1.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.005	0.152
10	5.5	1.419	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.398	0.903	0.118
10	5.7	1.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.616	0.507	0.146
10	5.9	1.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.522	0.373	0.168
10	6.1	1.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.199	0.641	0.642	0.241
10	6.3	1.391	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.273	0.541	0.436	0.141
10	6.5	3.697	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.165	1.429	0.598	0.506
10	6.7	0.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.185	0.107	0.351	0.078
10	6.9	1.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.364	0.184	0.438	0.062
10	7.1	1.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.951	0.243	0.388	0.039
10	7.3	6.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.787	1.394	1.555	0.358
10	7.5	23.892	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.393	2.650	0.763	0.086
10	7.7	19.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	17.183	1.887	0.127	0.002
10	7.9	11.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	10.203	0.962	0.391	0.009
10	8.1	17.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.788	14.164	0.470	0.825	0.003
10	8.3	4.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.658	2.935	0.194	0.204	0.000

Principal Sources (faults, subduction, random seismicity having > 3% contribution
UC33brAvg_FM32:
  Percent Contributed: 45.12
  Distance (km): 3.3034677
  Magnitude: 7.6829157
  Epsilon (mean values): 1.2938284
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 34.09
  Distance (km): 1.5963436
  Magnitude: 7.7446728
  Epsilon (mean values): 1.1688121
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
San Andreas (North Branch Mill Creek) [8]:
  Percent Contributed: 3.28
  Distance (km): 6.8100836
  Magnitude: 7.8930559
  Epsilon (mean values): 1.3640217
  Azimuth: 47.708892
  Latitude: 33.948796
  Longitude: -116.49661
San Andreas (San Gorgonio Pass-Garnet HIll) [3]:
  Percent Contributed: 2.78
  Distance (km): 3.6199785
  Magnitude: 7.3407754
  Epsilon (mean values): 1.4096264
  Azimuth: 127.31868
  Latitude: 33.892586
  Longitude: -116.51747
San Andreas (San Gorgonio Pass-Garnet HIll) [2]:
  Percent Contributed: 1.16
  Distance (km): 10.402757
  Magnitude: 7.2452741
  Epsilon (mean values): 2.0487328
  Azimuth: 119.49184
  Latitude: 33.865306
  Longitude: -116.44932
UC33brAvg_FM31:
  Percent Contributed: 44.82
  Distance (km): 3.3226917
  Magnitude: 7.6864893
  Epsilon (mean values): 1.2945359
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 34.02
  Distance (km): 1.5963436
  Magnitude: 7.7463697
  Epsilon (mean values): 1.1684838
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763

San Andreas (North Branch Mill Creek) [8]:
  Percent Contributed: 3.23
  Distance (km): 6.8100836
  Magnitude: 7.9088004
  Epsilon (mean values): 1.3608308
  Azimuth: 47.708892
  Latitude: 33.948796
  Longitude: -116.49661
San Andreas (San Gorgonio Pass-Garnet HIll) [3]:
  Percent Contributed: 2.57
  Distance (km): 3.6199785
  Magnitude: 7.3387973
  Epsilon (mean values): 1.4110018
  Azimuth: 127.31868
  Latitude: 33.892586
  Longitude: -116.51747
San Andreas (San Gorgonio Pass-Garnet HIll) [2]:
  Percent Contributed: 1.22
  Distance (km): 10.402757
  Magnitude: 7.2644067
  Epsilon (mean values): 2.0416969
  Azimuth: 119.49184
  Latitude: 33.865306
  Longitude: -116.44932
UC33brAvg_FM31 (opt):
  Percent Contributed: 5.03
  Distance (km): 8.0596476
  Magnitude: 5.8629767
  Epsilon (mean values): 2.1476689
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7837317
  Magnitude: 5.6643733
  Epsilon (mean values): 2.0533216
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7837317
  Magnitude: 5.6643733
  Epsilon (mean values): 2.0533216
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
UC33brAvg_FM32 (opt):
  Percent Contributed: 5.03
  Distance (km): 8.0588358
  Magnitude: 5.8625854
  Epsilon (mean values): 2.1477256
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7838073
  Magnitude: 5.6643077
  Epsilon (mean values): 2.0533559
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7838073
  Magnitude: 5.6643077
  Epsilon (mean values): 2.0533559
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E

imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: GMM: Abrahamson, Silva & Kamai (2014)
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:
  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr^{-1}
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr^{-1}
Totals:
  Binned: 21.11 %
  Residual: 0 %
  Trace: 0.02 %
Mean (over all sources):
  m: 7.42
  r: 4.02 km
  ε_0: 1.62 σ
Mode (largest m-r bin):
  m: 7.5
  r: 2.52 km
  ε_0: 1.42 σ
  Contribution: 5.37 %
Mode (largest m-r-ε_0 bin):
  m: 7.52
  r: 1.6 km
  ε_0: 1.34 σ
  Contribution: 4.23 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
50	7.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	8.1	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
50	8.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.9	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	7.1	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
30	7.3	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
30	7.5	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
30	7.7	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
30	7.9	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.048
30	8.1	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.092
30	8.3	0.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.067
10	5.1	0.484	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.437	0.047
10	5.3	0.389	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.341	0.048
10	5.5	0.314	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.266	0.048
10	5.7	0.254	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.209	0.045
10	5.9	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.169	0.042
10	6.1	0.354	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.236	0.080
10	6.3	0.334	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.141	0.126	0.039

10	6.5	0.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.283	0.062	0.190	0.238
10	6.7	0.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.044	0.104	0.017
10	6.9	0.271	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.066	0.060	0.128	0.017
10	7.1	0.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.205	0.076	0.098	0.014
10	7.3	1.461	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.302	0.515	0.503	0.141
10	7.5	5.374	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.228	0.876	0.248	0.021
10	7.7	4.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.575	0.423	0.024	0.000
10	7.9	2.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.793	0.289	0.097	0.000
10	8.1	3.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.672	0.350	0.019	0.000
10	8.3	0.809	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.631	0.178	0.001	0.000

Principal Sources (faults, subduction, random seismicity having > 3% contribution
UC33brAvg_FM32:
  Percent Contributed: 9.29
  Distance (km): 3.4407533
  Magnitude: 7.6483556
  Epsilon (mean values): 1.5173315
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 6.99
  Distance (km): 1.5963436
  Magnitude: 7.7124155
  Epsilon (mean values): 1.3834437
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
UC33brAvg_FM31:
  Percent Contributed: 9.23
  Distance (km): 3.4689498
  Magnitude: 7.6525832
  Epsilon (mean values): 1.5187089
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 6.98
  Distance (km): 1.5963436
  Magnitude: 7.7150685
  Epsilon (mean values): 1.3833068
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
UC33brAvg_FM31 (opt):
  Percent Contributed: 1.29
  Distance (km): 8.0553922
  Magnitude: 5.7577835
  Epsilon (mean values): 2.334787
UC33brAvg_FM32 (opt):
  Percent Contributed: 1.29
  Distance (km): 8.0545996
  Magnitude: 5.7573923
  Epsilon (mean values): 2.3348377
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E
imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: GMM: Boore, Stewart, Seyhan & Atkinson (2014)
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:
  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr^{-1}
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr^{-1}
Totals:
  Binned: 40.41 %
  Residual: 0 %
  Trace: 0.04 %
Mean (over all sources):
  m: 7.45
  r: 4.46 km

  ε_0: 1.31 σ
Mode (largest m-r bin):
  m: 7.5
  r: 2.69 km
  ε_0: 1.18 σ
  Contribution: 8.52 %
Mode (largest m-r-ε_0 bin):
  m: 7.51
  r: 2.09 km
  ε_0: 1.13 σ
  Contribution: 8.02 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
50	7.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	7.9	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
50	8.1	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
50	8.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.5	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	6.7	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
30	6.9	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004
30	7.1	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.012
30	7.3	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.012
30	7.5	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.037
30	7.7	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.019
30	7.9	0.114	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.071
30	8.1	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.158
30	8.3	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.105	0.012
10	5.1	0.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.105	0.139
10	5.3	0.493	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.491	0.001
10	5.5	0.831	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.398	0.378	0.055
10	5.7	0.758	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.616	0.057	0.085
10	5.9	0.624	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.522	0.000	0.102
10	6.1	0.967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.199	0.408	0.285	0.076
10	6.3	0.683	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.203	0.229	0.212	0.039
10	6.5	2.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.497	1.190	0.338	0.029
10	6.7	0.327	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.014	0.182	0.024
10	6.9	0.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.178	0.049	0.181	0.028
10	7.1	0.608	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.400	0.030	0.170	0.008
10	7.3	2.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.277	0.762	0.368	0.034
10	7.5	8.524	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.024	0.387	0.113	0.000
10	7.7	7.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.128	0.049	0.002	0.000
10	7.9	4.584	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.364	0.198	0.022	0.000
10	8.1	7.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.688	5.270	0.066	0.000	0.000
10	8.3	2.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.658	0.458	0.009	0.000	0.000

Principal Sources (faults, subduction, random seismicity having > 3% contribution
UC33brAvg_FM32:
  Percent Contributed: 17.7
  Distance (km): 3.8986672
  Magnitude: 7.6775514
  Epsilon (mean values): 1.2043377
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:

  Percent Contributed: 12.4
  Distance (km): 1.5963436
  Magnitude: 7.7634919
  Epsilon (mean values): 1.0530088
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
San Andreas (North Branch Mill Creek) [8]:
  Percent Contributed: 1.73
  Distance (km): 6.8100836
  Magnitude: 7.8930922
  Epsilon (mean values): 1.1302012
  Azimuth: 47.708892
  Latitude: 33.948796
  Longitude: -116.49661
San Andreas (San Gorgonio Pass-Garnet HIll) [3]:
  Percent Contributed: 1.04
  Distance (km): 3.6199785
  Magnitude: 7.3381615
  Epsilon (mean values): 1.2933651
  Azimuth: 127.31868
  Latitude: 33.892586
  Longitude: -116.51747
UC33brAvg_FM31:
  Percent Contributed: 17.58
  Distance (km): 3.9223666
  Magnitude: 7.680838
  Epsilon (mean values): 1.205565
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 12.37
  Distance (km): 1.5963436
  Magnitude: 7.7645843
  Epsilon (mean values): 1.0528309
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
San Andreas (North Branch Mill Creek) [8]:
  Percent Contributed: 1.71
  Distance (km): 6.8100836
  Magnitude: 7.9089852
  Epsilon (mean values): 1.1270616
  Azimuth: 47.708892
  Latitude: 33.948796
  Longitude: -116.49661
UC33brAvg_FM31 (opt):
  Percent Contributed: 2.57
  Distance (km): 8.2229564
  Magnitude: 5.89381
  Epsilon (mean values): 1.9953951
UC33brAvg_FM32 (opt):
  Percent Contributed: 2.56
  Distance (km): 8.222097
  Magnitude: 5.8934701
  Epsilon (mean values): 1.9954284
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E
imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: GMM: Campbell & Bozorgnia (2014)
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:
  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr^{-1}
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr^{-1}

Totals:
  Binned: 4.73 %
  Residual: 0 %
  Trace: 0.01 %
Mean (over all sources):
  m: 7.65
  r: 2.3 km
  ε_0: 2.03 σ
Mode (largest m-r bin):
  m: 7.51
  r: 2.01 km
  ε_0: 1.98 σ
  Contribution: 1.39 %
Mode (largest m-r-ε_0 bin):
  m: 7.52
  r: 1.6 km
  ε_0: 1.93 σ
  Contribution: 1.21 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
30	7.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	5.9	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
10	6.1	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020
10	6.3	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.017
10	6.5	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.106	0.016	0.024
10	6.7	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.011	0.009
10	6.9	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.013	0.012
10	7.1	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.015	0.010
10	7.3	0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.098	0.042
10	7.5	1.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.206	0.166	0.021
10	7.7	1.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.029	0.098	0.002
10	7.9	0.591	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.331	0.251	0.009
10	8.1	0.806	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.800	0.003
10	8.3	0.203	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.203	0.000

Principal Sources (faults, subduction, random seismicity having > 3% contribution
UC33brAvg_FM32:
  Percent Contributed: 2.33
  Distance (km): 2.2128375
  Magnitude: 7.6726505
  Epsilon (mean values): 2.0188977
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 2
  Distance (km): 1.5963436
  Magnitude: 7.6966799
  Epsilon (mean values): 1.9619423
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
UC33brAvg_FM31:
  Percent Contributed: 2.31
  Distance (km): 2.2048677
  Magnitude: 7.6759883

  Epsilon (mean values): 2.018647
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 1.99
  Distance (km): 1.5963436
  Magnitude: 7.6989259
  Epsilon (mean values): 1.9623125
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E
imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: GMM: Chiou & Youngs (2014)
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:
  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr^{-1}
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr^{-1}
Totals:
  Binned: 33.75 %
  Residual: 0 %
  Trace: 0.06 %
Mean (over all sources):
  m: 7.59
  r: 3.06 km
  ε_0: 1.23 σ
Mode (largest m-r bin):
  m: 7.51
  r: 2.36 km
  ε_0: 1.13 σ
  Contribution: 8.6 %
Mode (largest m-r-ε_0 bin):
  m: 7.51
  r: 1.9 km
  ε_0: 1.09 σ
  Contribution: 8.14 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
50	7.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	8.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	8.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.9	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	7.1	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

30	7.3	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
30	7.5	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
30	7.7	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
30	7.9	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.017
30	8.1	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.023
30	8.3	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.030
10	5.1	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.183
10	5.3	0.275	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.172	0.102
10	5.5	0.274	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.259	0.015
10	5.7	0.255	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.240	0.015
10	5.9	0.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.204	0.022
10	6.1	0.381	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.195	0.121	0.065
10	6.3	0.332	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.171	0.074	0.046
10	6.5	0.725	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.384	0.071	0.055	0.215
10	6.7	0.174	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.040	0.055	0.029
10	6.9	0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.054	0.115	0.006
10	7.1	0.533	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.345	0.071	0.104	0.008
10	7.3	1.960	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.209	0.025	0.585	0.141
10	7.5	8.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.140	0.181	0.236	0.044
10	7.7	6.913	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	6.480	0.385	0.003	0.000
10	7.9	4.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	4.045	0.145	0.021	0.000
10	8.1	6.378	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	6.222	0.051	0.006	0.000
10	8.3	1.853	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.846	0.007	0.000	0.000

Principal Sources (faults, subduction, random seismicity having > 3% contribution
UC33brAvg_FM32:
  Percent Contributed: 15.8
  Distance (km): 2.7167298
  Magnitude: 7.710764
  Epsilon (mean values): 1.1557695
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 12.7
  Distance (km): 1.5963436
  Magnitude: 7.7516088
  Epsilon (mean values): 1.0389514
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
UC33brAvg_FM31:
  Percent Contributed: 15.7
  Distance (km): 2.729419
  Magnitude: 7.7143057
  Epsilon (mean values): 1.1558738
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 12.68
  Distance (km): 1.5963436
  Magnitude: 7.7532777
  Epsilon (mean values): 1.038391
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
UC33brAvg_FM31 (opt):
  Percent Contributed: 1.12
  Distance (km): 7.7519595
  Magnitude: 5.8886682
  Epsilon (mean values): 2.2631164
UC33brAvg_FM32 (opt):
  Percent Contributed: 1.12
  Distance (km): 7.7511329
  Magnitude: 5.8881836
  Epsilon (mean values): 2.2632521
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E
imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: Source Type: System
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:

  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr⁻¹
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr⁻¹
Totals:
  Binned: 89.94 %
  Residual: 0 %
  Trace: 0.03 %
Mean (over all sources):
  m: 7.68
  r: 3.31 km
  ε_0: 1.29 σ
Mode (largest m-r bin):
  m: 7.5
  r: 2.49 km
  ε_0: 1.26 σ
  Contribution: 23.87 %
Mode (largest m-r-ε_0 bin):
  m: 7.51
  r: 1.91 km
  ε_0: 1.16 σ
  Contribution: 20.39 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
50	7.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	7.9	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
50	8.1	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
50	8.3	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	6.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.9	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
30	7.1	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
30	7.3	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
30	7.5	0.064	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.063
30	7.7	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.031
30	7.9	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052	0.136
30	8.1	0.293	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.274
30	8.3	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.108
10	6.3	0.338	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112	0.198	0.022	0.005
10	6.5	3.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.051	1.266	0.338	0.437
10	6.7	0.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.047	0.177	0.049
10	6.9	0.815	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.322	0.110	0.342	0.040
10	7.1	1.486	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.925	0.197	0.332	0.028
10	7.3	6.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.776	1.367	1.530	0.355
10	7.5	23.873	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.390	2.641	0.757	0.085
10	7.7	19.242	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	17.182	1.886	0.126	0.002
10	7.9	11.599	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	10.203	0.962	0.391	0.009
10	8.1	17.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.788	14.164	0.470	0.825	0.003
10	8.3	4.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.658	2.935	0.194	0.204	0.000

Principal Sources (faults, subduction, random seismicity having > 3% contribution

UC33brAvg_FM32:
  Percent Contributed: 45.12
  Distance (km): 3.3034677
  Magnitude: 7.6829157
  Epsilon (mean values): 1.2938284
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 34.09
  Distance (km): 1.5963436
  Magnitude: 7.7446728
  Epsilon (mean values): 1.1688121
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
San Andreas (North Branch Mill Creek) [8]:
  Percent Contributed: 3.28
  Distance (km): 6.8100836
  Magnitude: 7.8930559
  Epsilon (mean values): 1.3640217
  Azimuth: 47.708892
  Latitude: 33.948796
  Longitude: -116.49661
San Andreas (San Gorgonio Pass-Garnet HIll) [3]:
  Percent Contributed: 2.78
  Distance (km): 3.6199785
  Magnitude: 7.3407754
  Epsilon (mean values): 1.4096264
  Azimuth: 127.31868
  Latitude: 33.892586
  Longitude: -116.51747
San Andreas (San Gorgonio Pass-Garnet HIll) [2]:
  Percent Contributed: 1.16
  Distance (km): 10.402757
  Magnitude: 7.2452741
  Epsilon (mean values): 2.0487328
  Azimuth: 119.49184
  Latitude: 33.865306
  Longitude: -116.44932
UC33brAvg_FM31:
  Percent Contributed: 44.82
  Distance (km): 3.3226917
  Magnitude: 7.6864893
  Epsilon (mean values): 1.2945359
San Andreas (San Gorgonio Pass-Garnet HIll) [4]:
  Percent Contributed: 34.02
  Distance (km): 1.5963436
  Magnitude: 7.7463697
  Epsilon (mean values): 1.1684838
  Azimuth: 185.44739
  Latitude: 33.902511
  Longitude: -116.54763
San Andreas (North Branch Mill Creek) [8]:
  Percent Contributed: 3.23
  Distance (km): 6.8100836
  Magnitude: 7.9088004
  Epsilon (mean values): 1.3608308
  Azimuth: 47.708892
  Latitude: 33.948796
  Longitude: -116.49661
San Andreas (San Gorgonio Pass-Garnet HIll) [3]:
  Percent Contributed: 2.57
  Distance (km): 3.6199785
  Magnitude: 7.3387973
  Epsilon (mean values): 1.4110018
  Azimuth: 127.31868
  Latitude: 33.892586
  Longitude: -116.51747
San Andreas (San Gorgonio Pass-Garnet HIll) [2]:
  Percent Contributed: 1.22
  Distance (km): 10.402757
  Magnitude: 7.2644067

  Epsilon (mean values): 2.0416969
  Azimuth: 119.49184
  Latitude: 33.865306
  Longitude: -116.44932
PSHA Deaggregation. %contributions.
site: Test
longitude: 116.547°W
latitude: 33.911°E
imt: Peak Ground Acceleration
vs30 = 259 m/s (Site class D)
return period: 2475 yrs.
#This deaggregation corresponds to: Source Type: Grid
Summary statistics for PSHA PGA deaggregation, r=distance, ε=epsilon:
Deaggregation targets:
  Return period: 2475 yrs
  Exceedance rate: 0.0004040404 yr⁻¹
  PGA ground motion: 1.0380885 g
Recovered targets:
  Return period: 3109.7889 yrs
  Exceedance rate: 0.00032156524 yr⁻¹
Totals:
  Binned: 10.06 %
  Residual: 0 %
  Trace: 0.05 %
Mean (over all sources):
  m: 5.86
  r: 8.06 km
  ε_0: 2.15 σ
Mode (largest m-r bin):
  m: 6.09
  r: 8.17 km
  ε_0: 2 σ
  Contribution: 1.72 %
Mode (largest m-r-ε_0 bin):
  m: 5.31
  r: 7.08 km
  ε_0: 2.33 σ
  Contribution: 1 %
Discretization:
  r: min = 0.0, max = 1000.0, Δ = 20.0 km
  m: min = 4.4, max = 9.4, Δ = 0.2
  ε: min = -3.0, max = 3.0, Δ = 0.5 σ
Epsilon keys:
  ε0: [-∞ .. -2.5)
  ε1: [-2.5 .. -2.0)
  ε2: [-2.0 .. -1.5)
  ε3: [-1.5 .. -1.0)
  ε4: [-1.0 .. -0.5)
  ε5: [-0.5 .. 0.0)
  ε6: [0.0 .. 0.5)
  ε7: [0.5 .. 1.0)
  ε8: [1.0 .. 1.5)
  ε9: [1.5 .. 2.0)
  ε10: [2.0 .. 2.5)
  ε11: [2.5 .. +∞]

Closest Distance, rRup (km)	Magnitude (Mw)	ALL_ε	ε=(-∞,-2.5)	ε=[-2.5,-2)	ε=[-2,-1.5)	ε=[-1.5,-1)	ε=[-1,-0.5)	ε=[-0.5,0)	ε=[0,0.5)	ε=[0.5,1)	ε=[1,1.5)	ε=[1.5,2)	ε=[2,2.5)	ε=[2.5,∞)
50	7.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	7.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	6.5	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
30	6.7	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
30	6.9	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003
30	7.1	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.004
30	7.3	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
30	7.5	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
30	7.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	7.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

```
10     5.1    0.961  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.592  0.369
10     5.3    1.156  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  1.005  0.152
10     5.5    1.419  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.398  0.903  0.118
10     5.7    1.268  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.616  0.507  0.146
10     5.9    1.063  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.522  0.373  0.168
10     6.1    1.722  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.199  0.641  0.642  0.241
10     6.3    1.053  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.161  0.343  0.414  0.136
10     6.5    0.605  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.113  0.163  0.260  0.068
10     6.7    0.329  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.065  0.060  0.174  0.030
10     6.9    0.234  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.042  0.074  0.096  0.022
10     7.1    0.139  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.026  0.046  0.056  0.011
10     7.3    0.065  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.011  0.027  0.025  0.002
10     7.5    0.018  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.003  0.009  0.006  0.000
10     7.7    0.002  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.001  0.000  0.000
10     7.9    0.001  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
Principal Sources (faults, subduction, random seismicity having > 3% contribution
UC33brAvg_FM31 (opt):
  Percent Contributed: 5.03
  Distance (km): 8.0596476
  Magnitude: 5.8629767
  Epsilon (mean values): 2.1476689
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7837317
  Magnitude: 5.6643733
  Epsilon (mean values): 2.0533216
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7837317
  Magnitude: 5.6643733
  Epsilon (mean values): 2.0533216
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
UC33brAvg_FM32 (opt):
  Percent Contributed: 5.03
  Distance (km): 8.0588358
  Magnitude: 5.8625854
  Epsilon (mean values): 2.1477256
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7838073
  Magnitude: 5.6643077
  Epsilon (mean values): 2.0533559
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
PointSourceFinite: -116.547, 33.952:
  Percent Contributed: 1.18
  Distance (km): 6.7838073
  Magnitude: 5.6643077
  Epsilon (mean values): 2.0533559
  Azimuth: 0
  Latitude: 33.95152
  Longitude: -116.54664
```

APPENDIX E

STANDARD GRADING SPECIFICATIONS

STANDARD GRADING SPECIFICATIONS

These specifications present the usual and minimum requirements for projects on which Petra Geosciences, Inc. (Petra) is the geotechnical consultant. No deviation from these specifications will be allowed, except where specifically superseded in the preliminary geology and soils report, or in other written communication signed by the Soils Engineer and Engineering Geologist of record (Geotechnical Consultant).

I. GENERAL

A. The Geotechnical Consultant is the Owner's or Builder's representative on the project. For the purpose of these specifications, participation by the Geotechnical Consultant includes that observation performed by any person or persons employed by, and responsible to, the licensed Soils Engineer and Engineering Geologist signing the soils report.

B. The contractor should prepare and submit to the Owner and Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "spreads" and the estimated quantities of daily earthwork to be performed prior to the commencement of grading. This work plan should be reviewed by the Geotechnical Consultant to schedule personnel to perform the appropriate level of observation, mapping, and compaction testing as necessary.

C. All clearing, site preparation, or earthwork performed on the project shall be conducted by the Contractor in accordance with the recommendations presented in the geotechnical report and under the observation of the Geotechnical Consultant.

D. It is the Contractor's responsibility to prepare the ground surface to receive the fills to the satisfaction of the Geotechnical Consultant and to place, spread, mix, water, and compact the fill in accordance with the specifications of the Geotechnical Consultant. The Contractor shall also remove all material considered unsatisfactory by the Geotechnical Consultant.

E. It is the Contractor's responsibility to have suitable and sufficient compaction equipment on the job site to handle the amount of fill being placed. If necessary, excavation equipment will be shut down to permit completion of compaction to project specifications. Sufficient watering apparatus will also be provided by the Contractor, with due consideration for the fill material, rate of placement, and time of year.

F. After completion of grading a report will be submitted by the Geotechnical Consultant.

II. SITE PREPARATION

A. Clearing and Grubbing

1. All vegetation such as trees, brush, grass, roots, and deleterious material shall be disposed of offsite. This removal shall be concluded prior to placing fill.

2. Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipe lines, etc., are to be removed or treated in a manner prescribed by the Geotechnical Consultant.

III. FILL AREA PREPARATION

A. Remedial Removals/Overexcavations

1. Remedial removals, as well as overexcavation for remedial purposes, shall be evaluated by the Geotechnical Consultant. Remedial removal depths presented in the geotechnical report and shown on the geotechnical plans are estimates only. The actual extent of removal should be determined by the Geotechnical Consultant based on the conditions exposed during grading. All soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as determined by the Geotechnical Consultant.

2. Soil, alluvium, or bedrock materials determined by the Soils Engineer as being unsuitable for placement in compacted fills shall be removed from the site. Any material incorporated as a part of a compacted fill must be approved by the Geotechnical Consultant.

3. Should potentially hazardous materials be encountered, the Contractor should stop work in the affected area. An environmental consultant specializing in hazardous materials should be notified immediately for evaluation and handling of these materials prior to continuing work in the affected area.

B. Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide sufficient survey control for determining locations and elevations of processed areas, keys, and benches.

C. Processing

After the ground surface to receive fill has been declared satisfactory for support of fill by the Geotechnical Consultant, it shall be scarified to a minimum depth of 6 inches and until the ground surface is uniform and free from ruts, hollows, hummocks, or other uneven features which may prevent uniform compaction.

The scarified ground surface shall then be brought to optimum moisture, mixed as required, and compacted to a minimum relative compaction of 90 percent.

D. Subdrains

Subdrainage devices shall be constructed in compliance with the ordinances of the controlling governmental agency, and/or with the recommendations of the Geotechnical Consultant. (Typical Canyon Subdrain details are given on Plate SG-1).

E. Cut/Fill & Deep Fill/Shallow Fill Transitions

In order to provide uniform bearing conditions in cut/fill and deep fill/shallow fill transition lots, the cut and shallow fill portions of the lot should be overexcavated to the depths and the horizontal limits discussed in the approved geotechnical report and replaced with compacted fill. (Typical details are given on Plate SG-7.)

STANDARD GRADING SPECIFICATIONS

IV. COMPACTED FILL MATERIAL

A. General

Materials excavated on the property may be utilized in the fill, provided each material has been determined to be suitable by the Geotechnical Consultant. Material to be used for fill shall be essentially free of organic material and other deleterious substances. Roots, tree branches, and other matter missed during clearing shall be removed from the fill as recommended by the Geotechnical Consultant. Material that is spongy, subject to decay, or otherwise considered unsuitable shall not be used in the compacted fill.

Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

B. Oversize Materials

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches in diameter, shall be taken offsite or placed in accordance with the recommendations of the Geotechnical Consultant in areas designated as suitable for rock disposal (Typical details for Rock Disposal are given on Plate SG-4).

Rock fragments less than 12 inches in diameter may be utilized in the fill provided, they are not nested or placed in concentrated pockets; they are surrounded by compacted fine grained soil material and the distribution of rocks is approved by the Geotechnical Consultant.

C. Laboratory Testing

Representative samples of materials to be utilized as compacted fill shall be analyzed by the laboratory of the Geotechnical Consultant to determine their physical properties. If any material other than that previously tested is encountered during grading, the appropriate analysis of this material shall be conducted by the Geotechnical Consultant as soon as possible.

D. Import

If importing of fill material is required for grading, proposed import material should meet the requirements of the previous section. The import source shall be given to the Geotechnical Consultant at least 2 working days prior to importing so that appropriate tests can be performed and its suitability determined.

V. FILL PLACEMENT AND COMPACTION

A. Fill Layers

Material used in the compacting process shall be evenly spread, watered, processed, and compacted in thin lifts not to exceed 6 inches in thickness to obtain a uniformly dense layer. The fill shall be placed and compacted on a horizontal plane, unless otherwise approved by the Geotechnical Consultant.

B. Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly above optimum moisture content.

C. Compaction

Each layer shall be compacted to 90 percent of the maximum density in compliance with the testing method specified by the controlling governmental agency. (In general, ASTM D 1557-02, will be used.)

If compaction to a lesser percentage is authorized by the controlling governmental agency because of a specific land use or expansive soils condition, the area to received fill compacted to less than 90 percent shall either be delineated on the grading plan or appropriate reference made to the area in the soils report.

D. Failing Areas

If the moisture content or relative density varies from that required by the Geotechnical Consultant, the Contractor shall rework the fill until it is approved by the Geotechnical Consultant.

E. Benching

All fills shall be keyed and benched through all topsoil, colluvium, alluvium or creep material, into sound bedrock or firm material where the slope receiving fill exceeds a ratio of 5 horizontal to 1 vertical, in accordance with the recommendations of the Geotechnical Consultant.

VI. SLOPES

A. Fill Slopes

The contractor will be required to obtain a minimum relative compaction of 90 percent out to the finish slope face of fill slopes, buttresses, and stabilization fills. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required compaction.

B. Side Hill Fills

The key for side hill fills shall be a minimum of 15 feet within bedrock or firm materials, unless otherwise specified in the soils report. (See detail on Plate SG-5.)

C. Fill-Over-Cut Slopes

Fill-over-cut slopes shall be properly keyed through topsoil, colluvium or creep material into rock or firm materials, and the transition shall be stripped of all soils prior to placing fill. (see detail on Plate SG-6).

D. Landscaping

All fill slopes should be planted or protected from erosion by other methods specified in the soils report.

E. Cut Slopes

1. The Geotechnical Consultant should observe all cut slopes at vertical intervals not exceeding 10 feet.

2. If any conditions not anticipated in the preliminary report such as perched water, seepage, lenticular or confined strata of a potentially adverse nature, unfavorably inclined bedding, joints or fault planes are encountered during grading, these conditions shall be evaluated by the Geotechnical Consultant, and recommendations shall be made to treat these problems (Typical details for stabilization of a portion of a cut slope are given in Plates SG-2 and SG-3.).

3. Cut slopes that face in the same direction as the prevailing drainage shall be protected from slope wash by a non-erodible interceptor swale placed at the top of the slope.

4. Unless otherwise specified in the soils and geological report, no cut slopes shall be excavated higher or steeper than that allowed by the ordinances of controlling governmental agencies.

5. Drainage terraces shall be constructed in compliance with the ordinances of controlling governmental agencies, or with the recommendations of the Geotechnical Consultant.

VII. GRADING OBSERVATION

A. General

All cleanouts, processed ground to receive fill, key excavations, subdrains, and rock disposals must be observed and approved by the Geotechnical Consultant prior to placing any fill. It shall be the Contractor's responsibility to notify the Geotechnical Consultant when such areas are ready.

B. Compaction Testing

Observation of the fill placement shall be provided by the Geotechnical Consultant during the progress of grading. Location and frequency of tests shall be at the Consultants discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations may be selected to verify adequacy of compaction levels in areas that are judged to be susceptible to inadequate compaction.

C. Frequency of Compaction Testing

In general, density tests should be made at intervals not exceeding 2 feet of fill height or every 1000 cubic yards of fill placed. This criteria will vary depending on soil conditions and the size of the job. In any event, an adequate number of field density tests shall be made to verify that the required compaction is being achieved.

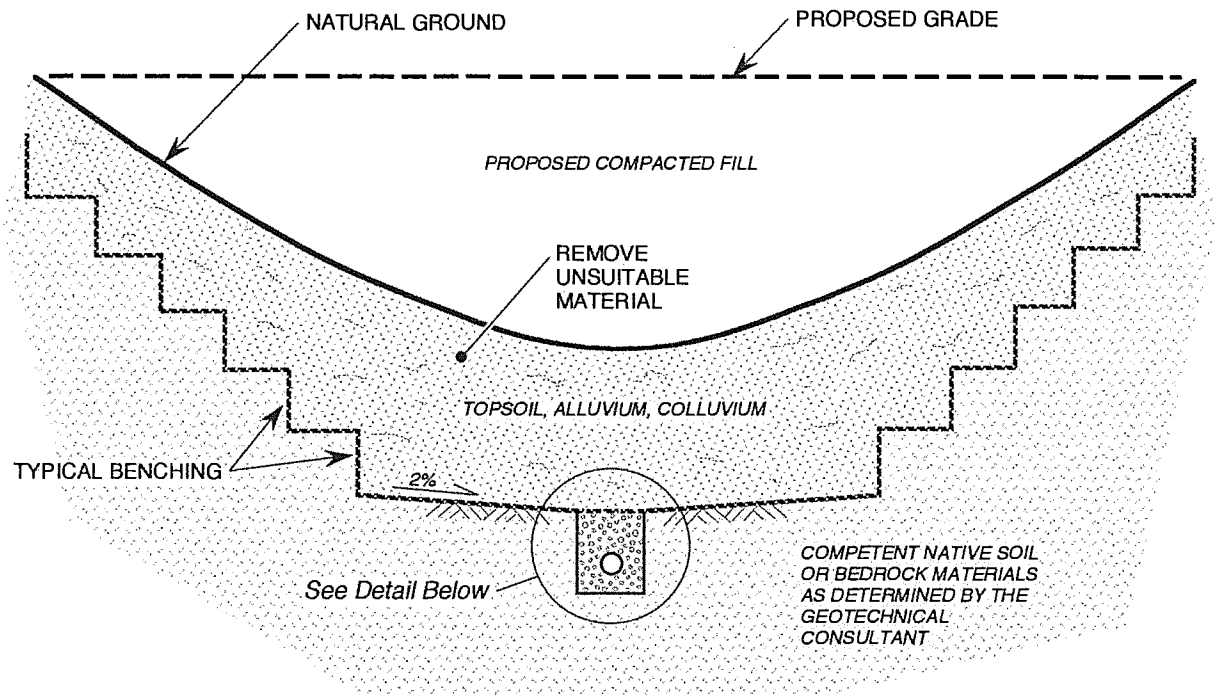
VIII. CONSTRUCTION CONSIDERATIONS

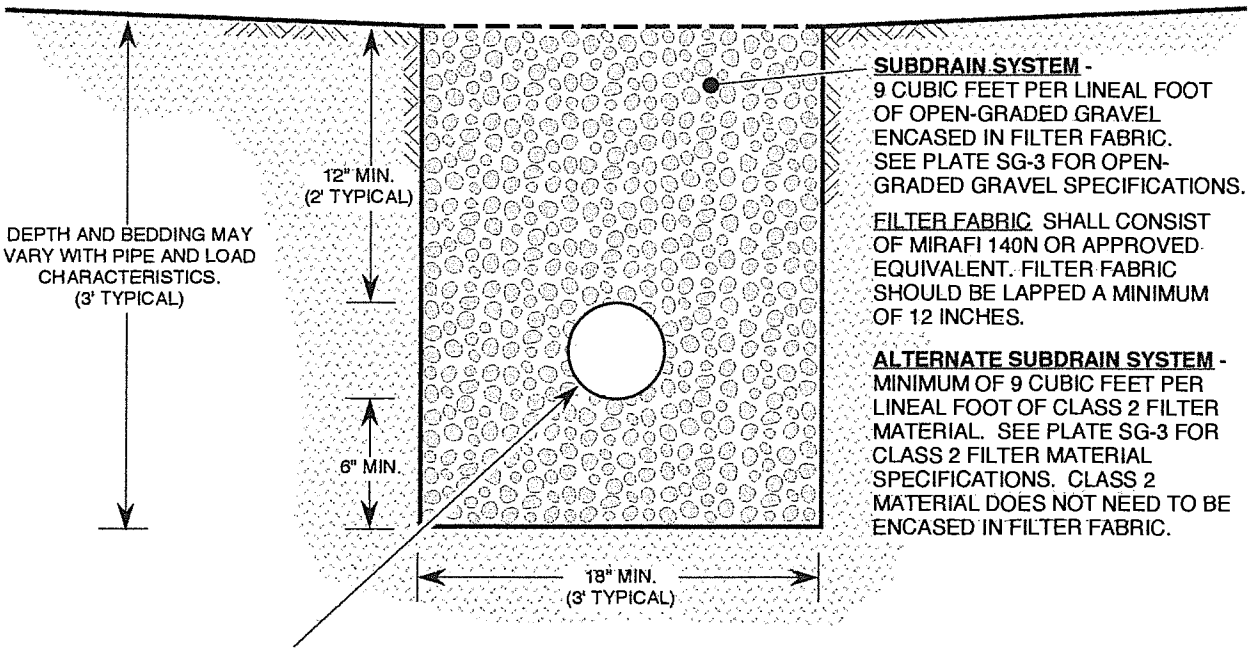
A. Erosion control measures, when necessary, shall be provided by the Contractor during grading and prior to the completion and construction of permanent drainage controls.

B. Upon completion of grading and termination of observations by the Geotechnical Consultant, no further filling or excavating, including that necessary for footings, foundations, large tree wells, retaining walls, or other features shall be performed without the approval of the Geotechnical Consultant.

C. Care shall be taken by the Contractor during final grading to preserve any berms, drainage terraces, interceptor swales, or other devices of permanent nature on or adjacent to the property.

S:\!BOILERS-WORK\REPORT INSERTS\STANDARD GRADING SPECS





SUBDRAIN SYSTEM - 9 CUBIC FEET PER LINEAL FOOT OF OPEN-GRADED GRAVEL ENCASED IN FILTER FABRIC. SEE PLATE SG-3 FOR OPEN-GRADED GRAVEL SPECIFICATIONS.

FILTER FABRIC SHALL CONSIST OF MIRAFI 140N OR APPROVED EQUIVALENT. FILTER FABRIC SHOULD BE LAPPED A MINIMUM OF 12 INCHES.

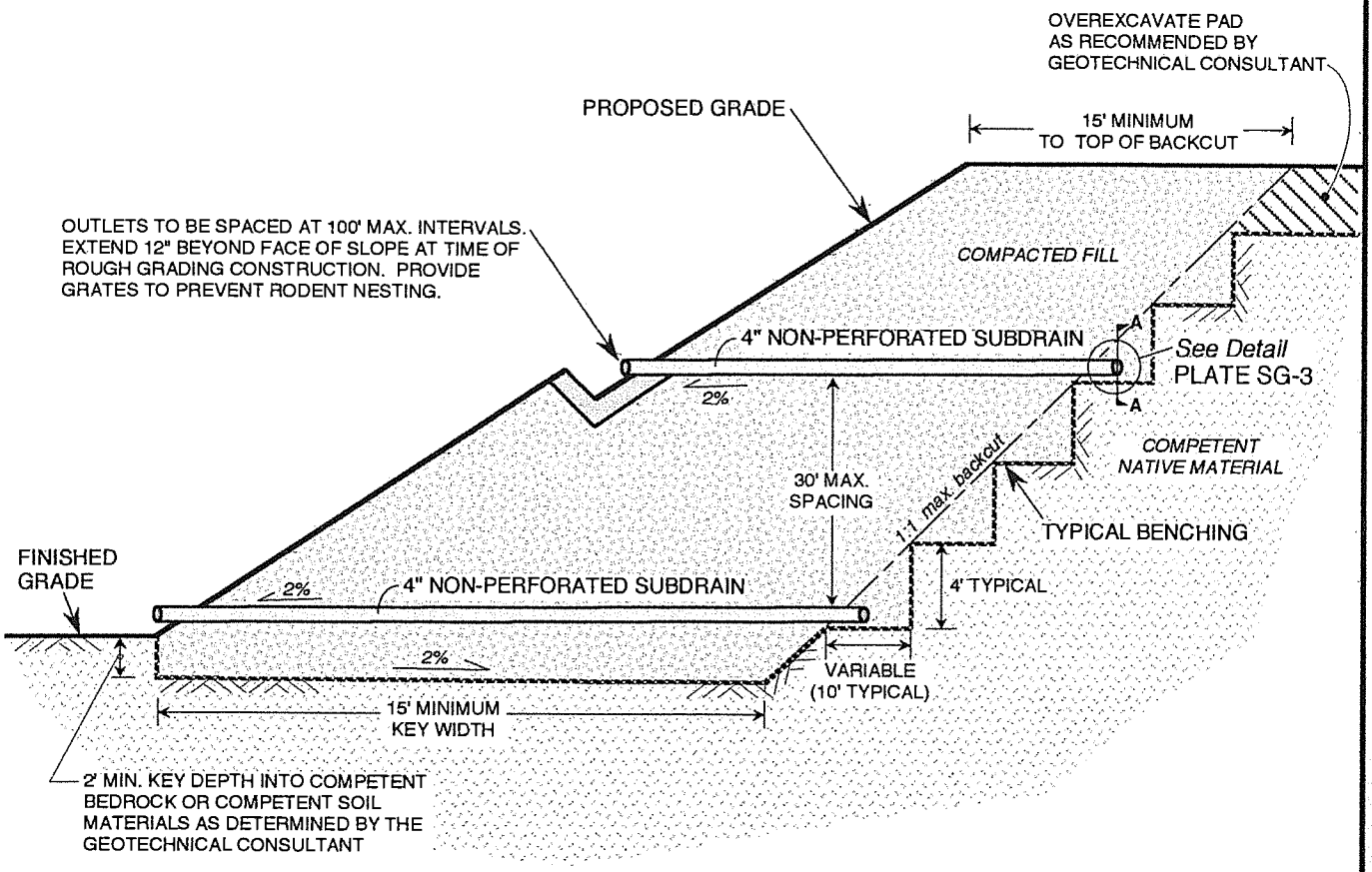
ALTERNATE SUBDRAIN SYSTEM - MINIMUM OF 9 CUBIC FEET PER LINEAL FOOT OF CLASS 2 FILTER MATERIAL. SEE PLATE SG-3 FOR CLASS 2 FILTER MATERIAL SPECIFICATIONS. CLASS 2 MATERIAL DOES NOT NEED TO BE ENCASED IN FILTER FABRIC.

MINIMUM 6-INCH DIAMETER PVC SCHEDULE 40, OR ABS SDR-35 WITH A MINIMUM OF EIGHT 1/4-INCH DIAMETER PERFORATIONS PER LINEAL FOOT IN BOTTOM HALF OF PIPE. PIPE TO BE LAID WITH PERFORATIONS FACING DOWN.

NOTES:

1. FOR CONTINUOUS RUNS IN EXCESS OF 500 FEET USE 8-INCH DIAMETER PIPE.
2. FINAL 20 FEET OF PIPE AT OUTLET SHALL BE NON-PERFORATED AND BACKFILLED WITH FINE-GRAINED MATERIAL.

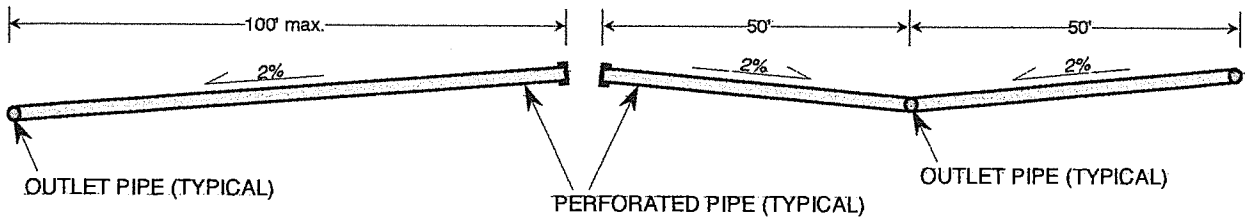
PETRA	CANYON SUBDRAIN DETAIL	PLATE SG-1



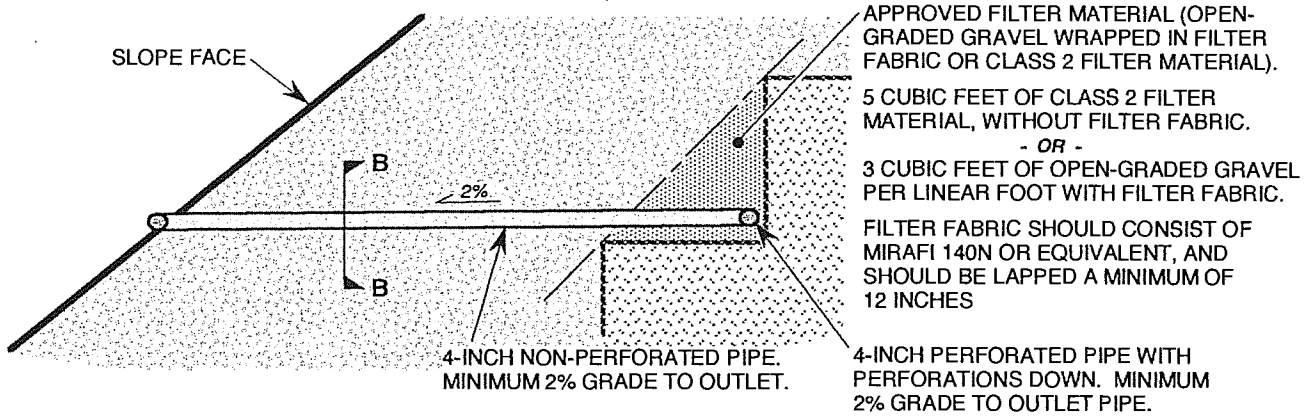
NOTES:

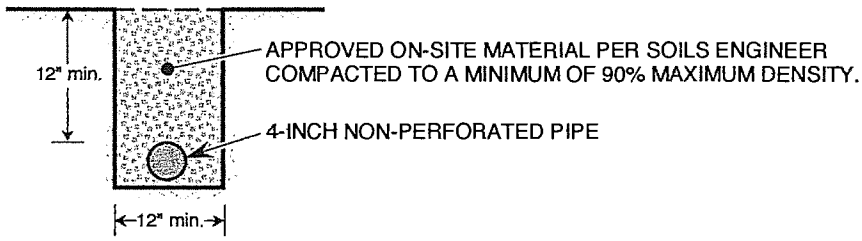
1. 30' MAXIMUM VERTICAL SPACING BETWEEN SUBDRAIN SYSTEMS.
2. 100' MAXIMUM HORIZONTAL DISTANCE BETWEEN NON-PERFORATED OUTLET PIPES. *(See Below)*
3. MINIMUM GRADIENT OF 2% FOR ALL PERFORATED AND NON-PERFORATED PIPE.

SECTION A-A (PERFORATED PIPE PROFILE)



PETRA	BUTTRESS OR STABILIZATION FILL DETAIL	PLATE SG-2





SECTION B-B (OUTLET PIPE)

PIPE SPECIFICATIONS:

1. 4-INCH MINIMUM DIAMETER, PVC SCHEDULE 40 OR ABS SDR-35.
2. FOR PERFORATED PIPE, MINIMUM 8 PERFORATIONS PER FOOT ON BOTTOM HALF OF PIPE.

FILTER MATERIAL/FABRIC SPECIFICATIONS:

OPEN-GRADED GRAVEL ENCASED IN FILTER FABRIC.
(MIRAFI 140N OR EQUIVALENT)

OPEN-GRADED GRAVEL

SIEVE SIZE	PERCENT PASSING
1 1/2-INCH	88 - 100
1-INCH	5 - 40
3/4-INCH	0 - 17
3/8-INCH	0 - 7
No. 200	0 - 3

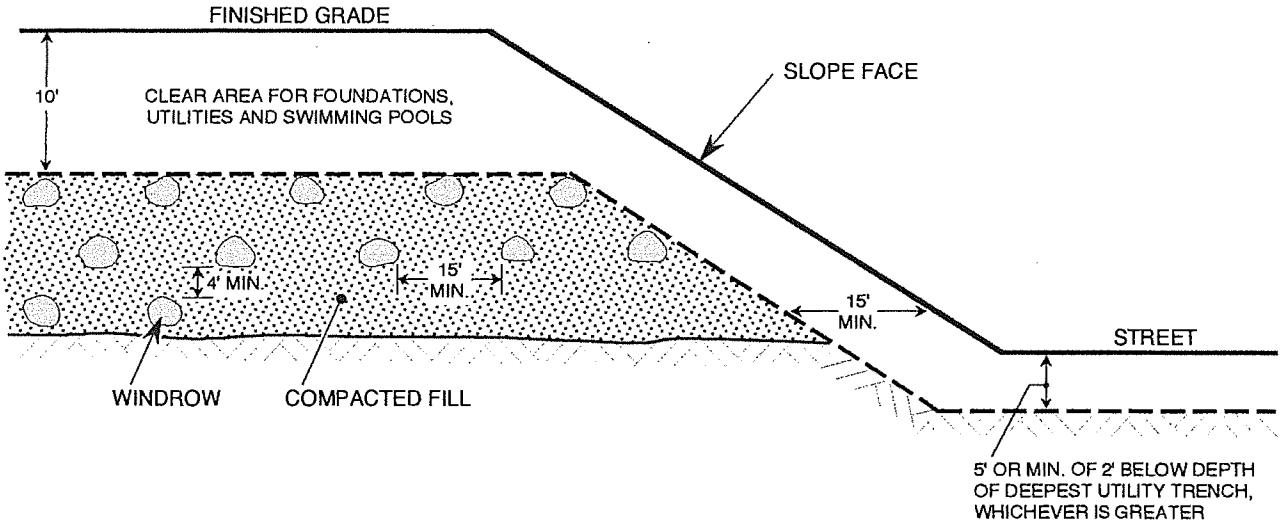
ALTERNATE:

CLASS 2 PERMEABLE FILTER MATERIAL PER CALTRANS STANDARD SPECIFICATION 68-1.025.

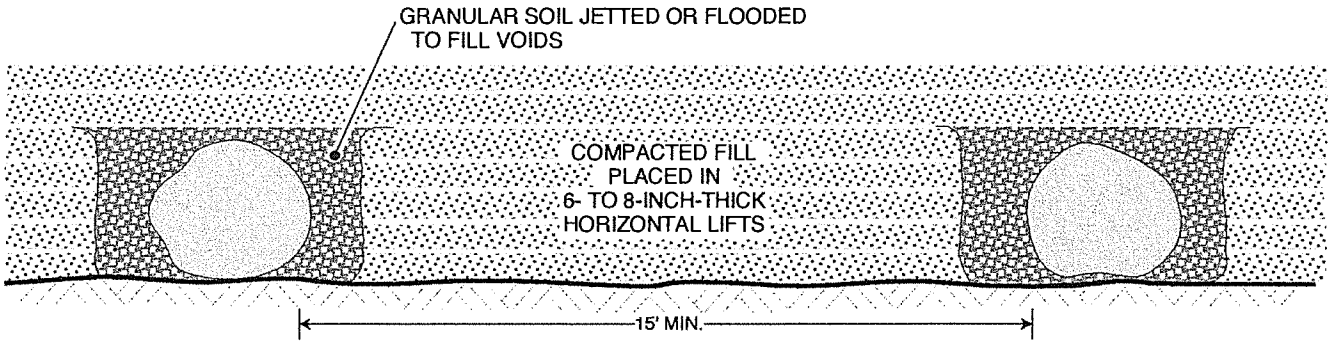
CLASS 2 FILTER MATERIAL

SIEVE SIZE	PERCENT PASSING
1-INCH	100
3/4-INCH	90 - 100
3/8-INCH	40 - 100
No. 4	25 - 40
No. 8	18 - 33
No. -30	5 - 15
No. -50	0 - 7
No. 200	0 - 3

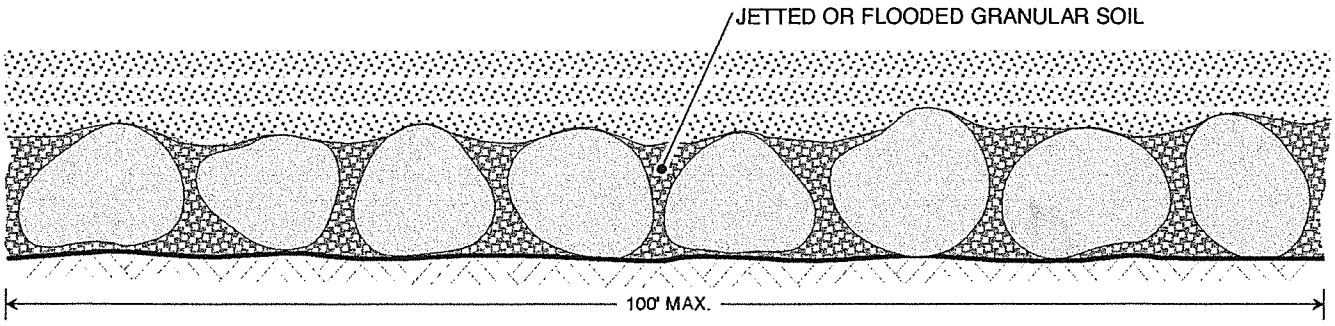
PETRA	BUTTRESS OR STABILIZATION FILL SUBDRAIN	PLATE SG-3



TYPICAL WINDROW DETAIL (END VIEW)

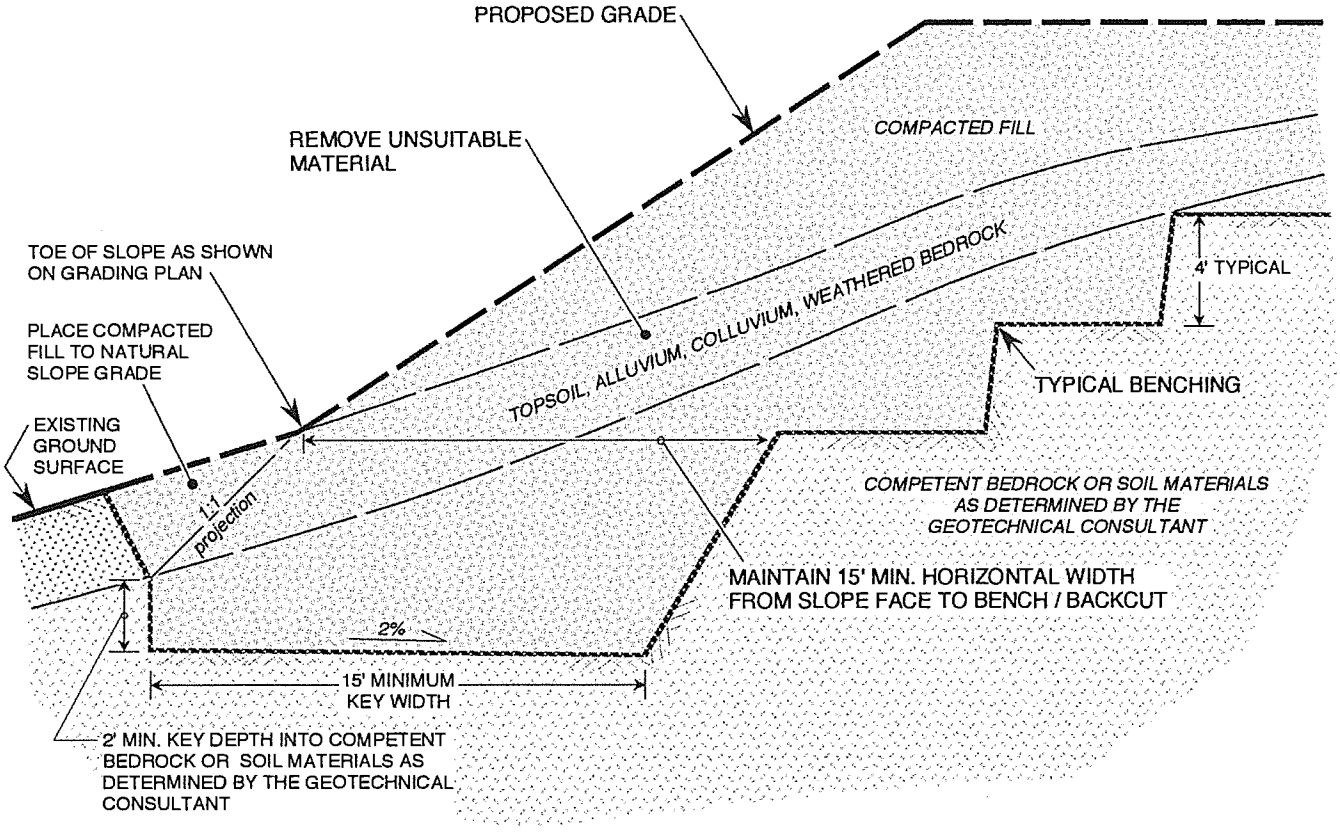


TYPICAL WINDROW DETAIL (PROFILE VIEW)



NOTE: OVERSIZE ROCK IS DEFINED AS CLASTS HAVING A MAXIMUM DIMENSION OF 12" OR LARGER

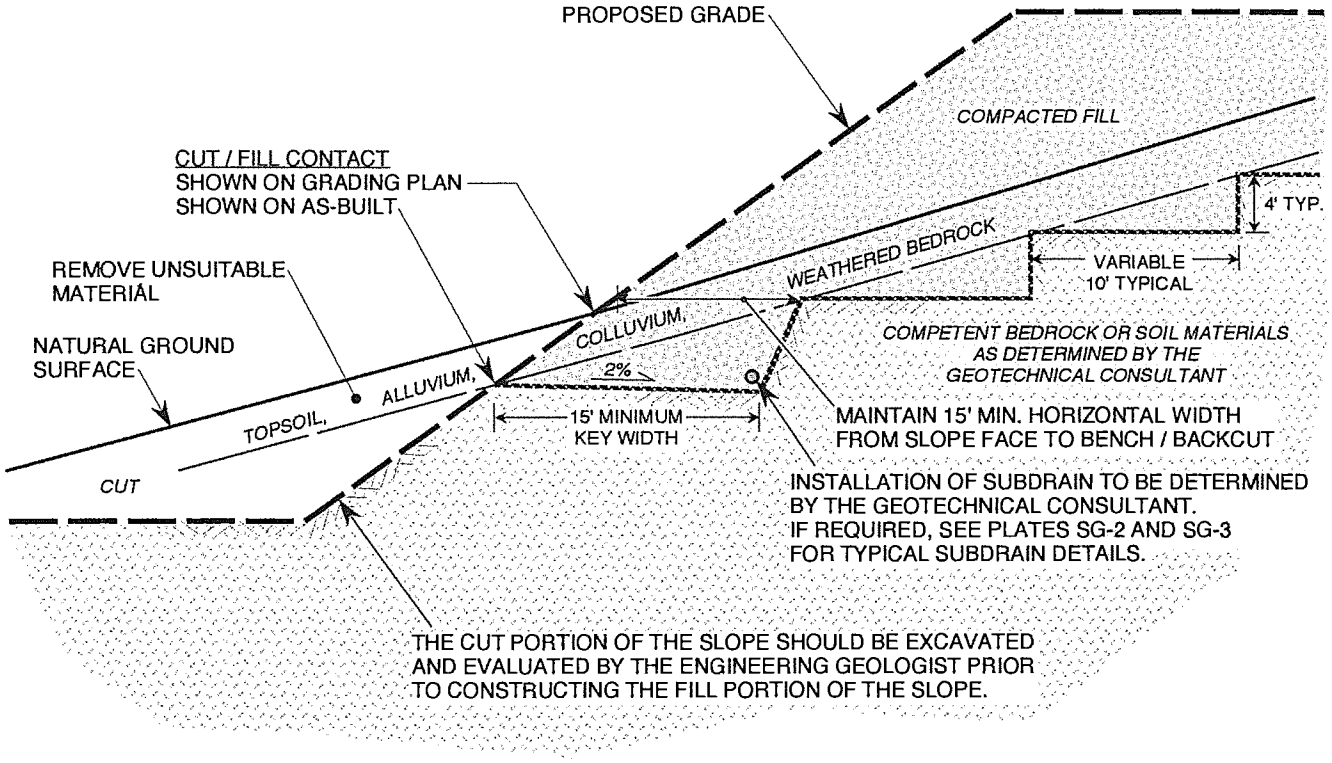
PETRA	TYPICAL ROCK DISPOSAL DETAIL	PLATE SG-4



NOTES:

1. WHERE NATURAL SLOPE GRADIENT IS 5:1 OR LESS, BENCHING IS NOT NECESSARY; HOWEVER, FILL IS NOT TO BE PLACED ON COMPRESSIBLE OR UNSUITABLE MATERIAL.
2. SOILS ENGINEER TO DETERMINE IF SUBDRAIN IS REQUIRED.

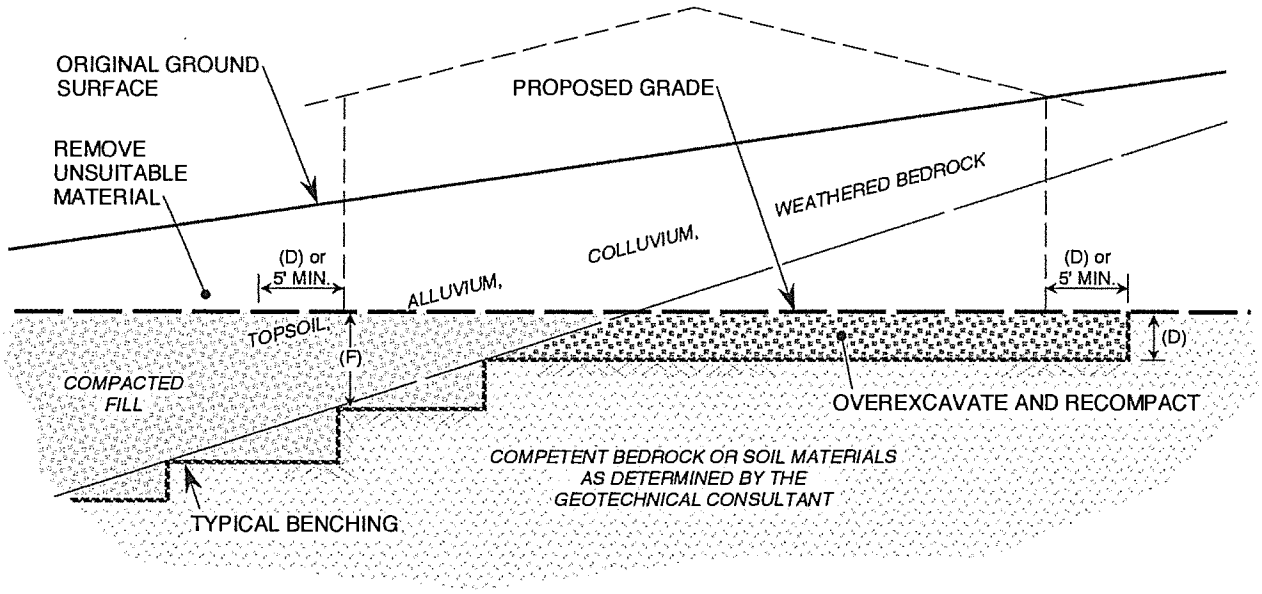
PETRA	FILL SLOPE ABOVE NATURAL SLOPE	PLATE SG-5



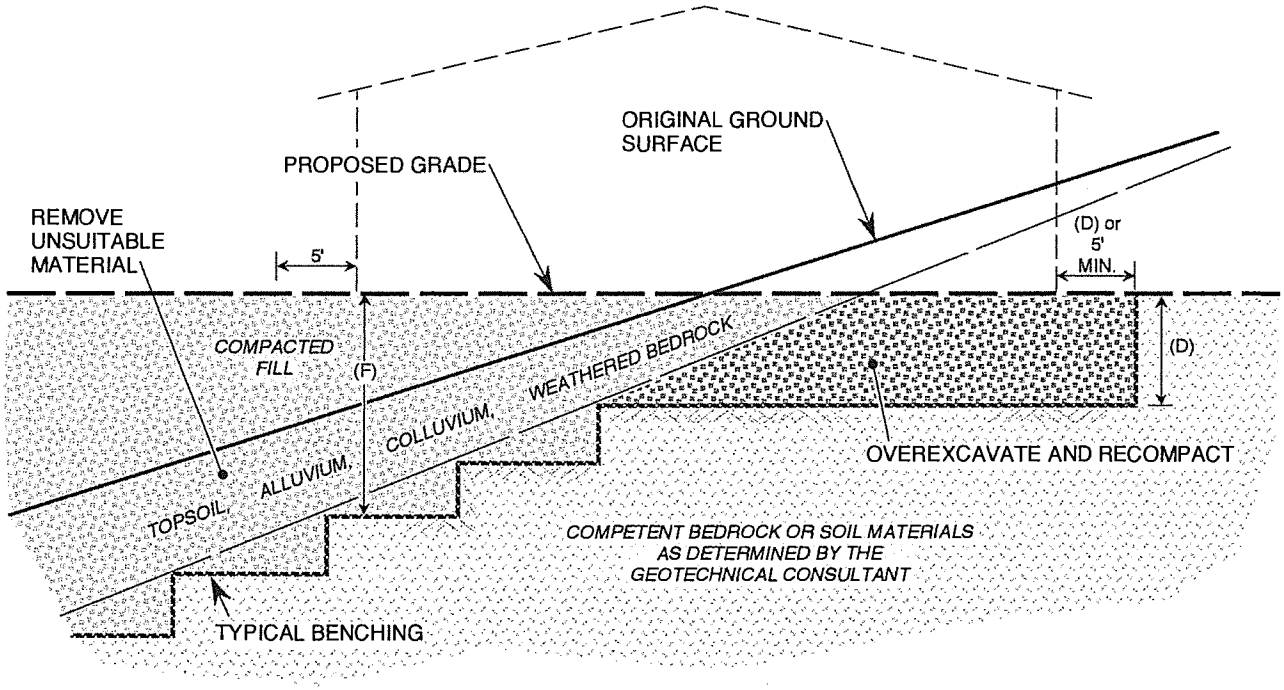
PETRA	FILL SLOPE ABOVE CUT SLOPE	PLATE SG-6

CUT LOT

UNSUITABLE MATERIAL EXPOSED IN PORTION OF CUT PAD

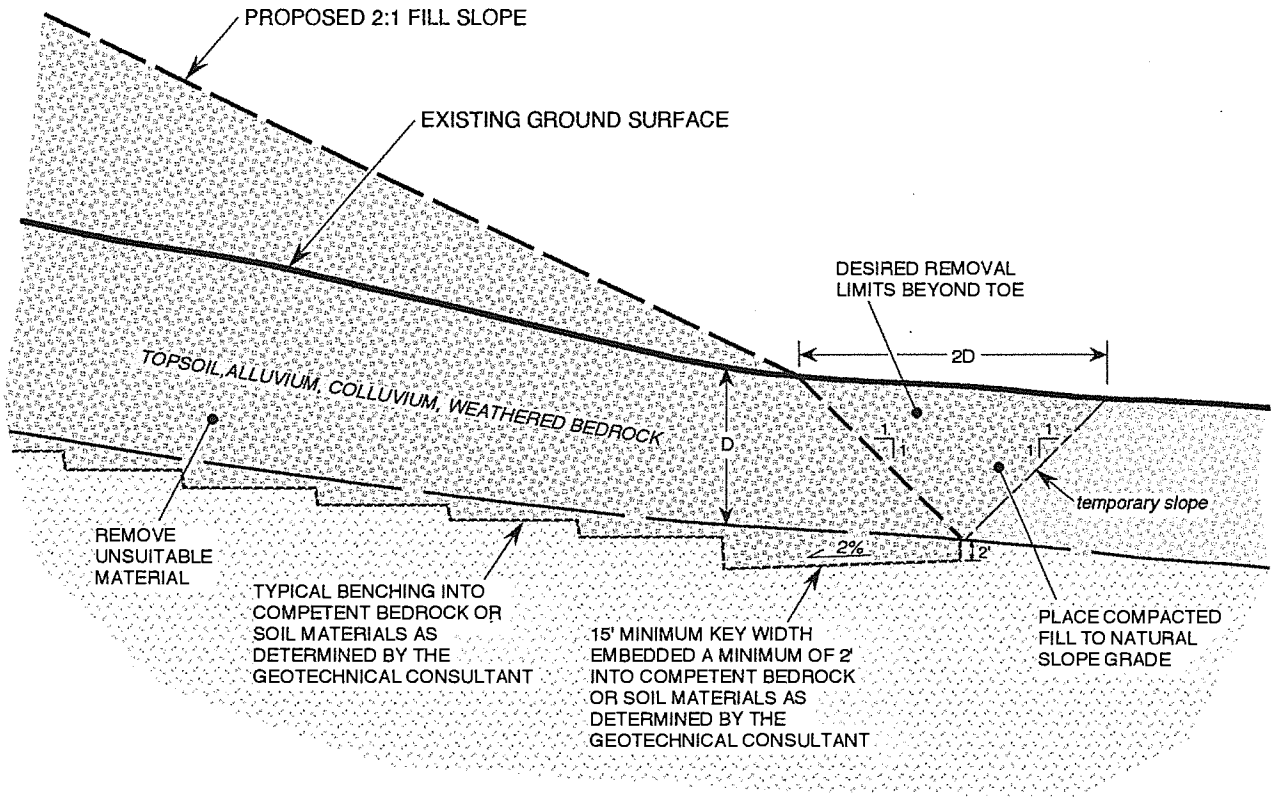


CUT-FILL TRANSITION LOT



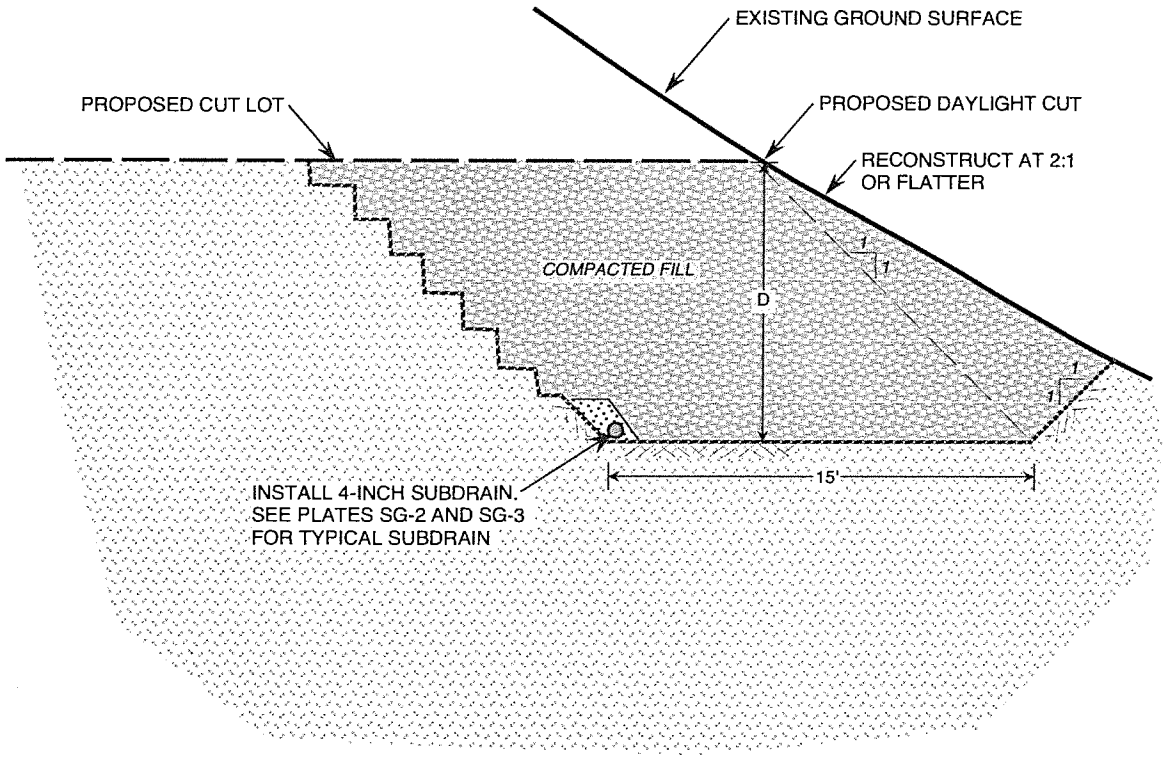
MAXIMUM FILL THICKNESS (F)	DEPTH OF OVEREXCAVATION (D)
FOOTING DEPTH TO 3 FEET	EQUAL DEPTH
3 TO 6 FEET	3 FEET
GREATER THAN 6 FEET	1/2 THE THICKNESS OF DEEPEST FILL PLACED WITHIN THE "FILL" PORTION (F) TO 15 FEET MAXIMUM

PETRA	CUT LOTS AND CUT-FILL TRANSITION LOTS	PLATE SG-7



D = RECOMMENDED DEPTH OF REMOVAL PER GEOTECHNICAL REPORT

PETRA	TYPICAL REMOVALS BEYOND TOE OF PROPOSED FILL SLOPE	PLATE SG-8



NOTE:

1. "D" SHALL BE 10 FEET MINIMUM OR AS DETERMINED BY SOILS ENGINEER.

PETRA	SHEAR KEY ON DAYLIGHT CUT LOTS	PLATE SG-9

Appendix H

Greenhouse Gas Report

N Indian Canyon/19th Ave High-Cube Warehouse

GREENHOUSE GAS ANALYSIS

CITY OF PALM SPRINGS

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DECEMBER 15, 2023

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LIST OF ABBREVIATED TERMS

%	Percent
°C	Degrees Celsius
°F	Degrees Fahrenheit
(1)	Reference
2017 Scoping Plan	Final 2017 Scoping Plan Update
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1881	California Water Conservation Landscaping Act of 2006
Annex I	Industrialized Nations
APA	Administrative Procedure Act
AQIA	*N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis*
BAU	Business as Usual
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
$C_2H_2F_4$	Tetrafluroethane
$C_2H_4F_2$	Ethylidene Fluoride
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CBSC	California Building Standards Commission
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CEQA Guidelines	*2019 CEQA Statute and Guidelines*
CDFA	California Department of Food and Agriculture
CF_4	Tetrafluoromethane

CFC	Chlorofluorocarbons
CFC-113	Trichlorotrifluoroethane
CH_4	Methane
City	City of Palm Springs
CNRA	California Natural Resources Agency
CNRA 2009	*2009 California Climate Adaptation Strategy*
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Convention	United Nation's Framework Convention on Climate Change
COP	Conference of the Parties
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
DOF	Department of Finance
DWR	Department of Water Resources
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
EV	Electric Vehicle
FED	Functional Equivalent Document
GCC	Global Climate Change
Gg	Gigagram
GHGA	Greenhouse Gas Analysis
GO-Biz	Governor's Office of Business and Economic Development
gpd	Gallons Per Day
gpm	Gallons Per Minute
GWP	Global Warming Potential
H_2O	Water
HFC	Hydrofluorocarbons
HDT	Heavy-Duty Trucks
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	1,1-difluoroethane
HHDT	Heavy-Heavy-Duty Trucks
hp	Horsepower
IBANK	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
ISO	Independent System Operator
ITE	Institute of Transportation Engineers

kWh	Kilowatt Hours
lbs	Pounds
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard or Executive Order S-01-07
LDA	Light-Duty Auto
LDT1/LDT2	Light-Duty Trucks
LEV III	Low-Emission Vehicle
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LULUCF	Land-Use, Land-Use Change and Forestry
MARB/IPA	March Air Reserve Base/Inland Port Airport
MCY	Motorcycles
MD	Medium Duty
MDT	Medium-Duty Trucks
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Tucks
MM	Mitigation Measures
MMR	Mandatory Reporting Rule
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
mpg	Miles Per Gallon
MPOs	Metropolitan Planning Organizations
$MMTCO_2e/yr$	Million Metric Ton of Carbon Dioxide Equivalent Per Year
MT/yr	Metric Tons Per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
$MTCO_2e/yr$	Metric Ton of Carbon Dioxide Equivalent Per Year
MW	Megawatts
MWh	Megawatts Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N_2O	Nitrous Oxide
NDC	Nationally Determined Contributions
NF_3	Nitrogen Trifluoride
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO_X	Nitrogen Oxides
Non-Annex I	Developing Nations
OAL	Office of Administrative Law

OPR	Office of Planning and Research
PFC	Perfluorocarbons
ppb	Parts Per Billion
ppm	Parts Per Million
ppt	Parts Per Trillion
Project	N Indian Canyon/19th Ave High-Cube Warehouse
RMC	Riverside Municipal Code
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient Vehicles Rule
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies
SB 1078	Renewable Portfolio Standards
SB 1368	Statewide Retail Provider Emissions Performance Standards
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
Scoping Plan	California Air Resources Board Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
sf	Square Feet
SF_6	Sulfur Hexaflouride
SGC	Strategic Growth Council
SHGC	Solar Heat Gain Coefficient
SLPS	Short-Lived Climate Pollutant Strategy
SP	Service Population
SWCRB	State Water Resources Control Board
TA	*N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis*
TDM	Transportation Demand Measures
Title 20	Appliance Energy Efficiency Standards
Title 24	California Building Code
U.N.	United Nations
U.S.	United States
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	Urban Emissions

UTR	Utility Tractors
VFP	Vehicle Fueling Positions
VMT	Vehicle Miles Traveled
WCI	Western Climate Initiative
WRCOG	Western Riverside Council of Governments
WRI	World Resources Institute
ZE/NZE	Zero and Near-Zero Emissions
ZEV	Zero-Emissions Vehicles

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *N Indian Canyon/19th Ave High-Cube Warehouse Greenhouse Gas Analysis* (GHGA) is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines)* (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings		
		Unmitigated	Mitigation Measure	Mitigated
GHG Impact #1: Would the Project generate GHG emissions either directly or indirectly, that may have a significant impact on the environment?	3.7	*Potentially Significant*	*MM GHG-1*	*Less Than Significant*
GHG Impact #2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	3.7	*Potentially Significant*	*MM GHG-1*	*Less Than Significant*

ES.2 REGULATORY REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the South Coast Air Quality Management District (SCAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill (SB) 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations (CCR)) and CALGreen standards. Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10 percent (%) less by 2020 (7).

- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010, to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (SB 1078 – also referred to as RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20% by 2010 and 33% by 2020 (10).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (11).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS, and therefore are accounted for in the Project's emission calculations.

ES.3 COUNTY OF RIVERSIDE CLIMATE ACTION PLAN

To evaluate consistency with the CAP Update, the County has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation or project design features (collectively "features") are assigned point values that correspond to the minimum GHG emissions reduction that would result from each feature. Projects that yield at least 100 points are considered to be consistent with the GHG emissions reduction quantities anticipated in the County's GHG Technical Report and support the GHG emissions reduction targets established under the CAP Update. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs would be considered less-than-significant.

MM GHG-1

Pursuant to MM GHG-1, the Project final plans and designs would conform to provisions of the CAP Update through implementation of the Screening Table Measures listed at Table ES-2.

The Project shall implement Screening Table Measures providing for a minimum 100 points per the County Screening Tables. The Project would be consistent with the CAP Update's requirement to achieve at least 100 points and thus the Project is considered to have a less than significant individual and cumulatively considerable impact on GHG emissions. The County shall verify incorporation of the identified Screening Table Measures within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of the identified Screening Table Measures prior to the issuance of Certificate(s) of Occupancy. As shown on table ES-2, the Project would yield 274

points which is more than double the required 100 points. The Project would therefore be consistent with the CAP and a less than significant imapct is expected.

TABLE ES-2: CAP CONSISTENCY – COMMERCIAL/INDUSTRIAL LAND USE

Feature	Description	Points
EE10.A.1 Insulation	Modestly Enhance Insulation (walls R-13, roof/attic R-38)	9
EE10.A.2 Windows	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	4
EE10.A.3 Cool Roofs	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	7
EE10.A.4 Air Infiltration	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	7
EE10.B.1 Heating/Cooling Distribution System	Enhanced Duct Insulation (R-8)	6
EE10.B.2 Space Heating/Cooling Equipment	Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF)	4
EE10B.4 Water Heaters	High Efficiency Water Heater (0.72 Energy Factor)	10
EE10.B.6 Artificial Lighting	Efficient Lights (25% of in-unit fixtures considered high efficiency. High efficiency is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)	5
EE10.B.7 Appliances	Energy Star Commercial Refrigerator (new) Energy Star Commercial Dishwasher (new)	4
EE10.C.1 Building Placement	North/south alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	4
EE10.C.2 Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6
CE1.B.1 Photovoltaic	30 percent of the power needs of the project	8
W2.D.1 Water Efficient Landscaping	Only low water using plants. Only California Native landscape that requires no or only supplemental irrigation.	8

Feature	Description	Points
W2.D.2 Water Efficient Irrigation Systems	Low precipitation spray heads< .75”/hr or drip irrigation. Weather based irrigation control systems combined with drip irrigation (demonstrate 20% reduced water)	4
W2.E.2 Toilets	Water Efficient Toilets/Urinals (1.5 gpm)	3
W2.E.3 Faucets	Water Efficient faucets (1.28 gpm)	2
W2.E.4 Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	2
W2.F.1 Recycled Water	Graywater (purple pipe) irrigation system on site	5
T4.B.1 Electric Vehicle Recharging	Install EV charging stations in garages/parking areas	176
	TOTAL POINTS EARNED BY COMMERCIAL/INDUSTRIAL PROJECT	***274***

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1 INTRODUCTION

This report presents the results of the GHGA prepared by Urban Crossroads, Inc., for the proposed N Indian Canyon/19th Ave High-Cube Warehouse (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

The proposed N Indian Canyon/19th Ave High-Cube Warehouse Project is located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet. It is anticipated that the Project would be fully developed by year 2025. The preliminary site plan for the proposed Project is shown on Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE (GCC)

GCC is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GHGS

2.3.1 GHGS AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 3-1 later in this report) because these gases are the primary contributors to GCC from development projects.

Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GHGS

GHGs	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop would continue is	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

GHGs	Description	Sources	Health Effects
	unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (12).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (13).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (14).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (15).

GHGs	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (16).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to elevated levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (17).

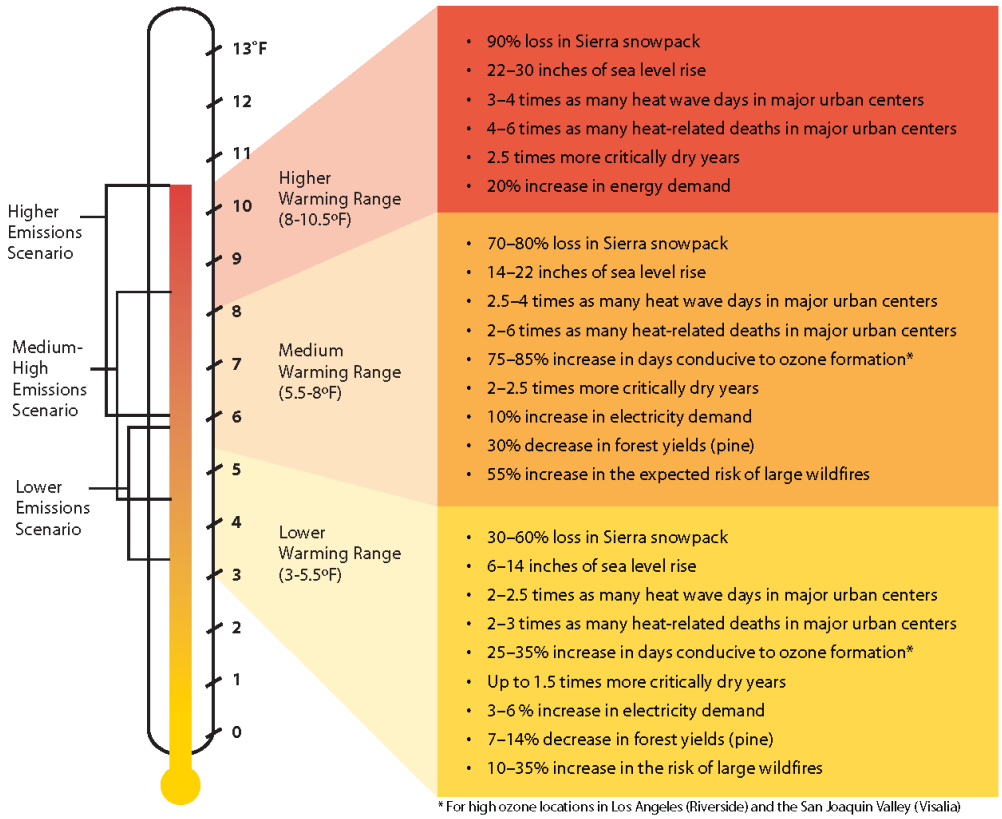
GHGs	Description	Sources	Health Effects
		bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (17).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs would remain in the atmosphere for over 100 years (18).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

GHGs	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (19). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

GHGs	Description	Sources	Health Effects
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (20).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (21).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport those higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change would likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (22). Exhibit 2-A presents the potential impacts of global warming (23).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas cause over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the 6th Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 25,200 for SF_6 (24).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)
		6th Assessment Report
CO_2	Multiple	1
CH_4	12 .4	28
N_2O	121	273
HFC-23	222	14,600
HFC-134a	13.4	1,526
HFC-152a	1.5	164
SF_6	3,200	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2022

2.5 GHG EMISSIONS INVENTORIES

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2020. Based on the latest available data, the sum of these emissions totaled approximately 28,026,643 gigagram (Gg) CO_2e[1] (25) (26) as summarized on Table 2-3.

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2020 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014 and 2016, respectively.

2.5.2 UNITED STATES

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2020.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [2]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	5,981,354
European Union (27-member countries)	3,706,110
India	2,839,420
Russian Federation	2,051,437
Japan	1,148,122
Total	**28,026,643**

2.5.3 STATE OF CALIFORNIA

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total (17). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 million metric tons of CO_2e per year ($MMTCO_2e/yr$) or 369,200 Gg CO_2e (6.17% of the total United States GHG emissions) (27).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

2.6.1 PUBLIC HEALTH

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. Based on *Our Changing Climate Assessing the Risks to California by the California Climate Change Center*, large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced (28).

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a

[2] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

significant increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

2.6.2 WATER RESOURCES

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

2.6.3 AGRICULTURE

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

2.6.4 FORESTS AND LANDSCAPES

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

2.6.5 RISING SEA LEVELS

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 REGULATORY SETTING

2.7.1 INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

UNITED NATION'S FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

INTERNATIONAL CLIMATE CHANGE TREATIES

The Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the UN Climate Change Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings gradually gained consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they would "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly would not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (29).

Following President Biden's day one executive order, the United States officially rejoined the landmark Paris Agreement on February 19, 2021, positioning the country to once again be part of the global climate solution. Meanwhile, city, state, business, and civic leaders across the country and around the world have been ramping up efforts to drive the clean energy advances needed to meet the goals of the agreement and put the brakes on dangerous climate change.

2.7.2 NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG ENDANGERMENT

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned

decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (30).

CLEAN VEHICLES

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if

accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY 2022-2025 GHG standards are not appropriate and should be revised (31). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022-2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend existing Corporate Average Fuel Economy (CAFE) and tailpipe CO_2 standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO_2 emissions standards by 1.5% each year through model year 2026 (32). On December 21, 2021, after reviewing all the public comments submitted on NHTSA's April 2021 Notice of Proposed Rulemaking, NHTSA finalizes the CAFE Preemption rulemaking to withdraw its portions of the so-called SAFE I Rule. The final rule concludes that the SAFE I Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that the SAFE I Rule will no longer form an improper barrier to states exploring creative solutions to address their local communities' environmental and public health challenges (33).

On March 31, 2022, NHTSA finalized CAFE standards for MY 2024-2026. The standards for passenger cars and light trucks for MYs 2024-2025 were increased at a rate of 8% per year and then increased at a rate of 10% per year for MY 2026 vehicles. NHTSA currently projects that the revised standards would require an industry fleet-wide average of roughly 49 mpg in MY 2026 and would reduce average fuel outlays over the lifetimes of affected vehicles that provide consumers hundreds of dollars in net savings. These standards are directly responsive to the agency's statutory mandate to improve energy conservation and reduce the nation's energy dependence on foreign sources (34).

MANDATORY REPORTING OF GHGS

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

NEW SOURCE REVIEW

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V

Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities would be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources would be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

STANDARDS OF PERFORMANCE FOR GHG EMISSIONS FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO_2 per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016, the Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.

On January 19, 2021, the D.C. Circuit Court of Appeals ruled that the EPA's ACE Rule for GHG emissions from power plants rested on an erroneous interpretation of the CAA that barred EPA from considering measures beyond those that apply at and to an individual source. The court therefore vacated and remanded the ACE Rule and adopted a replacement rule which regulates CO2 emissions from existing power plants, potentially again considering generation shifting and other measures to more aggressively target power sector emissions.

CAP-AND-TRADE

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N_2O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and in 2020 has retained all participating states.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32 requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

SMARTWAY PROGRAM

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (35):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs would have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped

with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10% or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions, and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel would eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

EXECUTIVE ORDER 13990

On January 20, 2021, Federal agencies were directed to immediately review, and take action to address, Federal regulations promulgated and other actions taken during the last 4 years that conflict with national objectives to improve public health and the environment; ensure access to clean air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce greenhouse gas emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and employment.

2.7.3 CALIFORNIA

2.7.3.1 LEGISLATIVE ACTIONS TO REDUCE GHGS

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 1881

The Water Conservation in Landscaping Act of 2006 requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

SB 1368

California SB 1368 adds Sections 8340 and 8341 to the Public Utilities Code (effective January 1, 2007) with the intent "to prevent long-term investments in power plants with GHG emissions in excess of those produced by a combined-cycle natural gas power plant" with the aim of "reducing emissions of GHGs from the state's electricity consumption, not just the state's electricity production." SB 1368 provides a mechanism for reducing the GHG emissions of electricity providers, both in-state and out-of-state, thereby assisting CARB in meeting its mandate under AB 32, the Global Warming Solutions Act of 2006.

AB 32

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met[3]). GHGs as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, NF_3, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

SB 375

On September 30, 2008, SB 375 was signed by Governor Schwarzenegger. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California would not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their

[3] Based upon the 2019 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2017 GHG emissions period, California emitted an average 424.1 $MMTCO_2e$ (53). This is less than the 2020 emissions target of 431 $MMTCO_2e$.

regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 requires MPOs to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the MMs required by an applicable prior environmental document.

AB 1493 - Pavley Fuel Efficiency Standards

Enacted on July 22, 2002, California AB 1493, also known as the Pavley Fuel Efficiency Standards, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 MY. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation would reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules would clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles (EV) and hydrogen fuel cell cars. The package would also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and Governor Jerry Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

SB 32

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (11).

2017 CARB SCOPING PLAN

In November 2017, CARB released the *Final 2017 Scoping Plan Update* (*2017 Scoping Plan*), which identifies the State's post-2020 reduction strategy. The *2017 Scoping Plan* reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The *2017 Scoping Plan* establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030 (36).

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land

use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the *2017 Scoping Plan* and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could

achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year ($MTCO_2e$/yr), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (37) (38).

CAP-AND-TRADE PROGRAM

The *2017 Scoping Plan* identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 $MTCO_2e$/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year (39).

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."* (40)

The Cap-and-Trade Program covers approximately 80% of California's GHG emissions (36). The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

2022 CARB SCOPING PLAN

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (41). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan's executive summary:

> "The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution."

> "[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies."

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.
- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "…focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

Additionally on Page 21 in Appendix D, CARB states: "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

2.7.3.2 EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

EXECUTIVE ORDER S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

EXECUTIVE ORDER S-01-07 (LCFS)

Governor Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against CARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify, and streamline program operations, and enhance enforcement. On November 16, 2015, the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector (42).

EXECUTIVE ORDER S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the *2009 California Climate Adaptation Strategy* (*CNRA 2009*) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER B-30-15

On April 29, 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor's executive order aligned California's GHG reduction targets with those of leading international governments ahead of the U.N. Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the *2017 Scoping Plan* to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable as to local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

EXECUTIVE ORDER B-55-18 AND SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.7.3.3 CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

TITLE 20 CCR SECTIONS 1601 ET SEQ. – APPLIANCE EFFICIENCY REGULATIONS

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state

and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

TITLE 24 CCR PART 6 – CALIFORNIA ENERGY CODE

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods.

TITLE 24 CCR PART 11 – CALIFORNIA GREEN BUILDING STANDARDS CODE

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (43). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (44):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).

- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

CARB REFRIGERANT MANAGEMENT PROGRAM

CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

TRACTOR-TRAILER GHG REGULATION

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors MY 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

PHASE I AND 2 HEAVY-DUTY VEHICLE GHG STANDARDS

In September 2011, CARB has adopted a regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer GHG Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements began with MY 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve

further GHG reductions for 2018 and later MY HDT vehicles, including trailers. The EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

SB 97 AND THE CEQA GUIDELINES UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)."

In 2012, Public Resources Code Section 21083.05 was amended to state:

> *"The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code."*

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added the *CEQA Guidelines* and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (1).

2.7.4 REGIONAL

The project is within the SCAB, which is under the jurisdiction of the SCAQMD.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, which could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and commercial land use: 3,000 $MTCO_2e$/yr
    - Industrial land use: 10,000 $MTCO_2e$/yr
    - Based on land use type: residential: 3,500 $MTCO_2e$/yr; commercial: 1,400 $MTCO_2e$/yr; or mixed use: 3,000 $MTCO_2e$/yr
- Tier 4 has the following options:
    - Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$ per SP per year for projects and 6.6 $MTCO_2e$ per SP per year for plans;
    - Option 3, 2035 target: 3.0 $MTCO_2e$ per SP per year for projects and 4.1 $MTCO_2e$ per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD would fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

2.8 COUNTY OF RIVERSIDE CAP

The County of Riverside Climate Action Plan (CAP) was designed under the premise that the County of Riverside, and the community it represents, is uniquely capable of addressing emissions associated with sources under the County of Riverside jurisdiction, and that the County of Riverside emission reduction efforts should coordinate with the state strategies of reducing emissions in order to accomplish these reductions in an efficient and cost-effective manner.

The CAP Update (November 2019) establishes GHG emission reduction programs and regulations that correlate with and support evolving State GHG emissions reduction goals and strategies. The CAP Update includes reduction targets for year 2030 and year 2050. These reduction targets require the County of Riverside to reduce emissions by at least 525,511 MT CO_2e below the adjusted BAU (ABAU) scenario by 2030 and at least 2,982,948 MT CO_2e below the ABAU scenario by 2050 (45).

To evaluate consistency with the CAP Update, the County of Riverside has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation or project design features (collectively

"features") are assigned point values that correspond to the minimum GHG emissions reduction that would result from each feature. Projects that yield at least 100 poin ts are considered to be consistent with the GHG emissions reduction quantities anticipated in the County of Riverside GHG Technical Report and support the GHG emissions reduction targets established under the CAP Update. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases would be considered less-than-significant

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3 PROJECT GHG IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following sections.

3.2 SIGNIFICANCE THRESHOLDS

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 CCR of Regulations §§15000, et seq.). Based on these significance criteria, a project would result in a significant impact related to GHG if it would (46):

- GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The evaluation of an impact under CEQA requires measuring data from a project against both existing conditions and a "threshold of significance." For establishing significance thresholds, the Office of Planning and Research's amendments to the CEQA Guidelines Section 15064.7(c) state "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

CEQA Guidelines Section 15064.4(a) further states, ". . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance-based standards."

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies,

provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

4.2.1 THRESHOLDS OF SIGNIFICANCE

As noted above in Section 2.8, the County of Riverside CAP Update provides a menu of options for energy efficiency, renewable energy, water conservation measures, and additional measures that provide predictable GHG reductions. Each option within the screening tables includes point values based upon the GHG reduction that each measure can achieve relative to a development project. Projects that achieve at least 100 points from the screening tables are determined to have provided a fair-share contribution of GHG reductions and, therefore, are considered consistent with the County of Riverside CAP Update. Because the County of Riverside CAP Update addresses GHG emissions reductions and is consistent with the requirements of AB 32, SB 32, and international efforts to reduce GHG emissions, Projects that comply with the CAP Update would have a less than significant GHG impact.

3.3 MODELS EMPLOYED TO ANALYZE GHGS

3.3.1 CALEEMOD

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from MMs (47). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 3.1. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water, refrigerant.

3.4 LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (48). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood, or documented, and would be challenging to mitigate (49). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

3.5 CONSTRUCTION EMISSIONS

Project construction actvities would generate CO_2 and CH_4 emissions The report *N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis Report* (AQIA) contains detailed information regarding Project construction activities (50). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

3.5.1 CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in January 2024 and completed in April 2025. The construction schedule utilized in the analysis, shown in Table 3-1, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[4]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

TABLE 3-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	1/8/2024	2/2/2024	20
Grading	2/5/2024	5/17/2024	75
Building Construction	4/5/2024	5/12/2025	287
Paving	3/3/2025	4/11/2025	30
Architectural Coating	2/7/2025	4/24/2025	55

3.5.2 CONSTRUCTION EQUIPMENT

A summary of construction equipment by phase is provided at Table 3-2. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-2 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

[4] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 "OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	2	8
	Crawler Tractors	2	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	2	8
	Forklifts	6	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

3.5.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions (51). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-3.

TABLE 3-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e[5]
2024	1,388.83	0.05	0.06	1.02	1,408.76
2025	576.29	0.02	0.03	0.48	584.93
Total GHG Emissions	1,965.11	0.07	0.09	1.50	1,993.69
Amortized Construction Emissions	**65.50**	**0.00**	**0.00**	**0.05**	**66.46**

Source CalEEMod annual construction-source emissions are presented in Appendix 3.1.

[5] CalEEMod reports the most common GHGs emitted which include CO_2, CH_4, N_2O and R. These GHGs are then converted into the CO_2e by multiplying the individual GHG by the GWP.

3.6 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste

3.6.1 AREA SOURCE EMISSIONS

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.6.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance. Based on information provided by the Project applicant, the site is not expected to utilize natural gas for the building envelope, and therefore would not generate any emissions from direct energy consumption. Electricity usage associated with the Project was calculated based on CalEEMod defaults

3.6.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis* were utilized in this analysis (52). Per the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis*, the proposed Project is expected to generate approximately 1,574 total trips per day, which include 1,294 passenger car trips per day and 280 truck trips per day.

APPROACH FOR ANALYSIS OF THE PROJECT

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses. For the proposed industrial uses, it is important to note that although the *N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis* does not breakdown passenger cars by type, this analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[6] & LDT2[7]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

TABLE 3-4: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Fulfillment Center Warehouse	50.75%	4.55%	25.13%	17.58%	1.99%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *N Indian Canyon/19th Ave High-Cube Warehouse Trip Generation Assessment*. The trip length function for the proposed industrial building use has been calculated to 35.51 miles and an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks.

In order to be consistent with the *N Indian Canyon/19th Ave High-Cube Warehouse Trip Generation Assessment*, trucks are broken down by truck type. The truck fleet mix is estimated by apportioning the trip rates for each truck type based on information provided in the *N Indian Canyon/19th Ave High-Cube Warehouse Trip Generation Assessment*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[8] & LHDT2 [9])/2-axle, Medium-Heavy-Duty Trucks (MHD)/3-axle, and Heavy-Heavy-Duty Trucks (HHD)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

[6] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[7] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

[8] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[9] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

TABLE 3-5: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Fulfillment Center Warehouse	8.21%	2.50%	10.71%	78.57%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

3.6.4 ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to four (4) 200 horsepower (hp), natural-gas powered cargo handling equipment – port tractors operating at 4 hours a day[10] for 365 days of the year.

3.6.5 WATER SUPPLY, TREATMENT AND DISTRIBUTION

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were used.

3.6.6 SOLID WASTE

Industrial land uses will result in the generation and disposal of solid waste. A percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by CalEEMod using default parameters.

3.6.7 REFRIGERANTS

Air conditioning (A/C) equipment associated with the building are anticipated to generate GHG emissions. CalEEMod automatically generates a default A/C and refrigeration equipment inventory for each project land use subtype based on industry data from the USEPA (2016b). CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. Note that CalEEMod does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime. Per 17 CCR 95371, new facilities with refrigeration equipment containing more than 50 pounds of refrigerant are prohibited from

[10] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

utilizing refrigerants with a GWP of 150 or greater as of January 1, 2022. GHG emissions associated with refrigerants were calculated by CalEEMod using default parameters.

3.6.8 EMISSIONS SUMMARY

PROJECT EMISSIONS

The annual GHG emissions associated with the Project are summarized in Table 3-6. As shown in Table 3-6, construction and operation of the Project would generate approximately 9,438.47 $MTCO_2e$/yr.

TABLE 3-6: PROJECT GHG EMISSIONS

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e
Amortized Construction Emissions	65.50	2.33E-03	2.83E-03	4.99E-02	66.46
Mobile Source	7,828.68	0.12	0.72	10.25	8,056.38
Area Source	10.80	0.00	0.00	0.00	10.84
Energy Source	580.86	0.05	0.01	0.00	584.22
Water Usage	182.34	5.57	0.13	0.00	361.51
Waste	62.01	6.20	0.00	0.00	216.96
On-site equipment	0.00	0.00	0.00	0.00	142.10
Total CO_2e (All Sources)	**9,438.47**				

Source: CalEEMod output, See Appendix 3.1 for detailed model outputs.

3.7 GHG EMISSIONS FINDINGS AND RECOMMENDATIONS

GHG Impact #1: The Project would have the potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment.

The purpose of the CAP Update is to provide guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County. To address the state's requirement to reduce GHG emissions, the County prepared its CAP Update with the goal of reducing GHG emissions within the County by 49% below "existing" 2008 levels by the year 2030. The County's target is consistent with the AB 32 target and ensures that the County will be providing GHG reductions locally that will complement state efforts to reduce GHG emissions. The County's target is also consistent with the SB 32 target that expands on AB 32 to reduce GHG emissions to 40% below the 1990 levels by 2030. Because the County's CAP Update addresses GHG emissions reductions and is consistent with the requirements of AB 32, SB 32, and international efforts to reduce GHG emissions, compliance with the CAP Update fulfills the description of mitigation found in the State CEQA Guidelines.

The CAP identifies a two-step approach in evaluating GHG emissions. First, a screening threshold of 3,000 $MTCO_2e$/yr is used to determine if additional analysis is required. Projects that exceed

the 3,000 $MTCO_2e$/yr will be required to demonstrate and achieve a 25% reduction minimum of GHG emissions from a 2011-year level of efficiency compared to the mitigated Project buildout year or demonstrate at least 100 points (equivalent to an approximate 15% reduction in GHG emissions) through the CAP Screening Tables.

As shown on Table 3-4, the Project will result in approximately 9,438.47 $MTCO_2e$/yr; the proposed Project would exceed the County's screening threshold of 3,000 $MTCO_2e$/yr. Thus, the Project would have the potential to result in a cumulatively considerable impact with respect to GHG emissions. As previously stated, since the Project exceeds the 3,000 $MTCO_2e$/yr threshold, the Project is required to demonstrate compliance with the County's CAP Screening Tables and achieve a minimum 100 points as identified in the CAP. Mitigation Measure GHG-1 is summarized as follows:

MM GHG-1

The Project shall implement Screening Table Measures providing for a minimum 100 points per the County Screening Tables. The Project would be consistent with the CAP Update's requirement to achieve at least 100 points and thus the Project is considered to have a less than significant individual and cumulatively considerable impact on GHG emissions. The County shall verify incorporation of the identified Screening Table Measures within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of the identified Screening Table Measures prior to the issuance of Certificate(s) of Occupancy.

The implemented Screening Table Measures and compliance with CAP Update Measure R2-CE1 would achieve a minimum of 100 Screening Table Points and would thereby ensure that the Project would achieve GHG emissions levels and GHG emissions reductions targets consistent with those identified in the County CAP Update. As shown previously on table ES-2, the Project would yield 274 points which is more than double the required 100 points. The Project would therefore be consistent with the CAP and a less than significant imapct is expected. On this basis, with implementation of Mitigation Measures GHG-1, the Project would not generate direct or indirect GHG emissions that would result in a significant impact on the environment and would result in a less than significant impact.

GHG Impact #2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

2022 SCOPING PLAN CONSISTENCY

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-

use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. Additionally, the Project includes design features related to water and solid conservation that will further reduce Project GHG emissions. As such, the Project would be consistent with the 2022 Scoping Plan.

CONSISTENCY WITH THE COUNTY OF RIVERSIDE CAP

The purpose of the County of Riverside CAP Update is to provide guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County. Because the County of Riverside CAP Update addresses GHG emissions reductions and is consistent with the requirements of AB 32, SB 32, and international efforts to reduce GHG emissions, compliance with the CAP Update fulfills the description of mitigation found in the State CEQA Guidelines.

Pursuant to MM GHG-1, the Project will implement Screening Table Measures providing for a minimum 100 points per the County Screening Tables. As previously shown on table ES-2, the Project would yield 274 points which is more than double the required 100 points. Since MM GHG-1 yields a minimum of 100 points, with incorporation of MM GHG-1, the Project would be consistent with the CAP Update. By achieving the 100-point minimum, the Project would be consistent with the GHG Development Review Process' requirement to achieve at least 100 points and thus the Project is considered to have a less than significant individual and cumulatively considerable impact on GHG emissions.

The Project would not have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

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4 REFERENCES

1. **Association of Environmental Professionals.** *Guidelines for Implementation of the California Environmental Quality Act.* As amended in 2018.
2. **California Air Resources Board.** Assembly Bill 32: Global Warming Solutions Act. [Online] 2006. http://www.arb.ca.gov/cc/ab32/ab32.htm.
3. **Air Resources Board.** Sustainable Communities. [Online] 2008. http://www.arb.ca.gov/cc/sb375/sb375.htm.
4. —. Clean Car Standards - Pavley, Assembly Bill 1493. [Online] September 24, 2009. http://www.arb.ca.gov/cc/ccms/ccms.htm.
5. **California Building Standards Commission.** California Building Standards Code (Title 24, California Code of Regulations). [Online] http://www.bsc.ca.gov/codes.aspx.
6. **California Energy Commission.** California Code of Regulations, TITLE 20, Division 2. [Online] September 3, 2013. http://www.energy.ca.gov/reports/title20/index.html.
7. **California Air Resources Board.** Title 17 - California Code of Regulation. [Online] 2010. http://www.arb.ca.gov/regs/regs-17.htm.
8. **California Department of Water Resources.** Updated Model Water Efficient Landscape Ordinance AB 1881. [Online] 2006. [Cited: November 13, 2013.] http://www.water.ca.gov/wateruseefficiency/landscapeordinance/updatedOrd_history.cfm.
9. **California Energy Commission.** SB 1368 Emission Performance Standards. [Online] September 29, 2006. http://www.energy.ca.gov/emission_standards/.
10. —. Renewables Portfolio Standard (RPS). [Online] 2002. http://www.energy.ca.gov/portfolio/.
11. **California Legislative Information.** Senate Bill No. 32. [Online] September 8, 2016. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.
12. **National Oceanic and Atmospheric Administration.** Greenhouse Gases - Water Vapor. *NOAA National Centers For Environmental Information.* [Online] https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php?section=watervapor.
13. **International Panel on Climate Change.** *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report.* 2007.
14. **Bennington, Bret J.** *The Carbon Cycle and Climate Change.* s.l. : Brooks/Cole. ISBN 1 3: 978-0-495-73855-8.
15. **The National Institute for Occupational Safety and Health.** Carbon Dioxide. *Centers for Disease Control and Prevention.* [Online] https://www.cdc.gov/niosh/npg/npgd0103.html.
16. **National Oceanic and Atmospheric Administration.** Greenhouse Gases - Methane. *NOAA National Centers for Environmental Information.* [Online] https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php?section=methane.
17. **World Resources Institute.** Climate Analysis Indicator Tool (CAIT). [Online] http://cait.wri.org.
18. **National Oceanic and Atmospheric Administration.** Greenhouse Gases - Chlorofluorocarbons. *NOAA National Centers For Environmental Information.* [Online] https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php?section=chlorofluorocarbons.

19. **United States Environmental Protection Agency.** Regulation for Reducting Sulfur Hexafluoride Emissions from Gas Insulated Switchgear. *Environmental Protection Agency.* [Online] May 7, 2014. https://www.epa.gov/sites/production/files/2016-02/documents/mehl-arb-presentation-2014-wkshp.pdf.

20. **World Resources Institute.** Nitrogen Trifluoride Now Required in GHG Protocol Greenhouse Gas Emissions Inventory. [Online] May 22, 2013. https://www.wri.org/blog/2013/05/nitrogen-trifluoride-now-required-ghg-protocol-greenhouse-gas-emissions-inventories.

21. **National Center for Biotechnology Information.** Nitrogen Trifluoride. *PubChem Compound Database.* [Online] https://pubchem.ncbi.nlm.nih.gov/compound/24553 .

22. **American Lung Association.** Climate Change. [Online] http://www.lung.org/our-initiatives/healthy-air/outdoor/climate-change/.

23. **Barbara H. Allen-Diaz.** Climate change affects us all. *University of California Agriculture and Natural Resources.* [Online] April 1, 2009. http://calag.ucanr.edu/Archive/?article=ca.v063n02p51.

24. **Intergovernmental Panel on Climate Change.** Climate Change 2021 The Physical Science Basis. *Climate Change 2021 The Physical Science Basis.* [Online] https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/.

25. **United Nations.** GHG Profiles - Annex I. [Online] http://di.unfccc.int/ghg_profile_annex1.

26. —. GHG Profiles - Non-Annex I. [Online] http://di.unfccc.int/ghg_profile_non_annex1.

27. **Air Resources Board.** 2022 GHG Inventory. *California Greenhouse Gas Emission Inventory 2000-2020 Edition.* [Online] [Cited: February 1, 2022.] http://www.arb.ca.gov/cc/inventory/data/data.htm.

28. **California Energy Commission.** *Our Changing Climate Assessing the Risks to California.* 2006.

29. **Center for Climate and Energy Solutions (C2ES).** Outcomes of the U.N. Climate Change Conference. *Center for Climate and Energy Solutions (C2ES).* [Online] 2015. http://www.c2es.org/international/negotiations/cop21-paris/summary.

30. **United States Environmental Protection Agency.** Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. *United States Environmental Protection Agency.* [Online] 2020. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean.

31. **Federal Register.** Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles. [Online] 2018. https://www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty.

32. **Administration, National Highway Traffic Safety.** SAFE: The Safer Affordable Fuel-Efficient 'SAFE' Vehicle Rule. *National Highway Traffic Safety Administration.* [Online] 2020. https://www.nhtsa.gov/corporate-average-fuel-economy/safe.

33. **National Highway Traffic Safety Administration.** Corporate Average Fuel Economy. [Online] https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.

34. **Department of Transportation.** Corporate Average Fuel Economy Standards for Model Years 2024-2026 Passenger Cars and Light Trucks. [Online] https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Final-Rule-Preamble_CAFE-MY-2024-2026.pdf.

35. **United States Environmental Protection Agency.** SmartWay. [Online] 2017. https://www.epa.gov/smartway/learn-about-smartway.

36. **California Air Resources Board.** California's 2017 Climate Change Scoping Plan . [Online] 2017. https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017_es.pdf.

37. **Lawrence Berkeley National Laboratory.** California's Policies Can Significantly Cut Greenhouse Gas Emissions through 2030. *Lawrence Berkeley National Laboratory.* [Online] January 22, 2015. http://newscenter.lbl.gov/2015/01/22/californias-policies-can-significantly-cut-greenhouse-gas-emissions-2030/.

38. **Ernest Orlando Lawrence Berkeley National Laboratory.** Modeling California policy impacts on greenhouse gas emissions. [Online] 2015. https://eaei.lbl.gov/sites/all/files/lbnl-7008e.pdf.

39. **California Air Resources Board.** Legal Disclaimer & User's Notice. [Online] April 2019. https://ww3.arb.ca.gov/cc/capandtrade/capandtrade/ct_reg_unofficial.pdf.

40. —. Climate Change Scoping Plan. [Online] 2014. https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

41. —. *2022 Scoping Plan for Achieving Carbon Neutrality.*

42. —. Low Carbon Fuel Standard. [Online] December 2019. https://ww3.arb.ca.gov/fuels/lcfs/lcfs.htm.

43. **California Energy Commission.** Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses. [Online] August 11, 2021. https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0.

44. **California Department of General Services.** 2022 CALGreen Code. *CALGreen.* [Online] https://codes.iccsafe.org/content/CAGBC2022P1.

45. **County of Riverside.** County of Riverside Climate Action Plan Update. [Online] November 2019. https://planning.rctlma.org/Portals/14/CAP/2019/2019_CAP_Update_Full.pdf.

46. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990. https://www.epa.gov/environmental-topics/air-topics.

47. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] May 2022. www.caleemod.com.

48. **California Natural Resources Agency.** Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97. [Online] December 2009.

49. *Minutes for the GHG CEQA Significance.* **South Coast Air Quality Managment District.** 2008.

50. **Urban Crossroads, Inc.** *N Indian Canyon/19th Ave High-Cube Warehouse Air Quality Impact Analysis Report.* 2022.

51. **South Coast Air Quality Management District.** *Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #13.* [Powerpoint] Diamond Bar : s.n., 2009.

52. **Urban Crossroads, Inc.** *N Indian Ccanyon/19th Ave High-Cube Warehouse Traffic Analysis.* 2023.

53. **California Air Resources Board.** 2019 GHG Inventory. *California Greenhouse Gas Emission Inventory 2000-2017 Edition.* [Online] [Cited: September 19, 2019.] http://www.arb.ca.gov/cc/inventory/data/data.htm.

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5 CERTIFICATIONS

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed N Indian Canyon/19th Ave High-Cube Warehouse Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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Master of Science in Environmental Studies
California State University, Fullerton • May 2010

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AEP – Association of Environmental Planners
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Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 3.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

15097 - N Indian Canyon & 19th Ave Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	15097 - N Indian Canyon & 19th Ave
Construction Start Date	1/8/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.911458, -116.546215
County	Riverside-Salton Sea
City	Palm Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5694
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	739	1000sqft	17.0	739,360	0.00	—	—	—
Parking Lot	787	Space	7.08	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.5	Acre	12.5	0.00	0.00	—	—	—
User Defined Industrial	739	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.83	73.9	66.9	94.9	0.14	2.83	7.97	10.8	2.61	2.26	4.87	—	20,576	20,576	0.72	0.77	28.8	20,853
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.93	73.4	37.6	62.2	0.09	1.71	5.85	7.20	1.58	1.83	3.01	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.74	11.3	24.8	35.8	0.05	1.01	3.40	4.42	0.94	0.94	1.87	—	8,389	8,389	0.30	0.36	6.15	8,509
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	2.06	4.52	6.53	0.01	0.19	0.62	0.81	0.17	0.17	0.34	—	1,389	1,389	0.05	0.06	1.02	1,409

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	9.83	8.40	66.9	94.9	0.14	2.83	7.97	10.8	2.61	2.26	4.87	—	20,576	20,576	0.72	0.77	28.8	20,853
2025	6.43	73.9	36.3	78.1	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	15,587	15,587	0.54	0.64	27.8	15,817
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.80	3.97	37.6	48.2	0.07	1.71	4.84	5.95	1.58	1.83	3.01	—	12,200	12,200	0.44	0.60	0.66	12,392
2025	5.93	73.4	36.7	62.2	0.09	1.36	5.85	7.20	1.25	1.40	2.66	—	14,731	14,731	0.55	0.64	0.72	14,935
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.74	3.19	24.8	35.8	0.05	1.01	3.40	4.42	0.94	0.94	1.87	—	8,389	8,389	0.30	0.36	6.15	8,509
2025	1.32	11.3	7.94	14.9	0.02	0.29	1.38	1.66	0.26	0.33	0.59	—	3,481	3,481	0.12	0.16	2.90	3,533
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.68	0.58	4.52	6.53	0.01	0.19	0.62	0.81	0.17	0.17	0.34	—	1,389	1,389	0.05	0.06	1.02	1,409
2025	0.24	2.06	1.45	2.71	< 0.005	0.05	0.25	0.30	0.05	0.06	0.11	—	576	576	0.02	0.03	0.48	585

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	29.1	35.4	166	0.55	0.76	32.8	33.6	0.71	8.41	9.12	702	60,845	61,547	72.3	5.80	164	65,248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.03	22.9	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	702	56,897	57,599	72.3	5.85	4.26	61,154
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.18	24.9	32.4	104	0.46	0.64	28.5	29.1	0.61	7.30	7.90	702	51,633	52,335	72.2	5.19	61.9	55,749
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.68	4.55	5.92	19.0	0.08	0.12	5.20	5.32	0.11	1.33	1.44	116	8,548	8,665	12.0	0.86	10.3	9,230

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.04	6.97	35.1	134	0.54	0.70	32.8	33.6	0.67	8.41	9.08	—	56,431	56,431	0.86	4.95	164	58,092
Area	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	13.8	29.1	35.4	166	0.55	0.76	32.8	33.6	0.71	8.41	9.12	702	60,845	61,547	72.3	5.80	164	65,248
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.03	5.99	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	—	52,615	52,615	0.86	5.00	4.26	54,131
Area	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529

Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	7.03	22.9	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	702	56,897	57,599	72.3	5.85	4.26	61,154
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.36	5.45	32.3	88.3	0.46	0.61	28.5	29.1	0.58	7.30	7.88	—	47,286	47,286	0.74	4.35	61.9	48,661
Area	2.82	19.5	0.13	15.9	< 0.005	0.03	—	0.03	0.02	—	0.02	—	65.2	65.2	< 0.005	< 0.005	—	65.4
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,508	3,508	0.33	0.04	—	3,529
Water	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Waste	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Total	9.18	24.9	32.4	104	0.46	0.64	28.5	29.1	0.61	7.30	7.90	702	51,633	52,335	72.2	5.19	61.9	55,749
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.00	5.90	16.1	0.08	0.11	5.20	5.31	0.11	1.33	1.44	—	7,829	7,829	0.12	0.72	10.3	8,056
Area	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	581	581	0.05	0.01	—	584
Water	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Waste	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Total	1.68	4.55	5.92	19.0	0.08	0.12	5.20	5.32	0.11	1.33	1.44	116	8,548	8,665	12.0	0.86	10.3	9,230

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.17	2.66	25.5	21.0	0.03	1.28	—	1.28	1.18	—	1.18	—	3,335	3,335	0.14	0.03	—	3,347
Dust From Material Movement	—	—	—	—	—	—	3.68	3.68	—	1.78	1.78	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.40	1.15	< 0.005	0.07	—	0.07	0.06	—	0.06	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.01	0.01	0.23	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.01	201
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	36.6	30.5	0.06	1.70	—	1.70	1.56	—	1.56	—	6,597	6,597	0.27	0.05	—	6,619
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	36.6	30.5	0.06	1.70	—	1.70	1.56	—	1.56	—	6,597	6,597	0.27	0.05	—	6,619
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.79	7.52	6.27	0.01	0.35	—	0.35	0.32	—	0.32	—	1,356	1,356	0.05	0.01	—	1,360
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.37	1.14	< 0.005	0.06	—	0.06	0.06	—	0.06	—	224	224	0.01	< 0.005	—	225
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	2.07	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	304	304	0.01	0.01	1.13	308

Vendor	0.04	0.03	0.84	0.38	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	772	772	0.01	0.11	2.10	807
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.12	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	261
Vendor	0.04	0.03	0.91	0.39	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	773	773	0.01	0.11	0.05	805
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	56.7	56.7	< 0.005	< 0.005	0.10	57.5
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	159	159	< 0.005	0.02	0.19	166
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.39	9.39	< 0.005	< 0.005	0.02	9.52
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.3	26.3	< 0.005	< 0.005	0.03	27.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	12.9	15.1	0.03	0.57	—	0.57	0.52	—	0.52	—	2,790	2,790	0.11	0.02	—	2,799
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.36	2.75	< 0.005	0.10	—	0.10	0.10	—	0.10	—	462	462	0.02	< 0.005	—	463
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.87	1.72	1.77	32.1	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,714	4,714	0.18	0.15	17.6	4,782
Vendor	0.15	0.11	3.19	1.44	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,929	2,929	0.03	0.41	7.96	3,059
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.57	1.28	1.89	18.3	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,008	4,008	0.20	0.15	0.45	4,059
Vendor	0.14	0.10	3.44	1.47	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,931	2,931	0.03	0.41	0.21	3,054
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.87	0.79	0.93	12.1	0.00	0.00	2.14	2.14	0.00	0.50	0.50	—	2,273	2,273	0.10	0.08	4.02	2,304
Vendor	0.08	0.06	1.78	0.77	0.01	0.02	0.41	0.43	0.02	0.11	0.14	—	1,554	1,554	0.02	0.22	1.82	1,620
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.20	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	376	376	0.02	0.01	0.67	381
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	257	257	< 0.005	0.04	0.30	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.85	7.31	0.01	0.24	—	0.24	0.22	—	0.22	—	1,359	1,359	0.06	0.01	—	1,364

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.07	1.33	< 0.005	0.04	—	0.04	0.04	—	0.04	—	225	225	0.01	< 0.005	—	226
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.78	1.63	1.63	29.6	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	4,611	4,611	0.18	0.15	16.0	4,678
Vendor	0.15	0.11	3.04	1.35	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,880	2,880	0.03	0.39	7.93	3,004
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.39	1.23	1.75	16.8	0.00	0.00	4.06	4.06	0.00	0.95	0.95	—	3,924	3,924	0.19	0.15	0.41	3,975
Vendor	0.14	0.10	3.27	1.38	0.02	0.04	0.78	0.82	0.04	0.22	0.26	—	2,883	2,883	0.03	0.39	0.21	2,999
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.42	5.44	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,083	1,083	0.05	0.04	1.78	1,098
Vendor	0.04	0.03	0.83	0.35	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	744	744	0.01	0.10	0.88	775
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.99	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	179	179	0.01	0.01	0.29	182
Vendor	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	< 0.005	0.02	0.15	128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.81	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	190	190	0.01	0.01	0.02	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Architectural Coatings	—	10.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.44	4.44	< 0.005	< 0.005	—	4.46
Architectural Coatings	—	1.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.33	0.33	5.92	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	922	922	0.04	0.03	3.19	936
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.35	3.36	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	785	785	0.04	0.03	0.08	795
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.63	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	126	126	0.01	< 0.005	0.21	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.9	20.9	< 0.005	< 0.005	0.03	21.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	7.13	6.34	5.63	127	0.27	0.10	24.3	24.4	0.09	6.13	6.22	—	26,849	26,849	0.64	0.54	87.0	27,112
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.91	0.63	29.5	7.04	0.28	0.60	8.52	9.12	0.58	2.28	2.85	—	29,582	29,582	0.22	4.41	77.2	30,980
Total	8.04	6.97	35.1	134	0.54	0.70	32.8	33.6	0.67	8.41	9.08	—	56,431	56,431	0.86	4.95	164	58,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	6.16	5.40	6.29	78.0	0.23	0.10	24.3	24.4	0.09	6.13	6.22	—	23,019	23,019	0.64	0.58	2.25	23,211
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.87	0.59	31.7	7.08	0.28	0.60	8.52	9.12	0.58	2.28	2.85	—	29,595	29,595	0.22	4.42	2.00	30,920

Total	7.03	5.99	38.0	85.0	0.51	0.70	32.8	33.6	0.67	8.41	9.08	—	52,615	52,615	0.86	5.00	4.26	54,131
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.02	0.90	0.94	15.0	0.04	0.02	3.85	3.87	0.01	0.97	0.99	—	3,549	3,549	0.09	0.08	5.43	3,580
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.14	0.10	4.96	1.13	0.04	0.10	1.35	1.45	0.09	0.36	0.45	—	4,280	4,280	0.03	0.64	4.82	4,476
Total	1.16	1.00	5.90	16.1	0.08	0.11	5.20	5.31	0.11	1.33	1.44	—	7,829	7,829	0.12	0.72	10.3	8,056

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	3,250	3,250	0.31	0.04	—	3,269
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	260
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,508	3,508	0.33	0.04	—	3,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	538	538	0.05	0.01	—	541
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	42.7	42.7	< 0.005	< 0.005	—	43.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	581	581	0.05	0.01	—	584

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.72	5.28	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Total	5.72	22.2	0.27	32.2	< 0.005	0.06	—	0.06	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	16.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Total	0.51	3.56	0.02	2.89	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	328	774	1,101	33.7	0.81	—	2,184
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.2	128	182	5.57	0.13	—	362

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	375	0.00	375	37.4	0.00	—	1,310
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.20	0.00	—	217

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Site Preparation	Site Preparation	1/8/2024	2/2/2024	5.00	20.0	30
Grading	Grading	2/5/2024	5/17/2024	5.00	75.0	75
Building Construction	Building Construction	4/5/2024	5/12/2025	5.00	287	740
Paving	Paving	3/3/2025	4/11/2025	5.00	30.0	55
Architectural Coating	Architectural Coating	2/7/2025	4/24/2025	5.00	55.0	55

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	24.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	311	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	91.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	62.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	1,109,040	369,680	51,323

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	40.0	0.00	—
Grading	—	—	300	0.00	—
Paving	0.00	0.00	0.00	0.00	19.6

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	7.08	100%
Other Asphalt Surfaces	12.5	100%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	1,294	738	707	412,664	35,045	19,986	19,145	11,177,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	280	160	153	89,364	9,670	5,511	5,282	3,083,963

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	1,109,040	369,680	51,323

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	3,402,795	349	0.0330	0.0040	0.00
Parking Lot	270,277	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	170,977,000	0.00
Parking Lot	0.00	0.00

Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	695	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1

AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6
Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7
Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186
Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459
Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123
Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—

Insured adults	2.55357372
Arthritis	0.0
Asthma ER Admissions	54.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4
Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0

Elderly	5.7
English Speaking	42.6
Foreign-born	50.4
Outdoor Workers	10.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.
Operations: Energy Use	Per client data, no natural gas will be utilized

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Appendix I

Phase I Environmental Site Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT

APN 666-320-018

JN: 2771

June 9, 2022

Prepared for:

Snider Interests, LLC and
Almar Management, LLC

Prepared by:

Michelle D. Witherspoon,
Registered Environmental Property Assessor
REPA 897425

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EXECUTIVE SUMMARY

The firm of MSA Consulting, Inc. ("MSA") was retained to conduct a Phase One Environmental Site Assessment ("Phase I ESA," "Assessment") for the Subject Property ("Site") with a gross area of approximately 38.19 acres, located at the northwest corner of 19th Avenue and North Indian Canyon Drive in the City of Palm Springs, County of Riverside, California. The Subject Property can also be identified by Riverside County Assessor's Parcel Number (APN) 666-320-018.

During the course of this Assessment, the Subject Property was observed in an undeveloped condition with relatively level terrain and scattered vegetation coverage. Informal dirt paths traverse the Site in a north-south direction. Miscellaneous trash and scattered debris are evident, but there are no apparent indicators of chemical or other hazardous waste dumping.

The purpose of this report is to advise **Snider Interests, LLC** of the existence or potential existence of recognized environmental conditions, controlled recognized environmental conditions, or historical recognized environmental conditions in connection with the Subject Property based on the investigation performed by MSA Consulting, Inc. in accordance with the scope and limitations of the American Society of Testing and Materials (ASTM) Practice E-1527-21 "*Standard Practice for Environmental Site Assessments*."

The investigation was carried on through:

1. Research of Federal, State and local governmental records, waste disposal records, underground storage tank records, and hazardous waste handling, treatment, disposal and spill records, concerning contamination at or near the facility
2. Search for recorded environmental cleanup liens against the facility that are filed under Federal, State, or local law
3. Review of historical sources, such as chain-of-title documents, aerial photographs, building department records, and land use records, to determine previous uses and occupancies of the real property since the property was first developed
4. Interviews with past and present owners, operators, and occupants of the facility, as available, for the purpose of gathering information regarding the potential for contamination at the facility
5. Visual inspections of the facility and of adjoining properties

ASTM Practice E-1527-21 does not include any testing or sampling of materials (for example, soil, water, air, or building materials).

The Phase I Environmental Site Assessment performed by MSA for the Subject Property, in conformance with the scope and limitations of ASTM Practice E1527-21, did not discover or identify a recognized environmental condition, controlled recognized environmental condition, or a historical recognized environmental condition in connection with the Subject Property.

MSA Consulting, Inc. recommends that as a matter of site housekeeping, any scattered debris and trash observed throughout the Subject Property should be properly collected, removed, and disposed of at an approved facility.

1.0 INTRODUCTION

This Assessment was conducted within the scope and limitations of ASMT E 1527-21 to determine if any recognized environmental conditions exist on the Subject Property. Emphasis has been placed upon identifying the potential presence of petroleum products, hazardous or otherwise toxic materials, or solid waste on the Subject Property. The information presented in this report includes the results of field reconnaissance, a review of various federal, state, and local government agency records, and inquiries with persons familiar with the Subject Property. This practice does not include any testing or sampling of materials (soil, water, air, or building materials).

The Subject Property involves a gross area of approximately 38.19 acres, identified by APN 666-320-018, located at the northwest corner of 19th Avenue and North Indian Canyon Drive, in the City of Palm Springs, California. In this context, North Indian Canyon Drive to the east and 19th Avenue to the south are paved roads. In relation to the Public Land Survey System, the location of the Subject Property can be described as a portion of Section 15, Township 3 South, Range 4 East, San Bernardino Meridian.

Figure 1
Subject Property Overview

Relevant Definitions

Recognized environmental conditions means (1) the presence of hazardous sub-stances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

Petroleum products are included within the scope of this practice because they are of concern with respect to commercial real estate and current custom and usage is to include an inquiry into the presence of petroleum products when doing an environmental site assessment of commercial real estate.

A ***controlled recognized environmental condition*** is a recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

A ***historical recognized environmental condition*** is a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition.

A ***de minimis condition*** is a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not a recognized environmental condition nor a controlled recognized environmental condition.

Significant Data Gap is a data gap that affects the ability of the environmental professional to identify a recognized environmental condition. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the effects of that data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

Involved Parties

Use of this report and reliance thereon is authorized to **Snider Interests, LLC.** The contractual scope of work does exceed the scope and limitations of ASTM E 1527-21.

2.0 USER PROVIDED INFORMATION

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user must provide the information requested in Appendix I to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete. Any environmental liens or AULs known to the user, should be reported to the environmental professional conducting the environmental site assessment.

MSA engaged in reasonable attempts to contact the User and associated parties. The completed Owner's Statement and User Questionnaire obtained did not reveal additional knowledge from the parties reached of any known or potential recognized environmental conditions, including environmental cleanup liens, activity and land use limitations, contamination, or hazardous materials. The supporting documentation is provided in Appendix I.

3.0 SITE RECONNAISSANCE

Site Inspection

MSA Consulting, Inc. conducted a reconnaissance of the Subject Property on the morning of May 4, 2022. The sequence of observations began from the southwest corner and continued along the western, northern, eastern and southern edges while also surveying the central areas. MSA relied on aerial imagery and electronic Riverside County maps to visually distinguish the Subject Property from its surroundings. Visual observations of the ground and surrounding conditions were noted and photographed accordingly. A representative portion of those photographs is provided in Appendix F. A completed Site Assessment Checklist is located at the end of this section.

The Subject Property perimeter is not physically screened, fenced, or continually delineated to the north, east, or south, but can be distinguished by the adjoining roads to the east and south. The west boundary of the Subject Property perimeter is physically marked by the barbed wire fence of the neighboring wind turbines.

Throughout the interior, the prevailing conditions are undeveloped and relatively level, with uniform sandy terrain and scattered vegetation. Sparse small to medium-sized boulders are also noted. Three north-south-trending dirt paths are distinguishable along the west edge, center,

and east edge respectively. Soil disturbance and vehicle tracks are indicative of recent activity, but no active circulation was noted at the time of observation.

Throughout the Property, there are various deposits of scattered trash and demolition debris, most of which are noted along the dirt paths. The discarded materials include household items (articles of clothing and plastic trash). The demolition waste includes broken concrete, asphalt, tile, and gravel in small quantities. Other items include vehicle tires, plastic tubing, and pieces of broken furniture. The northeast portion of the Property contains various piles of soil, gravel and small boulders, each estimated at approximately 1 to 2 cubic yards each. Given the observed condition and quantities, the observed trash, debris, and material are considered *de minimis.* Moreover, one potentially occupied recreational-type vehicle was observed parked on the north side of 19th Avenue, within the apparent right-of-way.

Site Inspection Checklist:

	Question	Finding	
1	Is the Property or any adjoining Property used for an industrial use? Comment: Not applicable to the Subject Property. The neighboring property on the east side of North Indian Canyon Drive includes cannabis cultivation and processing facilities within a Specific Plan land use designation with an industrial cannabis overlay. The on-site uses can be considered industrial or light industrial in nature.	Yes No Unknown	☒ ☐ ☐
2	Is the Property or any adjoining Property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment storage, disposal, processing, or recycling facility? If applicable, identify which. Comment: None.	Yes No Unknown	☐ ☒ ☐
3	Are there currently any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of >5 gal. (19 L) in volume or 50 gal. (190 L) in the aggregate, stored on, or used at the Property? Comment: None	Yes No Unknown	☐ ☒ ☐
4	Are there currently any industrial drums (typically 55-gal. (208 L) or sacks of chemicals located on the Property? Comment: None	Yes No Unknown	☐ ☒ ☐
5	Has fill dirt been brought onto the Property that originated from a contaminated site or that is of an unknown origin? Comment: Small piles of soil, gravel, and boulders are found at the northeast portion of the Property, but do not exhibit evidence of contamination.	Yes No Unknown	☐ ☐ ☒
6	Are there currently any pits, ponds, or lagoons located on the Property in connection with waste treatment or waste disposal? Comment: None.	Yes No Unknown	☐ ☒ ☐
7	Is there currently any stained soil or other surface staining on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐

	Question	Finding	
8	Are there currently any registered or unregistered storage tanks (above or underground) located on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐
9	Are there currently any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the Property or adjacent to any structure located on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐
10	Does the Property appear to discharge wastewater in or adjacent to the Property other than storm water? Comment: None.	Yes No Unknown	☐ ☒ ☐
11	To the best of your knowledge, have any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above ground, buried and/or burned on the Property? Comment: Tire remains and other waste materials have been found dumped on the Property.	Yes No Unknown	☒ ☐ ☐
12	Is there any evidence of Below Ground Storage Tanks on the Property? Comment: None	Yes No Unknown	☐ ☒ ☐
13	Is there any evidence of soil or groundwater contamination observed on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐
14	Are there Above Ground Storage Tanks on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐
15	Is there evidence that the Property or neighborhood properties have engaged in storing, transporting or producing waste, chemicals or hazardous substances? Comment: None.	Yes No Unknown	☐ ☒ ☐
16	Has the Property been used for agricultural purposes in the past ten (10) years? Comment: None.	Yes No Unknown	☐ ☒ ☐
17	Are there any noticeable pesticide odors? Comment: None.	Yes No Unknown	☐ ☒ ☐
18	Are there noticeable signs of straining or stressed vegetation? Comment: Land clearing for dirt paths has removed some native vegetation.	Yes No Unknown	☒ ☐ ☐
19	Is there any evidence of water wells, in use or abandoned, on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐

	Question	Finding	
20	Is there any evidence of streams, lakes, pits, ponds, lagoons or any other standing or moving water visible on the Property? Comment: None.	Yes No Unknown	☐ ☒ ☐
21	Are any transformers, electrical devices or hydraulic equipment observed on the Property labeled as containing PCBs? Comment: None.	Yes No Unknown	☐ ☒ ☐
22	Is there reason to suspect that radon may be a problem in the Property's location? Comment: None.	Yes No Unknown	☐ ☒ ☐

23	Were any physical signs of the following observed on the Property?	
	Oily Sheen on Water	☐
	Suspected Lead Hazard	☐
	Waste Sites	☐
	Suspected Asbestos	☐
	Electronic Magnetic Potential	☐

24	Were any physical signs of the following observed on an adjacent property?	
	Oily Sheen on Water	☐
	Suspected Lead Hazard	☐
	Waste Sites	☐
	Suspected Asbestos	☐
	Electronic Magnetic Potential	☐

Adjacent Site and Vicinity Observations

North: Land directly to the north is vacant land with native terrain and vegetation coverage.

South: Land immediately to the south is partially developed and includes 19th Avenue, a storage facility, and an industrial property for sale.

East: Land to the east includes North Indian Canyon Drive, followed by the Coachillin' industrial cannabis cultivation and ancillary business park within walled limits.

West: Land directly to the east is cleared land that is partially vacant with native terrain and vegetation coverage, as well as wind turbines enclosed within a barbed wire fence.

4.0 RECORDS REVIEW

This assessment involved three categories of records review pertaining to 1) physical setting, 2) historical records and 3) regulatory records.

4.1 PHYSICAL SETTING RESOURCES

The following discussions provide an overview of the relevant physical setting, including relevant regional conditions. Information pertaining to faults, soils, and groundwater conditions do not constitute or should substitute a geotechnical investigation.

Geologic Setting

The Subject Property is located in a western part of the Coachella Valley floor area, which forms part of the Salton Trough feature of the Colorado Desert Geomorphic province. According to the U.S. Geological Survey 7.5-Minute Topographic Map for Desert Hot Springs, California, the Subject Property lies at an elevation between 760 and 780 feet above mean sea level. There are no geologic landmarks, structures, or other features mapped on-site according to the referenced map.

Fault zones identify the known segments of California's fault systems. The Alquist-Priolo Fault Zones geospatial database is set forth to assist in development of rational land use decision-making on and around the State's many known faults. These zones do not show all potentially active faults and are based on best available data. According to the Official Alquist-Priolo database, the San Andreas Fault Zone occurs approximately 1,425 feet northeast of the Subject Property.

According to the United States Department of Agriculture (USDA) – Soil Survey of Riverside County, Coachella Valley Area, the Property is underlain primarily by three soil types:

CkB, Carsitas fine sand, 0 to 5 percent slopes

This soil classification corresponds to hydrologic soil group A, which is characterized by having a high infiltration rate and low runoff potential. These soils consist of deep, well drained sands or gravelly sands and have a high rate of water transmission

CdC, Carsitas gravelly sand, 0 to 9 percent slopes

This soil classification corresponds to hydrologic soil group A, which is characterized by having a high infiltration rate and low runoff potential. These soils consist of deep, well drained sands or gravelly sands and have a high rate of water transmission

ChC, Carsitas cobbly sand, 2 to 9 percent slopes

This soil classification corresponds to hydrologic soil group A, which is characterized by having a high infiltration rate and low runoff potential. These soils consist of deep, well drained sands or gravelly sands and have a high rate of water transmission

Surface Water Conditions

According to the most current U.S. Geological Survey 7.5-Minute Topographic Map for Desert Hot Springs, California, published in 2021, the Subject Property lies at an elevation between 760 and 780 feet above mean sea level and is absent of any mapped drainage flow line, including washes, streams, or rivers. In contrast, the most current USGS National Hydrography Dataset (NHD) indicates a potential flow line that coincides with the center dirt road. Site observations did not identify current surface or running water conditions. The potential USGS flow line coincides with the soil disturbance caused by the unpaved road.

The on-site sandy soils are categorized under the hydrologic soil group A category, designated by USGS, which applies to well-drained soils with low runoff potential. Combined with a low annual precipitation, the site soils exhibit minimal signs of surface runoff in response to storm events.

Groundwater Conditions

The Subject Property is underlain by the Indio Subbasin, but it is closely located to the border or transition with Mission Creek Subbasin. The Mission Creek Subbasin management documents identify a groundwater monitoring station (11L04) within one mile to the north of the Subject Property. According to such records for station 11L04, groundwater depths in 2019 and 2020 ranged from 152 to 162 feet below ground surface. A comparable depth to groundwater can be expected for the Subject Property.

4.2 HISTORICAL RECORDS REVIEW

Standard Historical Resources

Standard Historical Resources can provide useful information about prior uses of the Subject Property. This practice requires the review four standard historical resources: 1) Historical Aerial Photographs, 2) Historical Fire Insurance Maps, 3) Local Street Directories, and 4) Historical Topographic Maps. In cases in which any of the preceding four standard historical resources cannot be not reviewed, the environmental professional shall justify why such a review was not conducted. Considering that the Subject Property is completely undeveloped, local street directory resources were not expected to provide meaningful information and therefore were not sought or reviewed. In lieu of this resource, historic land use maps published by the City were

reviewed and cited below. It is worth noting that the characterization of prior uses from the resources listed above are interpretative.

Historical Aerial Photographs

The following table summarizes the land uses interpreted for each photograph year.

Summary of Historic Aerial Photograph Review

Year	Observed Land Use Condition				Adjoining Land Use	Notes/Observations
1953	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☐ ☐	N: Vacant E: Vacant S: Vacant W: Vacant	Site exhibits undeveloped conditions with scattered vegetation coverage. Local road distinguishable on east boundary of site.
1972	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☐ ☐	N: Vacant E: Vacant S: Vacant W: Vacant	The site and its immediate surroundings continue to exhibit undeveloped conditions. Interstate 10 is now visible south of the site.
1984	Vacant Residential Commercial	☐ ☐ ☒	Office Industrial Agricultural	☐ ☐ ☐	N: Vacant E: Vacant S: Commercial W: Vacant	A handful of commercial buildings have been built south of the site near the interstate exit.
1996	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☐ ☐	N: Vacant E: Vacant S: Commercial W: Vacant	Additional roadway has been paved along the south boundary of the site. More commercial buildings have been built, including one directly south of the site.
2005	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☒ ☐	N: Vacant E: Vacant S: Commercial W: Industrial	Roadway directly east of site has been widened. Additional commercial and industrial buildings south of site. Wind turbines directly west of site.
2009	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☒ ☐	N: Vacant E: Vacant S: Commercial W: Industrial	No significant changes are noted from the prior photograph. The site and its immediate surroundings continue to exhibit similarly developed conditions.
2012	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☒ ☐	N: Vacant E: Vacant S: Commercial W: Industrial	No significant changes are noted from the prior photograph. The site and its immediate surroundings continue to exhibit similarly developed conditions.
2016	Vacant Residential Commercial	☒ ☐ ☐	Office Industrial Agricultural	☐ ☒ ☐	N: Vacant E: Vacant S: Commercial W: Industrial	No significant changes are noted from the prior photograph. The site and its immediate surroundings continue to exhibit similarly developed conditions.

The aerial photograph analysis did not reveal evidence of prior development on the subject property. The Coachillin' development on the east side of North Indian Canyon Drive also occurred after the 2016 aerial photograph was captured.

Historical Fire Insurance (Sanborn) Maps

Fire Insurance Maps provide information on structure locations and operations which were present at the time of the survey. These maps were completed for most major cities and metropolitan areas, dating from 1867, and provide information into past usage of buildings and the way commercial and industrial zoning has changed over time. According to the Certified Sanborn Map Report provided in Appendix H, the Subject Property was searched, and fire insurance maps of the Property were not found. No other information is provided.

Historical Land Use Maps

According to the City of Palm Springs General Plan land use map, adopted 2007, the entire subject property and its surroundings have a land use designation of Industrial with a Wind Energy Overlay classification. This classification allows Wind Energy Conversion Systems (WECS) to occupy up to 15 percent of the total acreage located within the industrial and regional business center land uses.

Historical U.S. Geological Survey 7.5-Minute Topographic Map

According to the USGS 7.5-Minute Topographic Map for Desert Hot Springs, dated 1955 and photo-revised in 2018, the Subject Property occupies a portion of Section 15. Consistent with other historical resources, the topographic map does not display any on-site development but does contain adjacent roads to the Subject Property. The noted elevation range is 760 to 780 feet above sea level. No other geologic or hydrologic features are noted on-site.

4.3 REGULATORY RECORDS REVIEW

Government Agency Database Research

A search of federal, state, and local government listings was performed by Environmental Data Resources, Inc. (EDR) for the purposes of this Assessment. The EDR report includes records from many of the state and federal environmental regulatory agencies. The EDR results did not identify any records associated with the Subject Property.

Mission Springs Water District (MSWD)

The Property is located within the Mission Springs Water District (MSWD) service area. According to the information made publicly available by MSWD, including the July 2021 Water Quality Report, there are no outstanding water quality issues in the district area. The Agency's domestic water supply is said to meet state and federal standards.

Federal Emergency Management Agency (FEMA)

The FEMA Flood Insurance Rate Maps (FIRMs) serve as the basis for identifying potential flood hazards. According to FIRM panel 06065C0895G, effective August 28, 2008, the entire project is located within Zone X, corresponding to areas subject to the 0.2 percent annual chance flood hazard. By definition, the designation of Zone X is not considered a Special Flood Hazard Area

(SFHA) or floodway. Furthermore, this flood zone is considered to be a moderate-to-low risk area where flood insurance is available, but not mandatory.

United States Environmental Protection Agency

MSA performed a database search for the property within the Enforcement and Compliance History Online (ECHO), which provides integrated searches of EPA and state data for more than 800,000 regulated facilities. The database focuses on inspection, violation and enforcement data for the Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Safe Drinking Water Act (SDWA) and Toxics Release Inventory (TRI) data. The search results did not identify any facilities on the Subject Property, but it did identify several facilities within a half-mile radius of the Subject Property, including wind generation facilities, service stations, research labs, commercial stores, industrial facilities. None of these nearby facilities were found to violate any EPA regulations.

GeoTracker

MSA performed a database search for the Property within GeoTracker, which is a database maintained by the State of California Water Resources Control Board to provide online access to environmental data. It serves as the management system for tracking regulatory data on sites that can potentially impact groundwater, particularly those requiring groundwater cleanup and permitted facilities, such as operating underground storage tanks and land disposal sites. The search revealed that there are 3 Leaking Underground Storage Tank (LUST) sites within approximately 0.5 miles from the Subject Property. The Shell North Palm Springs at 20000 N. Indian Avenue, approximately 0.246 miles to the southeast, includes two case-closed LUSTs. The 76 Station 5699 at 19995 Indian Avenue, approximately 0.259 miles to the southeast, includes one case-closed LUST.

Evaluation of Records and Environmental Liens Search Results

A search for Environmental Liens (Federal Superfund Liens, CERCLA Lien Information, and Environmental Liens Listings) using the EDR results also did not yield any findings in connection with the Subject Property.

Additional Findings from Regulatory Records Review by Topic

The following discussions of potential environmental concerns organized by topic.

Regulatory Actions

Based upon a thorough search of available federal, state, and local records, no current regulatory action is pending with respect to the Subject Property.

Adjacent and Nearby Properties

The following information was obtained for a 160-acre facility located east of North Indian Canyon Drive and north of 19th Avenue.

The Coachillin' Canna-Business Park (Park) is a cooperative "canna-business" compound that will feature more than 3,000,000 square feet of cannabis cultivation, manufacturing, processing, laboratory testing, distribution, and touring/education facilities at full buildout. Coachillin' Holdings LLC (Discharger) owns and operates the Coachillin' Business Park Onsite Wastewater Treatment and Disposal System (Facility). The Facility is assigned California Integrated Water Quality System (CIWIQS) WDID 7A331366001 and GeoTracker Global Identification WDR100039708. The Facility was recently enrolled in the State Water Resources Control Board's (State Water Board) General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems, Order WQ-2014-0153-DWQ-R7002 (Small Domestic General Order).

On April 27, a publication by the Desert Sun, indicated that the Coachillin' facility has been issued multiple notices of violation by the Colorado River Basin Regional Water Quality Control Board. At the time of this Assessment, public records of these violations are not ascertainable, which can be explained if they are not finalized or if they have not been recorded in a formal hearing, board meeting, or press release. A review of the upcoming Region 7 agenda indicates that the Coachillin' facility may be discussed on June 14, 2022 under Agenda Item 9: Waste Discharge Requirements Order R7-2022-0028 and Monitoring and Reporting Program. No additional information is available. The Coachillin' facility is downgradient from the subject property.

Polychlorinated Biphenyls

No sources of polychlorinated biphenyls (PCBs) were noted on the Property. No other information related to the use, storage, or release of PCBs was identified during this investigation.

Underground Storage Tanks

Based on our review of the EDR Radius Report, no underground storage tanks (USTs) are reported to be located on the Subject Property currently nor are USTs reported to have been located on the site in the past.

Above Ground Storage Tanks

Based on review of the EDR Radius Report, historic aerial photographs, and historic topographic maps, no above ground storage tanks, are reported to be located on the Subject Property currently, nor are ASTs reported to have been located on the Subject Property in the past.

Stormwater / Wastewater Discharge

Discharge from the Subject Property currently appears to be limited to surface storm water runoff. It is anticipated that most precipitation falling on the site would infiltrate in on-site soils. Stormwater which does not infiltrate on-site soils would have the propensity to flow along the elevation gradient generally toward the south and southeast. No wastewater discharge is associated with the undeveloped Site condition. The nearest wastewater treatment facility is

located within the 160-acre Coachillin' industrial park, located east and downgradient of North Indian Canyon Drive and north of 19th Avenue.

Asbestos Containing Materials

No direct evidence of potential asbestos containing materials was observed on the Subject Property and no information was found which would indicate the use, storage or disposal of such material on the Subject Property.

Lead-Based Paints

No information was found which would indicate the storage or disposal of lead-based paints on the Subject Property.

Landfills

The EDR report does not list any known landfills or solid waste disposal sites on the Subject Property. Moreover, there are no known, planned, or designated landfills or solid waste disposal sites designated on or near the Property.

Water Supplies

The Property is located within the MSWD water service area. A water valve and water tower are located within the Calle De Los Romos right-of-way, served by MSWD, but no water facilities were noted within the formal extent of the Subject Property.

Waste Generation and Storage

Small amounts of scattered waste were noted, including miscellaneous debris, plastic/glass bottles and waste, food wrappers, aluminum cans, clothing items, and broken tile and concrete. This scattered material is not indicative of significant waste generation or storage condition.

5.0 INTERVIEWS/INQUIRIES

MSA engaged in reasonable attempts to contact the existing owners of the Property as well as the intended report users. The completed Owner's Statement and User Questionnaire obtained did not reveal additional knowledge from the parties reached of any known or potential recognized environmental conditions, including environmental cleanup liens, activity and land use limitations, contamination or hazardous materials (Appendix I).

6.0 NON-SCOPE ITEMS

The scope of this Assessment does not include any non-scope items, such as soils or materials testing.

7.0 FINDINGS AND OPINIONS

MSA Consulting, Inc. has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Practice E 1527-21.

At the time of observation, the Subject Property exhibited an undeveloped condition with active mobilization of soil and aggregate material as part of a larger stockpiling and management operation. No permeant facilities or structures are present or are expected to result upon completion of the activities.

The Phase I Environmental Site Assessment performed by MSA for the Subject Property, in conformance with the scope and limitations of ASTM Practice E1527-21, did not discover or identify a recognized environmental condition, controlled recognized environmental condition, or a historical recognized environmental condition in connection with the Subject Property.

Opinion Regarding Further Inquiry: No further inquiry is recommended for this Phase 1 Report.

7.1 SIGNIFICANT DATA GAPS

This investigation is based upon the Subject Property as described and the environmental data obtained from the field reconnaissance and research performed as outlined in this report. A significant data gap affects the ability of the environmental professional to identify a recognized environmental condition. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the effects of that data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

The Site Reconnaissance identified various piles of demolition debris, household trash, and inert materials (soil, gravel, and boulders). The source of this waste could not be determined from public records or site observations, but the lack of information about the material piles or scattered debris does not rise to the level of Significant Data Gap.

8.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined in § 312.10 of 40 C.F.R. § 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

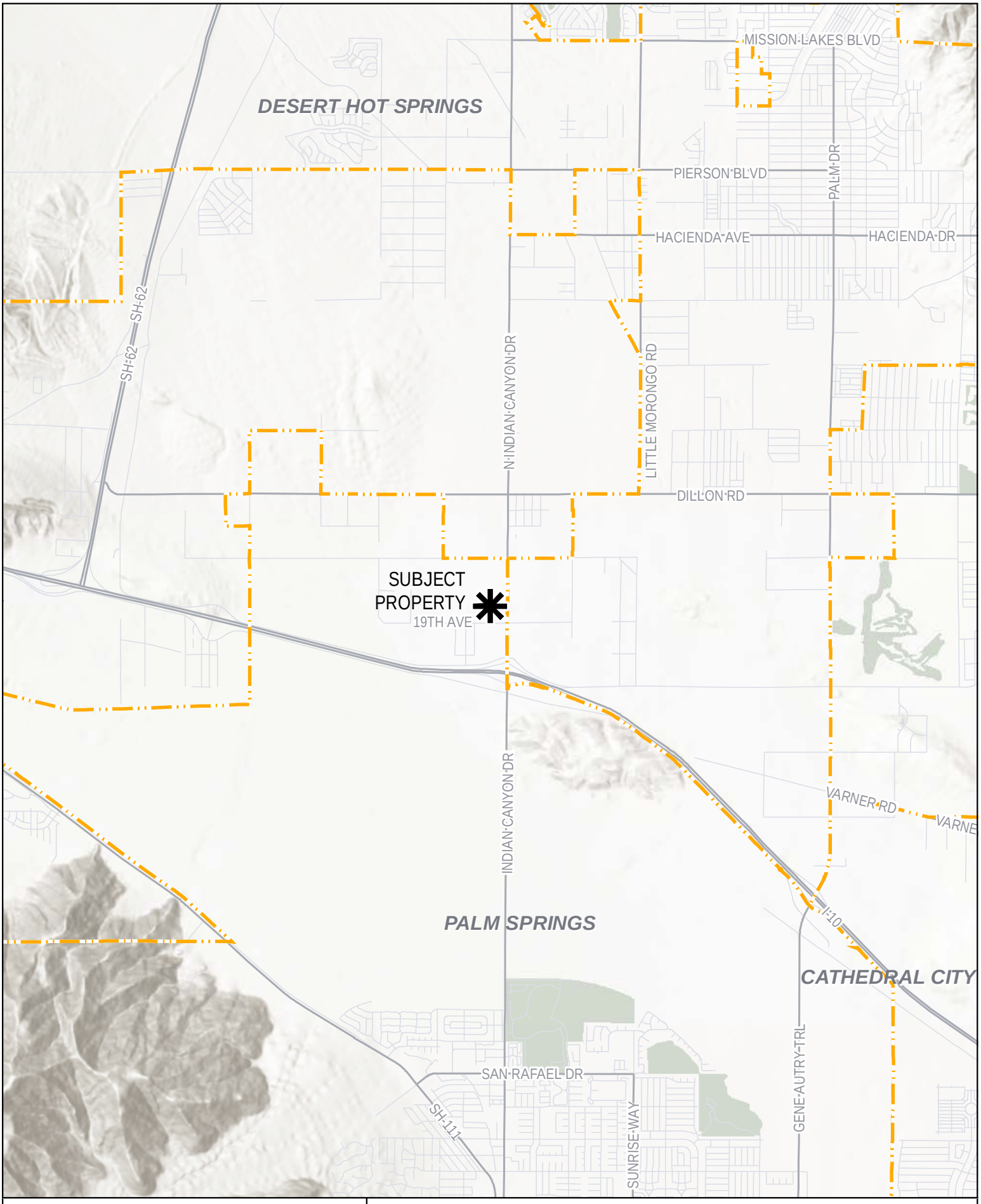
Prepared by:
Michelle D. Witherspoon, Registered Environmental Property Assessor (REPA #897425)

9.0 REFERENCES

- United States Geological Survey (USGS) 7.5-Minute Topographic Maps for Desert Hot Springs, California
- City of Palm Springs General Plan, 2007
- Federal Emergency Management Agency, FIRM Panel 06065C0895G, Effective August 28, 2008
- Mission Creek Subbasin Sustainable Groundwater Management Act (SGMA), November 2021
- Riverside County IT-GIS, April 2022

Appendix A

Vicinity Map



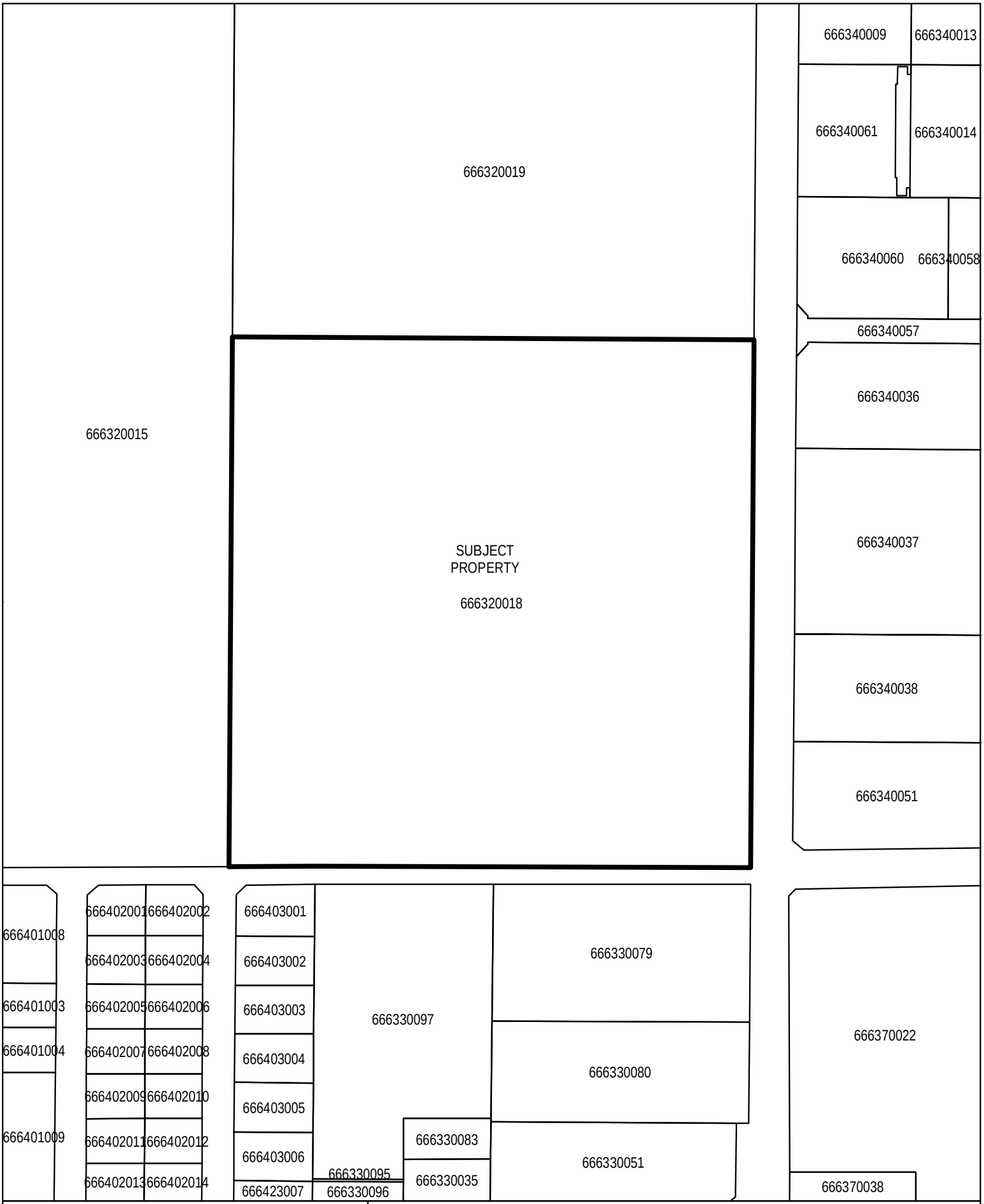
MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 5,000 FT

VICINITY MAP
APN 666-320-018

Appendix B

Assessor’s Parcel Map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SUBJECT
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MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING
NORTH
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FT
ASSESSOR'S PARCEL MAP
APN 666-320-018

Appendix C

Aerial Photograph and Site Observations Map

MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 300 FT

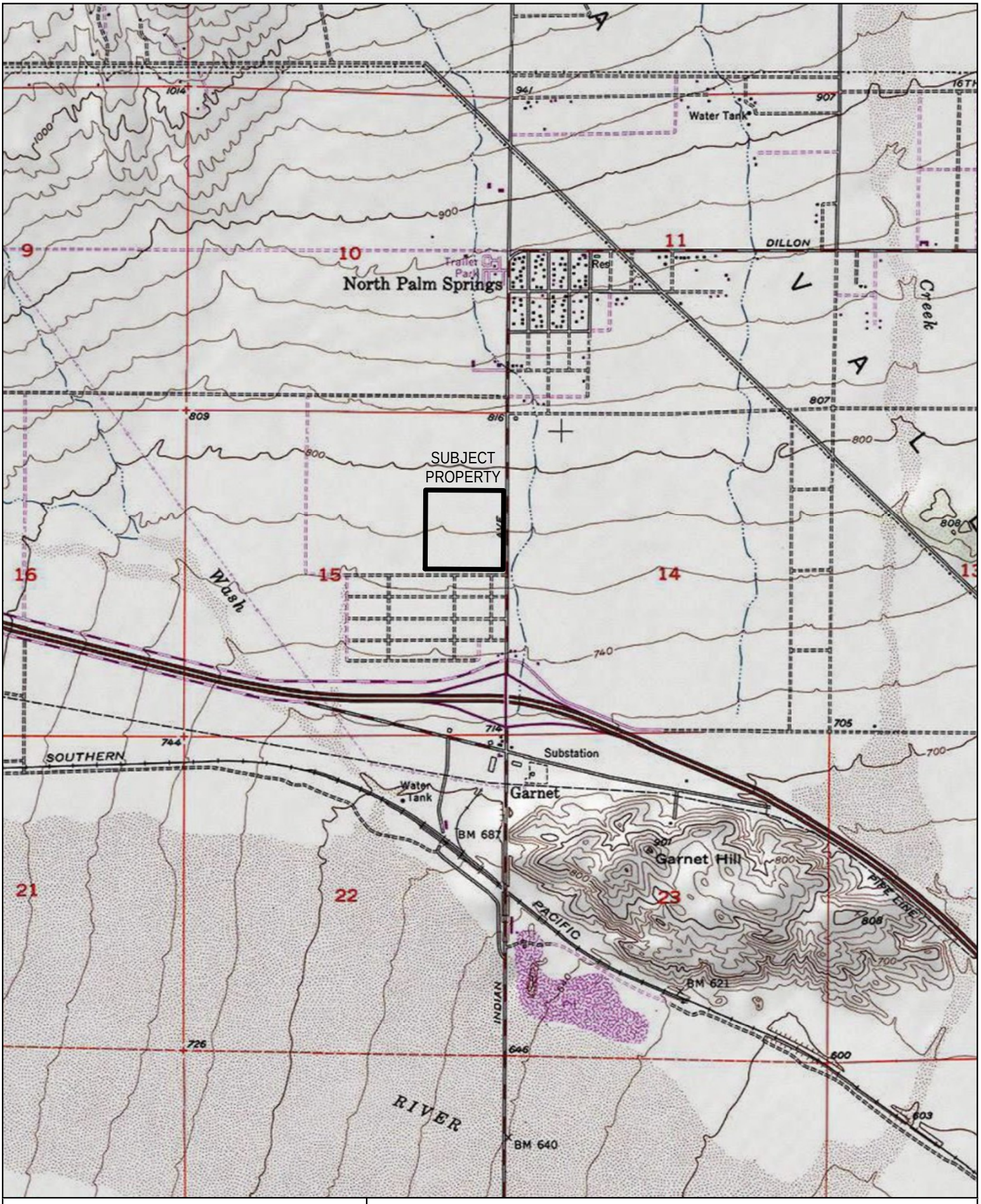
AERIAL PHOTOGRAPH

APN 666-320-018

(IMAGERY DATE: JANUARY 2022)

Appendix D

USGS Topographic Map



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 2,000 FT

USGS TOPOGRAPHIC MAP
APN 666-320-018

Appendix E

Historical Aerial Photographs

38-Ac Site APN 666-320-018

Northwest Corner Indian Canyon Dr. & 19th Ave.

Desert Hot Springs, CA 92240

Inquiry Number: 6955913.5

April 26, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

04/26/22

Site Name:

38-Ac Site APN 666-320-018
Northwest Corner Indian Canyo
Desert Hot Springs, CA 92240
EDR Inquiry # 6955913.5

Client Name:

MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270
Contact: Asia Lee

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1996	1"=500'	Flight Date: June 04, 1996	USGS
1984	1"=500'	Flight Date: August 24, 1984	USDA
1972	1"=500'	Flight Date: August 17, 1972	USDA
1953	1"=500'	Flight Date: October 24, 1953	USDA

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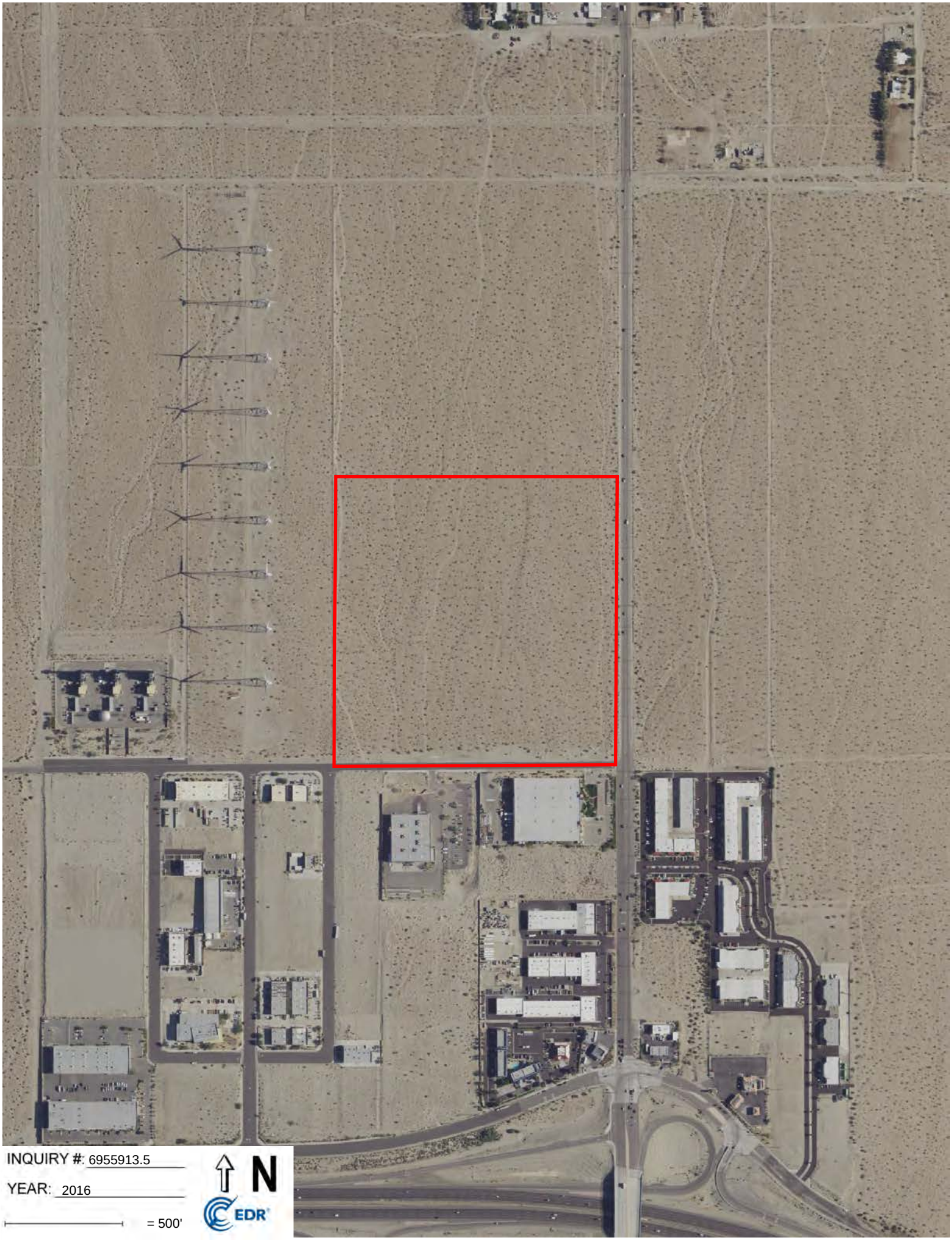
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YEAR: 2016
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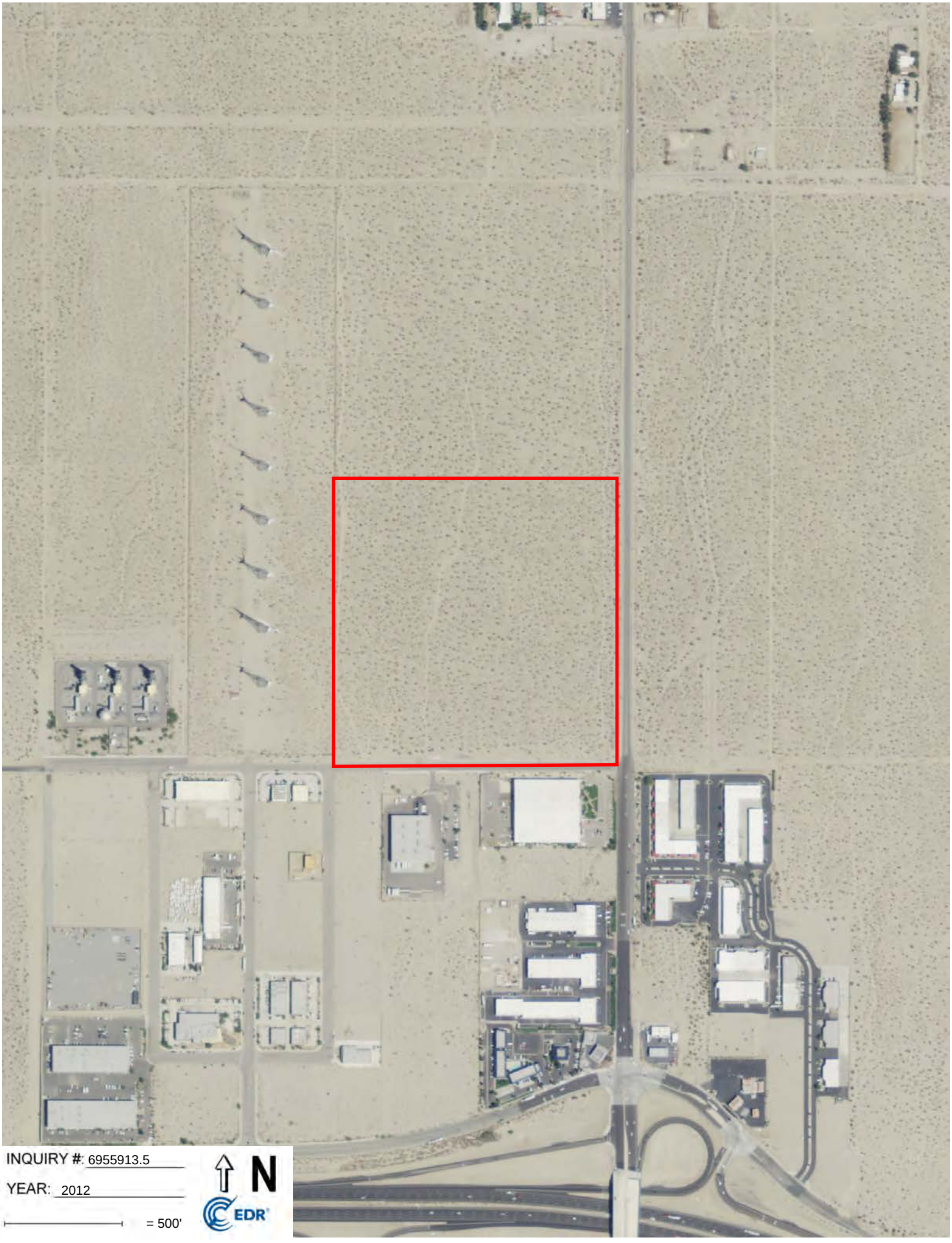
N
EDR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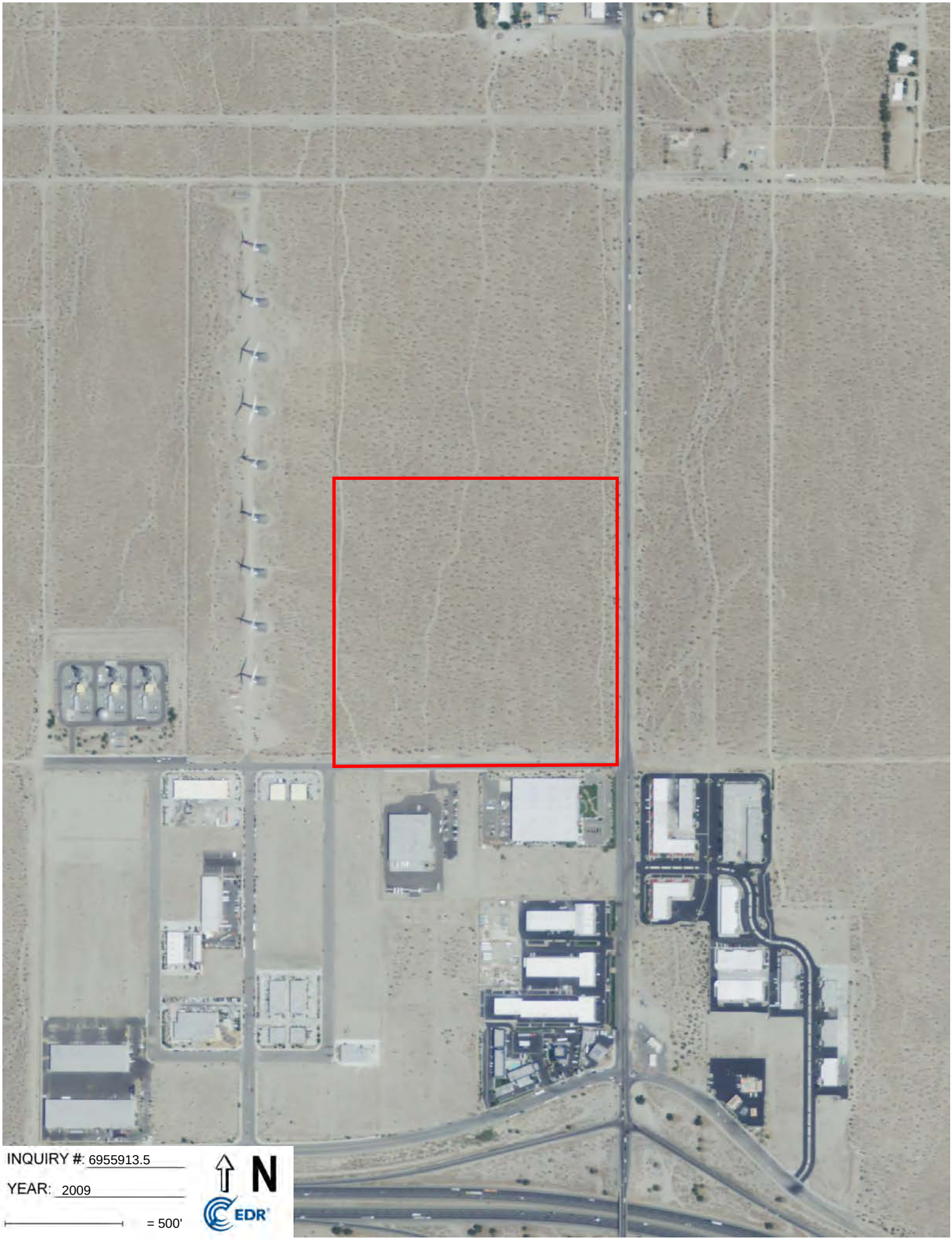
EDR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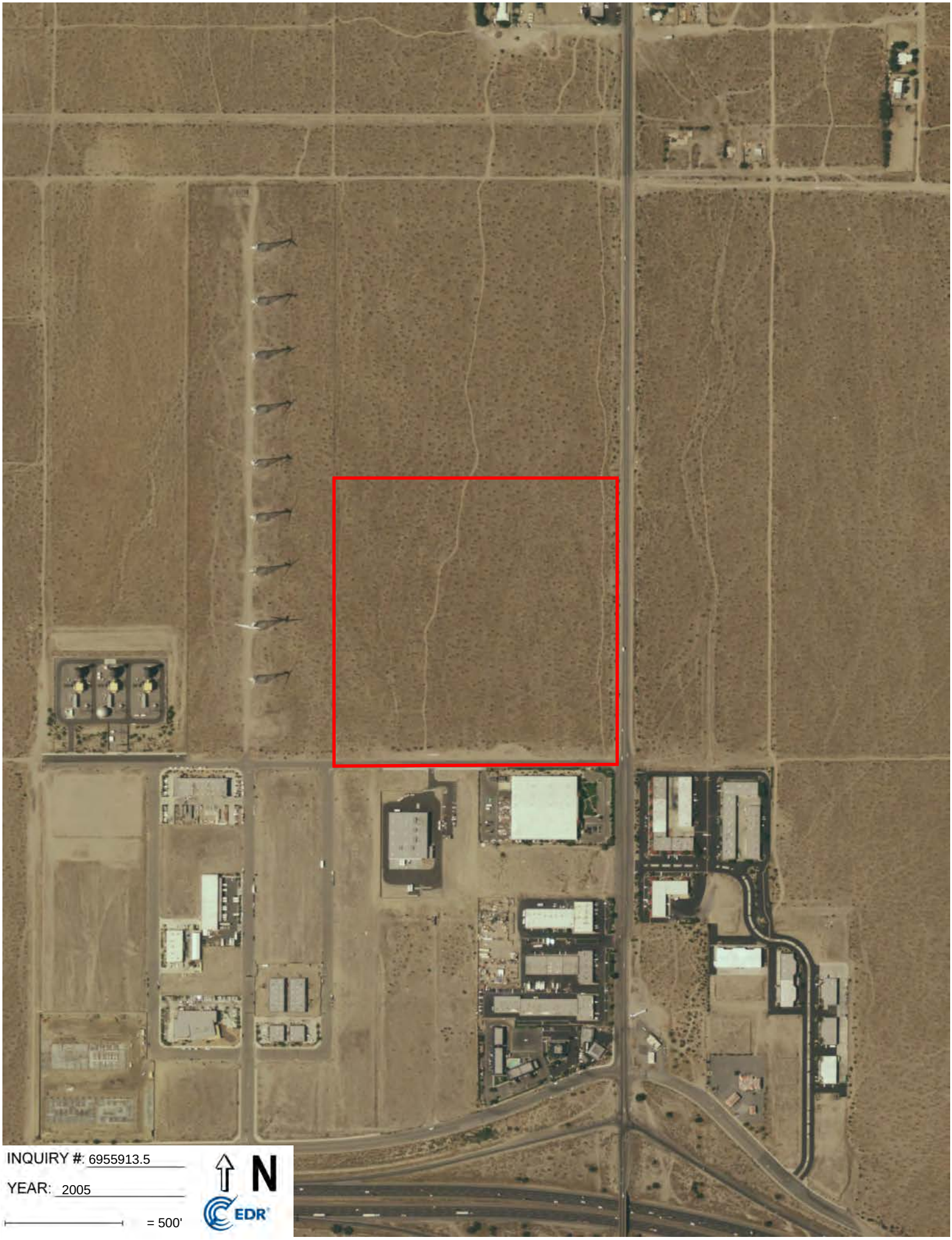
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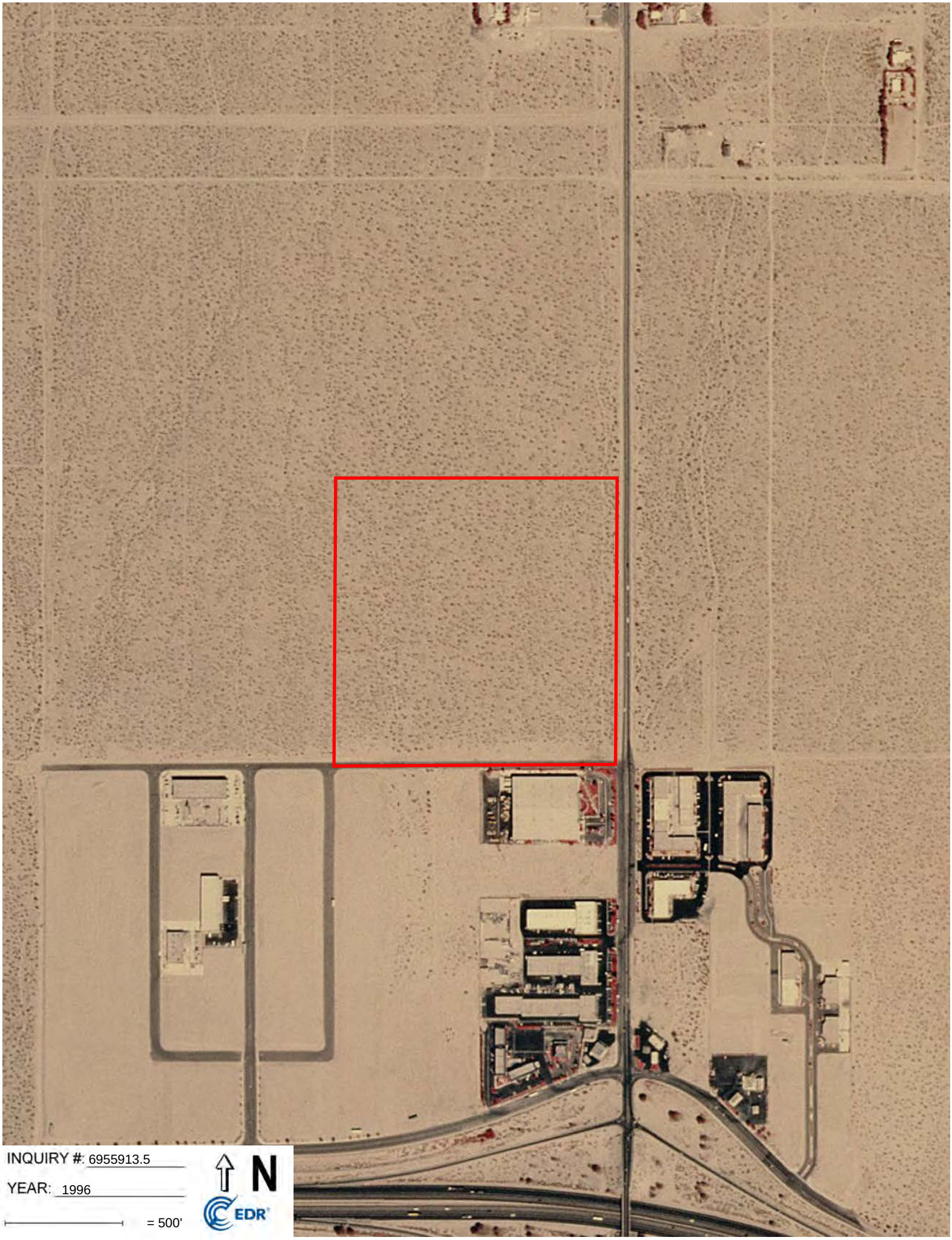
EDR



INQUIRY #: 6955913.5

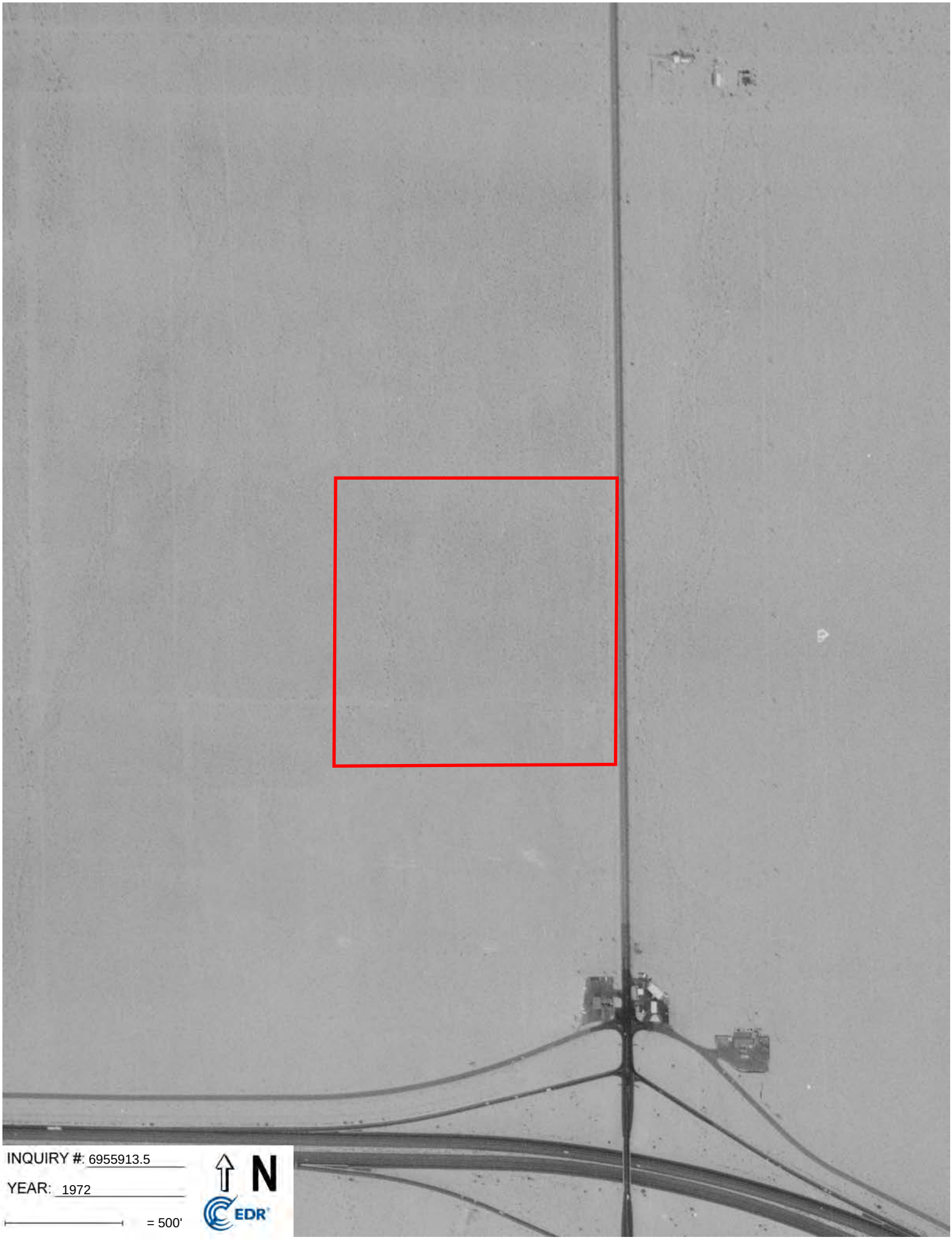
YEAR: 1996

= 500'

N

EDR

INQUIRY #: 6955913.5
YEAR: 1984
= 500'
N
EDR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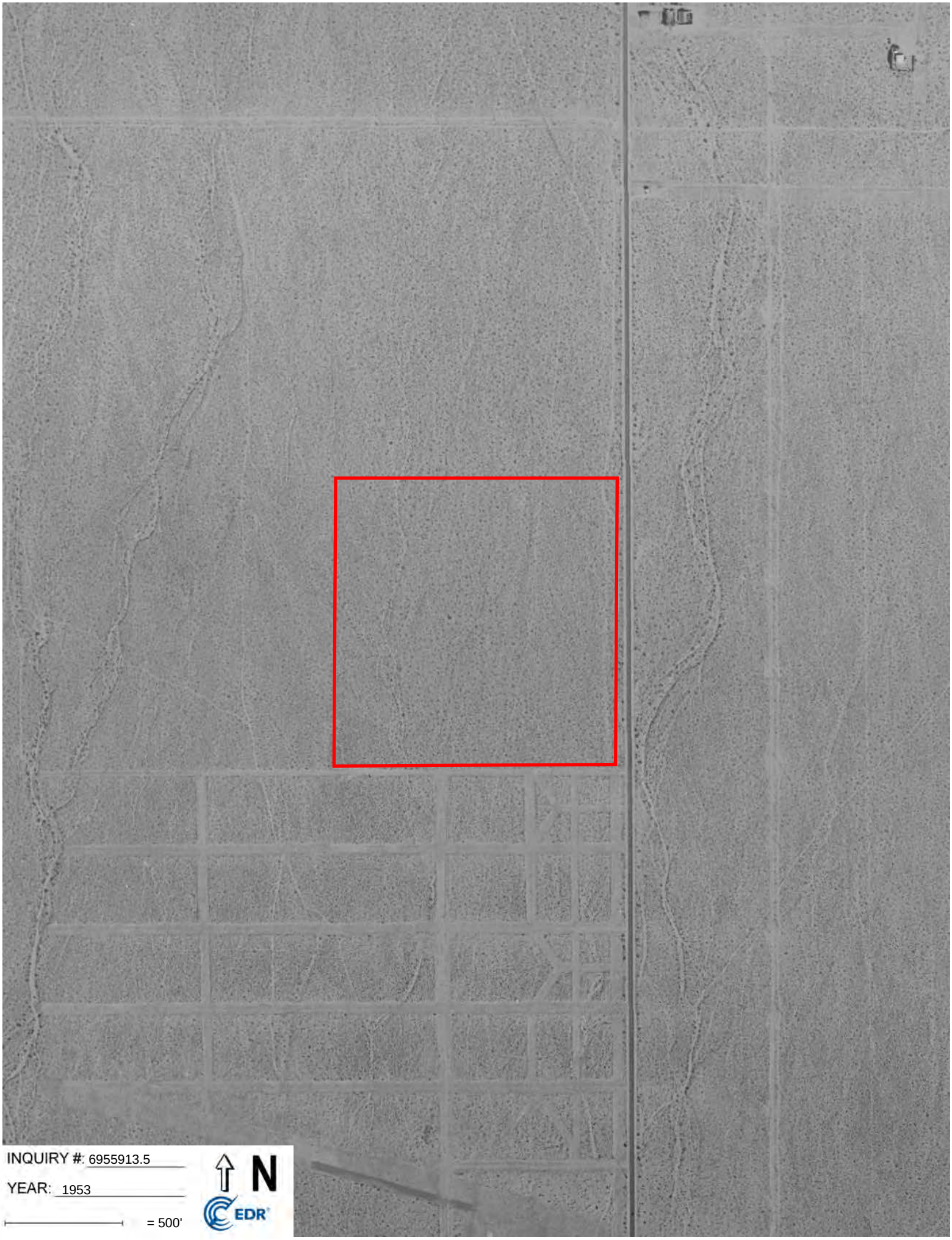
= 500'
N
EDR


INQUIRY #: 6955913.5
YEAR: 1953
= 500'
N
EDR

Appendix F

Site Visit Photographs

Phase I ESA Site Reconnaissance Photographs

Contact Information	
Date	05/04/2022
Times of Observation	9:30 AM
MSA Representative Name(s)	Michelle Witherspoon, Asia Lee, Jesus Herrera-Cortes
MSA Representative Phone Number	(760) 320-9811

Appendix G

EDR Radius Map Report

38-Ac Site APN 666-320-018
Northwest Corner Indian Canyon Dr. & 19th Ave.
Desert Hot Springs, CA 92240

Inquiry Number: 6955913.2s
April 26, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NORTHWEST CORNER INDIAN CANYON DR. & 19TH AVE.
DESERT HOT SPRINGS, CA 92240

COORDINATES

Latitude (North):	33.9120990 - 33ˆ 54' 43.55''
Longitude (West):	116.5475810 - 116ˆ 32' 51.29''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	541824.0
UTM Y (Meters):	3752307.8
Elevation:	783 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	12002832 DESERT HOT SPRINGS, CA
Version Date:	2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140521, 20140529
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NORTHWEST CORNER INDIAN CANYON DR. & 19TH AVE.
DESERT HOT SPRINGS, CA 92240

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	TURBINE MAINTENANCE	19020 N INDIAN AVE S	RCRA-SQG, FINDS, ECHO	Lower	59, 0.011, SE
A2	BLACK LION LABS INC	64125 19THA VE UNIT	RCRA-LQG	Lower	385, 0.073, ESE
A3	INTELIBIS RESEARCH	64125 19TH AVE UNIT	RCRA NonGen / NLR	Lower	385, 0.073, ESE
4	PALM SPRINGS DC	19251 RUPPERT ST	CERS HAZ WASTE, HAZNET, NPDES, CIWQS, CERS, HWTS	Lower	634, 0.120, SW
B5	CIRCLE K STORES SS #	19995 INDIAN AVE	UST	Lower	803, 0.152, SSE
C6	LIN LINES INC.	19345 INDIAN AVE STE	CERS HAZ WASTE, HAZNET, CERS, HWTS	Lower	828, 0.157, SSE
B7	KWIK KLEEN OF THE DE	19345 N INDIANA AVE	RCRA-SQG, FINDS, ECHO	Lower	835, 0.158, SSE
8	INDIGO GENERATION, L	63500 19TH AVE	CERS HAZ WASTE, CERS TANKS, EMI, WDS, CIWQS, CERS	Lower	970, 0.184, WSW
9	E&S PRECISION SHEETM	19298 MCLANE STREET	CERS HAZ WASTE, HAZNET, NPDES, CIWQS, CERS, HWTS	Lower	1078, 0.204, SW
10	THREE WIND HOLDINGS,	19020 N INDIAN CANYO	CERS HAZ WASTE, CERS TANKS, HAZNET, CERS, HWTS	Lower	1089, 0.206, SE
C11	PALM SPRINGS HARLEY	19465 N INDIAN AVE #	CERS HAZ WASTE, HAZNET, CERS, HWTS	Lower	1117, 0.212, South
D12	SAN GORGONIO WEST WI	19020 N INDIAN CANYO	RCRA NonGen / NLR	Lower	1192, 0.226, SSE
D13	SAN GORGONIO WEST WI	19020 N INDIAN CANYO	CERS HAZ WASTE, CERS TANKS, CERS	Lower	1192, 0.226, SSE
D14	GREEN POWER PARTNERS	19020 N INDIAN AVE B	CERS HAZ WASTE	Lower	1192, 0.226, SSE
D15	K POWERED	19020 N INDIAN CANYO	RCRA NonGen / NLR	Lower	1192, 0.226, SSE
D16	TOP NOTCH AUTOMOTIVE	19020 N INDIAN CANYO	RCRA NonGen / NLR	Lower	1192, 0.226, SSE
D17	SHELL SERVICE STATIO	20000 INDIAN	RCRA-SQG, ECHO	Lower	1271, 0.241, SSE
D18	SHELL NORTH PALM SPR	20000 N INDIAN AVENU	LUST, Cortese, CERS	Lower	1298, 0.246, SSE
D19	UNOCAL #5951	19995 INDIAN AVE	SWEEPS UST, CA FID UST	Lower	1314, 0.249, SSE
20	AES WIND GENERATION	19435 RUPPERT ST	CERS HAZ WASTE, CERS TANKS, HAZNET, CERS, HWTS	Lower	1314, 0.249, SW
D21	NORTH PALM SPRINGS S	20000 INDIAN	HIST CORTESE	Lower	1350, 0.256, SSE
D22	NORTH PALM SPRINGS S	20000 INDIAN AVENUE	LUST	Lower	1350, 0.256, SSE
D23	76 STATION 5699	19995 INDIAN AVE	LUST, CERS HAZ WASTE, CERS TANKS, Cortese, CERS	Lower	1365, 0.259, SSE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE ---------- State Response Sites

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR ---------- EnviroStor Database

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ---------- Solid Waste Information System

Lists of state and tribal leaking storage tanks

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---------- Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST ---------- Underground Storage Tank Listing
AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register

HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
CDL ---- Clandestine Drug Labs
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register
AQUEOUS FOAM ---- Former Fire Training Facility Assessments Listing
PFAS ---- PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

HIST UST ---- Hazardous Substance Storage Container Database

Local Land Records

LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program

UMTRA - Uranium Mill Tailings Sites
LEAD SMELTERS - Lead Smelter Sites
US AIRS - Aerometric Information Retrieval System Facility Subsystem
US MINES - Mines Master Index File
ABANDONED MINES - Abandoned Mines
FINDS - Facility Index System/Facility Registry System
ECHO - Enforcement & Compliance History Information
UXO - Unexploded Ordnance Sites
DOCKET HWC - Hazardous Waste Compliance Docket Listing
FUELS PROGRAM - EPA Fuels Program Registered Listing
CA BOND EXP. PLAN - Bond Expenditure Plan
CUPA Listings - CUPA Resources List
DRYCLEANERS - Cleaner Facilities
EMI - Emissions Inventory Data
ENF - Enforcement Action Listing
Financial Assurance - Financial Assurance Information Listing
HAZNET - Facility and Manifest Data
ICE - ICE
HWP - EnviroStor Permitted Facilities Listing
HWT - Registered Hazardous Waste Transporter Database
MINES - Mines Site Location Listing
MWMP - Medical Waste Management Program Listing
NPDES - NPDES Permits Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
UIC GEO - UIC GEO (GEOTRACKER)
WASTEWATER PITS - Oil Wastewater Pits Listing
WDS - Waste Discharge System
WIP - Well Investigation Program Case List
MILITARY PRIV SITES - MILITARY PRIV SITES (GEOTRACKER)
PROJECT - PROJECT (GEOTRACKER)
WDR - Waste Discharge Requirements Listing
CIWQS - California Integrated Water Quality System
CERS - CERS
NON-CASE INFO - NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS - OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS - PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT - SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ - Well Stimulation Project (GEOTRACKER)
HWTS - Hazardous Waste Tracking System
MINES MRDS - Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants
EDR Hist Auto - EDR Exclusive Historical Auto Stations
EDR Hist Cleaner - EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF - Recovered Government Archive Solid Waste Facilities List

EXECUTIVE SUMMARY

RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal RCRA generators

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 02/28/2022 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BLACK LION LABS INC	64125 19THA VE UNIT	ESE 0 - 1/8 (0.073 mi.)	A2	13

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/28/2022 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TURBINE MAINTENANCE EPA ID:: CAD982443525	***19020 N INDIAN AVE S***	***SE 0 - 1/8 (0.011 mi.)***	***1***	***9***
KWIK KLEEN OF THE DE EPA ID:: CA0000085746	***19345 N INDIANA AVE***	***SSE 1/8 - 1/4 (0.158 mi.)***	***B7***	***39***
SHELL SERVICE STATIO EPA ID:: CAR000088500	***20000 INDIAN***	***SSE 1/8 - 1/4 (0.241 mi.)***	***D17***	***109***

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL NORTH PALM SPR	***20000 N INDIAN AVENU***	***SSE 1/8 - 1/4 (0.246 mi.)***	***D18***	***112***
Database: LUST, Date of Government Version: 12/06/2021 Database: RIVERSIDE CO. LUST, Date of Government Version: 03/31/2022 Facility Id: 9914939 Facility Id: 200117206 Global Id: T0606500989 Global Id: T10000000876 Facility Status: 9 Status: Completed - Case Closed				
NORTH PALM SPRINGS S	20000 INDIAN AVENUE	SSE 1/4 - 1/2 (0.256 mi.)	D22	178
Database: LUST REG 7, Date of Government Version: 02/26/2004 Status: 9 - Case Closed Global ID: T0606500989				
76 STATION 5699	***19995 INDIAN AVE***	***SSE 1/4 - 1/2 (0.259 mi.)***	***D23***	***178***
Database: LUST, Date of Government Version: 12/06/2021 Database: RIVERSIDE CO. LUST, Date of Government Version: 03/31/2022 Facility Id: 200824965 Global Id: T0606574311 Facility Status: 9 Status: Completed - Case Closed				

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE K STORES SS #	19995 INDIAN AVE	SSE 1/8 - 1/4 (0.152 mi.)	B5	31
Database: UST, Date of Government Version: 12/06/2021 Facility Id: 223				

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 01/18/2022 has revealed that there are 9 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PALM SPRINGS DC	***19251 RUPPERT ST***	***SW 0 - 1/8 (0.120 mi.)***	***4***	***18***
LIN LINES INC.	***19345 INDIAN AVE STE***	***SSE 1/8 - 1/4 (0.157 mi.)***	***C6***	***32***
INDIGO GENERATION, L	***63500 19TH AVE***	***WSW 1/8 - 1/4 (0.184 mi.)***	***8***	***42***
E&S PRECISION SHEETM	***19298 MCLANE STREET***	***SW 1/8 - 1/4 (0.204 mi.)***	***9***	***54***
THREE WIND HOLDINGS,	***19020 N INDIAN CANYO***	***SE 1/8 - 1/4 (0.206 mi.)***	***10***	***70***
PALM SPRINGS HARLEY	***19465 N INDIAN AVE #***	***S 1/8 - 1/4 (0.212 mi.)***	***C11***	***75***
SAN GORGONIO WEST WI	***19020 N INDIAN CANYO***	***SSE 1/8 - 1/4 (0.226 mi.)***	***D13***	***99***
GREEN POWER PARTNERS	19020 N INDIAN AVE B	SSE 1/8 - 1/4 (0.226 mi.)	D14	102
AES WIND GENERATION	***19435 RUPPERT ST***	***SW 1/8 - 1/4 (0.249 mi.)***	***20***	***118***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL #5951	***19995 INDIAN AVE***	***SSE 1/8 - 1/4 (0.249 mi.)***	***D19***	***117***
Status: A				
Tank Status: A				
Comp Number: 13581				

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL #5951	***19995 INDIAN AVE***	***SSE 1/8 - 1/4 (0.249 mi.)***	***D19***	***117***
Facility Id: 33004912				
Status: A				

EXECUTIVE SUMMARY

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 01/18/2022 has revealed that there are 4 CERS TANKS sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
INDIGO GENERATION, L	***63500 19TH AVE***	***WSW 1/8 - 1/4 (0.184 mi.)***	***8***	***42***
THREE WIND HOLDINGS,	***19020 N INDIAN CANYO***	***SE 1/8 - 1/4 (0.206 mi.)***	***10***	***70***
SAN GORGONIO WEST WI	***19020 N INDIAN CANYO***	***SSE 1/8 - 1/4 (0.226 mi.)***	***D13***	***99***
AES WIND GENERATION	***19435 RUPPERT ST***	***SW 1/8 - 1/4 (0.249 mi.)***	***20***	***118***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/28/2022 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
INTELIBIS RESEARCH EPA ID:: CAL000447239	64125 19TH AVE UNIT	ESE 0 - 1/8 (0.073 mi.)	A3	15
SAN GORGONIO WEST WI EPA ID:: CAL000431348	19020 N INDIAN CANYO	SSE 1/8 - 1/4 (0.226 mi.)	D12	97
K POWERED EPA ID:: CAL000445404	19020 N INDIAN CANYO	SSE 1/8 - 1/4 (0.226 mi.)	D15	104
TOP NOTCH AUTOMOTIVE EPA ID:: CAL000430695	19020 N INDIAN CANYO	SSE 1/8 - 1/4 (0.226 mi.)	D16	107

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 12/16/2021 has revealed that there are 2 Cortese sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL NORTH PALM SPR Cleanup Status: COMPLETED - CASE CLOSED	***20000 N INDIAN AVENU***	***SSE 1/8 - 1/4 (0.246 mi.)***	***D18***	***112***
76 STATION 5699 Cleanup Status: COMPLETED - CASE CLOSED	***19995 INDIAN AVE***	***SSE 1/4 - 1/2 (0.259 mi.)***	***D23***	***178***

EXECUTIVE SUMMARY

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

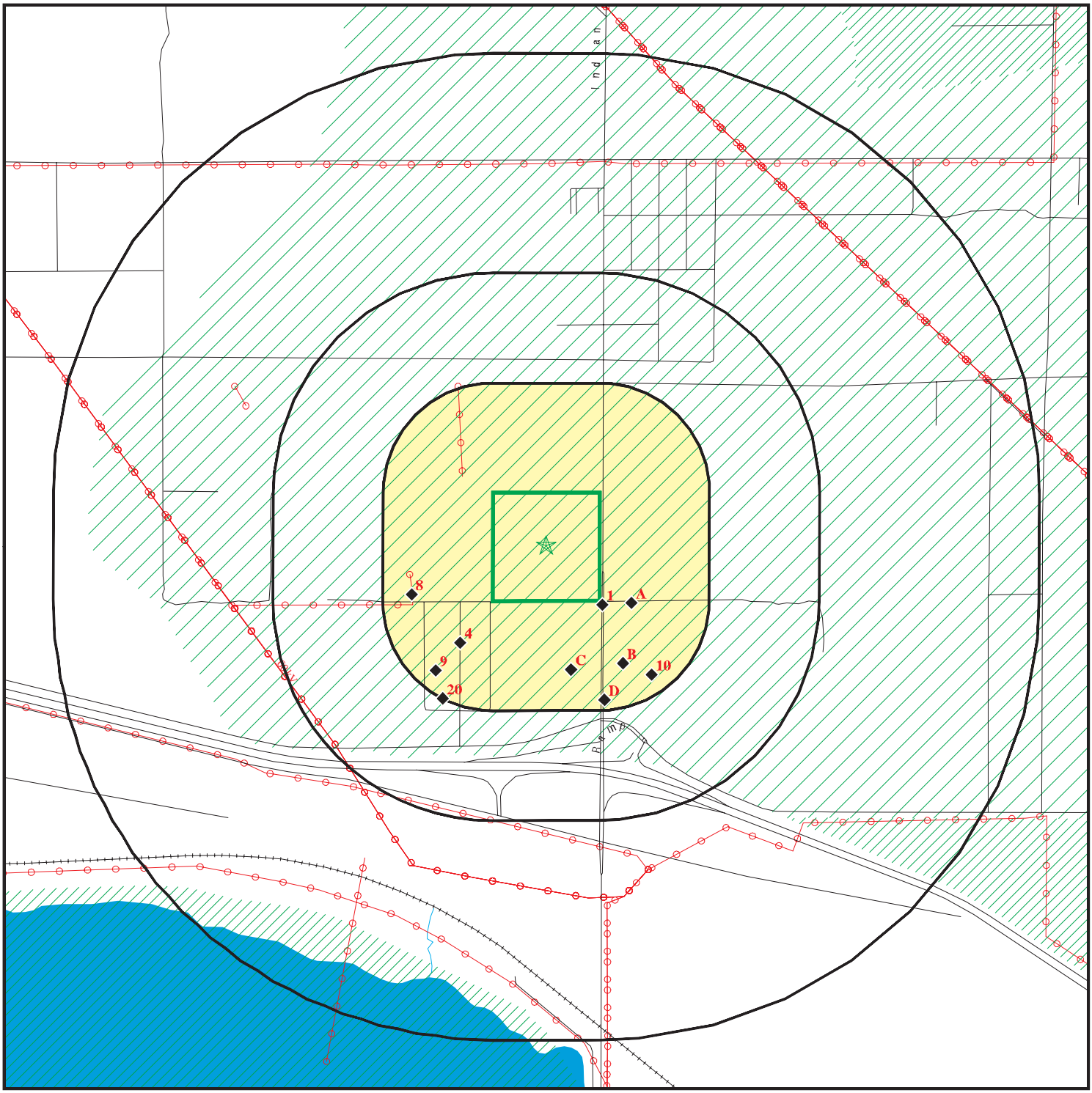
Lower Elevation	Address	Direction / Distance	Map ID	Page
NORTH PALM SPRINGS S Reg Id: 7T2258001	20000 INDIAN	SSE 1/4 - 1/2 (0.256 mi.)	D21	177

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 6 records.

Site Name	Database(s)
TECHNIQUE DESIGNS INC	CERS HAZ WASTE, HAZNET, HWTS
AUTO DOCTOR	CERS HAZ WASTE, HAZNET, HWTS
PALM SPRINGS MOTORSPORTS	CERS HAZ WASTE, HWTS
	CDL
	CDL
PALM SPRINGS TRANSFER AND RECYCLIN	SWF/LF

OVERVIEW MAP - 6955913.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	38-Ac Site APN 666-320-018	CLIENT:	MSA Consulting, Inc.
ADDRESS:	Northwest Corner Indian Canyon Dr. & 19th Ave. Desert Hot Springs CA 92240	CONTACT:	Asia Lee
LAT/LONG:	33.912099 / 116.547581	INQUIRY #:	6955913.2s
		DATE:	April 26, 2022 3:14 pm

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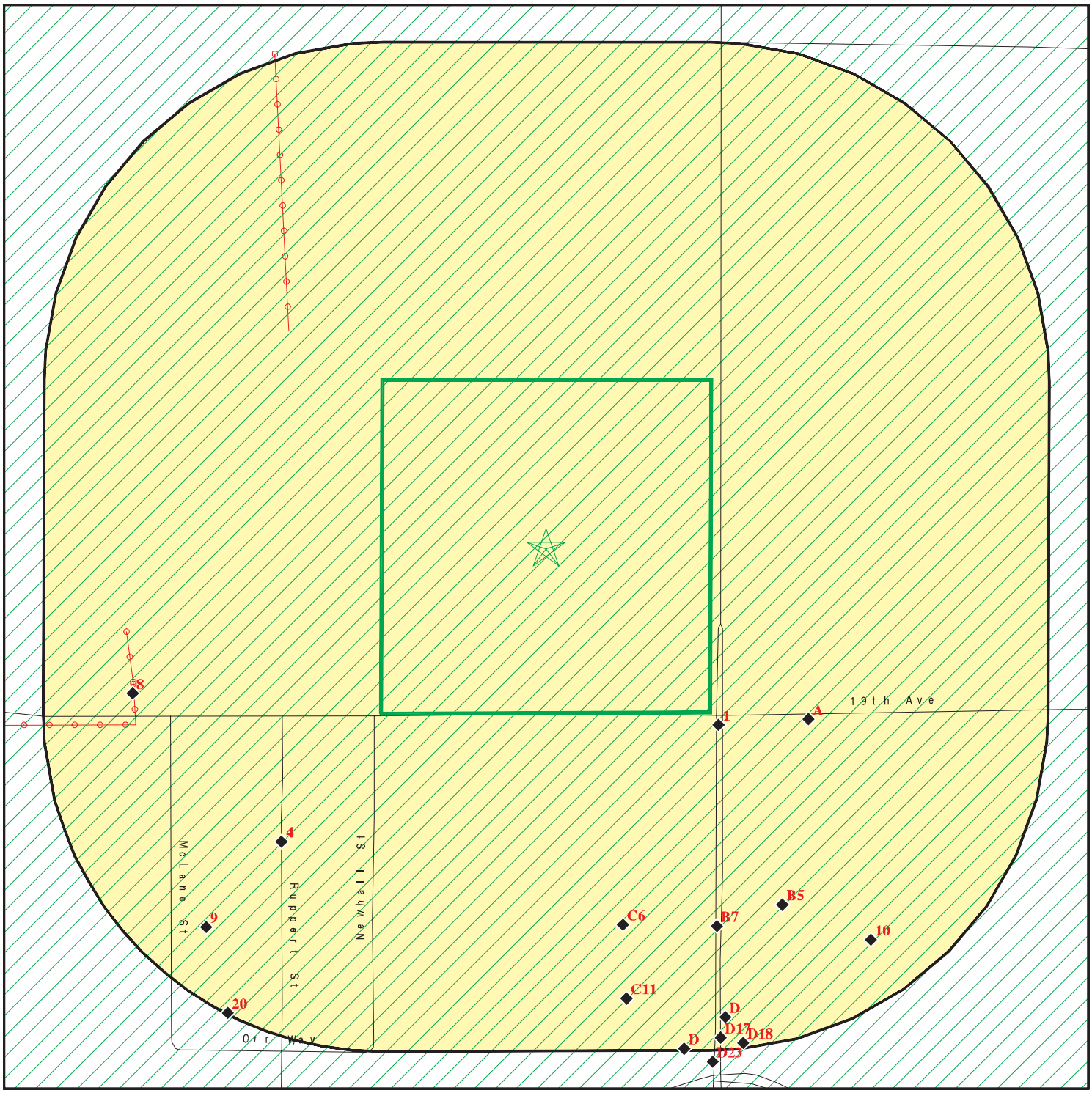
DETAIL MAP - 6955913.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	38-Ac Site APN 666-320-018	CLIENT:	MSA Consulting, Inc.
ADDRESS:	Northwest Corner Indian Canyon Dr. & 19th Ave. Desert Hot Springs CA 92240	CONTACT:	Asia Lee
LAT/LONG:	33.912099 / 116.547581	INQUIRY #:	6955913.2s
		DATE:	April 26, 2022 3:17 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		1	2	NR	NR	NR	3
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	1	2	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	1	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		1	8	NR	NR	NR	9
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
AQUEOUS FOAM	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	1	NR	NR	NR	1
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	1	NR	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CERS TANKS	0.250		0	4	NR	NR	NR	4
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	3	NR	NR	NR	4
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	1	1	NR	NR	2
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	1	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	4	22	4	0	0	30

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SE
< 1/8
0.011 mi.
59 ft.

TURBINE MAINTENANCE CORP
19020 N INDIAN AVE STE 4C 5C
N PALM SPRINGS, CA 92258

RCRA-SQG
FINDS
ECHO

1000593465
CAD982443525

Relative:
Lower

Actual:
767 ft.

RCRA-SQG:

Date Form Received by Agency:	19960901
Handler Name:	TURBINE MAINTENANCE CORP
Handler Address:	19020 N INDIAN AVE STE 4C 5C
Handler City,State,Zip:	N PALM SPRINGS, CA 92258
EPA ID:	CAD982443525
Contact Name:	Not reported
Contact Address:	Not reported
Contact City,State,Zip:	Not reported
Contact Telephone:	Not reported
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	CA
State District:	4
Mailing Address:	2825 TAHQUITZ MCCALLUM STE 202
Mailing City,State,Zip:	PALM SPRINGS, CA 92262
Owner Name:	Not reported
Owner Type:	Not reported
Operator Name:	NOT REQUIRED
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

TURBINE MAINTENANCE CORP (Continued) **1000593465**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20020627
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TABOR CONSTRUCTION
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

TURBINE MAINTENANCE CORP (Continued) **1000593465**

Historic Generators:
Receive Date: 19960901
Handler Name: TURBINE MAINTENANCE CORP
Federal Waste Generator Description: Small Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19910506
Handler Name: TURBINE MAINTENANCE CORP
Federal Waste Generator Description: Large Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported

TURBINE MAINTENANCE CORP (Continued) **1000593465**

SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19930428
Evaluation Responsible Agency: State Contractor/Grantee
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

FINDS:
Registry ID: 110002813894

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000593465
Registry ID: 110002813894
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002813894
Name: TURBINE MAINTENANCE CORP
Address: 19020 N INDIAN AVE STE 4C 5C
City,State,Zip: N PALM SPRINGS, CA 92258

A2 **BLACK LION LABS INC** **RCRA-LQG** **1027095515**
ESE **64125 19THA VE UNIT 1A** **CAR000332031**
< 1/8 **DESERT HOT SPRINGS, CA 92240**
0.073 mi.
385 ft. **Site 1 of 2 in cluster A**

Relative: **Lower**
Actual: **767 ft.**

RCRA-LQG:

Date Form Received by Agency:		20211209
Handler Name:	BLACK LION LABS INC	
Handler Address:		64125 19THA VE UNIT 1A
Handler City,State,Zip:		DESERT HOT SPRINGS, CA 92240
EPA ID:		CAR000332031
Contact Name:		GREG GAMET
Contact Address:		19THA VE UNIT 1A
Contact City,State,Zip:		DESERT HOT SPRINGS, CA 92240
Contact Telephone:		720-352-2380
Contact Fax:		Not reported
Contact Email:		GREG@GOLDFLORA.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Private
Federal Waste Generator Description:		Large Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		19THA VE UNIT 1A
Mailing City,State,Zip:		DESERT HOT SPRINGS, CA 92240
Owner Name:		GREG GAMET
Owner Type:		Private
Operator Name:		MICHAEL GALLAGHER
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

BLACK LION LABS INC (Continued) **1027095515**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20211213
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GREG GAMET
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	64125 19THA VE UNIT 1A
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92240
Owner/Operator Telephone:	720-352-2380
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MICHAEL GALLAGHER
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	64125 19THA VE UNIT 1A
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92240

BLACK LION LABS INC (Continued) **1027095515**

Owner/Operator Telephone: 619-370-8978
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20211209
Handler Name: BLACK LION LABS INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:
NAICS Code: 541714
NAICS Description: RESEARCH AND DEVELOPMENT IN BIOTECHNOLOGY (EXCEPT NANOBIOTECHNOLOGY

NAICS Code: 541715
NAICS Description: RESEARCH AND DEVELOPMENT IN THE PHYSICAL, ENGINEERING, AND LIFE SCIENCES (EXCEPT NANOTECHNOLOGY AND BIOTECHNOLOGY

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

A3 **INTELIBIS RESEARCH** **RCRA NonGen / NLR** **1025874110**
ESE **64125 19TH AVE UNIT 1I** **CAL000447239**
< 1/8 **DESERT HOT SPRINGS, CA 92240**
0.073 mi.
385 ft. **Site 2 of 2 in cluster A**

Relative:
Lower

Actual:
767 ft.

RCRA NonGen / NLR:
Date Form Received by Agency: 20200302
Handler Name: INTELIBIS RESEARCH
Handler Address: 64125 19TH AVE UNIT 1I
Handler City,State,Zip: DESERT HOT SPRINGS, CA 92240
EPA ID: CAL000447239
Contact Name: CHRIS CREIGHTON
Contact Address: 19TH AVE UNIT 1I
Contact City,State,Zip: DESERT HOT SPRINGS, CA 92240
Contact Telephone: 619-339-2942
Contact Fax: Not reported
Contact Email: CHRIS.CREIGHTON@INTELIBISRESEARCH.COM
Contact Title: Not reported
EPA Region: 09
Land Type: Private
Federal Waste Generator Description: Not a generator, verified

INTELIBIS RESEARCH (Continued) **1025874110**

Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	19TH AVE UNIT 1I
Mailing City,State,Zip:	DESERT HOT SPRINGS, CA 92240
Owner Name:	INTELIBIS RESEARCH
Owner Type:	Private
Operator Name:	INTELIBIS RESEARCH
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No

INTELIBIS RESEARCH (Continued) **1025874110**

Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200309
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	INTELIBIS RESEARCH
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	64125 19TH AVE UNIT 1I
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92240
Owner/Operator Telephone:	619-339-2942
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	INTELIBIS RESEARCH
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	64125 19TH AVE UNIT 1I
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92240
Owner/Operator Telephone:	619-339-2942
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	INTELIBIS RESEARCH
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	64125 19TH AVE UNIT 11
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92240
Owner/Operator Telephone:	619-339-2942
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CHRIS CREIGHTON
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	64125 19TH AVE UNIT 11
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92240
Owner/Operator Telephone:	619-339-2942

INTELIBIS RESEARCH (Continued) **1025874110**

Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20200302
Handler Name: INTELIBIS RESEARCH
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 20190702
Handler Name: INTELIBIS RESEARCH
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 325411
NAICS Description: MEDICINAL AND BOTANICAL MANUFACTURING

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

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4 **PALM SPRINGS DC** **CERS HAZ WASTE** **S103965223**
SW **19251 RUPPERT ST** **HAZNET** **N/A**
< 1/8 **NORTH PALM SPRINGS, CA 92258** **NPDES**
0.120 mi. **CIWQS**
634 ft. **CERS**
HWTS

Relative:
Lower

Actual:
758 ft.

CERS HAZ WASTE:
Name: FRITO-LAY INC
Address: 19251 RUPPERT ST
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 118151
CERS ID: 10320538
CERS Description: Hazardous Waste Generator

PALM SPRINGS DC (Continued) **S103965223**

HAZNET:

Name:	ROLLING FRITO-LAY SALES LP
Address:	19251 RUPPERT ST
Address 2:	Not reported
City,State,Zip:	NORTH PALM SPRINGS, CA 953570000
Contact:	CATHY MATOS-RYAN
Telephone:	2095445432
Mailing Name:	Not reported
Mailing Address:	4029 LECKRON ROAD
Year:	2019
Gepaid:	CAL000277905
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.01250
Year:	2018
Gepaid:	CAL000277905
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.01000
Year:	2017
Gepaid:	CAL000277905
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.025
Year:	2016
Gepaid:	CAL000277905
TSD EPA ID:	CAT080013352
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.085

Additional Info:

Year:	2017
Gen EPA ID:	CAL000277905
Shipment Date:	20171016
Creation Date:	5/30/2018 18:30:45
Receipt Date:	20171023
Manifest ID:	017730633JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993

PALM SPRINGS DC (Continued) **S103965223**

Trans Name:	US ECOLOGY VERNON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

NPDES:

Name:	PALM SPRINGS DC
Address:	19251 RUPPERT ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Facility Status:	Active
NPDES Number:	CAS000001
Region:	7
Agency Number:	0
Regulatory Measure ID:	205515
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	7 33I019027
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/07/2004
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	9846 4th Street
Discharge Name:	Rolling Frito Lay Sales LP
Discharge City:	Rancho Cucamonga
Discharge State:	California
Discharge Zip:	91730
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	7
Regulatory Measure ID:	205515
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	7 33I019027

PALM SPRINGS DC (Continued) **S103965223**

Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	09/07/2004
Status:	Active
Status Date:	09/07/2004
Place Size:	2
Place Size Unit:	Acres
Contact:	Ray Ginocchio
Contact Title:	Regional Fleet Manager
Contact Phone:	909-941-6230
Contact Phone Ext:	Not reported
Contact Email:	Ray.Ginocchio@pepsico.com
Operator Name:	Rolling Frito Lay Sales LP
Operator Address:	9846 4th Street
Operator City:	Rancho Cucamonga
Operator State:	California
Operator Zip:	91730
Operator Contact:	Ray Ginocchio
Operator Contact Title:	Regional Fleet Manager
Operator Contact Phone:	909-941-6230
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Ray.Ginocchio@pepsico.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported

PALM SPRINGS DC (Continued) **S103965223**

Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Garnet Wash
Certifier:	Ashin Parikh
Certifier Title:	Regional Vice President
Certification Date:	12-DEC-16
Primary Sic:	4213-Trucking, Except Local
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	7
Regulatory Measure ID:	205515
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	7 33I019027
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/07/2004
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Rolling Frito Lay Sales LP
Discharge Address:	9846 4th Street
Discharge City:	Rancho Cucamonga
Discharge State:	California
Discharge Zip:	91730
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported

PALM SPRINGS DC (Continued) **S103965223**

Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	PALM SPRINGS DC
Address:	19251 RUPPERT ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	7 33I019027
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	09/07/2004
Operator Name:	Rolling Frito Lay Sales LP
Operator Address:	9846 4th Street
Operator City:	Rancho Cucamonga

PALM SPRINGS DC (Continued) **S103965223**

Operator State:	California
Operator Zip:	91730

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	7
Regulatory Measure ID:	205515
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	7 33I019027
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	09/07/2004
Status:	Active
Status Date:	09/07/2004
Place Size:	2
Place Size Unit:	Acres
Contact:	Ray Ginocchio
Contact Title:	Regional Fleet Manager
Contact Phone:	909-941-6230
Contact Phone Ext:	Not reported
Contact Email:	Ray.Ginocchio@pepsico.com
Operator Name:	Rolling Frito Lay Sales LP
Operator Address:	9846 4th Street
Operator City:	Rancho Cucamonga
Operator State:	California
Operator Zip:	91730
Operator Contact:	Ray Ginocchio
Operator Contact Title:	Regional Fleet Manager
Operator Contact Phone:	909-941-6230
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Ray.Ginocchio@pepsico.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported

PALM SPRINGS DC (Continued) **S103965223**

Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Garnet Wash
Certifier:	Ashin Parikh
Certifier Title:	Regional Vice President
Certification Date:	12-DEC-16
Primary Sic:	4213-Trucking, Except Local
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	7
Regulatory Measure ID:	205515
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	7 33I019027
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/07/2004
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Rolling Frito Lay Sales LP
Discharge Address:	9846 4th Street
Discharge City:	Rancho Cucamonga
Discharge State:	California
Discharge Zip:	91730
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

PALM SPRINGS DC (Continued) **S103965223**

Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CIWQS:

Name:	PALM SPRINGS DC
Address:	19251 RUPPERT ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Agency:	Rolling Frito Lay Sales LP
Agency Address:	9846 4th Street, Rancho Cucamonga, CA 91730
Place/Project Type:	Industrial - Trucking, Except Local
SIC/NAICS:	4213
Region:	7
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	7 33I019027
NPDES Number:	CAS000001

PALM SPRINGS DC (Continued) **S103965223**

Adoption Date:	Not reported
Effective Date:	09/07/2004
Termination Date:	Not reported
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.908457
Longitude:	-116.551526

CERS:

Name:	PALM SPRINGS DC
Address:	19251 RUPPERT ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	538919
CERS ID:	249680
CERS Description:	Industrial Facility Storm Water

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-14-2019
Violations Found:	No
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	In compliance.
Eval Division:	Water Boards
Eval Program:	INDSTW
Eval Source:	SMARTS,

Affiliation:

Affiliation Type Desc:	Owner/Operator
Entity Name:	Rolling Frito Lay Sales LP
Entity Title:	Operator
Affiliation Address:	9846 4th Street
Affiliation City:	Rancho Cucamonga
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91730
Affiliation Phone:	,

Name:	FRITO-LAY INC
Address:	19251 RUPPERT ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	118151
CERS ID:	10320538
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	118151
Site Name:	Frito-Lay Inc
Violation Date:	11-17-2015
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material

PALM SPRINGS DC (Continued) **S103965223**

inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 11/25/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 118151
Site Name: Frito-Lay Inc
Violation Date: 11-17-2015
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/25/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 118151
Site Name: Frito-Lay Inc
Violation Date: 09-03-2015
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/25/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-11-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: NOTE: ensure fire extinguishers are serviced one time per year
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 11-17-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: reinspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-03-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

PALM SPRINGS DC (Continued) **S103965223**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-03-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Enforcement Action:
Site ID: 118151
Site Name: Frito-Lay Inc
Site Address: 19251 RUPPERT ST
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 09-03-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS,

Site ID: 118151
Site Name: Frito-Lay Inc
Site Address: 19251 RUPPERT ST
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 11-17-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS,

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 19251 Ruppert St
Affiliation City: North Palm Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92258
Affiliation Phone: ,

Affiliation Type Desc: Parent Corporation
Entity Name: Rolling Frito-Lay Sales, LP (SOCAL Region)
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

PALM SPRINGS DC (Continued) **S103965223**

Affiliation Type Desc:	Document Preparer
Entity Name:	Huda Shihada
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Environmental Contact
Entity Name:	ADRIAN BREWINGTON
Entity Title:	Not reported
Affiliation Address:	19251
Affiliation City:	North Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92258
Affiliation Phone:	,

Affiliation Type Desc:	Legal Owner
Entity Name:	Rolling Frito-Lay Sales, LP
Entity Title:	Not reported
Affiliation Address:	1500 Francisco St.
Affiliation City:	Torrance
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90501
Affiliation Phone:	(818) 324-9312,

Affiliation Type Desc:	Operator
Entity Name:	Rolling Frito-Lay Sales, LP
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(818) 324-9312,

Affiliation Type Desc:	Identification Signer
Entity Name:	Adam Buttgenbach
Entity Title:	Regional Fleet Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported

PALM SPRINGS DC (Continued) **S103965223**

Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055,

HWTS:
Name: ROLLING FRITO-LAY SALES LP
Address: 19251 RUPPERT ST
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 922580000
EPA ID: CAL000277905
Inactive Date: Not reported
Create Date: 01/08/2004
Last Act Date: 07/13/2020
Mailing Name: Not reported
Mailing Address: 4029 LECKRON ROAD
Mailing Address 2: Not reported
Mailing City,State,Zip: MODESTO, CA 953570000
Owner Name: FRITO-LAY INC
Owner Address: 7701 LEGACY DR
Owner Address 2: Not reported
Owner City,State,Zip: PLANO, TX 750240000
Contact Name: CATHY MATOS-RYAN
Contact Address: 4029 LECKRON ROAD
Contact Address 2: Not reported
City,State,Zip: MODESTO, CA 953570000

NAICS:
EPA ID: CAL000277905
Create Date: 2004-01-08 11:01:52.043
NAICS Code: 48423
NAICS Description: Specialized Freight (except Used Goods) Trucking, Long-Distance
Issued EPA ID Date: 2004-01-08 11:01:52.04300
Inactive Date: Not reported
Facility Name: ROLLING FRITO-LAY SALES LP
Facility Address: 19251 RUPPERT ST
Facility Address 2: Not reported
Facility City: NORTH PALM SPRINGS
Facility County: Not reported
Facility State: CA
Facility Zip: 922580000

B5 **CIRCLE K STORES SS #5699** **UST** **U004345235**
SSE **19995 INDIAN AVE** **N/A**
1/8-1/4 **N PALM SPRINGS, CA 92258**
0.152 mi.
803 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
753 ft.

UST:
Name: CIRCLE K STORES SS #5699
Address: 19995 INDIAN AVE
City,State,Zip: N PALM SPRINGS, CA 92258
Facility ID: 223
Permitting Agency: RIVERSIDE COUNTY
CERSID: Not reported
Latitude: 33.9082486
Longitude: -116.5445374

C6 **LIN LINES INC.** **CERS HAZ WASTE** **S113090896**
SSE **19345 INDIAN AVE STE.Q** **HAZNET** **N/A**
1/8-1/4 **NORTH PALM SPRINGS, CA 92258** **CERS**
0.157 mi. **HWTS**
828 ft. **Site 1 of 2 in cluster C**

Relative:
Lower

Actual:
754 ft.

CERS HAZ WASTE:
Name: LIN LINES INC.
Address: 19345 INDIAN AVE STE.Q
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 44479
CERS ID: 10320154
CERS Description: Hazardous Waste Generator

HAZNET:
Name: LIN LINES INC
Address: 19345 INDIAN AVE
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Contact: DANE SMITH
Telephone: 7602517742
Mailing Name: Not reported
Mailing Address: 1801 E TAHQUITZ CANYON WAY STE 100

Year: 2011
Gepaid: CAL000172838
TSD EPA ID: CAT080013352
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.06255

Additional Info:
Year: 2011
Gen EPA ID: CAL000172838

Shipment Date: 20110510
Creation Date: 7/14/2011 18:30:27
Receipt Date: 20110518
Manifest ID: 008156667JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 0.06255
Waste Quantity: 15
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported

LIN LINES INC. (Continued) **S113090896**

Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CERS:
Name: LIN LINES INC.
Address: 19345 INDIAN AVE STE.Q
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 44479
CERS ID: 10320154
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 44479
Site Name: Lin Lines Inc.
Violation Date: 09-18-2020
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 09/18/2020. OBSERVATION: Observed incomplete labels on drums of used oil filters, used coolant and used oil. Information missing included correct accumulation start date. CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS,

Site ID: 44479
Site Name: Lin Lines Inc.
Violation Date: 01-14-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 03/16/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 44479
Site Name: Lin Lines Inc.
Violation Date: 11-03-2021
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Not reported

LIN LINES INC. (Continued) **S113090896**

Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	44479
Site Name:	Lin Lines Inc.
Violation Date:	01-14-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 03/16/2016. [LOCAL ORDINANCE VIOLATION 104A] NFPA 704 sign(s) have been posted appropriately.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	44479
Site Name:	Lin Lines Inc.
Violation Date:	01-14-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 03/16/2016. [LOCAL ORDINANCE VIOLATION 101C] Approved HMBP accessible on site and available for review.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	44479
Site Name:	Lin Lines Inc.
Violation Date:	09-18-2020
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/05/2021. OBSERVATION: No training records observed/provided during inspection. CORRECTIVE ACTION: Owner/operator shall provide training to all employees. Documentation shall be retained and be made available for inspection for a minimum period of 3 years from the date of the training. Send picture of completed training to joelharris@rivco.org
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	44479
Site Name:	Lin Lines Inc.
Violation Date:	07-26-2021
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/05/2021. OBSERVATION: No training records

LIN LINES INC. (Continued) **S113090896**

observed/provided during inspection. CORRECTIVE ACTION: Owner/operator shall provide training to all employees. Documentation shall be retained and be made available for inspection for a minimum period of 3 years from the date of the training.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 44479
Site Name: Lin Lines Inc.
Violation Date: 09-18-2020
Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description: Failure to ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.
Violation Notes: Returned to compliance on 08/05/2021. OBSERVATION: No training records observed/provided during inspection. CORRECTIVE ACTION: Owner/operator shall provide employees with initial or refresher hazardous waste training as required. Submit a copy of the roster and the syllabus to the CUPA.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS,

Site ID: 44479
Site Name: Lin Lines Inc.
Violation Date: 01-14-2016
Citation: 40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description: Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human health or the environment..
Violation Notes: Returned to compliance on 01/14/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-14-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-14-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HW

LIN LINES INC. (Continued) **S113090896**

Eval Source:	CERS,
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	reinspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Facility is charter bus transportation company with maintenance shop. Facility generates used oil, used oil filters, used anti freeze and used lead acid batteries.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Facility is charter bus transportation company with maintenance shop. Facility maintains lubricating oils and coolant on site. Note: Please maintain most up to date copy of HMBP on site.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Other/Unknown
Eval Date:	11-03-2021
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Other/Unknown
Eval Date:	07-26-2021
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Evidence of adequate training was observed at time of inspection.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Other/Unknown
Eval Date:	07-26-2021
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health

LIN LINES INC. (Continued) **S113090896**

Eval Program: HMRRP
Eval Source: CERS,

Enforcement Action:
Site ID: 44479
Site Name: Lin Lines Inc.
Site Address: 19345 INDIAN AVE STE.Q
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 01-14-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS,

Site ID: 44479
Site Name: Lin Lines Inc.
Site Address: 19345 INDIAN AVE STE.Q
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 01-14-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW
Enf Action Source: CERS,

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title: Not reported
Affiliation Address: 4065 County Circle Drive, Room 104
Affiliation City: Riverside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055,

Affiliation Type Desc: Environmental Contact
Entity Name: MARK ANDERSON
Entity Title: Not reported
Affiliation Address: 1801 E Tahquitz Canyon Way, Ste 100
Affiliation City: Palm Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92262
Affiliation Phone: ,

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1801 Tahquitz Cyn Wy, Suite 100
Affiliation City: Palm Sprgs

LIN LINES INC. (Continued) **S113090896**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92262
Affiliation Phone:	,
Affiliation Type Desc:	Legal Owner
Entity Name:	MARK ANDERSON
Entity Title:	Not reported
Affiliation Address:	1801 Tahquitz Cyn Wy, Suite 100
Affiliation City:	Palm Springs
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92262
Affiliation Phone:	(760) 969-4230,
Affiliation Type Desc:	Identification Signer
Entity Name:	Mark Anderson
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Document Preparer
Entity Name:	Mark Anderson
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	MARK ANDERSON
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 792-4317,
Affiliation Type Desc:	Parent Corporation
Entity Name:	Lin Lines Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

LIN LINES INC. (Continued) **S113090896**

HWTS:

Name:	LIN LINES INC
Address:	19345 INDIAN AVE
Address 2:	BLDG 2 UNIT Q
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
EPA ID:	CAL000172838
Inactive Date:	06/30/2020
Create Date:	07/16/1999
Last Act Date:	01/04/2021
Mailing Name:	Not reported
Mailing Address:	1801 E TAHQUITZ CANYON WAY STE 100
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PALM SPRINGS, CA 922627121
Owner Name:	LIN LINES INC
Owner Address:	1801 E TAHQUITZ CANYON WAY STE 100
Owner Address 2:	Not reported
Owner City,State,Zip:	PALM SPRINGS, CA 922627121
Contact Name:	SHAWN CRAYCRAFT
Contact Address:	1801 E TAHQUITZ CANYON WAY, STE 100
Contact Address 2:	Not reported
City,State,Zip:	PALM SPRINGS, CA 92262

NAICS:

EPA ID:	CAL000172838
Create Date:	2002-03-14 16:36:28.000
NAICS Code:	48551
NAICS Description:	Charter Bus Industry
Issued EPA ID Date:	1999-07-16 00:00:00
Inactive Date:	2020-06-30 00:00:00
Facility Name:	LIN LINES INC
Facility Address:	19345 INDIAN AVE
Facility Address 2:	BLDG 2 UNIT Q
Facility City:	NORTH PALM SPRINGS
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92258

B7 **KWIK KLEEN OF THE DESERT** **RCRA-SQG 1000886144**
SSE **19345 N INDIANA AVE** **FINDS CA0000085746**
1/8-1/4 **PALM SPRINGS, CA 92262** **ECHO**
0.158 mi.
835 ft. **Site 2 of 2 in cluster B**

Relative:
Lower

Actual:
751 ft.

RCRA-SQG:

Date Form Received by Agency:	19960901
Handler Name:	KWIK KLEEN OF THE DESERT
Handler Address:	19345 N INDIANA AVE
Handler City,State,Zip:	PALM SPRINGS, CA 92262
EPA ID:	CA0000085746
Contact Name:	Not reported
Contact Address:	Not reported
Contact City,State,Zip:	Not reported
Contact Telephone:	Not reported
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09

KWIK KLEEN OF THE DESERT (Continued) **1000886144**

Land Type:	Private
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	P O BOX 2284
Mailing City,State,Zip:	COLTON, CA 92324-2284
Owner Name:	CHRISTINE CRUZ
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No

KWIK KLEEN OF THE DESERT (Continued) **1000886144**

Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20080902
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CHRISTINE CRUZ
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 411634
Owner/Operator City,State,Zip:	LOS ANGELES, CA 90041
Owner/Operator Telephone:	909-883-4628
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19960901
Handler Name: KWIK KLEEN OF THE DESERT	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

FINDS:

Registry ID:	110002612833

KWIK KLEEN OF THE DESERT (Continued) **1000886144**

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000886144
Registry ID:	110002612833
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002612833
Name:	KWIK KLEEN OF THE DESERT
Address:	19345 N INDIANA AVE
City,State,Zip:	PALM SPRINGS, CA 92262

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8 **INDIGO GENERATION, LLC** **CERS HAZ WASTE** **S106104740**
WSW **63500 19TH AVE** **CERS TANKS** **N/A**
1/8-1/4 **NORTH PALM SPRINGS, CA 92258** **EMI**
0.184 mi. **WDS**
970 ft. **CIWQS**
CERS

Relative:
Lower

Actual:
767 ft.

CERS HAZ WASTE:

Name:	INDIGO GENERATION, LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	38031
CERS ID:	10321579
CERS Description:	Hazardous Chemical Management

Name:	INDIGO GENERATION, LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	38031
CERS ID:	10321579
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	INDIGO GENERATION, LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	38031
CERS ID:	10321579
CERS Description:	Aboveground Petroleum Storage

EMI:

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Year:	2002
County Code:	33

INDIGO GENERATION, LLC (Continued) **S106104740**

Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	14
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	8
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	2
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Year:	2003
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	14
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	8
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	2
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Year:	2004
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13.95
Reactive Organic Gases Tons/Yr:	1.27
Carbon Monoxide Emissions Tons/Yr:	1.555
NOX - Oxides of Nitrogen Tons/Yr:	8.19
SOX - Oxides of Sulphur Tons/Yr:	0.2407
Particulate Matter Tons/Yr:	2.158
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.15

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE

INDIGO GENERATION, LLC (Continued) **S106104740**

City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Year:	2005
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.762
Reactive Organic Gases Tons/Yr:	.0696468
Carbon Monoxide Emissions Tons/Yr:	1.216
NOX - Oxides of Nitrogen Tons/Yr:	63.3
SOX - Oxides of Sulphur Tons/Yr:	.1139
Particulate Matter Tons/Yr:	2.422
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.407468

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Year:	2006
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.870897155361050328
Reactive Organic Gases Tons/Yr:	.628
Carbon Monoxide Emissions Tons/Yr:	1.338
NOX - Oxides of Nitrogen Tons/Yr:	11.01
SOX - Oxides of Sulphur Tons/Yr:	.094
Particulate Matter Tons/Yr:	2.161
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.148034

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Year:	2007
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.870897155361050328
Reactive Organic Gases Tons/Yr:	.628
Carbon Monoxide Emissions Tons/Yr:	1.338
NOX - Oxides of Nitrogen Tons/Yr:	11.01
SOX - Oxides of Sulphur Tons/Yr:	.094
Particulate Matter Tons/Yr:	2.161
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.148034

INDIGO GENERATION, LLC (Continued) **S106104740**

Name:	WILDFLOWER ENERGY LP/IINDIGO GENERATION
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2008
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	8731
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13.56673960612691466
Reactive Organic Gases Tons/Yr:	1.24
Carbon Monoxide Emissions Tons/Yr:	2.63
NOX - Oxides of Nitrogen Tons/Yr:	13.37
SOX - Oxides of Sulphur Tons/Yr:	.18
Particulate Matter Tons/Yr:	4.29
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4.26426

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2009
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	8731
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7.7680525164113696
Reactive Organic Gases Tons/Yr:	0.70999999999999996
Carbon Monoxide Emissions Tons/Yr:	1.3100000000000001
NOX - Oxides of Nitrogen Tons/Yr:	7.4400000000000004
SOX - Oxides of Sulphur Tons/Yr:	0.10000000000000001
Particulate Matter Tons/Yr:	2.5
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.4849999999999999

Name:	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2010
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	8731
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7.5157549234135601
Reactive Organic Gases Tons/Yr:	0.68694
Carbon Monoxide Emissions Tons/Yr:	0.97448000000000001
NOX - Oxides of Nitrogen Tons/Yr:	10.13199
SOX - Oxides of Sulphur Tons/Yr:	0.10272000000000001

INDIGO GENERATION, LLC (Continued) **S106104740**

Particulate Matter Tons/Yr: 2.3412000000000002
Part. Matter 10 Micrometers and Smllr Tons/Yr: 2.3271527999999999

Name: WILDFLOWER ENERGY LP/INDIGO ENERGY FAC
Address: 63500 19TH AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Year: 2011
County Code: 33
Air Basin: SS
Facility ID: 127299
Air District Name: SC
SIC Code: 8731
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 4.7295404814
Reactive Organic Gases Tons/Yr: 0.43228
Carbon Monoxide Emissions Tons/Yr: 0.60761
NOX - Oxides of Nitrogen Tons/Yr: 5.52648
SOX - Oxides of Sulphur Tons/Yr: 0.06464
Particulate Matter Tons/Yr: 1.492
Part. Matter 10 Micrometers and Smllr Tons/Yr: 1.483048

Name: WILDFLOWER ENERGY LP/INDIGOGEN., LLC
Address: 63500 19TH AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Year: 2012
County Code: 33
Air Basin: SS
Facility ID: 127299
Air District Name: SC
SIC Code: 8731
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 7.5508752735
Reactive Organic Gases Tons/Yr: 0.69015
Carbon Monoxide Emissions Tons/Yr: 0.55469
NOX - Oxides of Nitrogen Tons/Yr: 7.70599
SOX - Oxides of Sulphur Tons/Yr: 0.1032
Particulate Matter Tons/Yr: 2.3794
Part. Matter 10 Micrometers and Smllr Tons/Yr: 2.3651236

Name: WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address: 63500 19TH AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Year: 2013
County Code: 33
Air Basin: SS
Facility ID: 127299
Air District Name: SC
SIC Code: 4911
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 10.079540481
Reactive Organic Gases Tons/Yr: 0.92127

INDIGO GENERATION, LLC (Continued) **S106104740**

Carbon Monoxide Emissions Tons/Yr:	1.13497
NOX - Oxides of Nitrogen Tons/Yr:	10.98749
SOX - Oxides of Sulphur Tons/Yr:	0.13776
Particulate Matter Tons/Yr:	3.165
Part. Matter 10 Micrometers and Smllr Tons/Yr:	3.14601

Name:	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2014
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7.829993872
Reactive Organic Gases Tons/Yr:	0.73157
Carbon Monoxide Emissions Tons/Yr:	0.8684
NOX - Oxides of Nitrogen Tons/Yr:	7.22461
SOX - Oxides of Sulphur Tons/Yr:	0.10899
Particulate Matter Tons/Yr:	2.4987
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.48367672

Name:	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2015
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5.034800023
Reactive Organic Gases Tons/Yr:	0.57156275
Carbon Monoxide Emissions Tons/Yr:	0.8895545
NOX - Oxides of Nitrogen Tons/Yr:	7.9248516
SOX - Oxides of Sulphur Tons/Yr:	0.102589415
Particulate Matter Tons/Yr:	2.239036075
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.225600632

Name:	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2016
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

INDIGO GENERATION, LLC (Continued) **S106104740**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.1834558433
Reactive Organic Gases Tons/Yr:	0.111642
Carbon Monoxide Emissions Tons/Yr:	0.48
NOX - Oxides of Nitrogen Tons/Yr:	5.030734
SOX - Oxides of Sulphur Tons/Yr:	0.0300382
Particulate Matter Tons/Yr:	1.1800468
Part. Matter 10 Micrometers and Smllr Tons/Yr:	1.172964928

Name:	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2017
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.579786714
Reactive Organic Gases Tons/Yr:	0.24176
Carbon Monoxide Emissions Tons/Yr:	1.12
NOX - Oxides of Nitrogen Tons/Yr:	7.670872
SOX - Oxides of Sulphur Tons/Yr:	0.0900453
Particulate Matter Tons/Yr:	2.4100556
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.395593376

Name:	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2018
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.3259834649
Reactive Organic Gases Tons/Yr:	0.12523575
Carbon Monoxide Emissions Tons/Yr:	0.938788
NOX - Oxides of Nitrogen Tons/Yr:	10.1561743
SOX - Oxides of Sulphur Tons/Yr:	0.055057195
Particulate Matter Tons/Yr:	1.168940725
Part. Matter 10 Micrometers and Smllr Tons/Yr:	1.1619270806

Name:	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Year:	2019
County Code:	33
Air Basin:	SS
Facility ID:	127299
Air District Name:	SC

INDIGO GENERATION, LLC (Continued) **S106104740**

SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.381287811
Reactive Organic Gases Tons/Yr:	0.1299156
Carbon Monoxide Emissions Tons/Yr:	0.7185075
NOX - Oxides of Nitrogen Tons/Yr:	3.915000935
SOX - Oxides of Sulphur Tons/Yr:	0.0573652701
Particulate Matter Tons/Yr:	1.2182562605
Part. Matter 10 Micrometers and Smllr Tons/Yr:	1.2109467229

WDS:

Name:	INDIGO GENERATION LLC
Address:	63500 19TH AVE
City:	NORTH PALM SPRINGS
Facility ID:	7 33I017524
Facility Type:	Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	7
Facility Telephone:	7602882148
Facility Contact:	MORGAN OHLER
Agency Name:	WILDFLOWER ENERGY LP
Agency Address:	63500 19TH AVE
Agency City,St,Zip:	NORTH PALM SPRINGS 92558
Agency Contact:	MORGAN OHLER
Agency Telephone:	7602882148
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best

INDIGO GENERATION, LLC (Continued) **S106104740**

management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CIWQS:

Name:	INDIGO GENERATION LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92558
Agency:	Wildflower Energy LP
Agency Address:	PO Box 587043, North Palm Springs, CA 92258
Place/Project Type:	Industrial - Electric Services
SIC/NAICS:	4911
Region:	7
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	7 33I017524
NPDES Number:	CAS000001
Adoption Date:	Not reported
Effective Date:	10/02/2002
Termination Date:	03/13/2015
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.91057
Longitude:	-116.45795

CERS:

Name:	INDIGO GENERATION, LLC
Address:	63500 19TH AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	38031
CERS ID:	10321579
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-01-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-28-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health

INDIGO GENERATION, LLC (Continued) **S106104740**

Eval Program: APSA
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-06-2021
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: This facility is an energy plant that handles petroleum products, batteries, ammonia, compressed gases, and soap. NOTE: ensure that all leaks are addressed immediately in the turbine and generator compartments of the package; ensure that usable products on east end of property are clearly labeled as they are stored next to hazwaste.
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-01-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: CalARP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-01-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-28-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: CalARP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-06-2021
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: This facility is an energy plant that generates universal waste, oiliy waste, and water waste.
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-01-2015
Violations Found: No
Eval Type: Routine done by local agency

INDIGO GENERATION, LLC (Continued) **S106104740**

Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-28-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-28-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-06-2021
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS,

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Suzy Uvina
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Environmental Contact
Entity Name: Mike Carpenter
Entity Title: Not reported
Affiliation Address: P.O. Box 580743
Affiliation City: North Palm Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92258
Affiliation Phone: ,

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: PO Box 580743

INDIGO GENERATION, LLC (Continued) **S106104740**

Affiliation City:	North Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92258
Affiliation Phone:	,
Affiliation Type Desc:	Identification Signer
Entity Name:	MIKE CARPENTER
Entity Title:	PLANT MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	DGC Operations LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 577-6781,
Affiliation Type Desc:	Legal Owner
Entity Name:	Indigo Generation, LLC
Entity Title:	Not reported
Affiliation Address:	PO Box 580743
Affiliation City:	North Palm Springs
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92258
Affiliation Phone:	(760) 288-2148,
Affiliation Type Desc:	Parent Corporation
Entity Name:	Indigo Generation, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055,

9
SW
1/8-1/4
0.204 mi.
1078 ft.

Relative:
Lower

Actual:
751 ft.

E&S PRECISION SHEETMETAL MFG INC
19298 MCLANE STREET
NORTH PALM SPRINGS, CA 92258

Database(s): CERS HAZ WASTE, HAZNET, NPDES, CIWQS, CERS, HWTS

EDR ID Number: S113128640
EPA ID Number: N/A

CERS HAZ WASTE:
Name: E & S PRECISION SHEETMETAL MFG, INC
Address: 19298 MCLANE ST
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 113149
CERS ID: 10320532
CERS Description: Hazardous Waste Generator

HAZNET:
Name: E&S PRECISION SHEETMETAL MFG INC
Address: 19298 MCLANE ST
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Contact: FRANK EGRESITS
Telephone: 7603291607
Mailing Name: Not reported
Mailing Address: PO BOX 729

Year: 2015
Gepaid: CAL000275284
TSD EPA ID: CAD980675276
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.125

Year: 2014
Gepaid: CAL000275284
TSD EPA ID: CAT080025711
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.57

Year: 2011
Gepaid: CAL000275284
TSD EPA ID: CAD982444481
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.254

Year: 2011
Gepaid: CAL000275284
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H129 - Other Treatment
Tons: 0.03

Year: 2011
Gepaid: CAL000275284
TSD EPA ID: CAD982444481

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

CA Waste Code:	513 - Empty containers less than 30 gallons
Disposal Method:	H129 - Other Treatment
Tons:	0.0125
Year:	2004
Gepaid:	CAL000275284
TSD EPA ID:	CAD981696420
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	0.627

Additional Info:

Year:	2015
Gen EPA ID:	CAL000275284
Shipment Date:	20150806
Creation Date:	11/5/2015 22:15:27
Receipt Date:	20150818
Manifest ID:	005004075SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	D008
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	D004
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000275284
Shipment Date:	20110701
Creation Date:	8/26/2011 18:30:36
Receipt Date:	20110705
Manifest ID:	008697781JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.418
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110701
Creation Date:	8/26/2011 18:30:36
Receipt Date:	20110705
Manifest ID:	008697781JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	0.03
Waste Quantity:	60
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110615
Creation Date:	7/23/2011 18:30:39
Receipt Date:	20110616
Manifest ID:	008699000JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.836
Waste Quantity:	220
Quantity Unit:	G

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110615
Creation Date:	7/23/2011 18:30:39
Receipt Date:	20110616
Manifest ID:	008699000JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	513 - Empty containers less than 30 gallons
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	0.0125
Waste Quantity:	25
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000275284
Shipment Date:	20140625
Creation Date:	8/24/2014 22:15:06
Receipt Date:	20140627
Manifest ID:	004375597SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080025711
Trans Name:	ADVANCED ENVIRONMENTAL INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.57
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAL000275284
Shipment Date:	20040521
Creation Date:	10/15/2004 15:16:06
Receipt Date:	20040525
Manifest ID:	22854634
Trans EPA ID:	CAR000146951
Trans Name:	BETA ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981696420
Trans Name:	EVERGREEN ENVIRONMENTAL
TSDF Alt EPA ID:	CAD981696420
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.627
Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

NPDES:

Name:	E&S PRECISION SHEETMETAL MFG INC
Address:	19298 MCLANE STREET
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	7 33NEC003830
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	12/01/2017
Operator Name:	E&S Precision Sheetmetal Mfg Inc

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Operator Address:	PO Box 729
Operator City:	Desert Hot Springs
Operator State:	California
Operator Zip:	92240

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	7
Regulatory Measure ID:	488058
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	7 33NEC003830
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/01/2017
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	E&S Precision Sheetmetal Mfg Inc
Discharge Address:	PO Box 729
Discharge City:	Desert Hot Springs
Discharge State:	California
Discharge Zip:	92240
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	E&S PRECISION SHEETMETAL MFG INC
Address:	19298 MCLANE STREET
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Facility Status:	Active
NPDES Number:	CAS000001
Region:	7
Agency Number:	0
Regulatory Measure ID:	488058
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	7 33NEC003830
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/01/2017
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	PO Box 729
Discharge Name:	E&S Precision Sheetmetal Mfg Inc
Discharge City:	Desert Hot Springs
Discharge State:	California
Discharge Zip:	92240
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Agency Number:	0
Region:	7
Regulatory Measure ID:	488058
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	7 33NEC003830
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/01/2017
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	E&S Precision Sheetmetal Mfg Inc
Discharge Address:	PO Box 729
Discharge City:	Desert Hot Springs
Discharge State:	California
Discharge Zip:	92240
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CIWQS:

Name:	E&S PRECISION SHEETMETAL MFG INC
Address:	19298 MCLANE STREET
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Agency:	E&S Precision Sheetmetal Mfg Inc
Agency Address:	PO Box 729, Desert Hot Springs, CA 92240
Place/Project Type:	Industrial - Fabricated Metal Products, NEC
SIC/NAICS:	3499
Region:	7
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	7 33NEC003830
NPDES Number:	CAS000001
Adoption Date:	Not reported
Effective Date:	12/01/2017
Termination Date:	Not reported
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.90801
Longitude:	-116.55201

CERS:

Name:	E & S PRECISION SHEETMETAL MFG, INC
Address:	19298 MCLANE ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	113149
CERS ID:	10320532
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Violation Date:	07-28-2016
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/12/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	01-14-2016
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/12/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	06-14-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/28/2016. Owner/operator failed to have access to a current copy of the Hazardous Materials Business Plan on site. CORRECTIVE ACTION: Owner/operator shall ensure a current copy of the Hazardous Materials Business Plan is available on site at all times when the facility is staffed.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	09-23-2020
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 10/28/2020. OBSERVATION: Observed a drum of oily liquid and another drum of oily rags that were missing proper labels. CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

	hazardous property statement. Submit photos to this department, if applicable.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,
Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	09-23-2020
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 10/28/2020. OBSERVATION: Observed incorrectly posted NFPA-704 sign(s) located on front gate. Specifically, the numbers "4" in Flammability and "3" Reactivity and "1" in Health were incorrect based on the chemicals observed during the inspection. CORRECTIVE ACTION: Owner/operator shall research chemical safety data sheets and replace incorrect NFPA-704 signs. Submit photos to this department to joelharris@rivco.org.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	09-23-2020
Citation:	40 CFR 1 265.33 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.33
Violation Description:	Failure to test and maintain as necessary all facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment to assure its proper operation in time of emergency.
Violation Notes:	Returned to compliance on 10/28/2020. OBSERVATION: Observed annual fire extinguishers certification due August of 2020. CORRECTIVE ACTION: Owner/operator shall properly test and maintain all emergency equipment. Note: Certify fire extinguishers on an annual basis. Please send photograph(s) of annual certified fire extinguishers for 2020 to joelharris@rivco.org
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,
Site ID:	113149
Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	06-14-2016
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/12/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	113149

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Site Name:	E & S Precision Sheetmetal Mfg, Inc
Violation Date:	01-14-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/28/2016. [LOCAL ORDINANCE VIOLATION 101C] Approved HMBP accessible on site and available for review.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	06-14-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	reinspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,

Eval General Type:	Other/Unknown
Eval Date:	07-28-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	reinspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-14-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-14-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-23-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	This facility is a sheet metal fabricator that generates oily water and oily rags. Please send corrective action photos to joelharris@rivco.org
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-23-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: This facility is a metal fabricator that maintains welding gas, propane, liquid nitrogen and liquid oxygen on-site. Please send corrective action photos to joelharris@rivco.org
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Enforcement Action:
Site ID: 113149
Site Name: E & S Precision Sheetmetal Mfg, Inc
Site Address: 19298 MCLANE ST
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 01-14-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS,

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: E & S Precision Sheetmetal Mfg, Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title: Not reported
Affiliation Address: 4065 County Circle Drive, Room 104
Affiliation City: Riverside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055,

Affiliation Type Desc: Environmental Contact
Entity Name: Steve Egresits
Entity Title: Not reported
Affiliation Address: PO Box 729
Affiliation City: Desert Hot Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92240

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Affiliation Phone:	,
Affiliation Type Desc:	Identification Signer
Entity Name:	Frank Egresits
Entity Title:	Vice President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Document Preparer
Entity Name:	Frank Egresits
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Legal Owner
Entity Name:	Steve & Margit R. Egresits
Entity Title:	Not reported
Affiliation Address:	PO Box 729
Affiliation City:	Desert Hot Springs
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92240
Affiliation Phone:	(760) 568-6192,
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO Box 729
Affiliation City:	Desert Hot Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92240
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	Frank Egresits
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 329-1607,
Name:	E&S PRECISION SHEETMETAL MFG INC
Address:	19298 MCLANE STREET
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	530939

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

CERS ID: 856606
CERS Description: Industrial Facility Storm Water

Affiliation:
Affiliation Type Desc: Owner/Operator
Entity Name: E&S Precision Sheetmetal Mfg Inc
Entity Title: Operator
Affiliation Address: PO Box 729
Affiliation City: Desert Hot Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92240
Affiliation Phone: ,

HWTS:
Name: E&S PRECISION SHEETMETAL MFG INC
Address: 19298 MCLANE ST
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92258
EPA ID: CAL000275284
Inactive Date: Not reported
Create Date: 10/03/2003
Last Act Date: 08/13/2020
Mailing Name: Not reported
Mailing Address: PO BOX 729
Mailing Address 2: Not reported
Mailing City,State,Zip: DESERT HOT SPRINGS, CA 922400000
Owner Name: STEVE EGRESITS
Owner Address: 41270 CARLOTTA DR
Owner Address 2: Not reported
Owner City,State,Zip: PALM DESERT, CA 922110000
Contact Name: FRANK EGRESITS
Contact Address: PO BOX 729
Contact Address 2: Not reported
City,State,Zip: DESERT HOT SPRINGS, CA 92240

NAICS:
EPA ID: CAL000275284
Create Date: 2003-10-03 09:00:23.950
NAICS Code: 332214
NAICS Description: Kitchen Utensil, Pot, and Pan Manufacturing
Issued EPA ID Date: 2003-10-03 09:00:23.90300
Inactive Date: Not reported
Facility Name: E&S PRECISION SHEETMETAL MFG INC
Facility Address: 19298 MCLANE ST
Facility Address 2: Not reported
Facility City: NORTH PALM SPRINGS
Facility County: Not reported
Facility State: CA
Facility Zip: 92258

EPA ID: CAL000275284
Create Date: 2014-12-16 05:37:50.997
NAICS Code: 332322
NAICS Description: Sheet Metal Work Manufacturing
Issued EPA ID Date: 2003-10-03 09:00:23.90300
Inactive Date: Not reported

E&S PRECISION SHEETMETAL MFG INC (Continued) **S113128640**

Facility Name:	E&S PRECISION SHEETMETAL MFG INC
Facility Address:	19298 MCLANE ST
Facility Address 2:	Not reported
Facility City:	NORTH PALM SPRINGS
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92258
EPA ID:	CAL000275284
Create Date:	2014-12-16 05:37:50.997
NAICS Code:	332439
NAICS Description:	Other Metal Container Manufacturing
Issued EPA ID Date:	2003-10-03 09:00:23.90300
Inactive Date:	Not reported
Facility Name:	E&S PRECISION SHEETMETAL MFG INC
Facility Address:	19298 MCLANE ST
Facility Address 2:	Not reported
Facility City:	NORTH PALM SPRINGS
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92258
EPA ID:	CAL000275284
Create Date:	2014-12-16 05:37:50.997
NAICS Code:	332439
NAICS Description:	Other Metal Container Manufacturing
Issued EPA ID Date:	2003-10-03 09:00:23.90300
Inactive Date:	Not reported
Facility Name:	E&S PRECISION SHEETMETAL MFG INC
Facility Address:	19298 MCLANE ST
Facility Address 2:	Not reported
Facility City:	NORTH PALM SPRINGS
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92258
EPA ID:	CAL000275284
Create Date:	2014-12-16 05:37:50.997
NAICS Code:	333414
NAICS Description:	Heating Equipment (except Warm Air Furnaces) Manufacturing
Issued EPA ID Date:	2003-10-03 09:00:23.90300
Inactive Date:	Not reported
Facility Name:	E&S PRECISION SHEETMETAL MFG INC
Facility Address:	19298 MCLANE ST
Facility Address 2:	Not reported
Facility City:	NORTH PALM SPRINGS
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92258

10
SE
1/8-1/4
0.206 mi.
1089 ft.

THREE WIND HOLDINGS, LLC.
19020 N INDIAN CANYON DR
NORTH PALM SPRINGS, CA 92258

CERS HAZ WASTE
CERS TANKS
HAZNET
CERS
HWTS

S112988691
N/A

Relative:
Lower

Actual:
752 ft.

CERS HAZ WASTE:
Name: THREE WIND HOLDINGS, LLC.
Address: 19020 N INDIAN CANYON DR
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 67229
CERS ID: 10318675
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: THREE WIND HOLDINGS, LLC.
Address: 19020 N INDIAN CANYON DR
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 67229
CERS ID: 10318675
CERS Description: Aboveground Petroleum Storage

HAZNET:
Name: RIVERSIDE COUNTY
Address: 19020 N INDIAN CANYON DR
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Contact: MELANIE ESTES
Telephone: 5592175214
Mailing Name: Not reported
Mailing Address: 19020 N INDIAN CANYON DR

Year: 2011
Gepaid: CAC002669789
TSD EPA ID: CAD028409019
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.0875

Additional Info:
Year: 2011
Gen EPA ID: CAC002669789

Shipment Date: 20110627
Creation Date: 9/1/2011 18:31:47
Receipt Date: 20110708
Manifest ID: 001357294GBF
Trans EPA ID: CAR000181891
Trans Name: BDC SPECIAL WASTE SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD028409019
Trans Name: CROSBY & OVERTON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids

THREE WIND HOLDINGS, LLC. (Continued) **S112988691**

RCRA Code: D008
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.0875
Waste Quantity: 175
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CERS:
Name: THREE WIND HOLDINGS, LLC.
Address: 19020 N INDIAN CANYON DR
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 67229
CERS ID: 10318675
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 67229
Site Name: Three Wind Holdings, LLC.
Violation Date: 12-16-2020
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to comply with one or more of the following requirements: 1. Have record of inspections and tests, including integrity tests, signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and tests, including integrity tests, for at least three years. 3. Keep comparison records.
Violation Notes: Returned to compliance on 12/16/2020.
Violation Division: Riverside County Department of Env Health
Violation Program: APSA
Violation Source: CERS,

Site ID: 67229
Site Name: Three Wind Holdings, LLC.
Violation Date: 06-28-2017
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 02/28/2020.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 67229
Site Name: Three Wind Holdings, LLC.
Violation Date: 06-28-2017
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 07/11/2017. OBSERVATION: Required NFPA-704 signs were not posted. [insert details regarding location] CORRECTIVE

THREE WIND HOLDINGS, LLC. (Continued) **S112988691**

ACTION: Owner/operator shall research chemical safety data sheets and post proper NFPA-704 signs. Signs shall be posted [location details]. Submit photos to this department.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 67229
Site Name: Three Wind Holdings, LLC.
Violation Date: 12-16-2020
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 01/14/2021. OBSERVATION: Observed secondary containment pallets in O & M building to have standing liquid within. Observed gear box next turbine B 19 to be releasing oil onto the soil. CORRECTIVE ACTION: Owner/operator shall store all hazardous materials in a manner which will prevent unauthorized fire, explosion, or release. Owner/operator shall remove all standing liquid from secondary containment pallets and maintain clear. Owner/operator shall clean gear box and remove all contaminated soil - soil shall be managed as hazwaste.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-28-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-28-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-28-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-16-2020
Violations Found: No

THREE WIND HOLDINGS, LLC. (Continued) **S112988691**

Eval Type:	Routine done by local agency
Eval Notes:	NOTE: ensure labels on waste drums are accurate; NOTE: ensure waste is not stored on site 180 days after accumulation start date.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-16-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-16-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	NOTE: ensure NFPA is accurate with zeros if no value needs reporting
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Lonie Hardenbrook
Entity Title:	Not reported
Affiliation Address:	19020 N Indian Ave Building 12
Affiliation City:	North Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92258
Affiliation Phone:	,
Affiliation Type Desc:	Identification Signer
Entity Name:	Carolyn Wiles
Entity Title:	Office Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055,
Affiliation Type Desc:	Operator

THREE WIND HOLDINGS, LLC. (Continued) **S112988691**

Entity Name: Three Wind Holdings, LLC.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 288-0422,

Affiliation Type Desc: Parent Corporation
Entity Name: Shell WindEnergy Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Document Preparer
Entity Name: Carolyn Wiles
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 19020 N Indian Ave Building 12
Affiliation City: North Palm Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92258
Affiliation Phone: ,

Affiliation Type Desc: Legal Owner
Entity Name: Three Wind Holdings, LLC
Entity Title: Not reported
Affiliation Address: 19020 N Indian Ave Building 12
Affiliation City: North Palm Springs
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92258
Affiliation Phone: (760) 288-0422,

HWTS:
Name: RIVERSIDE COUNTY
Address: 19020 N INDIAN CANYON DR
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92258
EPA ID: CAC002669789
Inactive Date: 12/21/2011

THREE WIND HOLDINGS, LLC. (Continued) **S112988691**

Create Date:	06/23/2011
Last Act Date:	06/23/2011
Mailing Name:	Not reported
Mailing Address:	19020 N INDIAN CANYON DR
Mailing Address 2:	STE 2J
Mailing City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Owner Name:	RIVERSIDE COUNTY
Owner Address:	19020 N INDIAN CANYON DR
Owner Address 2:	STE 2J
Owner City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Contact Name:	MELANIE ESTES
Contact Address:	19020 N INDIAN CANYON DR
Contact Address 2:	STE 2J
City,State,Zip:	NORTH PALM SPRINGS, CA 92258

C11 **PALM SPRINGS HARLEY DAVIDSON ENT.** **CERS HAZ WASTE** **S113048738**
South **19465 N INDIAN AVE #T** **HAZNET** **N/A**
1/8-1/4 **NORTH PALM SPRINGS, CA 92258** **CERS**
0.212 mi. **HWTS**
1117 ft. **Site 2 of 2 in cluster C**

Relative: **Lower**

Actual: **747 ft.**

CERS HAZ WASTE:

Name:	PALM SPRINGS HARLEY DAVIDSON ENT.
Address:	19465 N INDIAN AVE #T
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	141328
CERS ID:	10318516
CERS Description:	Hazardous Waste Generator

HAZNET:

Name:	PALM SPRINGS HARLEY DAVIDSON
Address:	19465 NORTH INDIAN AVE
Address 2:	Not reported
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Contact:	MICHAEL L. ROACH
Telephone:	7603291448
Mailing Name:	Not reported
Mailing Address:	19465 N INDIAN CANYON
Year:	2018
Gepaid:	CAL000070669
TSD EPA ID:	CAL000330453
CA Waste Code:	352 - Other organic solids
Disposal Method:	H010 - Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons:	0.15000
Year:	2017
Gepaid:	CAL000070669
TSD EPA ID:	CAL000330453
CA Waste Code:	352 - Other organic solids
Disposal Method:	H010 - Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons:	0.2
Year:	2016
Gepaid:	CAL000070669
TSD EPA ID:	CAL000330453
CA Waste Code:	352 - Other organic solids

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.125
Year:	2014
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.76
Year:	2013
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.475
Year:	2012
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	1.634
Year:	2011
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	1.558
Year:	2010
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	1.767
Year:	2009
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	1.463
Year:	2009
Gepaid:	CAL000070669
TSD EPA ID:	CAD982444481
CA Waste Code:	512 - Other empty containers 30 gallons or more
Disposal Method:	H129 - Other Treatment

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Tons: 0.0175

Click this hyperlink while viewing on your computer to access
7 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2012
Gen EPA ID:	CAL000070669
Shipment Date:	20121220
Creation Date:	3/7/2013 22:15:18
Receipt Date:	20121221
Manifest ID:	010964674JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.684
Waste Quantity:	180
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120629
Creation Date:	10/3/2012 22:15:14
Receipt Date:	20120705
Manifest ID:	010208548JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.38
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120405
Creation Date:	5/29/2012 20:30:08
Receipt Date:	20120409
Manifest ID:	009945091JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.57
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAL000070669
Shipment Date:	20021204
Creation Date:	3/16/2007 18:30:20
Receipt Date:	20021205
Manifest ID:	21707583
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.608
Waste Quantity:	160
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020709

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Creation Date:	1/21/2003 18:31:48
Receipt Date:	20020709
Manifest ID:	21706797
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.627
Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000070669
Shipment Date:	20111228
Creation Date:	3/16/2012 20:30:29
Receipt Date:	20111229
Manifest ID:	009218162JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.456
Waste Quantity:	120
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110817
Creation Date:	10/19/2011 18:30:39
Receipt Date:	20110818
Manifest ID:	008894681JJK
Trans EPA ID:	CAR000172460

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.57
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110414
Creation Date:	6/16/2011 18:30:20
Receipt Date:	20110419
Manifest ID:	008408763JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.532
Waste Quantity:	140
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2010
Gen EPA ID:	CAL000070669
Shipment Date:	20101109
Creation Date:	1/3/2011 18:31:02
Receipt Date:	20101110
Manifest ID:	007927491JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.665
Waste Quantity: 175
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20100602
Creation Date: 8/30/2010 18:30:22
Receipt Date: 20100607
Manifest ID: 007241797JJK
Trans EPA ID: CAR000172460
Trans Name: ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.494
Waste Quantity: 130
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20100223
Creation Date: 6/10/2010 18:30:08
Receipt Date: 20100224
Manifest ID: 006599385JJK
Trans EPA ID: CAR000172460
Trans Name: ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.608
Waste Quantity: 160
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2005
Gen EPA ID: CAL000070669

Shipment Date: 20050301
Creation Date: 6/2/2005 18:30:59
Receipt Date: 20050301
Manifest ID: 24201026
Trans EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: CAD982444481
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: NONE
Meth Code: R01 - Recycler
Quantity Tons: 0.304
Waste Quantity: 80
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2017
Gen EPA ID: CAL000070669

Shipment Date: 20170405
Creation Date: 5/9/2018 18:31:38
Receipt Date: 20170406
Manifest ID: 017265101JJK
Trans EPA ID: CAL000330453
Trans Name: CLEANTECH ENVIRONMENTAL
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAL000330453
Trans Name: CLEANTECH ENVIRONMENTAL
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Meth Code:	H010 - Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000070669
Shipment Date:	20140403
Creation Date:	5/22/2014 22:14:58
Receipt Date:	20140404
Manifest ID:	012427659JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.76
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000070669
Shipment Date:	20091009
Creation Date:	12/8/2009 18:30:31
Receipt Date:	20091012
Manifest ID:	006060515JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.684
Waste Quantity: 180
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20090602
Creation Date: 7/31/2009 18:30:08
Receipt Date: 20090603
Manifest ID: 005985218JJK
Trans EPA ID: CAR000172460
Trans Name: ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.285
Waste Quantity: 75
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20090529
Creation Date: 7/31/2009 18:30:08
Receipt Date: 20090601
Manifest ID: 005985305JJK
Trans EPA ID: CAR000172460
Trans Name: ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 512 - Other empty containers 30 gallons or more
RCRA Code: Not reported
Meth Code: H129 - Other Treatment
Quantity Tons: 0.0175
Waste Quantity: 35
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090410
Creation Date:	5/29/2009 18:30:11
Receipt Date:	20090414
Manifest ID:	005430529JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.494
Waste Quantity:	130
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2013
Gen EPA ID:	CAL000070669
Shipment Date:	20130419
Creation Date:	6/13/2013 22:15:07
Receipt Date:	20130423
Manifest ID:	011191601JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.475
Waste Quantity:	125
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Additional Info:

Year:	2004
Gen EPA ID:	CAL000070669
Shipment Date:	20040511
Creation Date:	10/29/2004 7:40:51
Receipt Date:	20040512
Manifest ID:	23556927
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.608
Waste Quantity:	160
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2003
Gen EPA ID:	CAL000070669
Shipment Date:	20030429
Creation Date:	8/5/2003 18:31:37
Receipt Date:	20030429
Manifest ID:	22632545
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.608
Waste Quantity:	160
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Additional Info:

Year:	2000
Gen EPA ID:	CAL000070669
Shipment Date:	20001020
Creation Date:	12/13/2000 0:00:00
Receipt Date:	20001024
Manifest ID:	20598433
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.18
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2008
Gen EPA ID:	CAL000070669
Shipment Date:	20081218
Creation Date:	2/17/2009 18:30:19
Receipt Date:	20081219
Manifest ID:	004822234JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Shipment Date:	20081107
Creation Date:	1/9/2009 18:30:08
Receipt Date:	20081112
Manifest ID:	004817370JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20080806
Creation Date:	10/1/2008 18:30:31
Receipt Date:	20080806
Manifest ID:	004852870JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20080711
Creation Date:	9/4/2008 18:30:07
Receipt Date:	20080714
Manifest ID:	004847204JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080507
Creation Date:	8/4/2008 18:30:22
Receipt Date:	20080508
Manifest ID:	003420204JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080401
Creation Date:	6/9/2008 18:30:18
Receipt Date:	20080402
Manifest ID:	003804350JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080215
Creation Date:	6/4/2008 18:30:29
Receipt Date:	20080216
Manifest ID:	003810134JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	PALM SPRINGS HARLEY DAVIDSON ENT.
Address:	19465 N INDIAN AVE #T
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	141328
CERS ID:	10318516
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	11-10-2021
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	OBSERVATION: Observed one 55 gallon drum of waste coolant and one 55 gallon drum of used oil filters that were missing proper labels.

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

	CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,
Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	02-27-2019
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 12/11/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	01-14-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 03/16/2016. [LOCAL ORDINANCE VIOLATION 104A] NFPA 704 sign(s) have been posted appropriately.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	12-14-2021
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	OBSERVATION: Observed one 55 gallon drum of waste coolant and one 55 gallon drum of used oil filters that were missing proper labels. CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	12-14-2021
Citation:	40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description:	Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes:	OBSERVATION: Observed spillage in secondary containment pallets under used oil and used oil filters in hazwaste storage area. CORRECTIVE ACTION: Owner/operator shall clean, and manage according to Title 22 hazardous waste regulations. Submit a statement and supporting documentation (photos) explaining how this waste was managed to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,

Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	11-10-2021
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes:	Returned to compliance on 12/13/2021. OBSERVATION: Observed manifest number 014844812 JJK dated 9/17/21 with no matching TSDF-signed copy. CORRECTIVE ACTION: Owner/operator shall locate TSDF-signed copy of aforementioned manifest.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,

Site ID:	141328
Site Name:	Palm Springs Harley Davidson Ent.
Violation Date:	11-10-2021
Citation:	40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description:	Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes:	OBSERVATION: Observed spillage in secondary containment pallets under used oil and used oil filters in hazwaste storage area. CORRECTIVE ACTION: Owner/operator shall clean all spillage from secondary containment pallets and manage according to Title 22 hazardous waste regulations. Submit a statement and supporting documentation (photos) explaining how this waste was managed to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS,

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Site ID: 141328
Site Name: Palm Springs Harley Davidson Ent.
Violation Date: 01-11-2019
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 12/11/2019.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-11-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 02-27-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-09-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-14-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-09-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-14-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 02-23-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: reinspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-10-2021
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: This facility is a motorcycle dealer and repair store that generates used oil, waste coolant, used oil filters, and used batteries. NOTE: ensure fire markers are posted above fire extinguishers throughout facility.
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 12-14-2021
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Enforcement Action:
Site ID: 141328
Site Name: Palm Springs Harley Davidson Ent.
Site Address: 19465 N INDIAN AVE #T
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 01-14-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS,

Affiliation:

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Affiliation Type Desc:	Legal Owner
Entity Name:	Tom L. Roach
Entity Title:	Not reported
Affiliation Address:	PO Box 580915
Affiliation City:	N Indian Canyon Dr.
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92258
Affiliation Phone:	(760) 329-1448,

Affiliation Type Desc:	Environmental Contact
Entity Name:	Michael L. Roach
Entity Title:	Not reported
Affiliation Address:	P.O. Box 58095
Affiliation City:	North Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92258
Affiliation Phone:	,

Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055,

Affiliation Type Desc:	Document Preparer
Entity Name:	Michael Roach
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Parent Corporation
Entity Name:	Palm Springs Harley Davidson Ent.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO Box 580915
Affiliation City:	N Palm Sprgs
Affiliation State:	CA
Affiliation Country:	Not reported

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Affiliation Zip: 92258
Affiliation Phone: ,

Affiliation Type Desc: Identification Signer
Entity Name: Michael Roach
Entity Title: Owner/Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Operator
Entity Name: Michael Roach
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 774-2017,

HWTS:
Name: PALM SPRINGS HARLEY DAVIDSON
Address: 19465 NORTH INDIAN AVE
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 922580000
EPA ID: CAL000070669
Inactive Date: Not reported
Create Date: 07/28/1993
Last Act Date: 08/28/2020
Mailing Name: Not reported
Mailing Address: 19465 N INDIAN CANYON
Mailing Address 2: P.O. BOX 580915
Mailing City,State,Zip: N INDIAN CANYON DR., CA 92258
Owner Name: TOM L ROACH-OWNER
Owner Address: 19465 N INDIAN
Owner Address 2: P.O BOX 580915
Owner City,State,Zip: NORTH PALM SPRINGS, CA 922580000
Contact Name: MICHAEL L. ROACH
Contact Address: 19465 NORTH INDIAN CANYON DR
Contact Address 2: P.O BOX 580915
City,State,Zip: NORTH PALM SPRINGS, CA 922580000

NAICS:
EPA ID: CAL000070669
Create Date: 2010-11-22 13:00:50.000
NAICS Code: 441221
NAICS Description: Motorcycle Dealers
Issued EPA ID Date: 1993-07-28 00:00:00
Inactive Date: Not reported
Facility Name: PALM SPRINGS HARLEY DAVIDSON
Facility Address: 19465 NORTH INDIAN AVE
Facility Address 2: Not reported
Facility City: NORTH PALM SPRINGS

PALM SPRINGS HARLEY DAVIDSON ENT. (Continued) **S113048738**

Facility County:	Not reported
Facility State:	CA
Facility Zip:	922580000

D12 **SAN GORGONIO WEST WINDS II** **RCRA NonGen / NLR** **1024862824**
SSE **19020 N INDIAN CANYON DR 5-AB** **CAL000431348**
1/8-1/4 **DESERT HOT SPRINGS, CA 92258**
0.226 mi.
1192 ft. **Site 1 of 11 in cluster D**

Relative: **Lower**
Actual: **745 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	20171009
Handler Name:	SAN GORGONIO WEST WINDS II
Handler Address:	19020 N INDIAN CANYON DR 5-AB
Handler City,State,Zip:	DESERT HOT SPRINGS, CA 92258
EPA ID:	CAL000431348
Contact Name:	MARIO LOPEZ
Contact Address:	19021 NEWHALL ST
Contact City,State,Zip:	PALM SPRINGS, CA 92262
Contact Telephone:	760-288-0422
Contact Fax:	760-288-0825
Contact Email:	MLOPEZ@TERRA-GEN.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 580275
Mailing City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Owner Name:	SAN GORGONIO WEST WINDS II
Owner Type:	Other
Operator Name:	MARIO LOPEZ
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N

SAN GORGONIO WEST WINDS II (Continued) **1024862824**

Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180907
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARIO LOPEZ
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	19021 NEWHALL ST
Owner/Operator City,State,Zip:	PALM SPRINGS, CA 92262
Owner/Operator Telephone:	760-288-0422
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SAN GORGONIO WEST WINDS II
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	19021 NEWHALL ST

SAN GORGONIO WEST WINDS II (Continued) **1024862824**

Owner/Operator City,State,Zip: PALM SPRINGS, CA 92262
Owner/Operator Telephone: 760-288-0422
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20171009
Handler Name: SAN GORGONIO WEST WINDS II
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 221122
NAICS Description: ELECTRIC POWER DISTRIBUTION

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

D13 **SAN GORGONIO WEST WINDS II** **CERS HAZ WASTE** **S123522693**
SSE **19020 N INDIAN CANYON DR BLDG 5A** **CERS TANKS** **N/A**
1/8-1/4 **DESERT HOT SPRINGS, CA 92258** **CERS**
0.226 mi.
1192 ft. **Site 2 of 11 in cluster D**

Relative:
Lower

Actual:
745 ft.

CERS HAZ WASTE:
Name: SAN GORGONIO WEST WINDS II
Address: 19020 N INDIAN CANYON DR BLDG 5A
City,State,Zip: DESERT HOT SPRINGS, CA 92258
Site ID: 445384
CERS ID: 10776730
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: SAN GORGONIO WEST WINDS II
Address: 19020 N INDIAN CANYON DR BLDG 5A
City,State,Zip: DESERT HOT SPRINGS, CA 92258
Site ID: 445384
CERS ID: 10776730
CERS Description: Aboveground Petroleum Storage

CERS:
Name: SAN GORGONIO WEST WINDS II

SAN GORGONIO WEST WINDS II (Continued) **S123522693**

Address: 19020 N INDIAN CANYON DR BLDG 5A
City,State,Zip: DESERT HOT SPRINGS, CA 92258
Site ID: 445384
CERS ID: 10776730
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 445384
Site Name: San Gorgonio West Winds II
Violation Date: 05-01-2019
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 05/29/2019. OBSERVATION: Required NFPA-704 sign was not posted at the entrance of the warehouse. CORRECTIVE ACTION: Owner/operator shall research chemical safety data sheets and post proper NFPA-704 signs. Submit photos to this department.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-01-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: This site is a warehouse for the wind turbines. Hazardous waste generated onsite included: used oil, used antifreeze, waste oil filters, oily rags etc.
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-01-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: This site is a warehouse for the wind turbines. Hazardous materials onsite include: motor oil, synthetic lubricant oil, antifreeze, Nitrogen (below threshold), acetylene (below threshold) and oxygen (below threshold).
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title: Not reported
Affiliation Address: 4065 County Circle Drive, Room 104
Affiliation City: Riverside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055,

Affiliation Type Desc: Legal Owner

SAN GORGONIO WEST WINDS II (Continued) **S123522693**

Entity Name:	San Gorgonio Westwinds II, LLC
Entity Title:	Not reported
Affiliation Address:	P.O. Box 580275
Affiliation City:	North Palm Springs
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92258-0275
Affiliation Phone:	(760) 288-0422,
Affiliation Type Desc:	Parent Corporation
Entity Name:	San Gorgonio West Winds II, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Identification Signer
Entity Name:	Carolyn Wiles
Entity Title:	Office Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Environmental Contact
Entity Name:	CAROLYN WILES
Entity Title:	Not reported
Affiliation Address:	7021 Oak Creek Road
Affiliation City:	Mojave
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93501
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	San Gorgonio Westwinds II, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 288-0422,
Affiliation Type Desc:	Document Preparer
Entity Name:	Carolyn Wiles
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

SAN GORGONIO WEST WINDS II (Continued) **S123522693**

Affiliation Phone: ,

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: P.O. Box 580275
Affiliation City: North Palm Springs
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92258-0275
Affiliation Phone: ,

D14 **GREEN POWER PARTNERS I , LLC** **CERS HAZ WASTE** **S126976553**
SSE **19020 N INDIAN AVE BLDG 11-A** **N/A**
1/8-1/4 **DESERT HOT SPRINGS, CA 92240**
0.226 mi.
1192 ft. **Site 3 of 11 in cluster D**

Relative: **Lower**
Actual: **745 ft.**

CERS HAZ WASTE:
Name: GREEN POWER PARTNERS I , LLC
Address: 19020 N INDIAN AVE BLDG 11-A
City,State,Zip: DESERT HOT SPRINGS, CA 92240
Site ID: 120579
CERS ID: 10483819
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 120579
Site Name: Green Power Partners I , LLC
Violation Date: 08-07-2019
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 08/07/2019. OBSERVATION: The emergency response and training plan has not been re-certified annually in the statewide information management system (CERS). CORRECTIVE ACTION: Owner/Operator shall submit an updated business plan in the statewide information management system at http://cers.calepa.ca.gov. Business plans shall be reviewed and certified on at least an annual basis.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-07-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: This site is a wind turbine maintenance shop. Hazardous materials onsite: hydraulic oil, sulfuric acid (lead acid batteries), and lubricating oil.
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

GREEN POWER PARTNERS I , LLC (Continued) **S126976553**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-07-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	This site is a windurbine maintenance shop and hazardous waste generated onsite: used oil and spent lead acid batteries etc. Note: Per operator, the lead acid batteries at Karen substation have not been replaced within the last three years.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Kortney Koch
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055,

Affiliation Type Desc:	Environmental Contact
Entity Name:	Kortney Koch
Entity Title:	Not reported
Affiliation Address:	700 Universe Boulevard
Affiliation City:	Juno Beach
Affiliation State:	FL
Affiliation Country:	Not reported
Affiliation Zip:	33408
Affiliation Phone:	,

Affiliation Type Desc:	Identification Signer
Entity Name:	Kortney Koch
Entity Title:	Environmental Specialist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO Box 2866

GREEN POWER PARTNERS I , LLC (Continued) **S126976553**

Affiliation City:	Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92263
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	Green Power Partners I, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 329-1418,
Affiliation Type Desc:	Parent Corporation
Entity Name:	Green Power Partners I , LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Legal Owner
Entity Name:	Nextera Energy Resources
Entity Title:	Not reported
Affiliation Address:	700 Universe Blvd.
Affiliation City:	Juno Beach
Affiliation State:	FL
Affiliation Country:	United States
Affiliation Zip:	33408
Affiliation Phone:	(561) 691-7171,

D15 **K POWERED** **RCRA NonGen / NLR** **1025872283**
SSE **19020 N INDIAN CANYON DR** **CAL000445404**
1/8-1/4 **DESERT HOT SPRINGS, CA 92258**
0.226 mi.
1192 ft. **Site 4 of 11 in cluster D**

Relative: RCRA NonGen / NLR:
Lower

Date Form Received by Agency:		20190419
Actual: Handler Name:	K POWERED	
745 ft. Handler Address:		19020 N INDIAN CANYON DR
Handler City,State,Zip:		DESERT HOT SPRINGS, CA 92258
EPA ID:		CAL000445404
Contact Name:		NAVID PAJOUFAR
Contact Address:		81105 PALMWOOD DR
Contact City,State,Zip:		INDIO, CA 92201
Contact Telephone:		760-799-9718
Contact Fax:		Not reported
Contact Email:		K.POWERED@YAHOO.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported

K POWERED (Continued) **1025872283**

Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	81105 PALMWOOD DR
Mailing City,State,Zip:	INDIO, CA 92201
Owner Name:	NAVID PAJOUFAR
Owner Type:	Other
Operator Name:	NAVID PAJOUFAR
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	Yes
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No

K POWERED (Continued) **1025872283**

Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190628
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NAVID PAJOUFAR
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	81105 PALMWOOD DR
Owner/Operator City,State,Zip:	INDIO, CA 92201
Owner/Operator Telephone:	760-799-9718
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	NAVID PAJOUFAR
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	81105 PALMWOOD DR
Owner/Operator City,State,Zip:	INDIO, CA 92201
Owner/Operator Telephone:	760-799-9718
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20190419
Handler Name: K POWERED	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

K POWERED (Continued) **1025872283**

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

D16 **TOP NOTCH AUTOMOTIVE LLC** **RCRA NonGen / NLR** **1024862184**
SSE **19020 N INDIAN CANYON DR BLDG6A** **CAL000430695**
1/8-1/4 **DESERT HOT SPRINGS, CA 92258**
0.226 mi.
1192 ft. **Site 5 of 11 in cluster D**

Relative: **Lower**
Actual: **745 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	20170914
Handler Name:	TOP NOTCH AUTOMOTIVE LLC
Handler Address:	19020 N INDIAN CANYON DR BLDG6A
Handler City,State,Zip:	DESERT HOT SPRINGS, CA 92258
EPA ID:	CAL000430695
Contact Name:	FAUSTINO NOVINO
Contact Address:	19020 N INDIAN CANYON DR BLDG6A
Contact City,State,Zip:	DESERT HOT SPRINGS, CA 92258
Contact Telephone:	760-329-0800
Contact Fax:	Not reported
Contact Email:	TOPNOTCHSERVICE2016@GMAIL.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 580063
Mailing City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Owner Name:	FAUSTINO NOVINO
Owner Type:	Other
Operator Name:	FAUSTINO NOVINO
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported

TOP NOTCH AUTOMOTIVE LLC (Continued) **1024862184**

Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180907
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	FAUSTINO NOVINO
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	52950 AVENIDA MENDOZA
Owner/Operator City,State,Zip:	LA QUINTA, CA 92253
Owner/Operator Telephone:	760-771-5420
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	FAUSTINO NOVINO
Legal Status:	Other

TOP NOTCH AUTOMOTIVE LLC (Continued) **1024862184**

Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	19020 N INDIAN CANYON DR BLDG6A
Owner/Operator City,State,Zip:	DESERT HOT SPRINGS, CA 92258
Owner/Operator Telephone:	760-329-0800
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20170914
Handler Name:	TOP NOTCH AUTOMOTIVE LLC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811111
NAICS Description:	GENERAL AUTOMOTIVE REPAIR

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

D17 **SHELL SERVICE STATION** **RCRA-SQG 1004676711**
SSE **20000 INDIAN** **ECHO CAR000088500**
1/8-1/4 **PALM SPRINGS, CA 92282**
0.241 mi.
1271 ft. **Site 6 of 11 in cluster D**

Relative: **Lower**

Actual: **744 ft.**

RCRA-SQG:

Date Form Received by Agency:		20001214
Handler Name:	SHELL SERVICE STATION	
Handler Address:		20000 INDIAN
Handler City,State,Zip:		PALM SPRINGS, CA 92282
EPA ID:		CAR000088500
Contact Name:		SONDRA BIENVENU
Contact Address:		P O BOX 2099 TSP 1501
Contact City,State,Zip:		HOUSTON, TX 77252
Contact Telephone:		713-241-5036
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		09
Land Type:		Private
Federal Waste Generator Description:		Small Quantity Generator

SHELL SERVICE STATION (Continued) **1004676711**

Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	P O BOX 2099
Mailing City,State,Zip:	HOUSTON, TX 77252
Owner Name:	EQUILON ENTERPRISES
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No

SHELL SERVICE STATION (Continued) **1004676711**

Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20021007
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D000
Waste Description:	Not Defined
Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D018
Waste Description:	BENZENE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	EQUILON ENTERPRISES
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 2099
Owner/Operator City,State,Zip:	HOUSTON, TX 77252
Owner/Operator Telephone:	713-241-5036
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20001214
Handler Name: SHELL SERVICE STATION	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations:	No Violations Found

SHELL SERVICE STATION (Continued) **1004676711**

Evaluation Action Summary:
Evaluations: No Evaluations Found

ECHO:
Envid: 1004676711
Registry ID: 110012246532
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110012246532
Name: SHELL SERVICE STATION
Address: 20000 INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258

D18 **SHELL NORTH PALM SPRINGS** **LUST** **S109117800**
SSE **20000 N INDIAN AVENUE** **Cortese** **N/A**
1/8-1/4 **NORTH PALM SPRINGS, CA 92258** **CERS**
0.246 mi.
1298 ft. **Site 7 of 11 in cluster D**

Relative:
Lower

Actual:
744 ft.

LUST:
Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVENUE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Lead Agency: RIVERSIDE COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500989
Global Id: T0606500989
Latitude: 33.9067635352649
Longitude: -116.545042781606
Status: Completed - Case Closed
Status Date: 12/14/2001
Case Worker: RIV
RB Case Number: 7T2258002
Local Agency: RIVERSIDE COUNTY LOP
File Location: Local Agency Warehouse
Local Case Number: 200117206
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline, Diesel
Site History: Not reported

LUST:
Global Id: T0606500989
Contact Type: Regional Board Caseworker
Contact Name: KOLA OLATUNBOSUN
Organization Name: COLORADO RIVER BASIN RWQCB (REGION 7)
Address: 73-720 FRED WARING DRIVE, SUIE 100
City: PALM DESERT
Email: kola.olatunbosun@waterboards.ca.gov
Phone Number: 7607768958

Global Id: T0606500989
Contact Type: Local Agency Caseworker
Contact Name: Riverside County LOP
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: Not reported
Phone Number: 9519558980

SHELL NORTH PALM SPRINGS (Continued) **S109117800**

LUST:
Global Id: T0606500989
Action Type: Other
Date: 02/22/1999
Action: Leak Discovery

Global Id: T0606500989
Action Type: ENFORCEMENT
Date: 10/21/1999
Action: Closure/No Further Action Letter - #Riv Co Closure

Global Id: T0606500989
Action Type: Other
Date: 02/22/1999
Action: Leak Reported

Global Id: T0606500989
Action Type: ENFORCEMENT
Date: 12/13/2001
Action: File review - #RCDEH Upload Site File 10/28/2015

Global Id: T0606500989
Action Type: Other
Date: 02/22/1999
Action: Leak Stopped

LUST:
Global Id: T0606500989
Status: Open - Case Begin Date
Status Date: 02/22/1999

Global Id: T0606500989
Status: Open - Site Assessment
Status Date: 03/08/2001

Global Id: T0606500989
Status: Completed - Case Closed
Status Date: 12/14/2001

Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Lead Agency: RIVERSIDE COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000000876
Global Id: T10000000876
Latitude: 33.9068368751847
Longitude: -116.545096897483
Status: Completed - Case Closed
Status Date: 10/21/1999
Case Worker: RIV
RB Case Number: 7T2258002
Local Agency: RIVERSIDE COUNTY LOP
File Location: Local Agency Warehouse
Local Case Number: 9914939

SHELL NORTH PALM SPRINGS (Continued) **S109117800**

Potential Media Affect: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

LUST:
Global Id: T10000000876
Contact Type: Local Agency Caseworker
Contact Name: Riverside County LOP
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: Not reported
Phone Number: 9519558980

LUST:
Global Id: T10000000876
Action Type: Other
Date: 02/22/1999
Action: Leak Reported

Global Id: T10000000876
Action Type: ENFORCEMENT
Date: 10/20/1999
Action: File review - #RCDEH Upload Site File 10/28/2015

Global Id: T10000000876
Action Type: Other
Date: 02/02/1999
Action: Leak Stopped

Global Id: T10000000876
Action Type: Other
Date: 02/22/1999
Action: Leak Discovery

LUST:
Global Id: T10000000876
Status: Open - Case Begin Date
Status Date: 02/02/1999

Global Id: T10000000876
Status: Open - Site Assessment
Status Date: 02/22/1999

Global Id: T10000000876
Status: Completed - Case Closed
Status Date: 10/21/1999

RIVERSIDE CO. LUST:
Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA
Region: RIVERSIDE
Facility ID: 9914939
Employee: Shurlow-LOP

SHELL NORTH PALM SPRINGS (Continued) **S109117800**

Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA
Region: RIVERSIDE
Facility ID: 200117206
Employee: Shurlow-LOP
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

CORTESE:
Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVENUE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0606500989
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Region: CORTESE
Envirostor Id: Not reported
Global ID: T10000000876
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported

SHELL NORTH PALM SPRINGS (Continued) **S109117800**

Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

CERS:
Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 201718
CERS ID: T10000000876
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: KOLA OLATUNBOSUN - COLORADO RIVER BASIN RWQCB (REGION 7)
Entity Title: Not reported
Affiliation Address: 73-720 FRED WARING DRIVE, SUIE 100
Affiliation City: PALM DESERT
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 7607768986,

Affiliation Type Desc: Local Agency Caseworker
Entity Name: Riverside County LOP - RIVERSIDE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 3880 LEMON ST SUITE 200
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9519558980,

Name: SHELL NORTH PALM SPRINGS
Address: 20000 N INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 201718
CERS ID: T0606500989
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: KOLA OLATUNBOSUN - COLORADO RIVER BASIN RWQCB (REGION 7)
Entity Title: Not reported
Affiliation Address: 73-720 FRED WARING DRIVE, SUIE 100
Affiliation City: PALM DESERT
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported

SHELL NORTH PALM SPRINGS (Continued) **S109117800**

Affiliation Phone:	7607768986,
Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	Riverside County LOP - RIVERSIDE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	3880 LEMON ST SUITE 200
Affiliation City:	RIVERSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	9519558980,

D19 **UNOCAL #5951** **SWEEPS UST** **S101590152**
SSE **19995 INDIAN AVE** **CA FID UST** **N/A**
1/8-1/4 **N PALM SPRINGS, CA 92236**
0.249 mi.
1314 ft. **Site 8 of 11 in cluster D**

Relative: **Lower**

Actual: **744 ft.**

SWEEPS UST:

Name:	UNOCAL #5951
Address:	19995 INDIAN AVE
City:	N PALM SPRINGS
Status:	Active
Comp Number:	13581
Number:	1
Board Of Equalization:	44-001057
Referral Date:	06-13-90
Action Date:	06-13-90
Created Date:	02-29-88
Owner Tank Id:	5951-34
SWRCB Tank Id:	33-000-013581-000001
Tank Status:	A
Capacity:	550
Active Date:	06-13-90
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	3

Name:	UNOCAL #5951
Address:	19995 INDIAN AVE
City:	N PALM SPRINGS
Status:	Active
Comp Number:	13581
Number:	1
Board Of Equalization:	44-001057
Referral Date:	06-13-90
Action Date:	06-13-90
Created Date:	02-29-88
Owner Tank Id:	5951-22
SWRCB Tank Id:	33-000-013581-000002
Tank Status:	A
Capacity:	10000
Active Date:	06-13-90
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED

UNOCAL #5951 (Continued) **S101590152**

Number Of Tanks: Not reported

Name: UNOCAL #5951
Address: 19995 INDIAN AVE
City: N PALM SPRINGS
Status: Active
Comp Number: 13581
Number: 1
Board Of Equalization: 44-001057
Referral Date: 06-13-90
Action Date: 06-13-90
Created Date: 02-29-88
Owner Tank Id: 5951-11
SWRCB Tank Id: 33-000-013581-000003
Tank Status: A
Capacity: 10000
Active Date: 06-13-90
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

CA FID UST:
Facility ID: 33004912
Regulated By: UTNKA
Regulated ID: 00013581
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 6193298278
Mail To: Not reported
Mailing Address: P O BOX 7600
Mailing Address 2: Not reported
Mailing City,St,Zip: N PALM SPRINGS 92236
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

---

20 **AES WIND GENERATION LLC** **CERS HAZ WASTE** **S113138724**
SW **19435 RUPPERT ST** **CERS TANKS** **N/A**
1/8-1/4 **NORTH PALM SPRINGS, CA 92258** **HAZNET**
0.249 mi. **CERS**
1314 ft. **HWTS**

Relative:
Lower

Actual:
745 ft.

CERS HAZ WASTE:
Name: AES WIND GENERATION LLC
Address: 19435 RUPPERT ST
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 3384
CERS ID: 10321468
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: AES WIND GENERATION LLC

AES WIND GENERATION LLC (Continued) **S113138724**

Address: 19435 RUPPERT ST
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 3384
CERS ID: 10321468
CERS Description: Aboveground Petroleum Storage

HAZNET:
Name: AES WIND GENERATION LLC
Address: 19435 RUPPERT ST
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92263
Contact: JACOB RICH
Telephone: 7606606411
Mailing Name: Not reported
Mailing Address: PO BOX 2190

Year: 2019
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.00000

Year: 2019
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.06335

Year: 2019
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 15.97500

Year: 2019
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.10000

Year: 2018
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.00000

Year: 2018

AES WIND GENERATION LLC (Continued) **S113138724**

Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 12.77500

Year: 2018
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.45000

Year: 2017
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 3.045

Year: 2017
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 9.975

Year: 2016
Gepaid: CAL000297758
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 6.749

Click this hyperlink while viewing on your computer to access
57 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:
Year: 2007
Gen EPA ID: CAL000297758

Shipment Date: 20071130
Creation Date: 3/11/2008 18:30:29
Receipt Date: 20071211
Manifest ID: 000644387SKS
Trans EPA ID: TXR000050930
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: OKD981588791
Trans 2 Name: TRIAD TRANSPORT
TSDF EPA ID: NVT330010000

AES WIND GENERATION LLC (Continued) **S113138724**

Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	2.025
Waste Quantity:	4050
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071130
Creation Date:	3/11/2008 18:30:29
Receipt Date:	20071211
Manifest ID:	000644386SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071130
Creation Date:	3/11/2008 18:30:29
Receipt Date:	20071211
Manifest ID:	000644386SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)

AES WIND GENERATION LLC (Continued) **S113138724**

Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071019
Creation Date:	4/22/2008 18:30:08
Receipt Date:	20071102
Manifest ID:	000644159SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.0725
Waste Quantity:	145
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071019
Creation Date:	4/22/2008 18:30:08
Receipt Date:	20071102
Manifest ID:	000644160SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 5:	Not reported
Shipment Date:	20071019
Creation Date:	4/22/2008 18:30:08
Receipt Date:	20071102
Manifest ID:	000644159SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071019
Creation Date:	4/22/2008 18:30:08
Receipt Date:	20071102
Manifest ID:	000644159SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.0625
Waste Quantity:	125
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070615
Creation Date:	12/28/2007 18:30:19
Receipt Date:	20070628
Manifest ID:	000229568SKS
Trans EPA ID:	TXR000050930

AES WIND GENERATION LLC (Continued) **S113138724**

Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.135
Waste Quantity:	270
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070615
Creation Date:	12/28/2007 18:30:19
Receipt Date:	20070628
Manifest ID:	000229568SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070322
Creation Date:	12/10/2007 18:30:29
Receipt Date:	20070409
Manifest ID:	000247788SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons: 0.0625
Waste Quantity: 125
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2013
Gen EPA ID: CAL000297758

Shipment Date: 20131216
Creation Date: 6/25/2014 22:14:54
Receipt Date: 20140109
Manifest ID: 004096793SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: AZR000508515
Trans 2 Name: SLT
TSDF EPA ID: UTD991301748
Trans Name: CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons: 0.25
Waste Quantity: 500
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20131216
Creation Date: 6/25/2014 22:14:54
Receipt Date: 20140109
Manifest ID: 004096793SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: AZR000508515
Trans 2 Name: SLT
TSDF EPA ID: UTD991301748
Trans Name: CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H132 - Landfill Or Surface Impoundment That Will Be Closed As

AES WIND GENERATION LLC (Continued) **S113138724**

	Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131216
Creation Date:	6/25/2014 22:14:54
Receipt Date:	20140109
Manifest ID:	004096734SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	AZR000508515
Trans 2 Name:	SLT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131022
Creation Date:	3/31/2014 22:15:09
Receipt Date:	20131118
Manifest ID:	003938705SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	AZR000508515
Trans 2 Name:	SLT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	1.125
Waste Quantity:	2250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131022
Creation Date:	3/31/2014 22:15:09
Receipt Date:	20131118
Manifest ID:	003938704SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	AZR000508515
Trans 2 Name:	SLT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131022
Creation Date:	3/31/2014 22:15:09
Receipt Date:	20131118
Manifest ID:	003938704SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	AZR000508515
Trans 2 Name:	SLT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130927
Creation Date:	11/20/2013 22:15:20
Receipt Date:	20130927
Manifest ID:	011439481JJK
Trans EPA ID:	CAR000172460

AES WIND GENERATION LLC (Continued) **S113138724**

Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	20
Waste Quantity:	20
Quantity Unit:	T
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130927
Creation Date:	11/7/2013 22:15:14
Receipt Date:	20130927
Manifest ID:	011439482JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	20
Waste Quantity:	20
Quantity Unit:	T
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130927
Creation Date:	11/7/2013 22:15:14
Receipt Date:	20130927
Manifest ID:	011439478JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	20
Waste Quantity:	20
Quantity Unit:	T
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130927
Creation Date:	11/20/2013 22:15:20
Receipt Date:	20130927
Manifest ID:	011439477JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	20
Waste Quantity:	20
Quantity Unit:	T
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000297758
Shipment Date:	20171220
Creation Date:	8/3/2018 18:30:58
Receipt Date:	20171221
Manifest ID:	017380221JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No

AES WIND GENERATION LLC (Continued) **S113138724**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.575
Waste Quantity:	1150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171220
Creation Date:	8/3/2018 18:30:58
Receipt Date:	20171221
Manifest ID:	017380221JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.775
Waste Quantity:	1550
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171220
Creation Date:	8/3/2018 18:30:58
Receipt Date:	20171221
Manifest ID:	017380221JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.105
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171220
Creation Date:	8/3/2018 18:30:58
Receipt Date:	20171221
Manifest ID:	017380221JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171011
Creation Date:	5/30/2018 18:33:51
Receipt Date:	20171016
Manifest ID:	017179373JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	2.94
Waste Quantity:	700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171011
Creation Date:	5/30/2018 18:33:51
Receipt Date:	20171016
Manifest ID:	017179373JJK

AES WIND GENERATION LLC (Continued) **S113138724**

Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.75
Waste Quantity:	1500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171011
Creation Date:	5/30/2018 18:33:51
Receipt Date:	20171016
Manifest ID:	017179373JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170920
Creation Date:	5/30/2018 18:32:32
Receipt Date:	20170922
Manifest ID:	017179255JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170913
Creation Date:	6/20/2018 18:32:00
Receipt Date:	20170914
Manifest ID:	017179226JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.425
Waste Quantity:	850
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170913
Creation Date:	6/20/2018 18:32:00
Receipt Date:	20170914
Manifest ID:	017179226JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.7
Waste Quantity:	1400

AES WIND GENERATION LLC (Continued) **S113138724**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000297758
Shipment Date:	20091125
Creation Date:	2/3/2010 18:30:22
Receipt Date:	20091130
Manifest ID:	000027408MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091125
Creation Date:	2/3/2010 18:30:22
Receipt Date:	20091130
Manifest ID:	000027408MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091009
Creation Date:	11/25/2009 18:30:51
Receipt Date:	20091009
Manifest ID:	005463682JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.122
Waste Quantity:	244
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091009
Creation Date:	11/25/2009 18:30:51
Receipt Date:	20091009
Manifest ID:	005463682JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.083
Waste Quantity:	166
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091009
Creation Date:	11/25/2009 18:30:51
Receipt Date:	20091009

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	005463682JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.09
Waste Quantity:	180
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20091009
Creation Date:	11/25/2009 18:30:51
Receipt Date:	20091009
Manifest ID:	005463682JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0935
Waste Quantity:	187
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20090819
Creation Date:	3/5/2010 18:30:38
Receipt Date:	20090903
Manifest ID:	001939065SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	1.225
Waste Quantity:	2450
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090819
Creation Date:	3/5/2010 18:30:38
Receipt Date:	20090903
Manifest ID:	002013884SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1195
Waste Quantity:	239
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090819
Creation Date:	3/5/2010 18:30:38
Receipt Date:	20090903
Manifest ID:	002013884SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15

AES WIND GENERATION LLC (Continued) **S113138724**

Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090713
Creation Date:	12/8/2009 18:30:09
Receipt Date:	20090729
Manifest ID:	001747145SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	461 - Paint sludge
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2012
Gen EPA ID:	CAL000297758
Shipment Date:	20121217
Creation Date:	4/29/2013 22:15:20
Receipt Date:	20121228
Manifest ID:	003111217SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121107
Creation Date:	4/6/2013 22:15:15
Receipt Date:	20121119
Manifest ID:	003541391SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120921
Creation Date:	8/17/2013 22:15:07
Receipt Date:	20121002
Manifest ID:	003279725SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120921
Creation Date:	8/17/2013 22:15:07
Receipt Date:	20121002

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	003156541SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	Not reported
Waste Quantity:	250
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20120907
Creation Date:	8/18/2013 22:15:15
Receipt Date:	20120914
Manifest ID:	003339814SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20120817
Creation Date:	2/3/2013 22:15:07
Receipt Date:	20120828
Manifest ID:	003339620SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120817
Creation Date:	2/3/2013 22:15:07
Receipt Date:	20120828
Manifest ID:	003339620SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	1.525
Waste Quantity:	3050
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120608
Creation Date:	5/24/2013 22:15:24
Receipt Date:	20120620
Manifest ID:	003227045SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.2
Waste Quantity:	400

AES WIND GENERATION LLC (Continued) **S113138724**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120608
Creation Date:	5/24/2013 22:15:24
Receipt Date:	20120620
Manifest ID:	003272841SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120508
Creation Date:	5/29/2013 22:15:05
Receipt Date:	20120521
Manifest ID:	003227041SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.75
Waste Quantity:	1500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Info:

Year:	2006
Gen EPA ID:	CAL000297758
Shipment Date:	20061113
Creation Date:	7/6/2007 18:30:05
Receipt Date:	20061127
Manifest ID:	000199935CEX
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061113
Creation Date:	7/6/2007 18:30:05
Receipt Date:	20061127
Manifest ID:	000199935CEX
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061113
Creation Date:	7/6/2007 18:30:05
Receipt Date:	20061127

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	000199935CEX
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.225
Waste Quantity:	450
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060906
Creation Date:	7/13/2007 18:30:12
Receipt Date:	20060920
Manifest ID:	000783961JJK
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.16
Waste Quantity:	320
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060906
Creation Date:	7/13/2007 18:30:12
Receipt Date:	20060920
Manifest ID:	000783961JJK
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0625
Waste Quantity:	125
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060906
Creation Date:	7/13/2007 18:30:12
Receipt Date:	20060920
Manifest ID:	000783961JJK
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.45
Waste Quantity:	900
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2016
Gen EPA ID:	CAL000297758
Shipment Date:	20151112
Creation Date:	1/11/2016 22:16:40
Receipt Date:	20151113
Manifest ID:	015033783JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids

AES WIND GENERATION LLC (Continued) **S113138724**

RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.176
Waste Quantity:	352
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151112
Creation Date:	1/11/2016 22:16:40
Receipt Date:	20151113
Manifest ID:	015033783JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151021
Creation Date:	12/22/2015 22:15:07
Receipt Date:	20151023
Manifest ID:	015033585JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.325
Waste Quantity:	650
Quantity Unit:	P
Additional Code 1:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151021
Creation Date:	12/22/2015 22:15:07
Receipt Date:	20151023
Manifest ID:	015033585JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151021
Creation Date:	12/22/2015 22:15:07
Receipt Date:	20151023
Manifest ID:	015033585JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150916
Creation Date:	11/17/2015 22:15:32

AES WIND GENERATION LLC (Continued) **S113138724**

Receipt Date:	20150918
Manifest ID:	014446842JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150916
Creation Date:	11/17/2015 22:15:32
Receipt Date:	20150918
Manifest ID:	014446842JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150715
Creation Date:	9/4/2015 22:15:45
Receipt Date:	20150716
Manifest ID:	014580290JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481

AES WIND GENERATION LLC (Continued) **S113138724**

Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150715
Creation Date:	9/4/2015 22:15:45
Receipt Date:	20150716
Manifest ID:	014580290JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150715
Creation Date:	9/4/2015 22:15:45
Receipt Date:	20150716
Manifest ID:	014580290JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

AES WIND GENERATION LLC (Continued) **S113138724**

Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2008
Gen EPA ID:	CAL000297758
Shipment Date:	20081124
Creation Date:	4/9/2009 18:30:08
Receipt Date:	20081208
Manifest ID:	001594008SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.16
Waste Quantity:	320
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081124
Creation Date:	4/9/2009 18:30:08
Receipt Date:	20081208
Manifest ID:	001594008SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081124
Creation Date:	4/9/2009 18:30:20
Receipt Date:	20081209
Manifest ID:	001559391SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1125
Waste Quantity:	225
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081113
Creation Date:	4/8/2009 18:30:08
Receipt Date:	20081121
Manifest ID:	001559203SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.09
Waste Quantity:	180
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081113
Creation Date:	4/8/2009 18:30:08
Receipt Date:	20081121

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	001559203SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D008
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081113
Creation Date:	4/8/2009 18:30:08
Receipt Date:	20081120
Manifest ID:	001559750SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.065
Waste Quantity:	130
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081113
Creation Date:	4/8/2009 18:30:08
Receipt Date:	20081120
Manifest ID:	001559751SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081030
Creation Date:	3/31/2009 18:30:08
Receipt Date:	20081110
Manifest ID:	001273086SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.33
Waste Quantity:	660
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081030
Creation Date:	3/31/2009 18:30:08
Receipt Date:	20081111
Manifest ID:	001559678SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 1:	F003
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081030
Creation Date:	3/31/2009 18:30:08
Receipt Date:	20081110
Manifest ID:	001273086SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.035
Waste Quantity:	70
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000297758
Shipment Date:	20111221
Creation Date:	5/24/2012 20:30:15
Receipt Date:	20120106
Manifest ID:	002839980SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111213
Creation Date:	4/26/2012 20:30:19
Receipt Date:	20111228
Manifest ID:	002989913SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.7
Waste Quantity:	1400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111114
Creation Date:	4/14/2012 20:30:11
Receipt Date:	20111122
Manifest ID:	002823023SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.145
Waste Quantity:	290
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111114
Creation Date:	4/14/2012 20:30:11
Receipt Date:	20111122
Manifest ID:	002823023SKS

AES WIND GENERATION LLC (Continued) **S113138724**

Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.475
Waste Quantity:	950
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111114
Creation Date:	4/14/2012 20:30:11
Receipt Date:	20111122
Manifest ID:	002823023SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110928
Creation Date:	3/22/2012 20:30:23
Receipt Date:	20111006
Manifest ID:	002907871SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.525
Waste Quantity:	1050
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110928
Creation Date:	3/22/2012 20:30:23
Receipt Date:	20111006
Manifest ID:	002907871SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110819
Creation Date:	2/9/2012 20:30:13
Receipt Date:	20110829
Manifest ID:	003769400FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT IN
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.05
Waste Quantity:	100

AES WIND GENERATION LLC (Continued) **S113138724**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110819
Creation Date:	2/9/2012 20:30:13
Receipt Date:	20110829
Manifest ID:	003769400FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT IN
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.9
Waste Quantity:	1800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110623
Creation Date:	12/15/2011 18:30:12
Receipt Date:	20110630
Manifest ID:	003852116FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	1.25
Waste Quantity:	2500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Additional Info:

Year:	2010
Gen EPA ID:	CAL000297758
Shipment Date:	20101213
Creation Date:	5/24/2011 18:30:22
Receipt Date:	20101223
Manifest ID:	003685061FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101213
Creation Date:	5/24/2011 18:30:22
Receipt Date:	20101223
Manifest ID:	003685061FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101213
Creation Date:	5/24/2011 18:30:22
Receipt Date:	20101223

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	003685061FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072864MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0625
Waste Quantity:	125
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072865MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.225
Waste Quantity:	450
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072864MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072864MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1275

AES WIND GENERATION LLC (Continued) **S113138724**

Waste Quantity:	255
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072866MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.225
Waste Quantity:	450
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072866MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D035
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1815
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Shipment Date:	20101008
Creation Date:	12/30/2010 18:30:23
Receipt Date:	20101011
Manifest ID:	000072862MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.225
Waste Quantity:	450
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000297758
Shipment Date:	20141203
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141205
Manifest ID:	013856288JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141203
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141205

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	013856287JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20141203
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141205
Manifest ID:	013856288JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.462
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20141203
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141205
Manifest ID:	013856287JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141010
Creation Date:	11/25/2014 22:15:05
Receipt Date:	20141015
Manifest ID:	013125338JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141010
Creation Date:	11/25/2014 22:15:05
Receipt Date:	20141015
Manifest ID:	013125339JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1

AES WIND GENERATION LLC (Continued) **S113138724**

Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141010
Creation Date:	11/25/2014 22:15:05
Receipt Date:	20141015
Manifest ID:	013125339JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141010
Creation Date:	11/25/2014 22:15:05
Receipt Date:	20141015
Manifest ID:	013125338JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Shipment Date:	20141010
Creation Date:	11/25/2014 22:15:05
Receipt Date:	20141015
Manifest ID:	013125338JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0475
Waste Quantity:	95
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20140827
Creation Date:	10/22/2014 22:15:11
Receipt Date:	20140829
Manifest ID:	013481684JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAL000297758

Shipment Date:	20151112
Creation Date:	1/11/2016 22:16:40
Receipt Date:	20151113

AES WIND GENERATION LLC (Continued) **S113138724**

Manifest ID:	015033783JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.176
Waste Quantity:	352
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151112
Creation Date:	1/11/2016 22:16:40
Receipt Date:	20151113
Manifest ID:	015033783JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151021
Creation Date:	12/22/2015 22:15:07
Receipt Date:	20151023
Manifest ID:	015033585JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC

AES WIND GENERATION LLC (Continued) **S113138724**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151021
Creation Date:	12/22/2015 22:15:07
Receipt Date:	20151023
Manifest ID:	015033585JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.325
Waste Quantity:	650
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151021
Creation Date:	12/22/2015 22:15:07
Receipt Date:	20151023
Manifest ID:	015033585JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075

AES WIND GENERATION LLC (Continued) **S113138724**

Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150916
Creation Date:	11/17/2015 22:15:32
Receipt Date:	20150918
Manifest ID:	014446842JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150916
Creation Date:	11/17/2015 22:15:32
Receipt Date:	20150918
Manifest ID:	014446842JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Shipment Date:	20150715
Creation Date:	9/4/2015 22:15:45
Receipt Date:	20150716
Manifest ID:	014580290JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150715
Creation Date:	9/4/2015 22:15:45
Receipt Date:	20150716
Manifest ID:	014580290JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150715
Creation Date:	9/4/2015 22:15:45
Receipt Date:	20150716
Manifest ID:	014580290JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported

AES WIND GENERATION LLC (Continued) **S113138724**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	AES WIND GENERATION LLC
Address:	19435 RUPPERT ST
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	3384
CERS ID:	10321468
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	3384
Site Name:	AES Wind Generation LLC
Violation Date:	06-22-2017
Citation:	HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Description:	Failure to maintain a valid permit.
Violation Notes:	Returned to compliance on 09/22/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS,

Site ID:	3384
Site Name:	AES Wind Generation LLC
Violation Date:	06-22-2017
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 09/22/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,

Site ID:	3384
Site Name:	AES Wind Generation LLC
Violation Date:	06-22-2017
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in

AES WIND GENERATION LLC (Continued) **S113138724**

	safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/30/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	3384
Site Name:	AES Wind Generation LLC
Violation Date:	10-28-2020
Citation:	HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 12/02/2020. OBSERVATION: Site map submitted in CERS was missing adjacent streets. CORRECTIVE ACTION: Owner/operator shall complete an annotated site map which includes all elements outlined in CA Health and Safety Code: north orientation, loading areas, internal roads, adjacent streets, storm and sewer drain, access and exit points, emergency shut offs, evacuation staging areas, hazardous material handling and storage areas, and emergency response equipment. Submit site map into the statewide information management system (e.g. CERS) at http://cers.calepa.ca.gov.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	3384
Site Name:	AES Wind Generation LLC
Violation Date:	10-28-2020
Citation:	HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 12/02/2020. OBSERVATION: The most recent business plan submission in the statewide information management system (CERS) failed to contain a chemical inventory description page for lubricating oils for wind turbines on wind turbine sites owned by owner/operator. CORRECTIVE ACTION: Owner/operator shall complete a chemical inventory page for all reportable hazardous materials on site and submit to the statewide information management system (e.g. CERS) at http://cers.calepa.ca.gov.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS,
Site ID:	3384
Site Name:	AES Wind Generation LLC
Violation Date:	10-28-2020
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 12/02/2020. OBSERVATION: Owner/operator has

AES WIND GENERATION LLC (Continued) **S113138724**

previously submitted a business plan into the statewide information management system which had one or more sections rejected. Specifically, inventory and site map were rejected for not meeting minimum standards. CORRECTIVE ACTION: Owner/operator shall review the rejection comments attached to the previously submitted business plan, make required corrections, and resubmit corrected sections into the statewide information management system (e.g. CERS) at http://cers.calepa.ca.gov.

Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 3384
Site Name: AES Wind Generation LLC
Violation Date: 06-22-2017
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 09/22/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-28-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-28-2020
Violations Found: Yes
Eval Type: Routine done by local agency

AES WIND GENERATION LLC (Continued) **S113138724**

Eval Notes:	NOTE: remove NFPA 704 signs from locations that no longer store hazmat and refresh NFPA at service yard gate before fading. NOTE: discussed seepage of oil from turbines on tower - owner/operator makes efforts to minimize release and any release that reaches the base of the tower is immediately addressed and removed as haz waste.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-22-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-28-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS,

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055,
Affiliation Type Desc:	Environmental Contact
Entity Name:	ARMANDO GONZALEZ
Entity Title:	Not reported
Affiliation Address:	PO box 2190
Affiliation City:	Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92263
Affiliation Phone:	,
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO Box 2190
Affiliation City:	Palm Springs
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92263
Affiliation Phone:	,

AES WIND GENERATION LLC (Continued) **S113138724**

Affiliation Type Desc:	Identification Signer
Entity Name:	Jacob Rich
Entity Title:	Safety & Environmental Leader
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Parent Corporation
Entity Name:	AES Wind Generation LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Property Owner
Entity Name:	AES Wind Generation LLC
Entity Title:	Not reported
Affiliation Address:	PO box 2190
Affiliation City:	Palm Springs
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92263
Affiliation Phone:	(760) 660-6455,

Affiliation Type Desc:	Operator
Entity Name:	AES Wind Generation LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 660-6435,

Affiliation Type Desc:	Document Preparer
Entity Name:	Jacob Rich
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Legal Owner
Entity Name:	AES Corporation
Entity Title:	Not reported
Affiliation Address:	4300 Wilson Boulevard
Affiliation City:	Arlington
Affiliation State:	VA
Affiliation Country:	United States

AES WIND GENERATION LLC (Continued) **S113138724**

Affiliation Zip: 22203
Affiliation Phone: (703) 522-1315,

HWTS:
Name: AES WIND GENERATION LLC
Address: 19435 RUPPERT ST
Address 2: Not reported
City,State,Zip: NORTH PALM SPRINGS, CA 92258
EPA ID: CAL000297758
Inactive Date: Not reported
Create Date: 08/19/2005
Last Act Date: 07/14/2020
Mailing Name: Not reported
Mailing Address: PO BOX 2190
Mailing Address 2: Not reported
Mailing City,State,Zip: PALM SPRINGS, CA 92263
Owner Name: AES WIND GENERATION LLC
Owner Address: 4300 WILSON BLVD
Owner Address 2: Not reported
Owner City,State,Zip: ARLINGTON, VA 222030000
Contact Name: JACOB RICH
Contact Address: PO BOX 2190
Contact Address 2: Not reported
City,State,Zip: PALM SPRINGS, CA 92263

NAICS:
EPA ID: CAL000297758
Create Date: 2009-12-03 12:41:18.000
NAICS Code: 221122
NAICS Description: Electric Power Distribution
Issued EPA ID Date: 2005-08-19 15:15:57
Inactive Date: Not reported
Facility Name: AES WIND GENERATION LLC
Facility Address: 19435 RUPPERT ST
Facility Address 2: Not reported
Facility City: NORTH PALM SPRINGS
Facility County: Not reported
Facility State: CA
Facility Zip: 92258

D21 **NORTH PALM SPRINGS SHELL** **HIST CORTESE** **S105025456**
SSE **20000 INDIAN** **N/A**
1/4-1/2 **PALM SPRINGS, CA 90749**
0.256 mi.
1350 ft. **Site 9 of 11 in cluster D**

Relative:
Lower

Actual:
743 ft.

HIST CORTESE:
edr_fname: NORTH PALM SPRINGS SHELL
edr_fadd1: 20000 INDIAN
City,State,Zip: PALM SPRINGS, CA 90749
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 7T2258001

D22 **NORTH PALM SPRINGS SHELL** **LUST** **S105418557**
SSE **20000 INDIAN AVENUE** **N/A**
1/4-1/2 **NORTH PALM SPRINGS, CA**
0.256 mi.
1350 ft. **Site 10 of 11 in cluster D**

Relative: **Lower**
Actual: **743 ft.**

LUST REG 7:

Region:	7
Status:	9 - Case Closed
Case Num:	7T2258002
Substance:	Gasoline - Automotive
ID:	1040
Global ID:	T0606500989
Lead Agency:	Local Agency
Case Worker:	YO

D23 **76 STATION 5699** **LUST** **S109280359**
SSE **19995 INDIAN AVE** **CERS HAZ WASTE** **N/A**
1/4-1/2 **NORTH PALM SPRINGS, CA 92258** **CERS TANKS**
0.259 mi. **Cortese**
1365 ft. **Site 11 of 11 in cluster D** **CERS**

Relative: **Lower**
Actual: **742 ft.**

LUST:

Name:	76 STATION 5699
Address:	19995 INDIAN AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Lead Agency:	RIVERSIDE COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606574311
Global Id:	T0606574311
Latitude:	33.90684
Longitude:	-116.545404
Status:	Completed - Case Closed
Status Date:	12/10/2009
Case Worker:	Not reported
RB Case Number:	7T2258005
Local Agency:	Not reported
File Location:	Local Agency Warehouse
Local Case Number:	200824965
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	6 borings were advanced December 3 and 4, 2007, during a due diligence assessment. Up to 320 ppm TPHd was detected in B-4S @ 10 by the NW dispenser. The site was placed into LOP 5 soil borings were drilled November 24 and 25, 2008, to 50 . Soil samples were taken every 5 and analyzed in an on-site mobile laboratory. No TPHg, BTEX or oxygenates were detected except for one hit of 4.6 ppm TPHg at 15 in boring 10.

LUST:

Global Id:	T0606574311
Contact Type:	Regional Board Caseworker
Contact Name:	KAI DUNN
Organization Name:	COLORADO RIVER BASIN RWQCB (REGION 7)
Address:	73-720 FRED WARING DR. STE 100
City:	PALM DESERT
Email:	kai.dunn@waterboards.ca.gov
Phone Number:	Not reported

76 STATION 5699 (Continued) **S109280359**

LUST:

Global Id:	T0606574311
Action Type:	Other
Date:	06/04/2008
Action:	Leak Discovery
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	06/04/2008
Action:	Staff Letter
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	09/03/2008
Action:	Staff Letter
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	11/20/2008
Action:	File review
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	11/14/2008
Action:	File review
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	05/08/2009
Action:	File review
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	05/08/2009
Action:	File review
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	07/29/2009
Action:	Staff Letter - #RCDEH072909
Global Id:	T0606574311
Action Type:	ENFORCEMENT
Date:	12/10/2009
Action:	Closure/No Further Action Letter - #RCDEH Closure
Global Id:	T0606574311
Action Type:	Other
Date:	06/04/2008
Action:	Leak Reported
Global Id:	T0606574311
Action Type:	RESPONSE
Date:	11/29/2009
Action:	Other Report / Document
Global Id:	T0606574311

76 STATION 5699 (Continued) **S109280359**

Action Type: ENFORCEMENT
Date: 01/03/2008
Action: File review

Global Id: T0606574311
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606574311
Action Type: RESPONSE
Date: 12/02/2008
Action: Preliminary Site Assessment Report

Global Id: T0606574311
Action Type: ENFORCEMENT
Date: 09/29/2009
Action: File review

Global Id: T0606574311
Action Type: ENFORCEMENT
Date: 09/29/2009
Action: Staff Letter - #Riv Co 092909

LUST:
Global Id: T0606574311
Status: Open - Case Begin Date
Status Date: 06/04/2008

Global Id: T0606574311
Status: Open - Site Assessment
Status Date: 06/04/2008

Global Id: T0606574311
Status: Completed - Case Closed
Status Date: 12/10/2009

RIVERSIDE CO. LUST:
Name: 76 STATION #5699
Address: 19995 INDIAN
City,State,Zip: NORTH PALM SPRINGS, CA
Region: RIVERSIDE
Facility ID: 200824965
Employee: Shurlow-LOP
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

CERS HAZ WASTE:
Name: UNITED 5699
Address: 19995 INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 54684

76 STATION 5699 (Continued) **S109280359**

CERS ID: 10326694
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: UNITED 5699
Address: 19995 INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 54684
CERS ID: 10326694
CERS Description: Underground Storage Tank

CORTESE:
Name: 76 STATION 5699
Address: 19995 INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0606574311
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

CERS:
Name: UNITED 5699
Address: 19995 INDIAN AVE
City,State,Zip: NORTH PALM SPRINGS, CA 92258
Site ID: 54684
CERS ID: 10326694
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: Failure to submit statement of UST compliance and/or Designated Operator certification.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST

76 STATION 5699 (Continued) **S109280359**

Violation Source:	CERS,
Site ID:	54684
Site Name:	United 5699
Violation Date:	03-09-2020
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 03/10/2020. OBSERVATION: Observed UST tank information pages for both tanks submitted in CERS to be inaccurate and/or missing information. Riser containment is fiberglass sump, and UDC are steel; a detailed message has been sent via CERS. CORRECTIVE ACTION: Owner/operator shall make the corrections noted above to the UST tank information pages and re-submit updated forms in CERS.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS,
Site ID:	54684
Site Name:	United 5699
Violation Date:	03-08-2016
Citation:	23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description:	Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes:	Returned to compliance on 03/08/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS,
Site ID:	54684
Site Name:	United 5699
Violation Date:	03-19-2019
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 03/20/2019. OBSERVATION: Observed Tank information for Tank I.D.#1 and Tank I.D. #2 submitted in CERS to be inaccurate and/or missing information for type of tank manufacture and tank construction. At time of inspection, it was verified with the service technician that Tank I.D. #1 and Tank I.D. #2 were manufactured by Modern Welding and the tank constructed as a double walled steel (primary containment) fiberclad (secondary containment) tank. CORRECTIVE ACTION: Owner/operator shall make the corrections noted above to the UST tank information for Tank I.D. #1 and Tank I.D. #2 and re-submit updated forms in CERS.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS,
Site ID:	54684
Site Name:	United 5699
Violation Date:	03-19-2019
Citation:	23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)

76 STATION 5699 (Continued) **S109280359**

Violation Description:	Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.
Violation Notes:	Returned to compliance on 03/10/2020. OBSERVATION: An overfill equipment inspection was not completed by the October 13, 2018 deadline. CORRECTIVE ACTION: The overfill equipment inspection was conducted on 1/7/19 and the results were rejected by the Department. On 3/4/19, a plan check was submitted by the owner/operator and it has been approved. Owner/operator shall schedule an inspection and provide the required 48 hour notification prior to conducting the inspection. Inspection results and all supporting documentation (inspection procedures used, tank charts, printouts, etc.) must be submitted to this Department within 30 days upon completion of the inspection.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS,
Site ID:	54684
Site Name:	United 5699
Violation Date:	03-19-2019
Citation:	23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description:	Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at the dispenser when a leak is detected.
Violation Notes:	Returned to compliance on 03/19/2019. OBSERVATION: The float and chain assembly in the dispenser 6/7 and 11/12 failed to stop the flow of product at the dispenser when tested. CORRECTIVE ACTION: Owner/operator shall replace the inoperable float & chain assembly and certify proper functionality. The float and chain in dispenser 6/7 and 11/12 were readjusted, re-tested and passing result observed. Corrected onsite.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS,

76 STATION 5699 (Continued) **S109280359**

Site ID: 54684
Site Name: United 5699
Violation Date: 03-08-2016
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 03/08/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-19-2019
Citation: 23 CCR 16 2715(a)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)(2)
Violation Description: Failure to submit the Underground Storage Tank Statement of Understanding and Compliance Form.
Violation Notes: Returned to compliance on 03/20/2019. OBSERVATION: Observed that an "Underground Storage Tank Statement of Understanding and Compliance Form" was not submitted electronically in CERS. CORRECTIVE ACTION: Owner/operator shall electronically submit into CERS a complete, accurate and signed "Underground Storage Tank Statement of Understanding and Compliance Form". A copy of the form has been emailed to the environmental contact on CERS today.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 11-17-2021
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of

76 STATION 5699 (Continued) **S109280359**

capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Not reported
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-12-2014
Citation: HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description: UST Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 04/22/2014.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description: Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for three years.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699

76 STATION 5699 (Continued) **S109280359**

Violation Date: 03-08-2016
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to maintain on site an approved monitoring plan.
Violation Notes: Returned to compliance on 03/08/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-09-2020
Citation: HSC 6.7 25291(a)(2) - California Health and Safety Code, Chapter 6.7, Section(s) 25291(a)(2)
Violation Description: Failure to maintain secondary containment (e.g., failure of secondary containment testing).
Violation Notes: Returned to compliance on 03/10/2020. OBSERVATION: SB 989 testing conducted on 10/21/2019 revealed failed secondary components. Plan check repairs were completed 2/25/2020, yet results still not received. CORRECTIVE ACTION: Owner/operator shall make the necessary repairs to the failed secondary components and re-test failed components to ensure secondary containment is maintained tight. Documentation shall be sent to this dept for review to clear open violation.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-04-2020
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that

76 STATION 5699 (Continued) **S109280359**

none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Returned to compliance on 03/10/2020.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-12-2014
Citation: HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description: UST Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 03/12/2014.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs.
Violation Notes: Returned to compliance on 03/02/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Description: Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes: Returned to compliance on 03/02/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

76 STATION 5699 (Continued) **S109280359**

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-08-2016
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the under dispenser containment to be continuously monitored by a method that either shuts down the flow of product to the dispenser or activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 03/08/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-07-2018
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at the dispenser when a leak is detected.
Violation Notes: Returned to compliance on 03/19/2019.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 10-31-2019
Citation: HSC 6.7 25291(a)(2) - California Health and Safety Code, Chapter 6.7, Section(s) 25291(a)(2)
Violation Description: Failure to maintain secondary containment (e.g., failure of secondary

76 STATION 5699 (Continued) **S109280359**

containment testing).
Violation Notes: Returned to compliance on 03/10/2020. OBSERVATION: SB 989 testing conducted on 10/21/2019 revealed failed secondary components. The following components failed testing: the 87 fill sump failed. CORRECTIVE ACTION: Owner/operator shall make the necessary repairs to the failed secondary components and re-test failed components to ensure secondary containment is maintained tight. Note: Plans may be required for repairs; check with the HMMB area plan checker to determine if the submission of plans is necessary prior to starting repairs.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-12-2014
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the under dispenser containment to be continuously monitored by a method that either shuts down the flow of product to the dispenser or activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 04/22/2014.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the under dispenser containment to be continuously monitored by a method that either shuts down the flow of product to the dispenser or activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 03/02/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Site ID: 54684
Site Name: United 5699
Violation Date: 03-02-2015
Citation: 23 CCR 16 2636(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)
Violation Description: Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 03/02/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection

76 STATION 5699 (Continued) **S109280359**

Eval Date:	02-18-2021
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Facility is a gas station with convenience store. Hazardous waste are generated from any gasoline spills or gasoline mixed with testing water etc.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Other/Unknown
Eval Date:	02-21-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Delivering overfill failure notice
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-18-2021
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Facility is a gas station. Annual monitoring certification conducted at time of inspection. FastTech on-site to perform testing. No signature obtained at time of inspection to prevent possible transmission of COVID-19.
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-19-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	An annual routine monitoring certification performed today. Tank tech onsite. The secondary containment (SB 989) test was performed in November 2016.
Eval Division:	Riverside County Department of Env Health

76 STATION 5699 (Continued) **S109280359**

Eval Program:	UST
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	routine inpection
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-07-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-07-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-18-2021
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Facility is a gas station with convenience store. Hazardous materials onsite: 87 unleaded, 91 premium and bulk liquefied carbon dioxide tank.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-07-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Facility is a gas station generating fuel contaminated absorbent and fuel/water mixture.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-08-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	routine inspection
Eval Division:	Riverside County Department of Env Health

76 STATION 5699 (Continued) **S109280359**

Eval Program: UST
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-08-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: routine inspection
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-12-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 07-15-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reinspection
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 05-03-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: reinspection
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 07-15-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reinspection
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 10-31-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

76 STATION 5699 (Continued) **S109280359**

Eval General Type: Other/Unknown
Eval Date: 11-17-2021
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 03-02-2020
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-09-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: NOTE: ensure current permit is posted; NOTE: ensure DO inspection forms are signed within 5 days of DO inspection.
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 04-22-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reinspection
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS,

Enforcement Action:
Site ID: 54684
Site Name: United 5699
Site Address: 19995 INDIAN AVE
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 03-02-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS,

Site ID: 54684
Site Name: United 5699
Site Address: 19995 INDIAN AVE
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 03-02-2015

76 STATION 5699 (Continued) **S109280359**

Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW
Enf Action Source: CERS,

Site ID: 54684
Site Name: United 5699
Site Address: 19995 INDIAN AVE
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 03-02-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS,

Site ID: 54684
Site Name: United 5699
Site Address: 19995 INDIAN AVE
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 03-08-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS,

Site ID: 54684
Site Name: United 5699
Site Address: 19995 INDIAN AVE
Site City: NORTH PALM SPRINGS
Site Zip: 92258
Enf Action Date: 03-12-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS,

Affiliation:
Affiliation Type Desc: Operator
Entity Name: APRO LLC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (310) 323-3992,

76 STATION 5699 (Continued) **S109280359**

Affiliation Type Desc:	Parent Corporation
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	UST Tank Operator
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992,

Affiliation Type Desc:	Environmental Contact
Entity Name:	Tom Robins
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	,

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	,

Affiliation Type Desc:	Identification Signer
Entity Name:	Tom Robins
Entity Title:	Staff Geologist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported

76 STATION 5699 (Continued) **S109280359**

Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055,

Affiliation Type Desc: Document Preparer
Entity Name: Tom Robins
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Legal Owner
Entity Name: APRO LLC
Entity Title: Not reported
Affiliation Address: 4130 Cover Street
Affiliation City: Long Beach
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90808
Affiliation Phone: (310) 323-3992,

Affiliation Type Desc: Property Owner
Entity Name: Casa Marin, LLC
Entity Title: Not reported
Affiliation Address: 10 Glen Dr.
Affiliation City: Mill Valley
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 94941
Affiliation Phone: (415) 388-8817,

Affiliation Type Desc: UST Property Owner Name
Entity Name: CF UNITED PROPCO LLC
Entity Title: Not reported
Affiliation Address: 4130 Cover Street
Affiliation City: Long Beach
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90808
Affiliation Phone: (310) 323-3992,

Affiliation Type Desc: UST Tank Owner
Entity Name: APRO LLC
Entity Title: Not reported
Affiliation Address: 4130 Cover Street
Affiliation City: Long Beach
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90808
Affiliation Phone: (310) 323-3992,

Affiliation Type Desc: UST Permit Applicant
Entity Name: Allen Faass
Entity Title: Compliance Manager
Affiliation Address: Not reported

76 STATION 5699 (Continued) **S109280359**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 289-5286,

Name:	76 STATION 5699
Address:	19995 INDIAN AVE
City,State,Zip:	NORTH PALM SPRINGS, CA 92258
Site ID:	190882
CERS ID:	T0606574311
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	KAI DUNN - COLORADO RIVER BASIN RWQCB (REGION 7)
Entity Title:	Not reported
Affiliation Address:	73-720 FRED WARING DR. STE 100
Affiliation City:	PALM DESERT
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Count: 6 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
NORTH PALM SPRINGS	S118234611	TECHNIQUE DESIGNS INC	63665 19TH AVE	92258	CERS HAZ WASTE, HAZNET, HWTS
NORTH PALM SPRINGS	S126983930	PALM SPRINGS TRANSFER AND RECYCLIN	SW CORNER 19TH AVE. AND MCLEAN	92258	SWF/LF
NORTH PALM SPRINGS	S113131603	AUTO DOCTOR	19345 N INDIAN AVENUE #2	92258	CERS HAZ WASTE, HAZNET, HWTS
PALM SPRINGS	S124898588	PALM SPRINGS MOTORSPORTS	6550 N INDIAN CANYON DR	92262	CERS HAZ WASTE, HWTS
RIVERSIDE COUNTY	S107541240		WINEVILLE, SW CORNER OF GAGELE		CDL
SKY VALLEY	S107539508		NEAR CORNER OF LYONS BLVD & QU	92240	CDL

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 9

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/22/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/25/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/25/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/08/2021
Date Data Arrived at EDR: 11/09/2021
Date Made Active in Reports: 01/28/2022
Number of Days to Update: 80

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22
Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 12/01/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 03/02/2022
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/10/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/25/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 77
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/15/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 09/14/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 11/23/2021
Number of Days to Update: 12

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/25/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 12/10/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 03/11/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 01/24/2022
Number of Days to Update: 80

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/24/2022
Date Data Arrived at EDR: 02/25/2022
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 78

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 84

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 10/26/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2021
Date Data Arrived at EDR: 12/17/2021
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/18/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/18/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 87

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/04/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/08/2022
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/03/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/21/2022
Date Data Arrived at EDR: 03/22/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 3

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/02/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/14/2021
Date Data Arrived at EDR: 12/15/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 85

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/04/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 95

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/22/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 6
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 78
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/16/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 77
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 77

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/27/2021
Date Data Arrived at EDR: 09/01/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 79

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 11/17/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/07/2022
Number of Days to Update: 81

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 78

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/18/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 11/10/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 84

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/18/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/07/2022
Number of Days to Update: 80

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 80

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/18/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/17/2022
Number of Days to Update: 79
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/09/2021
Date Data Arrived at EDR: 11/09/2021
Date Made Active in Reports: 01/27/2022
Number of Days to Update: 79
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/17/2022
Number of Days to Update: 79
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/13/2021
Date Data Arrived at EDR: 12/14/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 79
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/09/2022
Next Scheduled EDR Contact: 06/26/2022
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/03/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/24/2022
Number of Days to Update: 79

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29
Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 07/13/2021
Date Data Arrived at EDR: 07/14/2021
Date Made Active in Reports: 10/06/2021
Number of Days to Update: 84
Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 12/28/2021
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 80

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 11/01/2021
Date Data Arrived at EDR: 11/02/2021
Date Made Active in Reports: 01/24/2022
Number of Days to Update: 83

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 12/28/2021
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 80

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/17/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 79

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/26/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 12/01/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/06/2022
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 11/10/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 02/02/2022
Number of Days to Update: 82

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 11/10/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 02/02/2022
Number of Days to Update: 82

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 03/24/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 01/24/2022
Number of Days to Update: 80

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/10/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/04/2022
Date Data Arrived at EDR: 04/05/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 8

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 83

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/21/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory

A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/23/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/12/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 82

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/13/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 11

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 09/14/2021
Number of Days to Update: 89

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 05/26/2021
Date Data Arrived at EDR: 07/09/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 82

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/23/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/24/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 03/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 01/26/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 10/08/2021
Date Data Arrived at EDR: 11/02/2021
Date Made Active in Reports: 01/24/2022
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/01/2022
Date Made Active in Reports: 04/18/2022
Number of Days to Update: 76

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 10/29/2021
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/01/2021
Date Data Arrived at EDR: 12/02/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 85

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/31/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/31/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 06/18/2021
Date Data Arrived at EDR: 09/28/2021
Date Made Active in Reports: 12/14/2021
Number of Days to Update: 77

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/02/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 11/02/2021
Number of Days to Update: 90

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 01/24/2022
Number of Days to Update: 80

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/01/2021
Date Data Arrived at EDR: 12/02/2021
Date Made Active in Reports: 02/17/2022
Number of Days to Update: 77

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 78

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 7

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/10/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 02/02/2022
Number of Days to Update: 83

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/10/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 79

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/11/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/07/2022
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 11/09/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 02/02/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 11/23/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/06/2022
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 04/26/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 78

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/23/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 81

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/24/2022
Number of Days to Update: 79

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 73

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/24/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/26/2022
Date Data Arrived at EDR: 01/27/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 77

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/11/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 81

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/07/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/14/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

38-AC SITE APN 666-320-018
NORTHWEST CORNER INDIAN CANYON DR. & 19TH AVE.
DESERT HOT SPRINGS, CA 92240

TARGET PROPERTY COORDINATES

Latitude (North):	33.912099 - 33ˆ 54’ 43.56’’
Longitude (West):	116.547581 - 116ˆ 32’ 51.29’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	541824.0
UTM Y (Meters):	3752307.8
Elevation:	783 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12002832 DESERT HOT SPRINGS, CA
Version Date:	2018

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

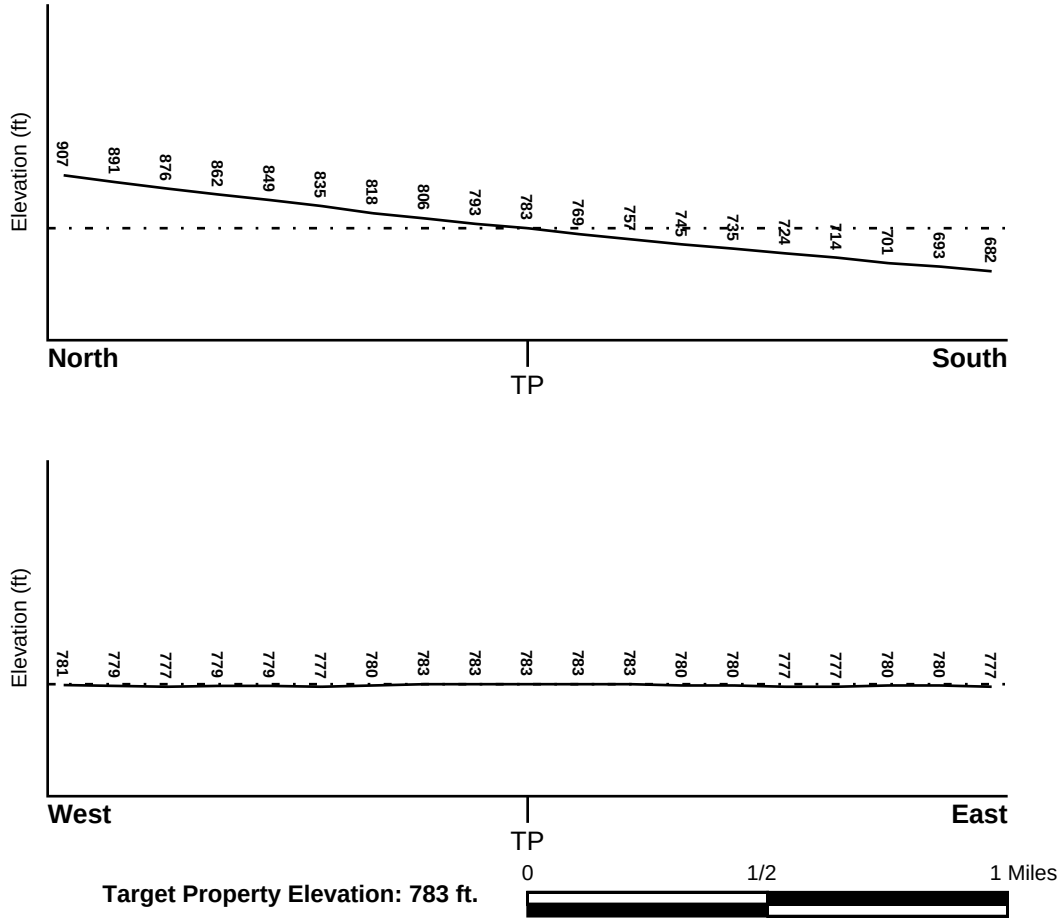
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06065C0895G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06065C0890G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
DESERT HOT SPRINGS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

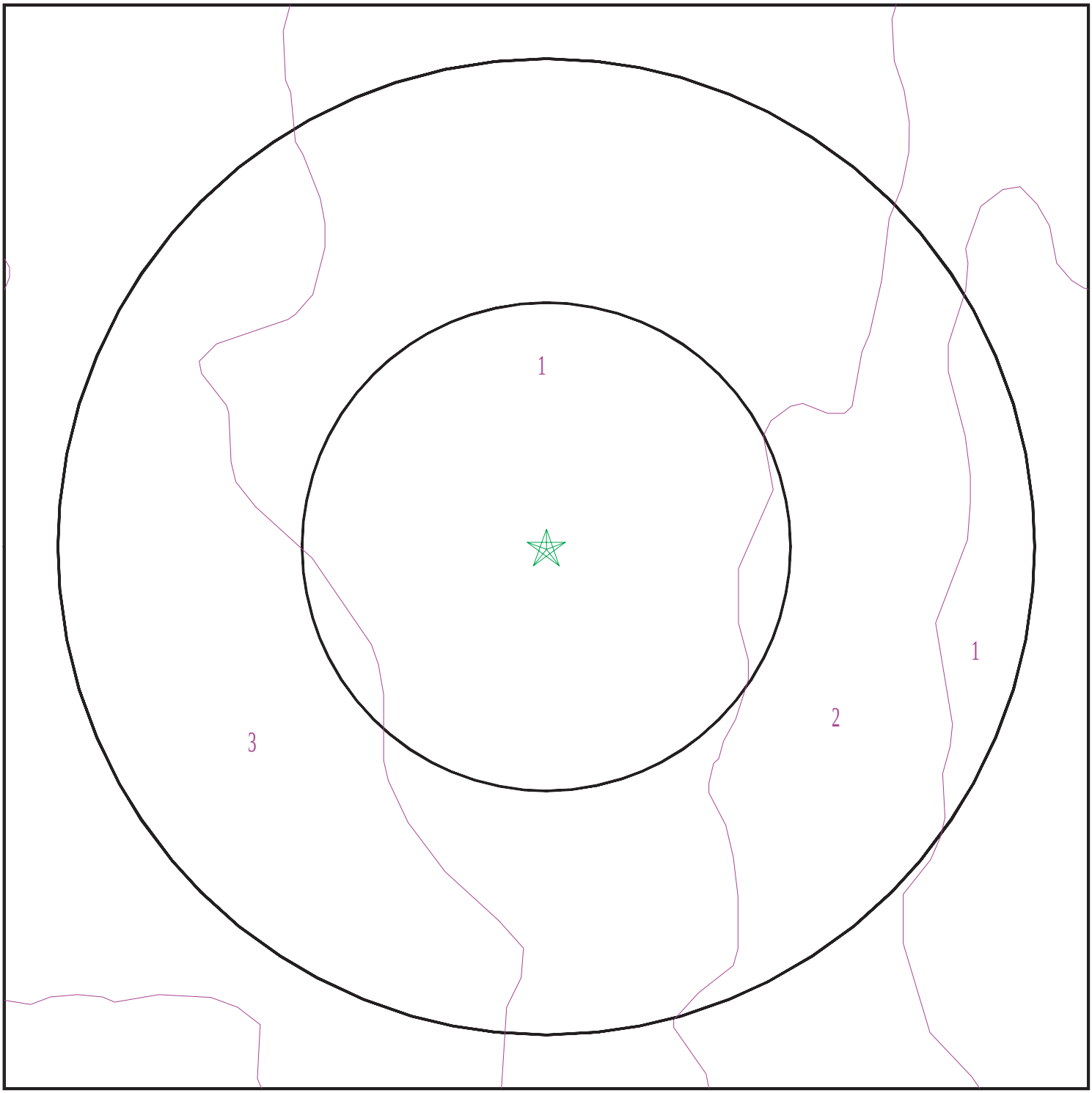
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6955913.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	38-Ac Site APN 666-320-018	CLIENT:	MSA Consulting, Inc.
ADDRESS:	Northwest Corner Indian Canyon Dr. & 19th Ave. Desert Hot Springs CA 92240	CONTACT:	Asia Lee
LAT/LONG:	33.912099 / 116.547581	INQUIRY #:	6955913.2s
		DATE:	April 26, 2022 3:18 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Carsitas

Soil Surface Texture: fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9
2	9 inches	59 inches	gravelly sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: Carsitas

Soil Surface Texture: gravelly sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9
2	9 inches	59 inches	gravelly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: Carsitas

Soil Surface Texture: cobbly sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	cobbly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9
2	9 inches	59 inches	gravelly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A4	USGS40000138985	1/2 - 1 Mile NE
B6	USGS40000138885	1/2 - 1 Mile South
B7	USGS40000138886	1/2 - 1 Mile South
C12	USGS40000139035	1/2 - 1 Mile NNE
D17	USGS40000139054	1/2 - 1 Mile North
D18	USGS40000139055	1/2 - 1 Mile North
F22	USGS40000139060	1/2 - 1 Mile NNE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

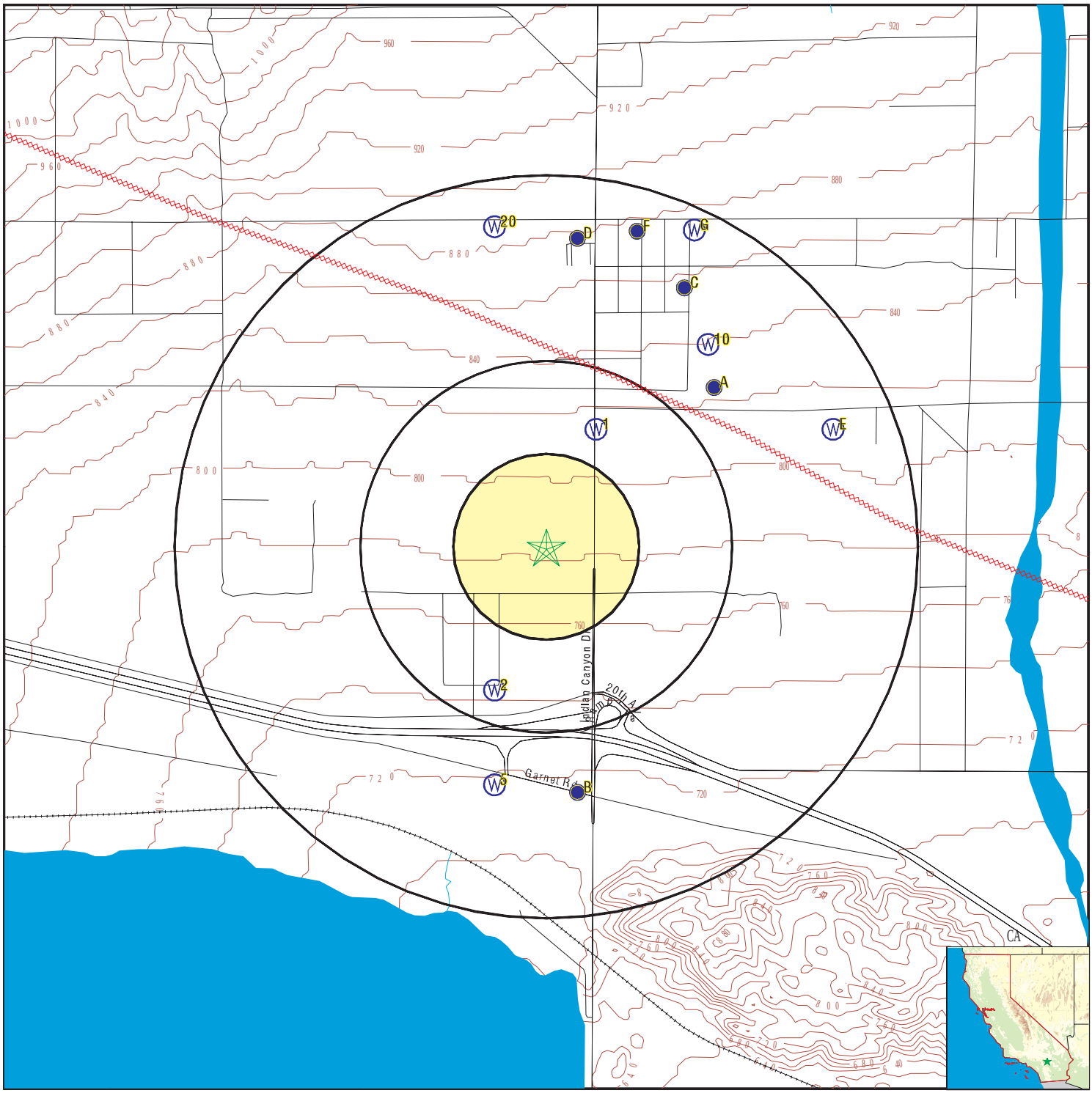
No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	2445	1/4 - 1/2 Mile NNE
2	CADWR0000032347	1/4 - 1/2 Mile SSW
A3	CAUSGSN00004361	1/2 - 1 Mile NE
5	CADWR0000033516	1/2 - 1 Mile SSW
B8	CAUSGSN00006167	1/2 - 1 Mile South
B9	CAUSGSN00013465	1/2 - 1 Mile South
10	CADDW0000005544	1/2 - 1 Mile NE
C11	CAUSGSN00008550	1/2 - 1 Mile NNE
D13	CAUSGSN00013419	1/2 - 1 Mile North
D14	CAUSGSN00010349	1/2 - 1 Mile North
E15	3501	1/2 - 1 Mile ENE
E16	3504	1/2 - 1 Mile ENE
D19	3499	1/2 - 1 Mile North
20	CADWR0000035918	1/2 - 1 Mile North
F21	CAUSGSN00011635	1/2 - 1 Mile NNE
G23	CADDW0000002154	1/2 - 1 Mile NNE
G24	3503	1/2 - 1 Mile NNE
G25	CADWR0000022609	1/2 - 1 Mile NNE
G26	CADDW0000019570	1/2 - 1 Mile NNE
G27	CAUSGSN00016512	1/2 - 1 Mile NNE
G28	CAUSGS000002839	1/2 - 1 Mile NNE
G29	3502	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 6955913.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	38-Ac Site APN 666-320-018	CLIENT:	MSA Consulting, Inc.
ADDRESS:	Northwest Corner Indian Canyon Dr. & 19th Ave. Desert Hot Springs CA 92240	CONTACT:	Asia Lee
LAT/LONG:	33.912099 / 116.547581	INQUIRY #:	6955913.2s
		DATE:	April 26, 2022 3:18 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNE
1/4 - 1/2 Mile
Higher | **CA WELLS** | **2445**

Seq:	2445	Prim sta c:	02S/04E-26D01 S
Frds no:	3310008014	County:	33
District:	14	User id:	WAT
System no:	3310008	Water type:	G
Source nam:	WELL 28	Station ty:	WEL/AMBNT/MUN/INTAKE
Latitude:	335500.0	Longitude:	1163240.0
Precision:	2	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310008	System nam:	Mission Springs Wd
Hqname:	Not Reported	Address:	66-575 Second Street
City:	Desert Hot Springs	State:	CA
Zip:	92240	Zip ext:	Not Reported
Pop serv:	24195	Connection:	7332
Area serve:	MISSION CREEK/DESERT HOT SPGS		

Sample date:	05-MAR-18	Finding:	0.89
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		

Sample date:	05-MAR-18	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	2.1
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	3.7e-002
Chemical:	RADIUM 226	Report units:	PCI/L
Dlr:	1.		

Sample date:	05-MAR-18	Finding:	7.3e-002
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	0.572
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	0.304
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-18	Finding:	0.4
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-18	Finding:	9.1
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-MAR-18	Finding:	1.5
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-18	Finding:	5.3
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-DEC-17	Finding:	5.3
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-DEC-17	Finding:	2.5
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-DEC-17	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	04-DEC-17	Finding:	0.495
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-DEC-17	Finding:	0.342
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-DEC-17	Finding:	0.4
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-DEC-17	Finding:	6.1e-002
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	3.5
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	11-SEP-17	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	2.3
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L

Dlr:	0.		
Sample date:	11-SEP-17	Finding:	8.9e-002
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	0.65
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	11-SEP-17	Finding:	0.384
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	2.3
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.63
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	05-JUN-17	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	12.14
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.29
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.89
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	610.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	14.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-JUN-17	Finding:	3.1
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	6.9
Chemical:	VANADIUM	Report units:	UG/L
Dlr:	3.		
Sample date:	05-JUN-17	Finding:	3.5
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-JUN-17	Finding:	15.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-JUN-17	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	2.7
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.89
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	7.9e-002
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	5.9e-002
Chemical:	RADIUM 228	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-JUN-17	Finding:	0.303
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	940.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	7.6
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	140.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	170.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	0.63
Chemical:	NITRATE (AS N)	Report units:	MG/L

Dlr:	0.4		
Sample date:	05-JUN-17	Finding:	350.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	96.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	28.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	57.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	9.9
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	80.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	05-JUN-17	Finding:	220.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	05-JUN-17	Finding:	0.65
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	05-JUN-17	Finding:	2.3
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	06-MAR-17	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-MAR-17	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-MAR-17	Finding:	0.385
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-MAR-17	Finding:	8.7e-002
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-MAR-17	Finding:	0.89
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-MAR-17	Finding:	2.8
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	06-MAR-17	Finding:	1.6
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-MAR-17	Finding:	15.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	06-MAR-17	Finding:	3.9
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	7.6
Chemical:	GROSS ALPHA	Report units:	PCI/L
Dlr:	3.		
Sample date:	05-DEC-16	Finding:	2.8
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-DEC-16	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	2.4
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	0.89
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	0.191
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	7.2e-002
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	0.48
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-DEC-16	Finding:	2.1e-002
Chemical:	RADIUM 226	Report units:	PCI/L
Dlr:	1.		
Sample date:	12-SEP-16	Finding:	0.68
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	07-SEP-16	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L

Dlr:	0.		
Sample date:	07-SEP-16	Finding:	4.5
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-SEP-16	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	07-SEP-16	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-SEP-16	Finding:	3.2
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-SEP-16	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-SEP-16	Finding:	0.192
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-SEP-16	Finding:	4.1e-002
Chemical:	RADIUM 228	Report units:	PCI/L
Dlr:	1.		
Sample date:	07-SEP-16	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-SEP-16	Finding:	0.471
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	0.47
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	0.559
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	0.272
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	2.8
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	01-JUN-16	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	01-JUN-16	Finding:	4.8
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-16	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	0.47
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	0.464
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	0.163
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	3.7e-002
Chemical:	RADIUM 226	Report units:	PCI/L
Dlr:	1.		
Sample date:	07-MAR-16	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	0.267
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	1.6
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	07-MAR-16	Finding:	4.4
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-MAR-16	Finding:	3.2
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	24-FEB-16	Finding:	0.86
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	02-DEC-15	Finding:	0.47
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-15	Finding:	0.567
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L

Dlr:	0.		
Sample date:	02-DEC-15	Finding:	3.5e-002
Chemical:	RADIUM 228	Report units:	PCI/L
Dlr:	1.		
Sample date:	02-DEC-15	Finding:	0.202
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-15	Finding:	7.3e-002
Chemical:	RADIUM 226	Report units:	PCI/L
Dlr:	1.		
Sample date:	02-DEC-15	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-15	Finding:	2.8
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-15	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-15	Finding:	17.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	02-DEC-15	Finding:	4.1
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-15	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	0.47
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	0.462
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	0.255
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	7.5e-002
Chemical:	RADIUM 226	Report units:	PCI/L
Dlr:	1.		
Sample date:	09-SEP-15	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	09-SEP-15	Finding:	1.8
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-SEP-15	Finding:	18.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	09-SEP-15	Finding:	4.
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-15	Finding:	17.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	01-JUN-15	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-15	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-15	Finding:	0.597
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-15	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-15	Finding:	3.3e-002
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	01-JUN-15	Finding:	0.172
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-15	Finding:	0.418
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	02-MAR-15	Finding:	3.8
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-MAR-15	Finding:	19.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	02-MAR-15	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-MAR-15	Finding:	0.47
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		

Report units:	PCI/L	Dlr:	0.
Sample date:	02-MAR-15	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-MAR-15	Finding:	0.524
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-MAR-15	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-MAR-15	Finding:	0.108
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-MAR-15	Finding:	2.3
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	4.2
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	14.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	01-DEC-14	Finding:	1.6
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	1.8
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	0.55
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	0.174
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-DEC-14	Finding:	0.418
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	03-SEP-14	Finding:	5.7e-002
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-SEP-14	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-SEP-14	Finding:	0.504
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-SEP-14	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-SEP-14	Finding:	2.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-SEP-14	Finding:	0.322
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.

Sample date:	03-SEP-14	Finding:	18.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		

Sample date:	03-SEP-14	Finding:	3.9
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-SEP-14	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	09-JUL-14	Finding:	2.7
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		

Sample date:	07-JUL-14	Finding:	87.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	07-JUL-14	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	07-JUL-14	Finding:	1.9
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	07-JUL-14	Finding:	830.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		

Sample date:	07-JUL-14	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	07-JUL-14	Finding:	12.28
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		

Sample date:	07-JUL-14	Finding:	0.3
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU

Dlr:	0.1		
Sample date:	07-JUL-14	Finding:	3.7
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	07-JUL-14	Finding:	0.43
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	1.04
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	590.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	18.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	07-JUL-14	Finding:	3.7
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	7.1
Chemical:	VANADIUM	Report units:	UG/L
Dlr:	3.		
Sample date:	07-JUL-14	Finding:	0.69
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	07-JUL-14	Finding:	200.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	07-JUL-14	Finding:	64.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	9.6
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	49.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	26.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	320.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	190.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		

Sample date:	07-JUL-14	Finding:	160.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	880.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	07-JUL-14	Finding:	7.7
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	3.
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	17.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	02-JUN-14	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	1.9
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	0.481
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	0.126
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-JUN-14	Finding:	0.418
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	13-MAR-14	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAR-14	Finding:	2.1
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAR-14	Finding:	1.6
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L

Dlr:	0.		
Sample date:	13-MAR-14	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	13-MAR-14	Finding:	3.6
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAR-14	Finding:	3.6e-002
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	13-MAR-14	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAR-14	Finding:	0.16
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAR-14	Finding:	0.637
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAR-14	Finding:	0.47
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	13-JAN-14	Finding:	3.8
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	02-DEC-13	Finding:	0.14
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-13	Finding:	5.e-002
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	02-DEC-13	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-13	Finding:	0.596
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-13	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-13	Finding:	0.322
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	02-DEC-13	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	02-DEC-13	Finding:	20.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	02-DEC-13	Finding:	3.3
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	02-DEC-13	Finding:	1.6
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	4.4
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	0.36
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	09-OCT-13	Finding:	0.299
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	0.354
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	09-OCT-13	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	0.626
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	4.8e-002
Chemical:	RADIUM 228	Report units:	PCI/L
Dlr:	1.		
Sample date:	09-OCT-13	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	2.4
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-OCT-13	Finding:	18.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	03-JUN-13	Finding:	18.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	03-JUN-13	Finding:	2.3
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L

Dlr:	0.		
Sample date:	03-JUN-13	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-JUN-13	Finding:	0.672
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-JUN-13	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-JUN-13	Finding:	0.104
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	03-JUN-13	Finding:	0.409
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-JUN-13	Finding:	0.405
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	03-JUN-13	Finding:	3.7
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-JUN-13	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-MAR-13	Finding:	3.5
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-MAR-13	Finding:	16.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	04-MAR-13	Finding:	1.6
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-MAR-13	Finding:	1.7
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-MAR-13	Finding:	0.87
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-MAR-13	Finding:	0.421
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-MAR-13	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	03-DEC-12	Finding:	3.4
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-DEC-12	Finding:	17.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	03-DEC-12	Finding:	1.7
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-DEC-12	Finding:	1.6
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-DEC-12	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-DEC-12	Finding:	0.492
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	03-DEC-12	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-SEP-12	Finding:	3.
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-SEP-12	Finding:	19.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-SEP-12	Finding:	1.8
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-SEP-12	Finding:	1.9
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-SEP-12	Finding:	0.87
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-SEP-12	Finding:	0.629
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-SEP-12	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	170.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	12.38
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported

Dlr:	0.		
Sample date:	09-JUL-12	Finding:	5.2
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-JUL-12	Finding:	0.55
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	1.15
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	70.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	7.9
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	710.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	04-JUN-12	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-JUN-12	Finding:	3.
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-JUN-12	Finding:	20.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	04-JUN-12	Finding:	0.493
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-JUN-12	Finding:	2.
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-JUN-12	Finding:	1.8
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-JUN-12	Finding:	0.87
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-12	Finding:	0.467
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

Sample date:	05-MAR-12	Finding:	3.1e-002
Chemical:	RADIUM 228	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-MAR-12	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-12	Finding:	1.6
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-12	Finding:	1.9
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-12	Finding:	19.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	05-MAR-12	Finding:	0.261
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	05-MAR-12	Finding:	2.9
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

2
SSW
1/4 - 1/2 Mile
Lower

CA WELLS **CADWR0000032347**

Well ID:	03S04E15R001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	03S04E15R001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=03S04E15R001S&store_num=		
GeoTracker Data:	Not Reported		

A3
NE
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00004361**

Well ID:	USGS-335506116322001	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335506116322001	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335506116322001&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A4
NE **FED USGS** **USGS40000138985**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E11P001S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

5
SSW **CA WELLS** **CADWR0000033516**
1/2 - 1 Mile
Lower

Well ID:	03S04E22A002S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	03S04E22A002S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=03S04E22A002S&store_num=		
GeoTracker Data:	Not Reported		

B6
South **FED USGS** **USGS40000138885**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E22A001S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

B7
South **FED USGS** **USGS40000138886**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E22A002S	Type:	Well

Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

B8
South
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00006167**

Well ID:	USGS-335409116324302	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335409116324302	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335409116324302&store_num=		
GeoTracker Data:	Not Reported		

B9
South
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00013465**

Well ID:	USGS-335409116324301	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335409116324301	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335409116324301&store_num=		
GeoTracker Data:	Not Reported		

10
NE
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000005544**

Well ID:	3301103-001	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 01 - INACTIVE	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3301103-001&store_num=		
GeoTracker Data:	Not Reported		

C11
NNE
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00008550**

Well ID:	USGS-335520116322501	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335520116322501	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335520116322501&store_num=		

GeoTracker Data: Not Reported

C12
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000139035**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E11M001S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	290
Well Depth Units:	ft	Well Hole Depth:	296
Well Hole Depth Units:	ft		

D13
North
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00013419**

Well ID:	USGS-335527116324302	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335527116324302	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335527116324302&store_num=		
GeoTracker Data:	Not Reported		

D14
North
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00010349**

Well ID:	USGS-335527116324301	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335527116324301	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335527116324301&store_num=		
GeoTracker Data:	Not Reported		

E15
ENE
1/2 - 1 Mile
Higher

CA WELLS **3501**

Seq:	3501	Prim sta c:	03S/04E-11K02 S
Frds no:	3310008005	County:	33
District:	14	User id:	WAT
System no:	3310008	Water type:	G
Source nam:	WELL 16 - DESTROYED	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	335500.0	Longitude:	1163200.0

Precision:	8	Status:	DS
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3310008	System nam:	Mission Springs Wd
Hqname:	Not Reported	Address:	66-575 Second Street
City:	Desert Hot Springs	State:	CA
Zip:	92240	Zip ext:	Not Reported
Pop serv:	24195	Connection:	7332
Area serve:	MISSION CREEK/DESERT HOT SPGS		

E16
ENE
1/2 - 1 Mile
Higher

CA WELLS 3504

Seq:	3504	Prim sta c:	03S/04E-11M01 S
Frds no:	3310008007	County:	33
District:	14	User id:	WAT
System no:	3310008	Water type:	G
Source nam:	WELL 21 - DESTROYED	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	335500.0	Longitude:	1163200.0
Precision:	8	Status:	DS
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3310008	System nam:	Mission Springs Wd
Hqname:	Not Reported	Address:	66-575 Second Street
City:	Desert Hot Springs	State:	CA
Zip:	92240	Zip ext:	Not Reported
Pop serv:	24195	Connection:	7332
Area serve:	MISSION CREEK/DESERT HOT SPGS		

D17
North
1/2 - 1 Mile
Higher

FED USGS USGS40000139054

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E10J001S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	300
Well Depth Units:	ft	Well Hole Depth:	300
Well Hole Depth Units:	ft		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D18
North
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40000139055**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E10J002S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

D19
North
1/2 - 1 Mile
Higher | **CA WELLS** | **3499**

Seq:	3499	Prim sta c:	03S/04E-10J01 S
Frds no:	3301103001	County:	33
District:	63	User id:	33C
System no:	3301103	Water type:	G
Source nam:	WELL 01	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	335527.0	Longitude:	1163243.0
Precision:	3	Status:	AR
Comment 1:	17-069 INDIAN AVE. N.PALM SPRINGS CA 92262		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported
System no:	3301103	System nam:	Carefree Mobile Village
Hqname:	Not Reported	Address:	Not Reported
City:	Not Reported	State:	Not Reported
Zip:	Not Reported	Zip ext:	Not Reported
Pop serv:	0	Connection:	0
Area serve:	Not Reported		

20
North
1/2 - 1 Mile
Higher | **CA WELLS** | **CADWR0000035918**

Well ID:	03S04E10J001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	03S04E10J001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=03S04E10J001S&store_num=		
GeoTracker Data:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F21
NNE
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00011635**

Well ID:	USGS-335528116323301	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335528116323301	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335528116323301&store_num=		
GeoTracker Data:	Not Reported		

F22
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000139060**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	003S004E11L001S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

G23
NNE
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000002154**

Well ID:	3310008-017	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 31	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3310008-017&store_num=		
GeoTracker Data:	Not Reported		

G24
NNE
1/2 - 1 Mile
Higher

CA WELLS **3503**

Seq:	3503	Prim sta c:	03S/04E-11L04 S
Frds no:	3310008017	County:	33
District:	14	User id:	WAT
System no:	3310008	Water type:	G
Source nam:	WELL 31	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	335527.0	Longitude:	1163223.0
Precision:	1	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported

Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3310008	System nam:	Mission Springs Wd
Hqname:	Not Reported	Address:	66-575 Second Street
City:	Desert Hot Springs	State:	CA
Zip:	92240	Zip ext:	Not Reported
Pop serv:	24195	Connection:	7332
Area serve:	MISSION CREEK/DESERT HOT SPGS		
Sample date:	06-JUN-17	Finding:	0.77
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	06-JUN-17	Finding:	0.77
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	06-JUN-17	Finding:	11.7
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	0.5
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	280.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	2.3
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	13.
Chemical:	CHROMIUM (TOTAL)	Report units:	UG/L
Dlr:	10.		
Sample date:	06-JUN-17	Finding:	11.
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	06-JUN-17	Finding:	0.62
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	06-JUN-17	Finding:	93.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	06-JUN-17	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	460.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	7.8
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		

Sample date:	06-JUN-17	Finding:	100.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	120.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	2.4
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	97.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	31.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	5.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	62.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	6.8
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	06-JUN-17	Finding:	16.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	0.236
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	0.144
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	1.7
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	17-APR-17	Finding:	0.82
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L

Dlr:	0.		
Sample date:	17-APR-17	Finding:	2.2
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	17-APR-17	Finding:	1.7
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	12-SEP-16	Finding:	0.73
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	24-FEB-16	Finding:	0.72
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-JUL-14	Finding:	77.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	1.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	570.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-JUL-14	Finding:	11.81
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	2.5
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-JUL-14	Finding:	0.6
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	290.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	1.2
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	0.68
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	09-JUL-14	Finding:	4.9
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	09-JUL-14	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		

Sample date:	09-JUL-14	Finding:	470.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	8.1
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	84.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	100.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	24.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	3.9
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	68.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	6.8
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	14.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	120.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	13-JAN-14	Finding:	2.6
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-JUL-12	Finding:	11.83
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	8.3
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	2.e-002
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	0.62
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	18.
Chemical:	CALCIUM	Report units:	MG/L

Dlr:	0.		
Sample date:	09-JUL-12	Finding:	74.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	480.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	2.3
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		

G25
NNE
1/2 - 1 Mile
Higher

CA WELLS **CADWR0000022609**

Well ID:	03S04E11L001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	03S04E11L001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=03S04E11L001S&store_num=		
GeoTracker Data:	Not Reported		

G26
NNE
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000019570**

Well ID:	3310008-013	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 27	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3310008-013&store_num=		
GeoTracker Data:	Not Reported		

G27
NNE
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00016512**

Well ID:	USGS-335500116320001	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-335500116320001	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-335500116320001&store_num=		
GeoTracker Data:	Not Reported		

Map ID Direction Distance Elevation	Database	EDR ID Number
G28 **NNE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**CAUSGS000002839**

G29
NNE
1/2 - 1 Mile
Higher

CA WELLS **3502**

Seq:	3502	Prim sta c:	03S/04E-11L02 S
Frds no:	3310008013	County:	33
District:	14	User id:	WAT
System no:	3310008	Water type:	G
Source nam:	WELL 27	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	335530.0	Longitude:	1163224.0
Precision:	2	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310008	System nam:	Mission Springs Wd
Hqname:	Not Reported	Address:	66-575 Second Street
City:	Desert Hot Springs	State:	CA
Zip:	92240	Zip ext:	Not Reported
Pop serv:	24195	Connection:	7332
Area serve:	MISSION CREEK/DESERT HOT SPGS		

Sample date:	01-JUN-17	Finding:	7.4
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	01-JUN-17	Finding:	1.7
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		

Sample date:	01-JUN-17	Finding:	11.76
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		

Sample date:	01-JUN-17	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		

Sample date:	01-JUN-17	Finding:	490.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		

Sample date:	01-JUN-17	Finding:	7.7
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		

Sample date:	01-JUN-17	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		

Sample date:	01-JUN-17	Finding:	160.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L

Dlr:	0.		
Sample date:	01-JUN-17	Finding:	1.7
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	01-JUN-17	Finding:	120.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	38.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	5.7
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	55.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	2.2
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	37.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	46.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	01-JUN-17	Finding:	0.53
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	01-JUN-17	Finding:	12.
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	01-JUN-17	Finding:	17.
Chemical:	CHROMIUM (TOTAL)	Report units:	UG/L
Dlr:	10.		
Sample date:	01-JUN-17	Finding:	2.2
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	280.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	0.55
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	01-JUN-17	Finding:	0.2
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		

Sample date:	13-APR-15	Finding:	0.3
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	29-DEC-14	Finding:	14.
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	09-JUL-14	Finding:	12.
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	09-JUL-14	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	490.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	8.
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	160.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	130.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	43.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	6.1
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	52.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	7.9
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	27.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	70.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	09-JUL-14	Finding:	0.62
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L

Dlr:	0.1		
Sample date:	09-JUL-14	Finding:	12.
Chemical:	CHROMIUM (TOTAL)	Report units:	UG/L
Dlr:	10.		
Sample date:	09-JUL-14	Finding:	6.2
Chemical:	GROSS ALPHA	Report units:	PCI/L
Dlr:	3.		
Sample date:	09-JUL-14	Finding:	1.6
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	4.
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	09-JUL-14	Finding:	280.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	0.96
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	0.36
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	5.5
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-JUL-14	Finding:	0.2
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	09-JUL-14	Finding:	12.17
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	0.89
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	1300.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-JUL-14	Finding:	1.1
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	09-JUL-14	Finding:	0.88
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-JAN-14	Finding:	5.1
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample date:	09-JUL-12	Finding:	8.1
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	120.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	41.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	0.37
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	4.3
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-JUL-12	Finding:	12.19
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	480.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	20.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	09-JUL-12	Finding:	0.98
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92240	6	0

Federal EPA Radon Zone for RIVERSIDE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.117 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.450 pCi/L	100%	0%	0%
Basement	1.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Appendix H

EDR Sanborn Map Report

38-Ac Site APN 666-320-018

Northwest Corner Indian Canyon Dr. & 19th Ave.

Desert Hot Springs, CA 92240

Inquiry Number: 6955913.3

April 26, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/26/22

Site Name:

38-Ac Site APN 666-320-018
Northwest Corner Indian Canyo
Desert Hot Springs, CA 92240
EDR Inquiry # 6955913.3

Client Name:

MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270
Contact: Asia Lee

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by MSA Consulting, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 9DDB-45A2-B484

PO # NA

Project 2771.001

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 9DDB-45A2-B484

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Appendix I

Owner's Statement and
User Questionnaire

MSA CONSULTING, INC. > PLANNING > CIVIL ENGINEERING > LAND SURVEYING	Phase I Environmental Site Assessment User Questionnaire

Subject Property Information	
Subject Property Identifier	Assessor's Parcel Number (APN) 666-320-018
Subject Property Location	N.W.C. of Avenue 19 and Indian Canyon Dr (Refer to attached map)

The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

	Question/Inquiry	Response	Explanation for Yes Responses (As Applicable)
1	Environmental cleanup liens: Are you aware of any environmental liens filed or recorded against the subject property under federal, tribal, state, or local law?	☐ Yes ■ No	
2	Activity and land use limitations (AULs). Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded against the subject property under federal, tribal, state or local law?	☐ Yes ■ No	
3	Specialized knowledge or experience. Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	☐ Yes ■ No	
4	Relationship of the purchase price to fair market value. Does the purchase price being paid for this subject property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the subject property?	☐ Yes ■ No ☐ N/A	
5	Commonly known or reasonably ascertainable information. Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? Examples: (a.) Past uses of the subject property. (b.) Specific chemicals that are present or once were present at the subject property. (c.) Spills or other chemical releases that have taken place at the subject property. (d.) Environmental cleanups that have taken place at the subject property.	☐ Yes ■ No	
6	Based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of releases at the subject property?	☐ Yes ■ No	

Completed by	
Name:	David Snider
Signature:	David Snider
Title/Role:	Manager
Organization:	Snider Interests LLC
Date:	5/5/22

MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 300 FT

SUBJECT PROPERTY
AERIAL PHOTOGRAPH
(APN: 666-320-018)

MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

Phase I Environmental Site Assessment
Owner's Statement

Subject Property Information	
Subject Property Identifier	Assessor's Parcel Number (APN) 666-320-018
Subject Property Location	N.W.C. of Avenue 19 and Indian Canyon Dr (Refer to attached map)

	Question/Inquiry	Response
1	Ownership Role	☐ Present Owner/Occupant ☐ Past Owner/Occupant Future owner
2	Number of Years Property Owned (If Applicable)	_____ Years
3	Are you aware of any past uses or conditions on the property that differ from the present uses or conditions?	☐ Yes ☐ No
4	Are you aware of any uses or conditions, past or present, within or adjacent to the property that pertain to hazardous materials? This includes knowledge of past release, existing release or material threat of release of hazardous substances or petroleum products.	☐ Yes ☐ No

Explanation for Yes Responses (As Applicable)
To our knowledge this land has never been used for anything in the past.

Completed by	
Name:	David Snider
Signature:	David Snider
Title/Role:	Manager
Organization:	Snider Interests LLC
Date:	5/5/22

MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

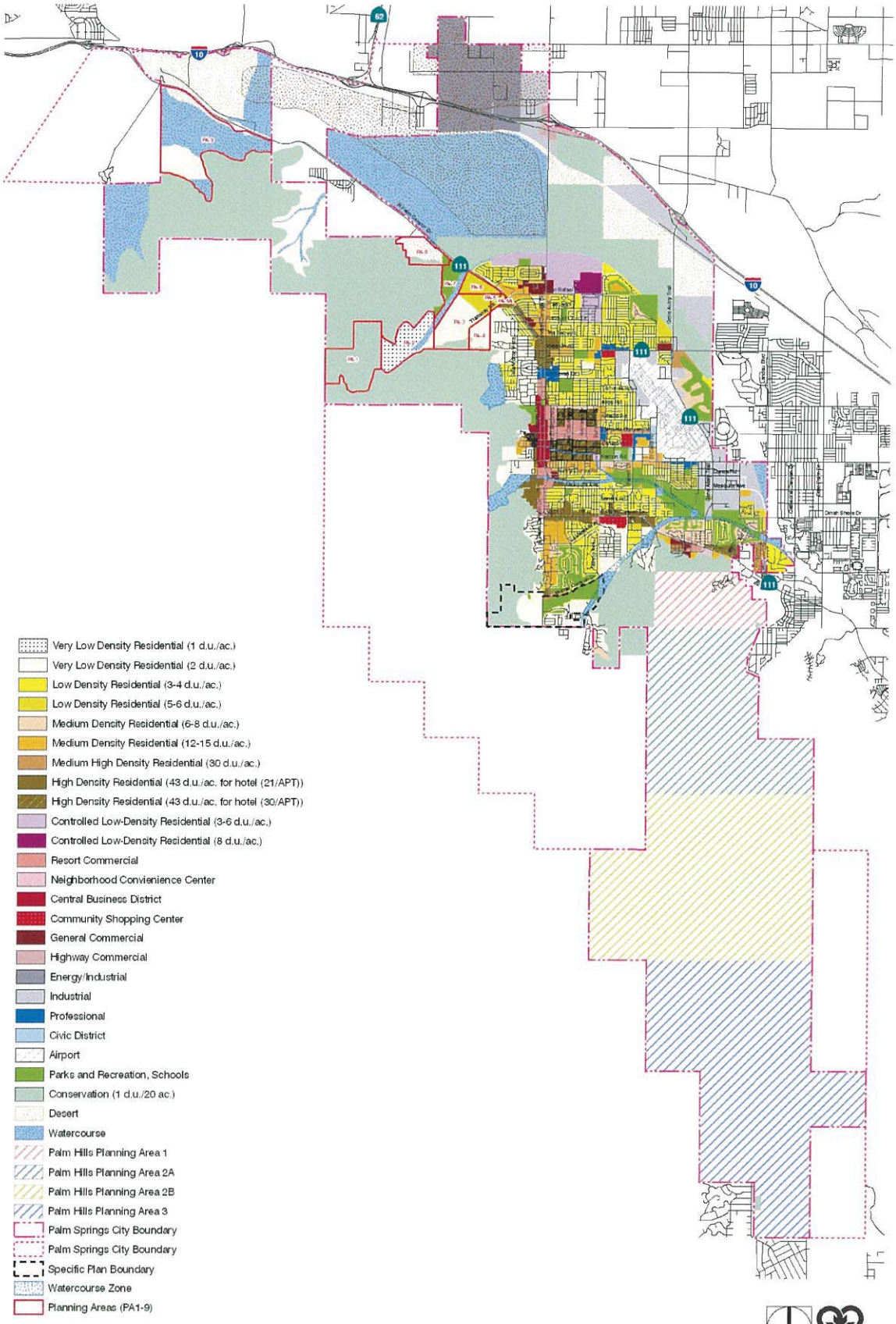
0 NORTH 300 FT

SUBJECT PROPERTY
AERIAL PHOTOGRAPH
(APN: 666-320-018)

Appendix J

Additional Records

Existing General Plan Land Use



Appendix J.1

Preliminary Hydrology Report

PRELIMINARY HYDROLOGY REPORT

Located in a portion of the Southeast ¼ of the Northeast ¼ of Section 15, Township 3 South, Range 4 East, S.B.M. City of Palm Springs, County of Riverside, California

PALM SPRINGS FULFILLMENT CENTER

January 4, 2023

Prepared for:

Snider Interests, LLC

730 Arcady Road
Montecito, CA 93108

MSA Job Number: 2771

MSA CONSULTING, INC.
PLANNING ■ CIVIL ENGINEERING ■ LAND SURVEYING

34200 BOB HOPE DRIVE ■ RANCHO MIRAGE ■ CA 92270
TELEPHONE (760) 320-9811 ■ FAX (760) 323-7893

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A. RIVERSIDE COUNTY TLMA VICINITY MAP
B. NFIP FLOOD INSURANCE RATE MAP
C. USDA NCSS HYDROLOGIC SOILS MAP
D. NOAA ATLAS 14 & RCFCD REFERENCE PLATES
E. RCFCD SYNTHETIC UNIT HYDROGRAPH WORKSHEETS
F. RIVERSIDE COUNTY WHITEWATER RIVER REGION WQMP WORKSHEETS
G. PRELIMINARY HYDROLOGY EXHIBIT AND PRELIMINARY GRADING & DRAINAGE PLAN

PROJECT LOCATION

The proposed project site comprises approximately 39.5 acres located at the intersection of Indian Canyon Road and 19th Avenue, in the City of Palm Springs, Riverside County. Where 3.3 acres of the project is designated as offsite street dedication, which allows 36.2 acres as the remaining design area. The site is described as a portion of the Southeast ¼ of the Northeast ¼ of Section 15, Records of Riverside County California and is assigned Assessor's Parcel Numbers 666-320-018. A vicinity map obtained from the Riverside TLMA website is included as Appendix A.

EXISTING CONDITIONS

Flood Rate Map

The proposed (to be developed) area is covered by FIRM Panel Number 06065C0895G, effective August 28, 2008, which indicates the project area lies within Zone X which is defined as *"Areas determined to be outside the 0.2% annual chance floodplain."* (Refer to the attached NFIP Flood Insurance Rate Map – Appendix B).

National Cooperative Soil Survey

The existing soil is categorized as hydrologic soil group A as shown on the attached USDA NCSS Hydrologic Soils Map exhibits in Appendix C.

Existing Topography

The entire subject area is native vegetation, including brush and rocks. Topographically, the site generally slopes from north to south. A Phase I Study has been completed for this property.

PROPOSED FLOOD CONTROL REQUIREMENTS

Currently drainage requirements for this project fall under the jurisdiction of the City of Palm Springs. For the purposes of this report, the project tributary area is based on the project boundary, street frontage, and the preliminary grading (Refer to the Preliminary Grading and Drainage Plan included in Appendix G.) The underground stormwater detention and retention basin was sized to provide storage of the 100-year controlling storm event (Refer to the Proposed Underground Storage Volumes included in Appendix E.)

Offsite tributary flood flows will be conveyed along the street frontage of the site following the historical flow path. As the final design documents are generated, a more detailed hydrology report will be prepared for the City to review; that report will include hydraulic calculations for the associated catch basins, storm drain conveyance system, and underground retention facility storage capacities.

The project area has been evaluated as two tributary areas DA-A and DA-B, with each areas storm flows draining to separate underground stormwater CMP retention facilities, while area DA-B will have both underground retention and a retention basin (refer to the Preliminary Hydrology Exhibit included in Appendix G.)

HYDROLOGY ANALYSIS DESIGN CRITERIA

Storm run-off volumes for the 100-year event were obtained utilizing the Synthetic Unit (Shortcut Method) Hydrograph, as described in the *RCFC&WCD Hydrology Manual*. The shortcut method is useful for evaluating those areas less than 200 acres in size. The hydrologic data used for the calculations are as follows:

Hydrologic Soil Group

Soil Group A is defined by RCFCD as – "those soils having high infiltration rates (low infiltration rate). These soils consist of mainly deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission."

Antecedent Moisture Condition

AMC II – Moderate runoff potential, an intermediate condition. Per RCFC & WCD Hydrology Manual (Dated: April, 1978): "For the purposes of design hydrology using District methods, AMC II should normally be assumed for both the 10 year and 100 year frequency storm".

Land Use Classifications and Runoff Index Numbers

Runoff Index Numbers were obtained from RCFCD Plate E-6.1 and are summarized below:

Proposed Conditions - Commercial Landscaping	32

Percent of Impervious Cover (RCFCD Plate E-6.3):

Proposed Conditions	
Building	46%
Paving/Hardscape	43%
Landscaping areas	11%
Low Loss Rates:	85%

Precipitation Frequency Estimates

Precipitation depths were obtained from NOAA Atlas 14:

2 Year - 1 Hour Precipitation:	0.351	inches
100 Year – 1 Hour Precipitation:	1.69	inches
100 Year – 3 Hour Precipitation:	2.45	inches
100 Year - 6 Hour Precipitation	3.16	inches
100 Year – 24 Hour Precipitation	5.11	inches
Slope of Intensity Duration Curve:	0.49	

See Appendix D for the NOAA Atlas 14 Point Precipitation Frequency Estimates and respective RCFCD Plates.

Site Infiltration

For the purposes of this report the City of Palm Springs maximum design percolation rate of 1 inch per hour was used in the calculations.

SUMMARY of SYNTHETIC UNIT (SHORTCUT METHOD) ANALYSES

The subject project area of 36.2 acres is less than the 200-acre limit guideline for utilization of the shortcut method.

It should be noted that the peak flow for the 1-hour storm is not necessarily representative for peak flow. Per RCFCD, peak discharges from the 3-hour storm should normally compare well with rational peaks.

Analyses performed include: flood volume calculations based on RCFCD Synthetic Unit (Shortcut Method) and Underground retention Storage calculations. For the purposes of this report, all hydrologic land use areas were derived from the Proposed Technical Site Plan. The Synthetic Unit Hydrograph Worksheets are included in Appendix E with the Proposed Land Use Summary included in Preliminary Hydrology Exhibit Appendix G.

For drainage area DA-B we assumed no percolation for this drainage area, this is therefore the most conservative drainage volume required for the retention basin and the underground storage. This calculates the total volume required to retain 100% for the storm flow volumes, we were able to calculate the retention basin and underground storage volume. This assumes the worst-case scenario and will be studied in greater detail during final design.

PRELIMINARY WQMP ANALYSIS

Preliminary design volume and flow for BMP measures were based on Worksheets 1 and 2 from the Riverside County - Whitewater River Region Water Quality Management Plan (Appendix F). Impervious areas for the tributary drainage areas are derived from the Synthetic Unit Hydrograph Worksheets Appendix E. A summary of the design flow and volumes is presented in the Preliminary Hydrology Exhibit Appendix G.

RESULTS AND CONCLUSIONS

As the above narrative and summaries confirm, the preliminary underground retention and retention basin facility has sufficient storage to retain the flood volume from the 100 year storm event, and therefore meet the hydrologic requirements established by the City of Palm Springs.

Appendix A

Riverside County TLMA Vicinity Map

Map My County Map

Legend

World Street Map

Notes

IMPORTANT Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

0 752 1,505 Feet

REPORT PRINTED ON... 12/12/2022 1:14:13 PM

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Appendix B

NFIP Flood Insurance Rate Map

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represen an authoritative property location.

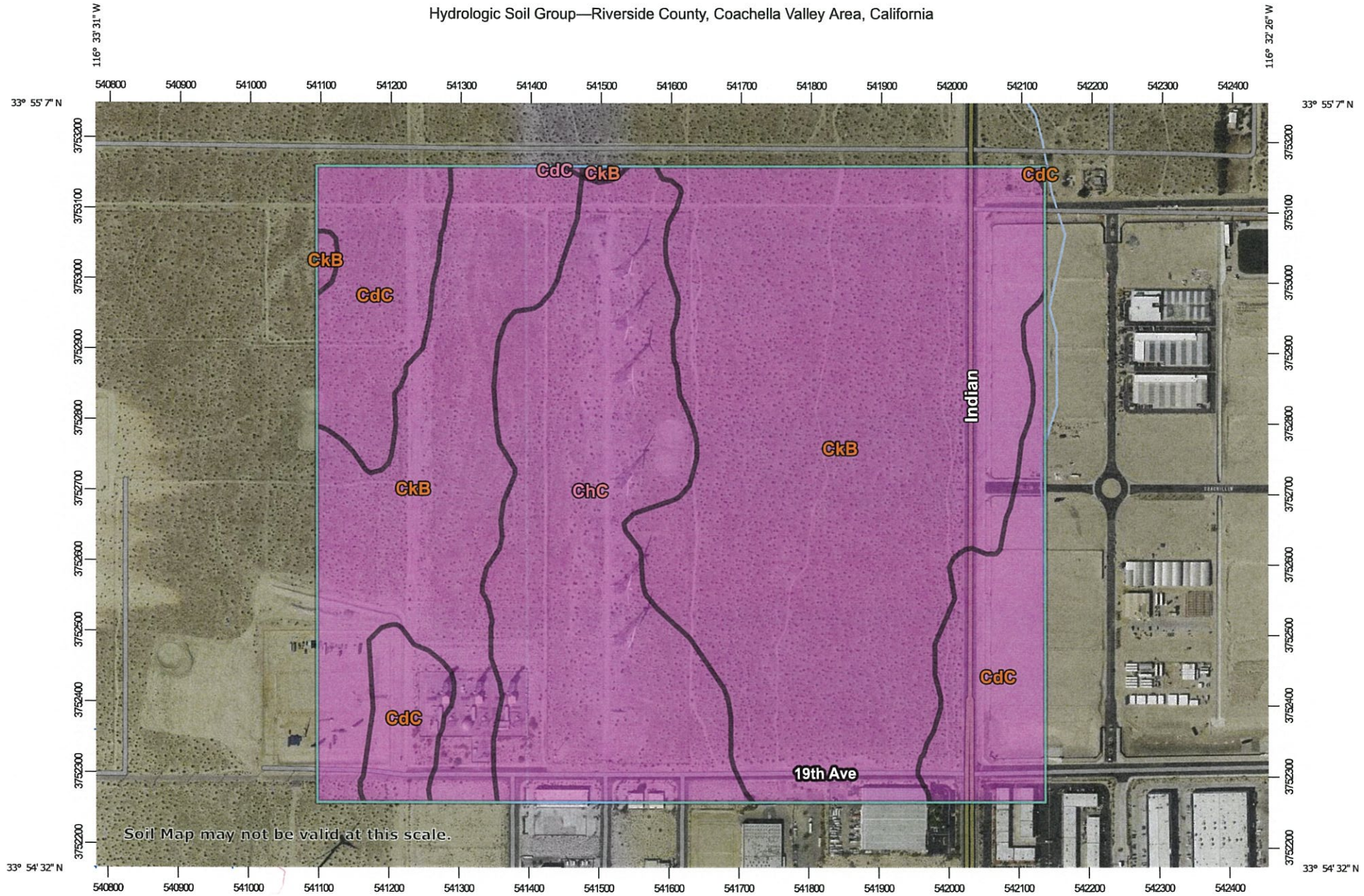
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/12/2022 at 2:27 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix C

USDA NCSS Hydrologic Soils Map



Map Scale: 1:7,650 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Riverside County, Coachella Valley Area, California
Survey Area Data: Version 14, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 15, 2022—May 28, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CdC	Carsitas gravelly sand, 0 to 9 percent slopes	A	37.6	16.2%
ChC	Carsitas cobbly sand, 2 to 9 percent slopes	A	54.2	23.3%
CkB	Carsitas fine sand, 0 to 5 percent slopes	A	140.7	60.5%
Totals for Area of Interest			**232.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Appendix D

NOAA Atlas 14

RCFCD Reference Plates

NOAA Atlas 14, Volume 6, Version 2
Location name: North Palm Springs, California, USA*
Latitude: 33.9109°, Longitude: -116.5465°
Elevation: 772.38 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.081 (0.067-0.098)	0.119 (0.099-0.145)	0.175 (0.145-0.214)	0.225 (0.185-0.277)	0.301 (0.240-0.383)	0.367 (0.285-0.476)	0.440 (0.334-0.585)	0.522 (0.385-0.715)	0.647 (0.458-0.925)	0.757 (0.517-1.12)
10-min	0.116 (0.097-0.141)	0.171 (0.142-0.208)	0.251 (0.208-0.306)	0.323 (0.265-0.397)	0.432 (0.343-0.549)	0.526 (0.409-0.683)	0.630 (0.478-0.839)	0.748 (0.552-1.02)	0.928 (0.656-1.33)	1.09 (0.741-1.61)
15-min	0.141 (0.117-0.171)	0.207 (0.172-0.251)	0.304 (0.252-0.370)	0.391 (0.321-0.480)	0.523 (0.415-0.664)	0.636 (0.494-0.826)	0.762 (0.578-1.01)	0.905 (0.667-1.24)	1.12 (0.793-1.60)	1.31 (0.896-1.94)
30-min	0.215 (0.179-0.261)	0.316 (0.262-0.384)	0.464 (0.384-0.565)	0.596 (0.490-0.733)	0.798 (0.634-1.01)	0.971 (0.755-1.26)	1.16 (0.883-1.55)	1.38 (1.02-1.89)	1.71 (1.21-2.45)	2.01 (1.37-2.97)
60-min	0.312 (0.260-0.379)	0.459 (0.381-0.558)	0.674 (0.559-0.821)	0.867 (0.712-1.07)	1.16 (0.921-1.47)	1.41 (1.10-1.83)	1.69 (1.28-2.25)	2.01 (1.48-2.75)	2.49 (1.76-3.56)	2.91 (1.99-4.31)
2-hr	0.435 (0.362-0.528)	0.616 (0.512-0.748)	0.879 (0.728-1.07)	1.11 (0.915-1.37)	1.47 (1.16-1.86)	1.77 (1.37-2.29)	2.10 (1.59-2.79)	2.47 (1.82-3.38)	3.02 (2.13-4.31)	3.49 (2.38-5.17)
3-hr	0.529 (0.440-0.642)	0.741 (0.616-0.900)	1.05 (0.867-1.28)	1.32 (1.08-1.62)	1.73 (1.37-2.19)	2.07 (1.61-2.69)	2.45 (1.86-3.26)	2.87 (2.12-3.93)	3.50 (2.47-5.00)	4.03 (2.75-5.97)
6-hr	0.703 (0.585-0.853)	0.980 (0.814-1.19)	1.38 (1.14-1.68)	1.73 (1.42-2.12)	2.25 (1.79-2.86)	2.68 (2.09-3.49)	3.16 (2.40-4.21)	3.69 (2.72-5.06)	4.48 (3.16-6.40)	5.14 (3.51-7.60)
12-hr	0.866 (0.721-1.05)	1.23 (1.02-1.50)	1.75 (1.45-2.13)	2.21 (1.81-2.71)	2.87 (2.28-3.65)	3.43 (2.67-4.46)	4.04 (3.06-5.37)	4.70 (3.47-6.44)	5.68 (4.02-8.12)	6.51 (4.44-9.63)
24-hr	1.03 (0.914-1.19)	1.51 (1.34-1.75)	2.19 (1.93-2.53)	2.77 (2.43-3.23)	3.63 (3.08-4.37)	4.34 (3.60-5.34)	5.11 (4.14-6.43)	5.96 (4.70-7.71)	7.20 (5.46-9.70)	8.24 (6.04-11.5)
2-day	1.15 (1.02-1.32)	1.72 (1.52-1.98)	2.52 (2.23-2.92)	3.23 (2.82-3.76)	4.25 (3.60-5.12)	5.10 (4.24-6.27)	6.02 (4.88-7.58)	7.04 (5.56-9.10)	8.53 (6.46-11.5)	9.77 (7.16-13.6)
3-day	1.20 (1.06-1.38)	1.81 (1.60-2.09)	2.69 (2.37-3.11)	3.45 (3.02-4.02)	4.57 (3.87-5.50)	5.49 (4.56-6.75)	6.50 (5.27-8.18)	7.61 (6.00-9.84)	9.24 (7.00-12.4)	10.6 (7.78-14.8)
4-day	1.24 (1.10-1.43)	1.88 (1.67-2.17)	2.81 (2.48-3.25)	3.62 (3.17-4.22)	4.80 (4.07-5.78)	5.79 (4.80-7.11)	6.86 (5.56-8.63)	8.04 (6.34-10.4)	9.78 (7.41-13.2)	11.2 (8.23-15.6)
7-day	1.35 (1.19-1.55)	2.08 (1.84-2.40)	3.14 (2.77-3.63)	4.07 (3.56-4.74)	5.43 (4.60-6.54)	6.57 (5.45-8.07)	7.80 (6.32-9.82)	9.16 (7.22-11.8)	11.1 (8.45-15.0)	12.8 (9.39-17.8)
10-day	1.42 (1.25-1.63)	2.20 (1.95-2.54)	3.34 (2.95-3.87)	4.35 (3.80-5.07)	5.83 (4.94-7.03)	7.07 (5.87-8.69)	8.41 (6.82-10.6)	9.88 (7.80-12.8)	12.1 (9.14-16.2)	13.9 (10.2-19.3)
20-day	1.56 (1.38-1.80)	2.47 (2.18-2.85)	3.79 (3.34-4.39)	4.96 (4.34-5.79)	6.72 (5.69-8.09)	8.18 (6.79-10.1)	9.77 (7.93-12.3)	11.5 (9.10-14.9)	14.1 (10.7-19.0)	16.2 (11.9-22.6)
30-day	1.75 (1.55-2.01)	2.77 (2.45-3.19)	4.27 (3.77-4.95)	5.62 (4.92-6.55)	7.64 (6.47-9.20)	9.33 (7.74-11.5)	11.2 (9.05-14.0)	13.2 (10.4-17.0)	16.1 (12.2-21.7)	18.5 (13.6-25.8)
45-day	1.92 (1.70-2.22)	3.06 (2.71-3.53)	4.75 (4.19-5.49)	6.26 (5.48-7.31)	8.56 (7.25-10.3)	10.5 (8.71-12.9)	12.6 (10.2-15.8)	14.9 (11.7-19.2)	18.2 (13.8-24.5)	20.9 (15.3-29.1)
60-day	2.10 (1.86-2.42)	3.33 (2.95-3.85)	5.19 (4.58-6.01)	6.86 (6.01-8.01)	9.39 (7.96-11.3)	11.5 (9.57-14.2)	13.9 (11.2-17.4)	16.4 (12.9-21.2)	20.0 (15.2-27.0)	23.0 (16.9-32.0)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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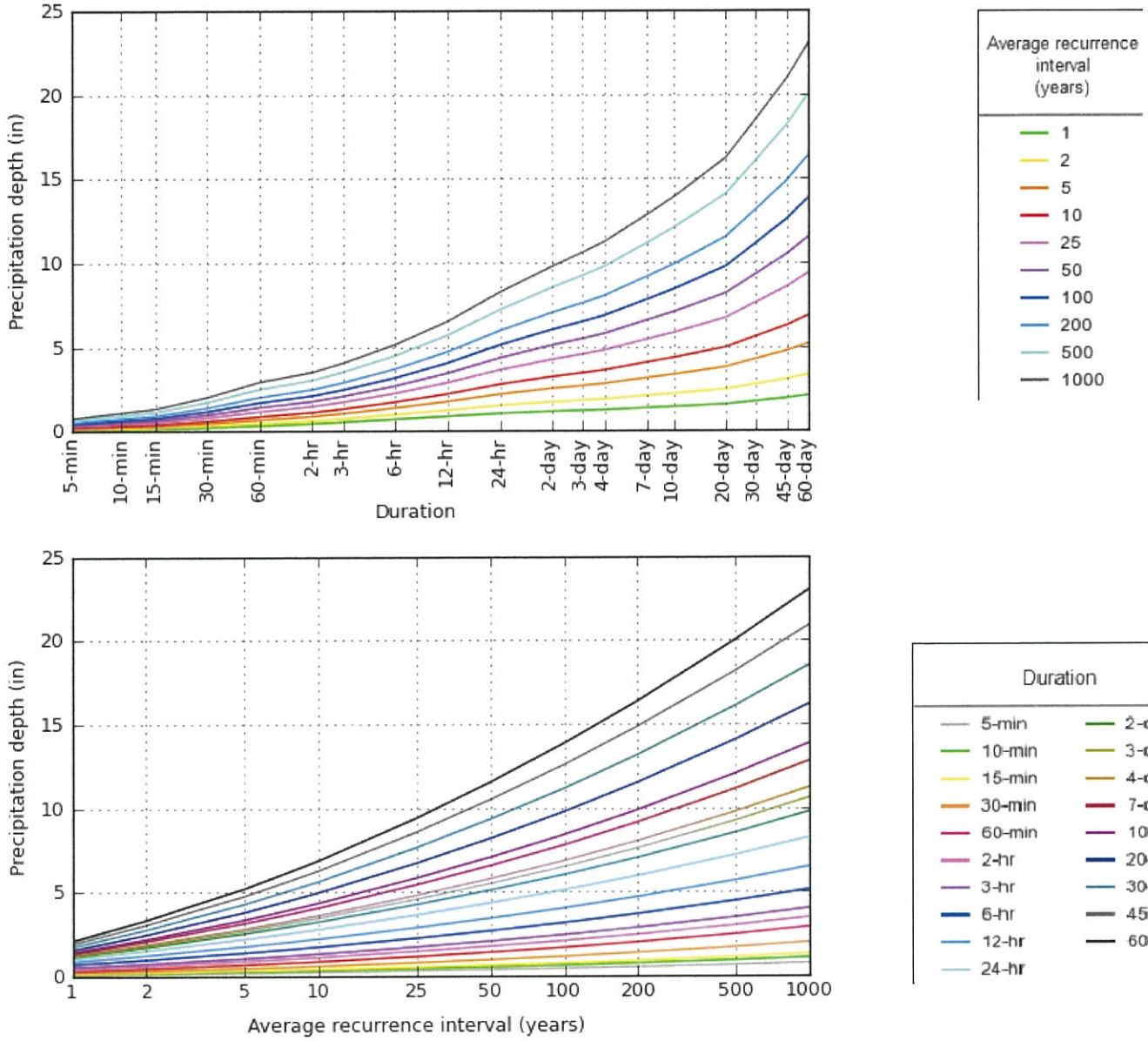
PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 33.9109°, Longitude: -116.5465°



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Thu Dec 29 16:48:42 2022

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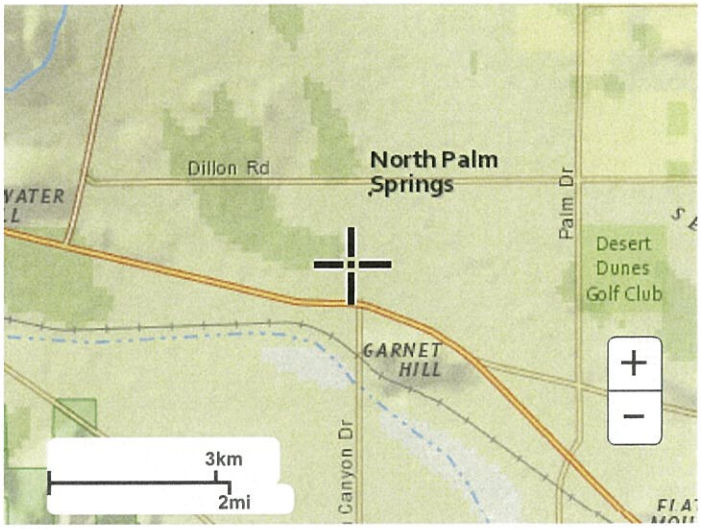
Maps & aerials

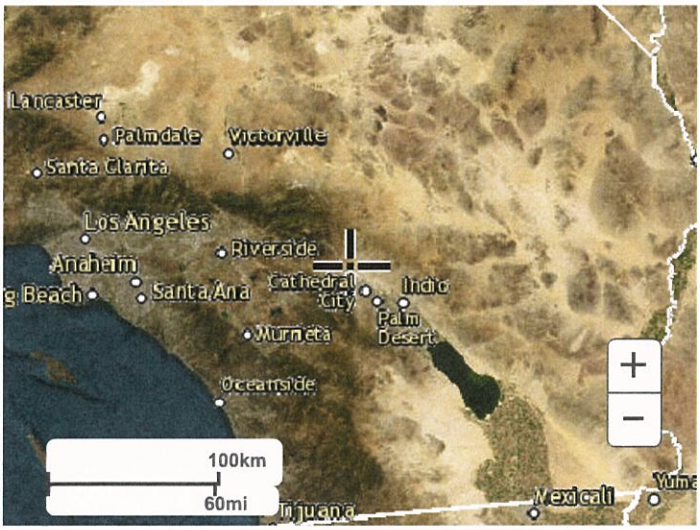
Small scale terrain



Large scale terrain

Large scale map

Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

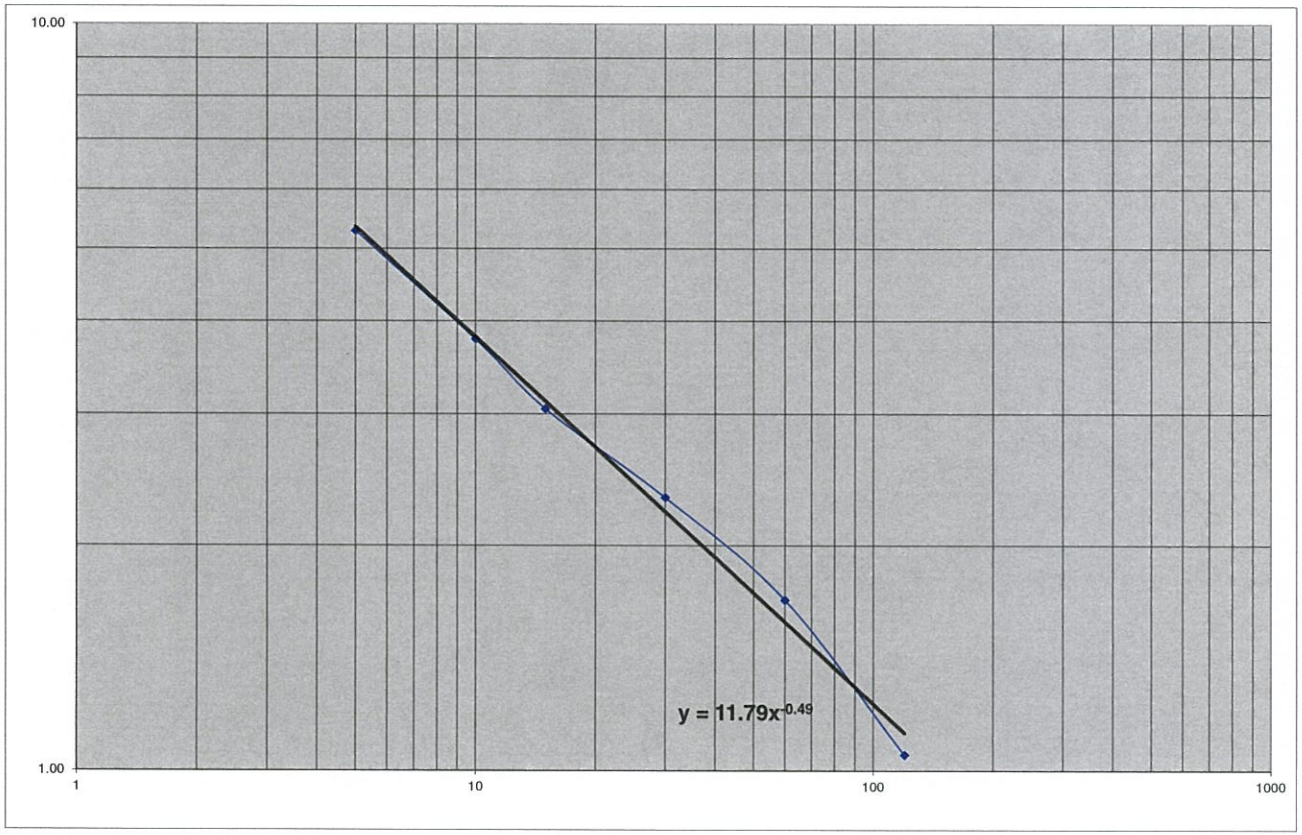
Disclaimer

NOAA ATLAS 14 INTENSITY - DURATION WORKSHEET

PROJECT NAME	Palm Springs Logistics Center
PROJECT NUMBER	2771
STORM EVENT	100 yr
DATE:	January 3, 2023

DATA FROM NOAA ATLAS 14

MINUTES	RAINFALL INTENSITY (in/hr)	RAINFALL DEPTH (in)
5	5.28	0.44
10	3.78	0.63
15	3.05	0.76
30	2.32	1.16
60	1.69	1.69
120	1.05	2.10



INTENSITY VALUES FROM GRAPH

CONSTANT FROM GRAPH	11.61
EXPONENT FROM GRAPH	-0.49

MINUTES	RAINFALL INTENSITY (in/hr)	RAINFALL DEPTH (in)
5	5.28	0.44
10	3.76	0.63
15	3.08	0.77
20	2.68	0.89
25	2.40	1.00
30	2.19	1.10
35	2.03	1.19
40	1.90	1.27
45	1.80	1.35
50	1.71	1.42
55	1.63	1.49
60	1.56	1.56
65	1.50	1.63
70	1.45	1.69
75	1.40	1.75
80	1.36	1.81
85	1.32	1.87
90	1.28	1.92
95	1.25	1.97
100	1.22	2.03
105	1.19	2.08
110	1.16	2.13
115	1.14	2.18
120	1.11	2.22

Appendix E

Proposed Land Use Areas
RCFCD Synthetic Unit Hydrograph Worksheets
Proposed Underground Storage Volumes

PALM SPRINGS FULFILLMENT CENTER
MSA JOB #2771
PROPOSED LAND USE AREAS - SYNTHETIC UNIT
January 5, 2023

HYDROLOGIC SOIL GROUP A

	LAND USE	
DRAINAGE AREA	**COMMERCIAL**	**TOTAL**
	RI=32	
	(acres)	**(acres)**
DA-A	6.980	6.980
DA-B	29.140	29.140
TOTAL SITE	**36.120**	**36.120**

TOTAL LAND USE AREAS	
COMMERCIAL	36.120
ON SITE NON-TRIBUTARY	3.380
TOTAL HYDROLOGIC AREA	**39.500**
SURVEY BOUNDARY	**39.5**

RCFCD SYNTHETIC UNIT HYDROGRAPH - SHORTCUT METHOD

DATA INPUT SHEET

DATE:	January 5, 2023
WORKSHEET PREPARED BY:	NM
PROJECT NAME	Palm Springs Fulfillment Center
PROJECT NUMBER	2771
CONCENTRATION POINT DESIGNATION	
AREA DESIGNATION	DA-A
AMC NUMBER	2

Low Loss Conditions: X=Existing; D=Developed; BS=Retention

AREA DESIG	SOIL GROUP	TRIBUTARY AREAS	ACRES	LOW LOSS CONDITION	RI NUMBER	AMC II INFILTRATION RATE	IMPERVIOUS PERCENT
1	A	COMMERCIAL	6.98	D	32	0.74	0.90

LENGTH OF WATERCOURSE (L)	600 ft
LENGTH TO POINT OPPOSITE CENTROID (Lca)	300 ft
ELEVATION OF HEADWATER	794.0 ft
ELEVATION OF CONCENTRATION POINT	780.0 ft
AVERAGE MANNINGS 'N' VALUE	0.02
STORM FREQUENCY (YEAR)	100
LOW LOSS RATE (For storms > 10 Years)	85%
POINT RAIN FROM NOAA ATLAS	14
1-HOUR	1.69 in
3-HOUR	2.45 in
6-HOUR	3.16 in
24-HOUR	5.11 in

UNDERGROUND STORAGE AREA

LENGTH:	770 ft		
WIDTH:	20 ft	TOTAL AREA	15,400 sf

PERCOLATION RATE	1.00 in/hr

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD BASIC DATA CALCULATION FORM	PROJECT: Palm Springs Fulfillment Center Job No.: 2771 BY: NM DATE: 1/5/23

PHYSICAL DATA

[1] CONCENTRATION POINT	0
[2] AREA DESIGNATION	DA-A
[3] AREA - ACRES	6.98
[4] L-FEET	600
[5] L-MILES	0.114
[6] La-FEET	300.00
[7] La-MILES	0.057
[8] ELEVATION OF HEADWATER	794
[9] ELEVATION OF CONCENTRATION POINT	780
[10] H-FEET	14
[11] S-FEET/MILE	123.2
[12] S^0.5	11.10
[13] L*LCA/S^0.5	0.001
[14] AVERAGE MANNINGS 'N'	0.02
[15] LAG TIME-HOURS	0.03
[16] LAG TIME-MINUTES	1.7
[17] 100% OF LAG-MINUTES	1.7
[18] 200% OF LAG-MINUTES	3.4

RAINFALL DATA

[1] AMC	II
[2] FREQUENCY-YEARS	100
NOAA ATLAS	14
[3] DURATION:	Point Rain
1-HOUR	1.69 in
3-HOUR	2.45 in
6-HOUR	3.16 in
24-HOUR	5.11 in

STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.55	2.03	2.33	2.75
FLOOD VOLUME	(cu-ft) (acre-ft)	39,258 0.90	51,390 1.18	58,945 1.35	69,684 1.60
PEAK FLOW	(cfs)	N/A	15.98	13.96	4.04
PERCOLATION PERCOLATION LOSSES	(ft) (cu-ft)	0.08 1283.33	0.25 3850.00	0.50 7700.00	2.00 30800.00
REQUIRED STORAGE	(cu-ft)	37974.59	47539.52	51245.24	38884.03

NOTE: PEAK FLOW FOR THE 1-HOUR STORM IS NOT REPRESENTATIVE. PER RCFCD PEAK DISCHARGES FROM THE 3-HOUR STORM SHOULD NORMALLY COMPARE WELL WITH RATIONAL PEAKS.

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD BASIC DATA CALCULATION FORM AMC II	PROJECT:	Palm Springs Fulfillment Center		
		Job No.:	2771		
		BY:	NM	DATE:	1/5/23

AVERAGE ADJUSTED LOSS RATE

SOIL GROUP [Plate C-1]	LAND USE	RI NUMBER [Plate E-6.1]	PERVIOUS AREA INFILTRATION RATE (in/hr) [Plate E-6.2]	DECIMAL PERCENT OF AREA IMPERVIOUS [Plate E-6.3]	ADJUSTED INFILTRATION RATE (in/hr)	AREA	AREA WEIGHTED AVERAGE	MAX AVERAGE ADJUSTED INFILTRATION RATE (in/hr)	LOW LOSS CONDITION	LOW LOSS RATE PER RCFC/2322 (in/hr)	MIN AVERAGE ADJUSTED INFILTRATION RATE (in/hr)
A	COMMERCIAL	32	0.74	90%	0.14	6.98	1.000	0.1406	DEVELOPED	0.1800	0.1800
					SUM	6.98	SUM	0.1406			0.1800

VARIABLE LOSS RATE CURVE (24-HOUR STORM ONLY)

Fm= 0.0703

C= 0.00130

Ft=C(24-(T/60))^1.55 = 0.00130 (24-(T/60))^1.55 + 0.07 in/hr

CONSTANT LOSS RATE (3 & 6 HOUR STORMS) = 0.1406 in/hr

LOW LOSS RATE = 0.8500 in/hr

Where:

T=Time in minutes. To get an average value for each unit time period, Use T=1/2 the unit time for the first time period, T=1 1/2 unit time for the second period, etc.

NOTE: Low loss rates established per RCFC/2322 (Dated: May-30-95)
For Storms Less than the 100 Year Event
Undeveloped Condition: Low Loss = 90%
Developed Condition: Low Loss = 0.9 - (0.8 * %impervious)
Basin Site: Low Loss = 10%
For 100 Year Storm - Low Loss should be between 80% & 90% of the Rainfall Rate

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 1-HOUR STORM	PROJECT: Job No.: BY:	Palm Springs Fulfillment Center 2771 NM	DATE 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	6.98	
UNIT TIME-MINUTES	5	
LAG TIME - MINUTES	1.70	
UNIT TIME-PERCENT OF LAG	294.4	
TOTAL ADJUSTED STORM RAIN-INCHES	1.69	
CONSTANT LOSS RATE-in/hr		0.14
LOW LOSS RATE - PERCENT		85%

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain in/hr	Flood Hydrograph Flow cfs
	Minutes	Hours	(Plate E-5.9)		Max	Low		
1	5	0.08	3.6	0.73	0.14	0.62	0.59	4.15
2	10	0.17	4.2	0.85	0.14	0.72	0.71	5.01
3	15	0.25	4.4	0.89	0.14	0.76	0.75	5.29
4	20	0.33	4.6	0.93	0.14	0.79	0.79	5.58
5	25	0.42	5.0	1.01	0.14	0.86	0.87	6.15
6	30	0.50	5.6	1.14	0.14	0.97	1.00	7.00
7	35	0.58	6.4	1.30	0.14	1.10	1.16	8.15
8	40	0.67	8.1	1.64	0.14	1.40	1.50	10.57
9	45	0.75	13.1	2.66	0.14	2.26	2.52	17.71
10	50	0.83	34.5	7.00	0.14	5.95	6.86	**48.25**
11	55	0.92	6.7	1.36	0.14	1.15	1.22	8.57
12	60	1.00	3.8	0.77	0.14	0.66	0.63	4.43

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

EFFECTIVE RAIN (in)	1.55
FLOOD VOLUME (acft)	0.90
FLOOD VOLUME (cuft)	39,258
PEAK FLOW RATE (cfs)	48.25

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 3-HOUR STORM	PROJECT: Job No.: BY:	Palm Springs Fulfillment Center 2771 NM	DATE 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	6.98	
UNIT TIME-MINUTES	5	
LAG TIME - MINUTES	1.70	
UNIT TIME-PERCENT OF LAG	294.4	
TOTAL ADJUSTED STORM RAIN-INCHES	2.45	
CONSTANT LOSS RATE-in/hr		0.14
LOW LOSS RATE - PERCENT		85%

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain	Flood Hydrograph Flow
	Minutes	Hours	(Plate E-5.9)		Max	Low	in/hr	cfs
1	5	0.08	1.3	0.38	0.14	0.32	0.24	1.70
2	10	0.17	1.3	0.38	0.14	0.32	0.24	1.70
3	15	0.25	1.1	0.32	0.14	0.27	0.18	1.29
4	20	0.33	1.5	0.44	0.14	0.37	0.30	2.11
5	25	0.42	1.5	0.44	0.14	0.37	0.30	2.11
6	30	0.50	1.8	0.53	0.14	0.45	0.39	2.74
7	35	0.58	1.5	0.44	0.14	0.37	0.30	2.11
8	40	0.67	1.8	0.53	0.14	0.45	0.39	2.74
9	45	0.75	1.8	0.53	0.14	0.45	0.39	2.74
10	50	0.83	1.5	0.44	0.14	0.37	0.30	2.11
11	55	0.92	1.6	0.47	0.14	0.40	0.33	2.32
12	60	1.00	1.8	0.53	0.14	0.45	0.39	2.74
13	65	1.08	2.2	0.65	0.14	0.55	0.51	3.56
14	70	1.17	2.2	0.65	0.14	0.55	0.51	3.56
15	75	1.25	2.2	0.65	0.14	0.55	0.51	3.56
16	80	1.33	2.0	0.59	0.14	0.50	0.45	3.15
17	85	1.42	2.6	0.76	0.14	0.65	0.62	4.39
18	90	1.50	2.7	0.79	0.14	0.67	0.65	4.60
19	95	1.58	2.4	0.71	0.14	0.60	0.57	3.98
20	100	1.67	2.7	0.79	0.14	0.67	0.65	4.60
21	105	1.75	3.3	0.97	0.14	0.82	0.83	5.84
22	110	1.83	3.1	0.91	0.14	0.77	0.77	5.43
23	115	1.92	2.9	0.85	0.14	0.72	0.71	5.01
24	120	2.00	3.0	0.88	0.14	0.75	0.74	5.22
25	125	2.08	3.1	0.91	0.14	0.77	0.77	5.43
26	130	2.17	4.2	1.23	0.14	1.05	1.09	7.70
27	135	2.25	5.0	1.47	0.14	1.25	1.33	9.36
28	140	2.33	3.5	1.03	0.14	0.87	0.89	6.25
29	145	2.42	6.8	2.00	0.14	1.70	1.86	13.08
30	150	2.50	7.3	2.15	0.14	1.82	2.01	14.12
31	155	2.58	8.2	2.41	0.14	2.05	2.27	15.98
32	160	2.67	5.9	1.73	0.14	1.47	1.59	11.22
33	165	2.75	2.0	0.59	0.14	0.50	0.45	3.15
34	170	2.83	1.8	0.53	0.14	0.45	0.39	2.74
35	175	2.92	1.8	0.53	0.14	0.45	0.39	2.74
36	180	3.00	0.6	0.18	0.14	0.15	0.04	0.25

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

EFFECTIVE RAIN (in)	2.03
FLOOD VOLUME (acft)	1.18
FLOOD VOLUME (cuft)	51,390
PEAK FLOW RATE (cfs)	15.98

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 6-HOUR STORM	PROJECT: Palm Springs Fulfillment Center Job No.: 2771 DATE BY: NM 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	6.98
UNIT TIME-MINUTES	5
LAG TIME - MINUTES	1.70
UNIT TIME-PERCENT OF LAG	294.4
TOTAL ADJUSTED STORM RAIN-INCHES	3.16
CONSTANT LOSS RATE-in/hr	0.141
LOW LOSS RATE - PERCENT	85%

Unit Time Period	Time Minutes	Time Hours	Pattern Percent (Plate E-5.9)	Storm Rain in/hr	Loss Rate in/hr Max	Loss Rate in/hr Low	Effective Rain in/hr	Flood Hydrograph Flow cfs
1	5	0.08	0.5	0.190	0.14	0.16	0.05	0.34
2	10	0.17	0.6	0.228	0.14	0.19	0.09	0.61
3	15	0.25	0.6	0.228	0.14	0.19	0.09	0.61
4	20	0.33	0.6	0.228	0.14	0.19	0.09	0.61
5	25	0.42	0.6	0.228	0.14	0.19	0.09	0.61
6	30	0.50	0.7	0.265	0.14	0.23	0.12	0.88
7	35	0.58	0.7	0.265	0.14	0.23	0.12	0.88
8	40	0.67	0.7	0.265	0.14	0.23	0.12	0.88
9	45	0.75	0.7	0.265	0.14	0.23	0.12	0.88
10	50	0.83	0.7	0.265	0.14	0.23	0.12	0.88
11	55	0.92	0.7	0.265	0.14	0.23	0.12	0.88
12	60	1.00	0.8	0.303	0.14	0.26	0.16	1.15
13	65	1.08	0.8	0.303	0.14	0.26	0.16	1.15
14	70	1.17	0.8	0.303	0.14	0.26	0.16	1.15
15	75	1.25	0.8	0.303	0.14	0.26	0.16	1.15
16	80	1.33	0.8	0.303	0.14	0.26	0.16	1.15
17	85	1.42	0.8	0.303	0.14	0.26	0.16	1.15
18	90	1.50	0.8	0.303	0.14	0.26	0.16	1.15
19	95	1.58	0.8	0.303	0.14	0.26	0.16	1.15
20	100	1.67	0.8	0.303	0.14	0.26	0.16	1.15
21	105	1.75	0.8	0.303	0.14	0.26	0.16	1.15
22	110	1.83	0.8	0.303	0.14	0.26	0.16	1.15
23	115	1.92	0.8	0.303	0.14	0.26	0.16	1.15
24	120	2.00	0.9	0.341	0.14	0.29	0.20	1.41
25	125	2.08	0.8	0.303	0.14	0.26	0.16	1.15
26	130	2.17	0.9	0.341	0.14	0.29	0.20	1.41
27	135	2.25	0.9	0.341	0.14	0.29	0.20	1.41
28	140	2.33	0.9	0.341	0.14	0.29	0.20	1.41
29	145	2.42	0.9	0.341	0.14	0.29	0.20	1.41
30	150	2.50	0.9	0.341	0.14	0.29	0.20	1.41
31	155	2.58	0.9	0.341	0.14	0.29	0.20	1.41
32	160	2.67	0.9	0.341	0.14	0.29	0.20	1.41
33	165	2.75	1.0	0.379	0.14	0.32	0.24	1.68
34	170	2.83	1.0	0.379	0.14	0.32	0.24	1.68
35	175	2.92	1.0	0.379	0.14	0.32	0.24	1.68
36	180	3.00	1.0	0.379	0.14	0.32	0.24	1.68
37	185	3.08	1.0	0.379	0.14	0.32	0.24	1.68
38	190	3.17	1.1	0.417	0.14	0.35	0.28	1.95
39	195	3.25	1.1	0.417	0.14	0.35	0.28	1.95
40	200	3.33	1.1	0.417	0.14	0.35	0.28	1.95
41	205	3.42	1.2	0.455	0.14	0.39	0.31	2.21
42	210	3.50	1.3	0.493	0.14	0.42	0.35	2.48
43	215	3.58	1.4	0.531	0.14	0.45	0.39	2.75
44	220	3.67	1.4	0.531	0.14	0.45	0.39	2.75
45	225	3.75	1.5	0.569	0.14	0.48	0.43	3.01
46	230	3.83	1.5	0.569	0.14	0.48	0.43	3.01
47	235	3.92	1.6	0.607	0.14	0.52	0.47	3.28
48	240	4.00	1.6	0.607	0.14	0.52	0.47	3.28
49	245	4.08	1.7	0.645	0.14	0.55	0.50	3.55
50	250	4.17	1.8	0.683	0.14	0.58	0.54	3.81

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 6-HOUR STORM	PROJECT:	Palm Springs Fulfillment Center	
		Job No.:	2771	DATE
		BY:	NM	1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	6.98
UNIT TIME-MINUTES	5
LAG TIME - MINUTES	1.70
UNIT TIME-PERCENT OF LAG	294.4
TOTAL ADJUSTED STORM RAIN-INCHES	3.16
CONSTANT LOSS RATE-in/hr	0.141
LOW LOSS RATE - PERCENT	85%

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain	Flood Hydrograph Flow
	Minutes	Hours	(Plate E-5.9)		Max	Low	in/hr	cfs
51	255	4.25	1.9	0.720	0.14	0.61	0.58	4.08
52	260	4.33	2.0	0.758	0.14	0.64	0.62	4.35
53	265	4.42	2.1	0.796	0.14	0.68	0.66	4.62
54	270	4.50	2.1	0.796	0.14	0.68	0.66	4.62
55	275	4.58	2.2	0.834	0.14	0.71	0.69	4.88
56	280	4.67	2.3	0.872	0.14	0.74	0.73	5.15
57	285	4.75	2.4	0.910	0.14	0.77	0.77	5.42
58	290	4.83	2.4	0.910	0.14	0.77	0.77	5.42
59	295	4.92	2.5	0.948	0.14	0.81	0.81	5.68
60	300	5.00	2.6	0.986	0.14	0.84	0.85	5.95
61	305	5.08	3.1	1.176	0.14	1.00	1.03	7.28
62	310	5.17	3.6	1.365	0.14	1.16	1.22	8.62
63	315	5.25	3.9	1.479	0.14	1.26	1.34	9.42
64	320	5.33	4.2	1.593	0.14	1.35	1.45	10.22
65	325	5.42	4.7	1.782	0.14	1.51	1.64	11.55
66	330	5.50	5.6	2.124	0.14	1.80	1.98	**13.96**
67	335	5.58	1.9	0.720	0.14	0.61	0.58	4.08
68	340	5.67	0.9	0.341	0.14	0.29	0.20	1.41
69	345	5.75	0.6	0.228	0.14	0.19	0.09	0.61
70	350	5.83	0.5	0.190	0.14	0.16	0.05	0.34
71	355	5.92	0.3	0.114	0.14	0.10	0.02	0.12
72	360	6.00	0.2	0.076	0.14	0.06	0.01	0.08

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

EFFECTIVE RAIN (in)	2.33
FLOOD VOLUME (acft)	1.35
FLOOD VOLUME (cuft)	58,945
PEAK FLOW RATE (cfs)	13.96

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 24-HOUR STORM	PROJECT:	Palm Springs Fulfillment Center	
		Job No.:	2771	DATE:
		BY:	NM	1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	6.980	CONSTANT LOSS RATE-in/hr	n/a
UNIT TIME-MINUTES	15	VARIABLE LOSS RATE (AVG) in/hr	0.1406
LAG TIME - MINUTES	1.70	MINIMUM LOSS RATE (for var. loss) - in/hr	0.070
UNIT TIME-PERCENT OF LAG	883.3	LOW LOSS RATE - DECIMAL	0.85
TOTAL ADJUSTED STORM RAIN-INCHES	5.11	C	0.00130

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain	Flood Hydrograph Flow
	Minutes	Hours	(Plate E-5.9)		Max	Low	in/hr	cfs
1	15	0.25	0.2	0.041	0.248	0.035	0.006	0.04
2	30	0.50	0.3	0.061	0.245	0.052	0.009	0.06
3	45	0.75	0.3	0.061	0.243	0.052	0.009	0.06
4	60	1.00	0.4	0.082	0.240	0.069	0.012	0.09
5	75	1.25	0.3	0.061	0.237	0.052	0.009	0.06
6	90	1.50	0.3	0.061	0.234	0.052	0.009	0.06
7	105	1.75	0.3	0.061	0.231	0.052	0.009	0.06
8	120	2.00	0.4	0.082	0.228	0.069	0.012	0.09
9	135	2.25	0.4	0.082	0.226	0.069	0.012	0.09
10	150	2.50	0.4	0.082	0.223	0.069	0.012	0.09
11	165	2.75	0.5	0.102	0.220	0.087	0.015	0.11
12	180	3.00	0.5	0.102	0.218	0.087	0.015	0.11
13	195	3.25	0.5	0.102	0.215	0.087	0.015	0.11
14	210	3.50	0.5	0.102	0.212	0.087	0.015	0.11
15	225	3.75	0.5	0.102	0.210	0.087	0.015	0.11
16	240	4.00	0.6	0.123	0.207	0.104	0.018	0.13
17	255	4.25	0.6	0.123	0.204	0.104	0.018	0.13
18	270	4.50	0.7	0.143	0.202	0.122	0.021	0.15
19	285	4.75	0.7	0.143	0.199	0.122	0.021	0.15
20	300	5.00	0.8	0.164	0.196	0.139	0.025	0.17
21	315	5.25	0.6	0.123	0.194	0.104	0.018	0.13
22	330	5.50	0.7	0.143	0.191	0.122	0.021	0.15
23	345	5.75	0.8	0.164	0.189	0.139	0.025	0.17
24	360	6.00	0.8	0.164	0.186	0.139	0.025	0.17
25	375	6.25	0.9	0.184	0.184	0.156	0.000	0.00
26	390	6.50	0.9	0.184	0.181	0.156	0.002	0.02
27	405	6.75	1.0	0.204	0.179	0.174	0.025	0.18
28	420	7.00	1.0	0.204	0.177	0.174	0.028	0.20
29	435	7.25	1.0	0.204	0.174	0.174	0.030	0.21
30	450	7.50	1.1	0.225	0.172	0.191	0.053	0.37
31	465	7.75	1.2	0.245	0.170	0.208	0.076	0.53
32	480	8.00	1.3	0.266	0.167	0.226	0.099	0.69
33	495	8.25	1.5	0.307	0.165	0.261	0.142	1.00
34	510	8.50	1.5	0.307	0.163	0.261	0.144	1.01
35	525	8.75	1.6	0.327	0.160	0.278	0.167	1.17
36	540	9.00	1.7	0.347	0.158	0.295	0.189	1.33
37	555	9.25	1.9	0.388	0.156	0.330	0.233	1.64
38	570	9.50	2.0	0.409	0.154	0.347	0.255	1.80
39	585	9.75	2.1	0.429	0.151	0.365	0.278	1.96
40	600	10.00	2.2	0.450	0.149	0.382	0.300	2.11
41	615	10.25	1.5	0.307	0.147	0.261	0.160	1.12
42	630	10.50	1.5	0.307	0.145	0.261	0.162	1.14
43	645	10.75	2.0	0.409	0.143	0.347	0.266	1.87
44	660	11.00	2.0	0.409	0.141	0.347	0.268	1.89
45	675	11.25	1.9	0.388	0.139	0.330	0.250	1.76
46	690	11.50	1.9	0.388	0.137	0.330	0.252	1.77
47	705	11.75	1.7	0.347	0.135	0.295	0.213	1.50
48	720	12.00	1.8	0.368	0.133	0.313	0.235	1.66
49	735	12.25	2.5	0.511	0.131	0.434	0.380	2.68
50	750	12.50	2.6	0.531	0.129	0.452	0.403	2.84
51	765	12.75	2.8	0.572	0.127	0.486	0.446	3.14
52	780	13.00	2.9	0.593	0.125	0.504	0.468	3.29
53	795	13.25	3.4	0.695	0.123	0.591	0.572	4.03
54	810	13.50	3.4	0.695	0.121	0.591	0.574	4.04
55	825	13.75	2.3	0.470	0.119	0.400	0.351	2.47
56	840	14.00	2.3	0.470	0.117	0.400	0.353	2.48
57	855	14.25	2.7	0.552	0.116	0.469	0.436	3.07
58	870	14.50	2.6	0.531	0.114	0.452	0.418	2.94
59	885	14.75	2.6	0.531	0.112	0.452	0.419	2.95
60	900	15.00	2.5	0.511	0.110	0.434	0.401	2.82
61	915	15.25	2.4	0.491	0.109	0.417	0.382	2.69

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 24-HOUR STORM	PROJECT:	Palm Springs Fulfillment Center	
		Job No.:	2771	DATE:
		BY:	NM	1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	6.980	CONSTANT LOSS RATE-in/hr	n/a
UNIT TIME-MINUTES	15	VARIABLE LOSS RATE (AVG) in/hr	0.1406
LAG TIME - MINUTES	1.70	MINIMUM LOSS RATE (for var. loss) - in/hr	0.070
UNIT TIME-PERCENT OF LAG	883.3	LOW LOSS RATE - DECIMAL	0.85
TOTAL ADJUSTED STORM RAIN-INCHES	5.11	C	0.00130

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain in/hr	Flood Hydrograph Flow cfs
	Minutes	Hours	(Plate E-5.9)		Max	Low		
62	930	15.50	2.3	0.470	0.107	0.400	0.363	2.56
63	945	15.75	1.9	0.388	0.105	0.330	0.283	1.99
64	960	16.00	1.9	0.388	0.104	0.330	0.285	2.00
65	975	16.25	0.4	0.082	0.102	0.069	0.012	0.09
66	990	16.50	0.4	0.082	0.101	0.069	0.012	0.09
67	1005	16.75	0.3	0.061	0.099	0.052	0.009	0.06
68	1020	17.00	0.3	0.061	0.098	0.052	0.009	0.06
69	1035	17.25	0.5	0.102	0.096	0.087	0.006	0.04
70	1050	17.50	0.5	0.102	0.095	0.087	0.007	0.05
71	1065	17.75	0.5	0.102	0.093	0.087	0.009	0.06
72	1080	18.00	0.4	0.082	0.092	0.069	0.012	0.09
73	1095	18.25	0.4	0.082	0.091	0.069	0.012	0.09
74	1110	18.50	0.4	0.082	0.089	0.069	0.012	0.09
75	1125	18.75	0.3	0.061	0.088	0.052	0.009	0.06
76	1140	19.00	0.2	0.041	0.087	0.035	0.006	0.04
77	1155	19.25	0.3	0.061	0.085	0.052	0.009	0.06
78	1170	19.50	0.4	0.082	0.084	0.069	0.012	0.09
79	1185	19.75	0.3	0.061	0.083	0.052	0.009	0.06
80	1200	20.00	0.2	0.041	0.082	0.035	0.006	0.04
81	1215	20.25	0.3	0.061	0.081	0.052	0.009	0.06
82	1230	20.50	0.3	0.061	0.080	0.052	0.009	0.06
83	1245	20.75	0.3	0.061	0.079	0.052	0.009	0.06
84	1260	21.00	0.2	0.041	0.078	0.035	0.006	0.04
85	1275	21.25	0.3	0.061	0.077	0.052	0.009	0.06
86	1290	21.50	0.2	0.041	0.076	0.035	0.006	0.04
87	1305	21.75	0.3	0.061	0.075	0.052	0.009	0.06
88	1320	22.00	0.2	0.041	0.074	0.035	0.006	0.04
89	1335	22.25	0.3	0.061	0.074	0.052	0.009	0.06
90	1350	22.50	0.2	0.041	0.073	0.035	0.006	0.04
91	1365	22.75	0.2	0.041	0.072	0.035	0.006	0.04
92	1380	23.00	0.2	0.041	0.072	0.035	0.006	0.04
93	1395	23.25	0.2	0.041	0.071	0.035	0.006	0.04
94	1410	23.50	0.2	0.041	0.071	0.035	0.006	0.04
95	1425	23.75	0.2	0.041	0.071	0.035	0.006	0.04
96	1440	24.00	0.2	0.041	0.070	0.035	0.006	0.04

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

EFFECTIVE RAIN (in)	2.75
FLOOD VOLUME (acft)	1.60
FLOOD VOLUME (cuft)	69,684
PEAK FLOW (cfs)	4.04

DYODS™

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CONTECH CMP DETENTION SYSTEMS

CONTECH CONSTRUCTION PRODUCTS INC.

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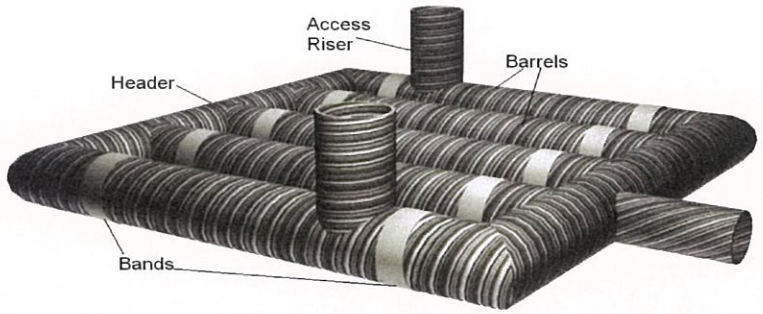


Project Summary

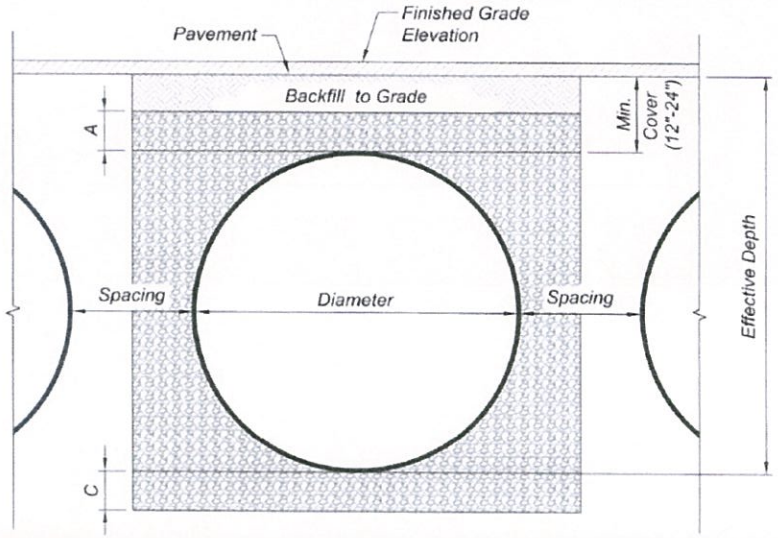
Date:	1/5/2023
Project Name:	Palm Springs Fulfillment Center
City / County:	Palm Springs / Riverside
State:	CA
Designed By:	NM
Company:	MSA Consulting
Telephone:	(760) 320-9811

Enter Information in Blue Cells

Corrugated Metal Pipe Calculator

Storage Volume Required (cf):	51,245
Limiting Width (ft):	20.00
Effective Depth Below Asphalt (ft):	6.00
Solid or Perforated Pipe:	Perforated
Shape Or Diameter:	60
Spacing between Barrels (ft):	3.50
Stone Width Around Perimeter of System (ft):	1.5
Depth A: Porous Stone Above Pipe (in):	6
Depth C: Porous Stone Below Pipe (in):	12
Stone Porosity (0 to 40%):	40

19.63 ft^2 Pipe Area



System Sizing

Use Custom Layout (at right) for layout adjustment

Pipe Storage:	30,277 cf	
Porous Stone Storage:	21,094 cf	
Total Storage Provided:	51,371 cf	100.2% Of Required Storage
Number of Barrels:	2 barrels	
Length Per Barrel:	771.00 ft	
Rectangular Footprint (W x L):	16.5 ft x 774. ft	

CONTECH Materials

Total CMP Footage:	1,542 ft
Approximate Total Pieces:	66 pcs
Approximate Coupling Bands:	64 bands
Approximate Truckloads:	17 trucks

Construction Quantities**

Total Excavation:	2838 cy
Porous Stone Backfill For Storage:	1953 cy Stone
Backfill to Grade Excluding Stone:	-237 cy Fill

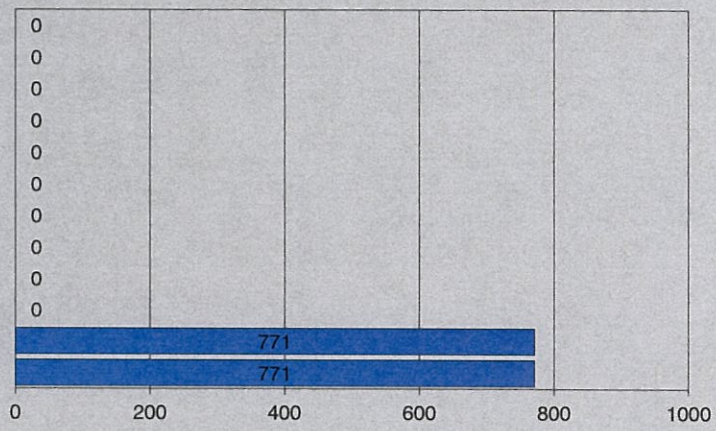
***Construction quantities are approximate and should be verified upon final design*

Custom Layout

To adjust layout, enter desired barrel length in the light blue boxes below.

Excess Footage = 0

Barrel 12	0
Barrel 11	0
Barrel 10	0
Barrel 9	0
Barrel 8	0
Barrel 7	0
Barrel 6	0
Barrel 5	0
Barrel 4	0
Barrel 3	0
Barrel 2	771
Barrel 1	771



RCFCD SYNTHETIC UNIT HYDROGRAPH - SHORTCUT METHOD

DATA INPUT SHEET

DATE:	January 5, 2023
WORKSHEET PREPARED BY:	NM
PROJECT NAME	Palm Springs Fulfillment Center
PROJECT NUMBER	2771
CONCENTRATION POINT DESIGNATION	
AREA DESIGNATION	DA-B
AMC NUMBER	2

Low Loss Conditions: X=Existing; D=Developed; BS=Retention

AREA DESIG	SOIL GROUP	TRIBUTARY AREAS	ACRES	LOW LOSS CONDITION	RI NUMBER	AMC II INFILTRATION RATE	IMPERVIOUS PERCENT
1	A	COMMERCIAL	29.140	D	32	0.74	0.90

LENGTH OF WATERCOURSE (L)	2,285 ft
LENGTH TO POINT OPPOSITE CENTROID (Lca)	1,143 ft
ELEVATION OF HEADWATER	782.0 ft
ELEVATION OF CONCENTRATION POINT	775.0 ft
AVERAGE MANNINGS 'N' VALUE	0.02
STORM FREQUENCY (YEAR)	100
LOW LOSS RATE (For Storms Greater Than 10 Years)	85%
POINT RAIN FROM NOAA ATLAS	14
1-HOUR	1.69 in
3-HOUR	2.45 in
6-HOUR	3.16 in
24-HOUR	5.11 in

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD BASIC DATA CALCULATION FORM	PROJECT: Palm Springs Fulfillment Center Job No.: 2771 BY: NM DATE: 1/5/23

PHYSICAL DATA

[1] CONCENTRATION POINT	0
[2] AREA DESIGNATION	DA-B
[3] AREA - ACRES	29.140
[4] L-FEET	2285
[5] L-MILES	0.433
[6] La-FEET	1142.50
[7] La-MILES	0.216
[8] ELEVATION OF HEADWATER	782
[9] ELEVATION OF CONCENTRATION POINT	775
[10] H-FEET	7
[11] S-FEET/MILE	16.2
[12] S^0.5	4.02
[13] L*LCA/S^0.5	0.023
[14] AVERAGE MANNINGS 'N'	0.02
[15] LAG TIME-HOURS	0.12
[16] LAG TIME-MINUTES	6.9
[17] 100% OF LAG-MINUTES	6.9
[18] 200% OF LAG-MINUTES	13.8

RAINFALL DATA

[1] AMC	II
[2] FREQUENCY-YEARS	100
NOAA ATLAS	**14**
[3] DURATION:	Point Rain
1-HOUR	1.69 in
3-HOUR	2.45 in
6-HOUR	3.16 in
24-HOUR	5.11 in

STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
TOTAL RAINFALL	(in)	1.69	2.45	3.16	5.11
RAINFALL VOLUME	(cuft)	178,766	259,158	334,260	540,529
SOIL LOSSES	(cuft)	14,872	44,617	88,177	249,613
EFFECTIVE RAIN	(in)	1.55	2.03	2.33	2.75
FLOOD VOLUME	(cu-ft) (acre-ft)	163,893 3.76	214,540 4.93	246,084 5.65	290,916 6.68
PEAK FLOW	(cfs)	N/A	66.71	58.26	16.86

NOTE: PEAK FLOW FOR THE 1-HOUR STORM IS NOT REPRESENTATIVE. PER RCFCD PEAK DISCHARGES FROM THE 3-HOUR STORM SHOULD NORMALLY COMPARE WELL WITH RATIONAL PEAKS.

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD BASIC DATA CALCULATION FORM AMC II	PROJECT:	Palm Springs Fulfillment Center		
		Job No.:	2771		
		BY:	NM	DATE:	1/5/23

AVERAGE ADJUSTED LOSS RATE

SOIL GROUP [Plate C-1]	LAND USE	RI NUMBER [Plate E-6.1]	PERVIOUS AREA INFILTRATION RATE (in/hr) [Plate E-6.2]	DECIMAL PERCENT OF AREA IMPERVIOUS [Plate E-6.3]	ADJUSTED INFILTRATION RATE (in/hr)	AREA	AREA WEIGHTED AVERAGE	MAX AVERAGE ADJUSTED INFILTRATION RATE (in/hr)	LOW LOSS CONDITION	LOW LOSS RATE PER RCFC/2322 (in/hr)	MIN AVERAGE ADJUSTED INFILTRATION RATE (in/hr)
A	COMMERCIAL	32	0.74	90%	0.14	29.140	1.000	0.1406	DEVELOPED	0.1800	0.1800
					SUM	29.140	SUM	0.1406			0.1800

VARIABLE LOSS RATE CURVE (24-HOUR STORM ONLY)

Fm= 0.0703

C= 0.00130

Ft=C(24-(T/60))^1.55 = 0.00130 (24-(T/60))^1.55 + 0.07 in/hr

CONSTANT LOSS RATE (3 & 6 HOUR STORMS) = 0.1406 in/hr

LOW LOSS RATE = 0.8500 in/hr

Where:

T=Time in minutes. To get an average value for each unit time period, Use T=1/2 the unit time for the first time period, T=1 1/2 unit time for the second period, etc.

NOTE: Low loss rates established per RCFC/2322 (Dated: May-30-95)
For 10 Year Storms or Less
Undeveloped Condition: Low Loss = 90%
Developed Condition: Low Loss = 0.9 - (0.8 * %impervious)
Basin Site: Low Loss = 10%
For 100 Year Storm - Low Loss should be between 80% & 90% of the Rainfall Rate

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 1-HOUR STORM	PROJECT: Job No.: BY:	Palm Springs Fulfillment Center 2771 NM	DATE 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	29.14	
UNIT TIME-MINUTES	5	
LAG TIME - MINUTES	6.90	
UNIT TIME-PERCENT OF LAG	72.5	
TOTAL ADJUSTED STORM RAIN-INCHES	1.69	
CONSTANT LOSS RATE-in/hr		0.14
LOW LOSS RATE - PERCENT		85%

Unit Time Period	Time Minutes	Time Hours	Pattern Percent (Plate E-5.9)	Storm Rain in/hr	Loss Rate in/hr Max	Loss Rate in/hr Low	Effective Rain in/hr	Flood Hydrograph Flow cfs
1	5	0.08	3.6	0.73	0.14	0.62	0.59	17.32
2	10	0.17	4.2	0.85	0.14	0.72	0.71	20.90
3	15	0.25	4.4	0.89	0.14	0.76	0.75	22.09
4	20	0.33	4.6	0.93	0.14	0.79	0.79	23.28
5	25	0.42	5.0	1.01	0.14	0.86	0.87	25.66
6	30	0.50	5.6	1.14	0.14	0.97	1.00	29.24
7	35	0.58	6.4	1.30	0.14	1.10	1.16	34.01
8	40	0.67	8.1	1.64	0.14	1.40	1.50	44.14
9	45	0.75	13.1	2.66	0.14	2.26	2.52	73.93
10	50	0.83	34.5	7.00	0.14	5.95	6.86	**201.45**
11	55	0.92	6.7	1.36	0.14	1.15	1.22	35.79
12	60	1.00	3.8	0.77	0.14	0.66	0.63	18.51

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

TOTAL RAINFALL (in)	1.69
RAINFALL VOLUME (cuft)	178,766
SOIL LOSSES (cuft)	14,872
EFFECTIVE RAIN (in)	1.55
FLOOD VOLUME (acft)	3.76
FLOOD VOLUME (cuft)	163,893
PEAK FLOW RATE (cfs)	201.45

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 3-HOUR STORM	PROJECT: Job No.: BY:	Palm Springs Fulfillment Center 2771 NM	DATE 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	29.14
UNIT TIME-MINUTES	5
LAG TIME - MINUTES	6.90
UNIT TIME-PERCENT OF LAG	72.5
TOTAL ADJUSTED STORM RAIN-INCHES	2.45
CONSTANT LOSS RATE-in/hr	0.14
LOW LOSS RATE - PERCENT	85%

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain	Flood Hydrograph Flow
	Minutes	Hours	(Plate E-5.9)		Max	Low	in/hr	cfs
1	5	0.08	1.3	0.38	0.14	0.32	0.24	7.10
2	10	0.17	1.3	0.38	0.14	0.32	0.24	7.10
3	15	0.25	1.1	0.32	0.14	0.27	0.18	5.37
4	20	0.33	1.5	0.44	0.14	0.37	0.30	8.83
5	25	0.42	1.5	0.44	0.14	0.37	0.30	8.83
6	30	0.50	1.8	0.53	0.14	0.45	0.39	11.42
7	35	0.58	1.5	0.44	0.14	0.37	0.30	8.83
8	40	0.67	1.8	0.53	0.14	0.45	0.39	11.42
9	45	0.75	1.8	0.53	0.14	0.45	0.39	11.42
10	50	0.83	1.5	0.44	0.14	0.37	0.30	8.83
11	55	0.92	1.6	0.47	0.14	0.40	0.33	9.69
12	60	1.00	1.8	0.53	0.14	0.45	0.39	11.42
13	65	1.08	2.2	0.65	0.14	0.55	0.51	14.87
14	70	1.17	2.2	0.65	0.14	0.55	0.51	14.87
15	75	1.25	2.2	0.65	0.14	0.55	0.51	14.87
16	80	1.33	2.0	0.59	0.14	0.50	0.45	13.15
17	85	1.42	2.6	0.76	0.14	0.65	0.62	18.33
18	90	1.50	2.7	0.79	0.14	0.67	0.65	19.19
19	95	1.58	2.4	0.71	0.14	0.60	0.57	16.60
20	100	1.67	2.7	0.79	0.14	0.67	0.65	19.19
21	105	1.75	3.3	0.97	0.14	0.82	0.83	24.38
22	110	1.83	3.1	0.91	0.14	0.77	0.77	22.65
23	115	1.92	2.9	0.85	0.14	0.72	0.71	20.92
24	120	2.00	3.0	0.88	0.14	0.75	0.74	21.78
25	125	2.08	3.1	0.91	0.14	0.77	0.77	22.65
26	130	2.17	4.2	1.23	0.14	1.05	1.09	32.15
27	135	2.25	5.0	1.47	0.14	1.25	1.33	39.06
28	140	2.33	3.5	1.03	0.14	0.87	0.89	26.10
29	145	2.42	6.8	2.00	0.14	1.70	1.86	54.61
30	150	2.50	7.3	2.15	0.14	1.82	2.01	58.93
31	155	2.58	8.2	2.41	0.14	2.05	2.27	66.71
32	160	2.67	5.9	1.73	0.14	1.47	1.59	46.84
33	165	2.75	2.0	0.59	0.14	0.50	0.45	13.15
34	170	2.83	1.8	0.53	0.14	0.45	0.39	11.42
35	175	2.92	1.8	0.53	0.14	0.45	0.39	11.42
36	180	3.00	0.6	0.18	0.14	0.15	0.04	1.05

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

TOTAL RAINFALL (in)	2.45
RAINFALL VOLUME (cuft)	259,158
SOIL LOSSES (cuft)	44,617
EFFECTIVE RAIN (in)	2.03
FLOOD VOLUME (acft)	4.93
FLOOD VOLUME (cuft)	214,540
PEAK FLOW RATE (cfs)	66.71

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 6-HOUR STORM	PROJECT: Palm Springs Fulfillment Center Job No.: 2771 DATE BY: NM 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	29.14
UNIT TIME-MINUTES	5
LAG TIME - MINUTES	6.90
UNIT TIME-PERCENT OF LAG	72.5
TOTAL ADJUSTED STORM RAIN-INCHES	3.16
CONSTANT LOSS RATE-in/hr	0.141
LOW LOSS RATE - PERCENT	85%

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain	Flood Hydrograph Flow
	Minutes	Hours	(Plate E-5.9)		Max	Low	in/hr	cfs
1	5	0.08	0.5	0.190	0.14	0.16	0.05	1.44
2	10	0.17	0.6	0.228	0.14	0.19	0.09	2.55
3	15	0.25	0.6	0.228	0.14	0.19	0.09	2.55
4	20	0.33	0.6	0.228	0.14	0.19	0.09	2.55
5	25	0.42	0.6	0.228	0.14	0.19	0.09	2.55
6	30	0.50	0.7	0.265	0.14	0.23	0.12	3.67
7	35	0.58	0.7	0.265	0.14	0.23	0.12	3.67
8	40	0.67	0.7	0.265	0.14	0.23	0.12	3.67
9	45	0.75	0.7	0.265	0.14	0.23	0.12	3.67
10	50	0.83	0.7	0.265	0.14	0.23	0.12	3.67
11	55	0.92	0.7	0.265	0.14	0.23	0.12	3.67
12	60	1.00	0.8	0.303	0.14	0.26	0.16	4.78
13	65	1.08	0.8	0.303	0.14	0.26	0.16	4.78
14	70	1.17	0.8	0.303	0.14	0.26	0.16	4.78
15	75	1.25	0.8	0.303	0.14	0.26	0.16	4.78
16	80	1.33	0.8	0.303	0.14	0.26	0.16	4.78
17	85	1.42	0.8	0.303	0.14	0.26	0.16	4.78
18	90	1.50	0.8	0.303	0.14	0.26	0.16	4.78
19	95	1.58	0.8	0.303	0.14	0.26	0.16	4.78
20	100	1.67	0.8	0.303	0.14	0.26	0.16	4.78
21	105	1.75	0.8	0.303	0.14	0.26	0.16	4.78
22	110	1.83	0.8	0.303	0.14	0.26	0.16	4.78
23	115	1.92	0.8	0.303	0.14	0.26	0.16	4.78
24	120	2.00	0.9	0.341	0.14	0.29	0.20	5.90
25	125	2.08	0.8	0.303	0.14	0.26	0.16	4.78
26	130	2.17	0.9	0.341	0.14	0.29	0.20	5.90
27	135	2.25	0.9	0.341	0.14	0.29	0.20	5.90
28	140	2.33	0.9	0.341	0.14	0.29	0.20	5.90
29	145	2.42	0.9	0.341	0.14	0.29	0.20	5.90
30	150	2.50	0.9	0.341	0.14	0.29	0.20	5.90
31	155	2.58	0.9	0.341	0.14	0.29	0.20	5.90
32	160	2.67	0.9	0.341	0.14	0.29	0.20	5.90
33	165	2.75	1.0	0.379	0.14	0.32	0.24	7.01
34	170	2.83	1.0	0.379	0.14	0.32	0.24	7.01
35	175	2.92	1.0	0.379	0.14	0.32	0.24	7.01
36	180	3.00	1.0	0.379	0.14	0.32	0.24	7.01
37	185	3.08	1.0	0.379	0.14	0.32	0.24	7.01
38	190	3.17	1.1	0.417	0.14	0.35	0.28	8.12
39	195	3.25	1.1	0.417	0.14	0.35	0.28	8.12
40	200	3.33	1.1	0.417	0.14	0.35	0.28	8.12
41	205	3.42	1.2	0.455	0.14	0.39	0.31	9.24
42	210	3.50	1.3	0.493	0.14	0.42	0.35	10.35
43	215	3.58	1.4	0.531	0.14	0.45	0.39	11.47
44	220	3.67	1.4	0.531	0.14	0.45	0.39	11.47
45	225	3.75	1.5	0.569	0.14	0.48	0.43	12.58
46	230	3.83	1.5	0.569	0.14	0.48	0.43	12.58
47	235	3.92	1.6	0.607	0.14	0.52	0.47	13.70
48	240	4.00	1.6	0.607	0.14	0.52	0.47	13.70
49	245	4.08	1.7	0.645	0.14	0.55	0.50	14.81
50	250	4.17	1.8	0.683	0.14	0.58	0.54	15.92
51	255	4.25	1.9	0.720	0.14	0.61	0.58	17.04
52	260	4.33	2.0	0.758	0.14	0.64	0.62	18.15
53	265	4.42	2.1	0.796	0.14	0.68	0.66	19.27
54	270	4.50	2.1	0.796	0.14	0.68	0.66	19.27

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 6-HOUR STORM	PROJECT: Palm Springs Fulfillment Center Job No.: 2771 DATE BY: NM 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	29.14
UNIT TIME-MINUTES	5
LAG TIME - MINUTES	6.90
UNIT TIME-PERCENT OF LAG	72.5
TOTAL ADJUSTED STORM RAIN-INCHES	3.16
CONSTANT LOSS RATE-in/hr	0.141
LOW LOSS RATE - PERCENT	85%

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain in/hr	Flood Hydrograph Flow cfs
	Minutes	Hours	(Plate E-5.9)		Max	Low		
55	275	4.58	2.2	0.834	0.14	0.71	0.69	20.38
56	280	4.67	2.3	0.872	0.14	0.74	0.73	21.50
57	285	4.75	2.4	0.910	0.14	0.77	0.77	22.61
58	290	4.83	2.4	0.910	0.14	0.77	0.77	22.61
59	295	4.92	2.5	0.948	0.14	0.81	0.81	23.72
60	300	5.00	2.6	0.986	0.14	0.84	0.85	24.84
61	305	5.08	3.1	1.176	0.14	1.00	1.03	30.41
62	310	5.17	3.6	1.365	0.14	1.16	1.22	35.98
63	315	5.25	3.9	1.479	0.14	1.26	1.34	39.32
64	320	5.33	4.2	1.593	0.14	1.35	1.45	42.67
65	325	5.42	4.7	1.782	0.14	1.51	1.64	48.24
66	330	5.50	5.6	2.124	0.14	1.80	1.98	**58.26**
67	335	5.58	1.9	0.720	0.14	0.61	0.58	17.04
68	340	5.67	0.9	0.341	0.14	0.29	0.20	5.90
69	345	5.75	0.6	0.228	0.14	0.19	0.09	2.55
70	350	5.83	0.5	0.190	0.14	0.16	0.05	1.44
71	355	5.92	0.3	0.114	0.14	0.10	0.02	0.50
72	360	6.00	0.2	0.076	0.14	0.06	0.01	0.33

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

TOTAL RAINFALL (in)	3.16
RAINFALL VOLUME (cuft)	334,260
SOIL LOSSES (cuft)	88,177
EFFECTIVE RAIN (in)	2.33
FLOOD VOLUME (acft)	5.65
FLOOD VOLUME (cuft)	246,084
PEAK FLOW RATE (cfs)	58.26

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 24-HOUR STORM	PROJECT: Palm Springs Fulfillment Center Job No.: 2771 DATE: BY: NM 1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	29.140	CONSTANT LOSS RATE-in/hr	n/a
UNIT TIME-MINUTES	15	VARIABLE LOSS RATE (AVG) in/hr	0.1406
LAG TIME - MINUTES	6.90	MINIMUM LOSS RATE (for var. loss) - in/hr	0.070
UNIT TIME-PERCENT OF LAG	217.4	LOW LOSS RATE - DECIMAL	0.85
TOTAL ADJUSTED STORM RAIN-INCHES	5.11	C	0.00130

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain	Flood Hydrograph Flow
	Minutes	Hours	(Plate E-5.9)		Max	Low	in/hr	cfs
1	15	0.25	0.2	0.041	0.248	0.035	0.006	0.18
2	30	0.50	0.3	0.061	0.245	0.052	0.009	0.27
3	45	0.75	0.3	0.061	0.243	0.052	0.009	0.27
4	60	1.00	0.4	0.082	0.240	0.069	0.012	0.36
5	75	1.25	0.3	0.061	0.237	0.052	0.009	0.27
6	90	1.50	0.3	0.061	0.234	0.052	0.009	0.27
7	105	1.75	0.3	0.061	0.231	0.052	0.009	0.27
8	120	2.00	0.4	0.082	0.228	0.069	0.012	0.36
9	135	2.25	0.4	0.082	0.226	0.069	0.012	0.36
10	150	2.50	0.4	0.082	0.223	0.069	0.012	0.36
11	165	2.75	0.5	0.102	0.220	0.087	0.015	0.45
12	180	3.00	0.5	0.102	0.218	0.087	0.015	0.45
13	195	3.25	0.5	0.102	0.215	0.087	0.015	0.45
14	210	3.50	0.5	0.102	0.212	0.087	0.015	0.45
15	225	3.75	0.5	0.102	0.210	0.087	0.015	0.45
16	240	4.00	0.6	0.123	0.207	0.104	0.018	0.54
17	255	4.25	0.6	0.123	0.204	0.104	0.018	0.54
18	270	4.50	0.7	0.143	0.202	0.122	0.021	0.63
19	285	4.75	0.7	0.143	0.199	0.122	0.021	0.63
20	300	5.00	0.8	0.164	0.196	0.139	0.025	0.72
21	315	5.25	0.6	0.123	0.194	0.104	0.018	0.54
22	330	5.50	0.7	0.143	0.191	0.122	0.021	0.63
23	345	5.75	0.8	0.164	0.189	0.139	0.025	0.72
24	360	6.00	0.8	0.164	0.186	0.139	0.025	0.72
25	375	6.25	0.9	0.184	0.184	0.156	0.000	0.00
26	390	6.50	0.9	0.184	0.181	0.156	0.002	0.07
27	405	6.75	1.0	0.204	0.179	0.174	0.025	0.74
28	420	7.00	1.0	0.204	0.177	0.174	0.028	0.82
29	435	7.25	1.0	0.204	0.174	0.174	0.030	0.89
30	450	7.50	1.1	0.225	0.172	0.191	0.053	1.56
31	465	7.75	1.2	0.245	0.170	0.208	0.076	2.23
32	480	8.00	1.3	0.266	0.167	0.226	0.099	2.90
33	495	8.25	1.5	0.307	0.165	0.261	0.142	4.16
34	510	8.50	1.5	0.307	0.163	0.261	0.144	4.23
35	525	8.75	1.6	0.327	0.160	0.278	0.167	4.90
36	540	9.00	1.7	0.347	0.158	0.295	0.189	5.57
37	555	9.25	1.9	0.388	0.156	0.330	0.233	6.83
38	570	9.50	2.0	0.409	0.154	0.347	0.255	7.50
39	585	9.75	2.1	0.429	0.151	0.365	0.278	8.16
40	600	10.00	2.2	0.450	0.149	0.382	0.300	8.83
41	615	10.25	1.5	0.307	0.147	0.261	0.160	4.69
42	630	10.50	1.5	0.307	0.145	0.261	0.162	4.75
43	645	10.75	2.0	0.409	0.143	0.347	0.266	7.82
44	660	11.00	2.0	0.409	0.141	0.347	0.268	7.88
45	675	11.25	1.9	0.388	0.139	0.330	0.250	7.34
46	690	11.50	1.9	0.388	0.137	0.330	0.252	7.40
47	705	11.75	1.7	0.347	0.135	0.295	0.213	6.26
48	720	12.00	1.8	0.368	0.133	0.313	0.235	6.92
49	735	12.25	2.5	0.511	0.131	0.434	0.380	11.18
50	750	12.50	2.6	0.531	0.129	0.452	0.403	11.84
51	765	12.75	2.8	0.572	0.127	0.486	0.446	13.09
52	780	13.00	2.9	0.593	0.125	0.504	0.468	13.75
53	795	13.25	3.4	0.695	0.123	0.591	0.572	16.81
54	810	13.50	3.4	0.695	0.121	0.591	0.574	16.86
55	825	13.75	2.3	0.470	0.119	0.400	0.351	10.31
56	840	14.00	2.3	0.470	0.117	0.400	0.353	10.36
57	855	14.25	2.7	0.552	0.116	0.469	0.436	12.82
58	870	14.50	2.6	0.531	0.114	0.452	0.418	12.27
59	885	14.75	2.6	0.531	0.112	0.452	0.419	12.32
60	900	15.00	2.5	0.511	0.110	0.434	0.401	11.77
61	915	15.25	2.4	0.491	0.109	0.417	0.382	11.22
62	930	15.50	2.3	0.470	0.107	0.400	0.363	10.67
63	945	15.75	1.9	0.388	0.105	0.330	0.283	8.31
64	960	16.00	1.9	0.388	0.104	0.330	0.285	8.36

RCFC & WCD HYDROLOGY MANUAL	SYNTHETIC UNIT HYDROGRAPH METHOD SHORTCUT METHOD 24-HOUR STORM	PROJECT:	Palm Springs Fulfillment Center	
		Job No.:	2771	DATE:
		BY:	NM	1/5/23

UNIT HYDROGRAPH and EFFECTIVE RAIN CALCULATION FORM

DRAINAGE AREA-ACRES	29.140	CONSTANT LOSS RATE-in/hr	n/a
UNIT TIME-MINUTES .	15	VARIABLE LOSS RATE (AVG) in/hr	0.1406
LAG TIME - MINUTES	6.90	MINIMUM LOSS RATE (for var. loss) - in/hr	0.070
UNIT TIME-PERCENT OF LAG	217.4	LOW LOSS RATE - DECIMAL	0.85
TOTAL ADJUSTED STORM RAIN-INCHES	5.11	C	0.00130

Unit Time Period	Time		Pattern Percent	Storm Rain in/hr	Loss Rate in/hr		Effective Rain in/hr	Flood Hydrograph Flow cfs
	Minutes	Hours	(Plate E-5.9)		Max	Low		
65	975	16.25	0.4	0.082	0.102	0.069	0.012	0.36
66	990	16.50	0.4	0.082	0.101	0.069	0.012	0.36
67	1005	16.75	0.3	0.061	0.099	0.052	0.009	0.27
68	1020	17.00	0.3	0.061	0.098	0.052	0.009	0.27
69	1035	17.25	0.5	0.102	0.096	0.087	0.006	0.18
70	1050	17.50	0.5	0.102	0.095	0.087	0.007	0.22
71	1065	17.75	0.5	0.102	0.093	0.087	0.009	0.26
72	1080	18.00	0.4	0.082	0.092	0.069	0.012	0.36
73	1095	18.25	0.4	0.082	0.091	0.069	0.012	0.36
74	1110	18.50	0.4	0.082	0.089	0.069	0.012	0.36
75	1125	18.75	0.3	0.061	0.088	0.052	0.009	0.27
76	1140	19.00	0.2	0.041	0.087	0.035	0.006	0.18
77	1155	19.25	0.3	0.061	0.085	0.052	0.009	0.27
78	1170	19.50	0.4	0.082	0.084	0.069	0.012	0.36
79	1185	19.75	0.3	0.061	0.083	0.052	0.009	0.27
80	1200	20.00	0.2	0.041	0.082	0.035	0.006	0.18
81	1215	20.25	0.3	0.061	0.081	0.052	0.009	0.27
82	1230	20.50	0.3	0.061	0.080	0.052	0.009	0.27
83	1245	20.75	0.3	0.061	0.079	0.052	0.009	0.27
84	1260	21.00	0.2	0.041	0.078	0.035	0.006	0.18
85	1275	21.25	0.3	0.061	0.077	0.052	0.009	0.27
86	1290	21.50	0.2	0.041	0.076	0.035	0.006	0.18
87	1305	21.75	0.3	0.061	0.075	0.052	0.009	0.27
88	1320	22.00	0.2	0.041	0.074	0.035	0.006	0.18
89	1335	22.25	0.3	0.061	0.074	0.052	0.009	0.27
90	1350	22.50	0.2	0.041	0.073	0.035	0.006	0.18
91	1365	22.75	0.2	0.041	0.072	0.035	0.006	0.18
92	1380	23.00	0.2	0.041	0.072	0.035	0.006	0.18
93	1395	23.25	0.2	0.041	0.071	0.035	0.006	0.18
94	1410	23.50	0.2	0.041	0.071	0.035	0.006	0.18
95	1425	23.75	0.2	0.041	0.071	0.035	0.006	0.18
96	1440	24.00	0.2	0.041	0.070	0.035	0.006	0.18

EFFECTIVE RAIN & FLOOD VOLUMES SUMMARY

TOTAL RAINFALL (in)	5.11
RAINFALL VOLUME (cuft)	540,529
SOIL LOSSES (cuft)	249,613
EFFECTIVE RAIN (in)	2.75
FLOOD VOLUME (acft)	6.68
FLOOD VOLUME (cuft)	290,916
PEAK FLOW (cfs)	16.86

JOB NAME: 2771
JOB #:
RETENTION BASIN
DATE:
BASIN CHARACTERISTICS

CONTOUR ELEVATION	DEPTH INCR (ft)	DEPTH TOTAL (ft)	AREA INCR (sf)	AREA TOTAL (sf)	VOLUME INCR (cuft)	VOLUME TOTAL (cuft)	VOLUME TOTAL (acre-ft)
763.6	0	0		20,233	0	0	0.00
764	0.4	0.4	2,763	22,997	8,646	8,646	0.20
765	1	1.4	6,899	29,895	26,446	35,092	0.81
766	1	2.4	6,971	36,866	33,381	68,472	1.57
767	1	3.4	7,089	43,955	40,411	108,883	2.50

PALM SPRINGS FULFILLMENT CENTER
MSA JOB #2771
PROPOSED UG VOLUME REQUIRED - SYNTHETIC UNIT
January 5, 2023

DRAINAGE AREA : DA-B

	VOLUME REQUIRED	
	RI=32	
	(acres)	**(acres)**
DA-B	29.140	29.140
TOTAL DRAINAGE AREA	**29.140**	**29.140**

FLOOD VOLUME	(cu-ft)
TOTAL VOLUME OF MAX AREA	245800.0
PROPOSED RETENTION BASIN STORAGE	108883.0
TOTAL REQ UG STORAGE VOLUME	**136917.0**

(SEE CONTECH SHEET FOR BARREL SIZE)

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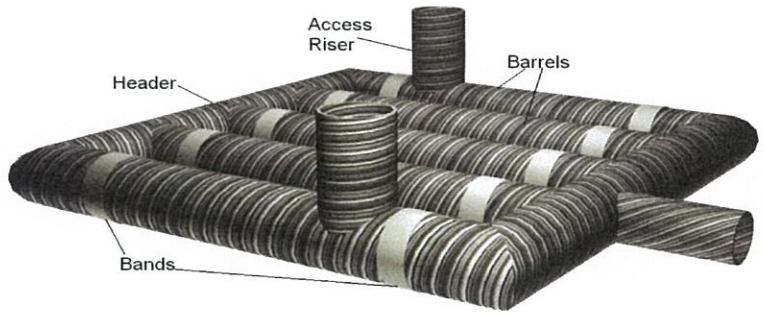


Project Summary

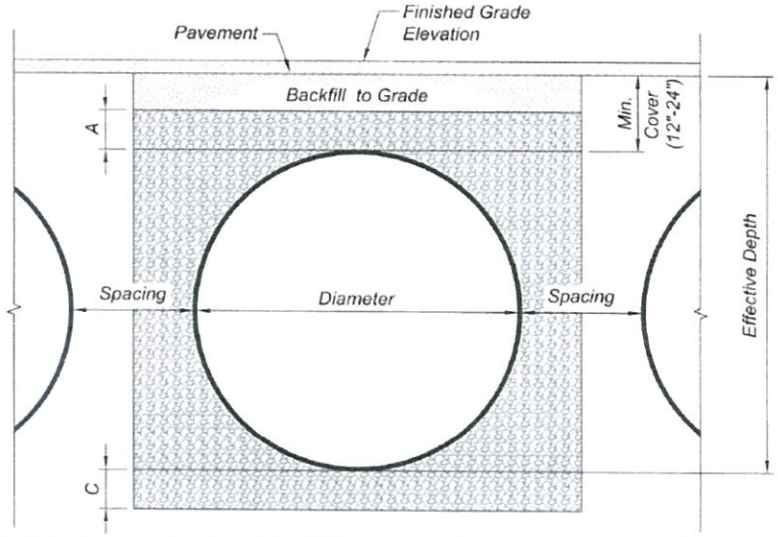
Date:	1/5/2023
Project Name:	Palm Springs Fulfillment Center
City / County:	Palm Springs / Riverside
State:	CA
Designed By:	NM
Company:	MSA Consulting
Telephone:	(760) 320-9811

Enter Information in Blue Cells

Corrugated Metal Pipe Calculator

Storage Volume Required (cf):	137,000
Limiting Width (ft):	50.00
Effective Depth Below Asphalt (ft):	10.00
Solid or Perforated Pipe:	Perforated
Shape Or Diameter:	60
Spacing between Barrels (ft):	3.50
Stone Width Around Perimeter of System (ft):	1.5
Depth A: Porous Stone Above Pipe (in):	6
Depth C: Porous Stone Below Pipe (in):	12
Stone Porosity (0 to 40%):	40

19.63 ft^2 Pipe Area



System Sizing

Use Custom Layout (at right) for layout adjustment

Pipe Storage:	79,914 cf	
Porous Stone Storage:	57,251 cf	
Total Storage Provided:	137,165 cf	100.1% Of Required Storage
Number of Barrels:	5 barrels	
Length Per Barrel:	814.00 ft	
Rectangular Footprint (W x L):	42. ft x 817. ft	

CONTECH Materials

Total CMP Footage:	4,070 ft
Approximate Total Pieces:	170 pcs
Approximate Coupling Bands:	165 bands
Approximate Truckloads:	43 trucks

Construction Quantities**

Total Excavation:	12709 cy
Porous Stone Backfill For Storage:	5301 cy Stone
Backfill to Grade Excluding Stone:	4448 cy Fill

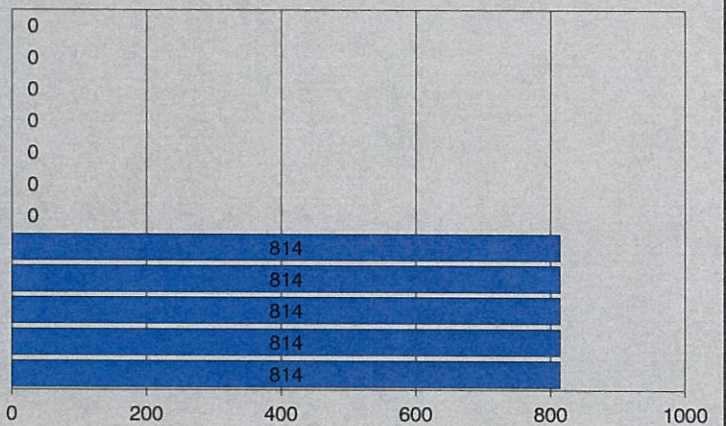
***Construction quantities are approximate and should be verified upon final design*

Custom Layout

To adjust layout, enter desired barrel length in the light blue boxes below.

Excess Footage = 0

Barrel 12	0
Barrel 11	0
Barrel 10	0
Barrel 9	0
Barrel 8	0
Barrel 7	0
Barrel 6	0
Barrel 5	814
Barrel 4	814
Barrel 3	814
Barrel 2	814
Barrel 1	814



Appendix F

Riverside County Whitewater River Region WQMP Worksheets

Whitewater Watershed

BMP Design Volume, V_{BMP} & Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend: Required Entries / Calculated Cells

Company Name	MSA Consulting, Inc	Date	January 5, 2023
Designed By	NM	County/City Case No.	
Company Project Number/Name	2771 / Palm Springs Fulfillment Center		
Drainage Area Number/Name	DA-A		

Enter the Area Tributary to this Feature (A_{TRIB}) — A_{TRIB} = 6.980 acres

Determine the Impervious Area Ratio

Determine the Impervious Area Within A_{TRIB} (A_{IMP}) — A_{IMP} = 6.280 acres

Calculate the Impervious Area Ratio (I_F)

$I_F = A_{IMP}/A_{TRIB}$ — I_F = 0.90

Calculate the Composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ — C_{BMP} = 0.73

Determine Design Storage Volume, V_{BMP}

Calculate V_U, the 80% Unit Storage Volume $V_U = 0.40 \times C_{BMP}$ — V_U = 0.29 (in*ac)/ac

Calculate the design storage volume of the BMP, V_{BMP}

$$V_{BMP}\ (ft^3) = \frac{V_U\ (in\text{-}ac/ac) \times A_T\ (ac) \times 43{,}560\ (ft^2/ac)}{12(in/ft)}$$

V_{BMP} = 7,397 ft^3

BMP Design Flow Rate, Q_{BMP}

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ — Q_{BMP} = 1.02 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

Whitewater Watershed

BMP Design Volume, V_{BMP} & Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend:		Required Entries
		Calculated Cells

Company Name	MSA Consulting, Inc	Date	January 5, 2023
Designed By	NM	County/City Case No.	
Company Project Number/Name	2771 / Palm Springs Fulfillment Center		
Drainage Area Number/Name	DA-B		

Enter the Area Tributary to this Feature (A_{TRIB}) — A_{TRIB} = 29.140 acres

Determine the Impervious Area Ratio

Determine the Impervious Area Within A_{TRIB} (A_{IMP}) — A_{IMP} = 26.230 acres

Calculate the Impervious Area Ratio (I_F)

$I_F = A_{IMP}/A_{TRIB}$ — I_F = 0.90

Calculate the Composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ — C_{BMP} = 0.73

Determine Design Storage Volume, V_{BMP}

Calculate V_U, the 80% Unit Storage Volume $V_U = 0.40 \times C_{BMP}$ — V_U = 0.29 (in*ac)/ac

Calculate the design storage volume of the BMP, V_{BMP}

$$V_{BMP}\ (ft^3) = \frac{V_U\ (in\text{-}ac/ac) \times A_T\ (ac) \times 43{,}560\ (ft^2/ac)}{12(in/ft)}$$

V_{BMP} = 30,908 ft^3

BMP Design Flow Rate, Q_{BMP}

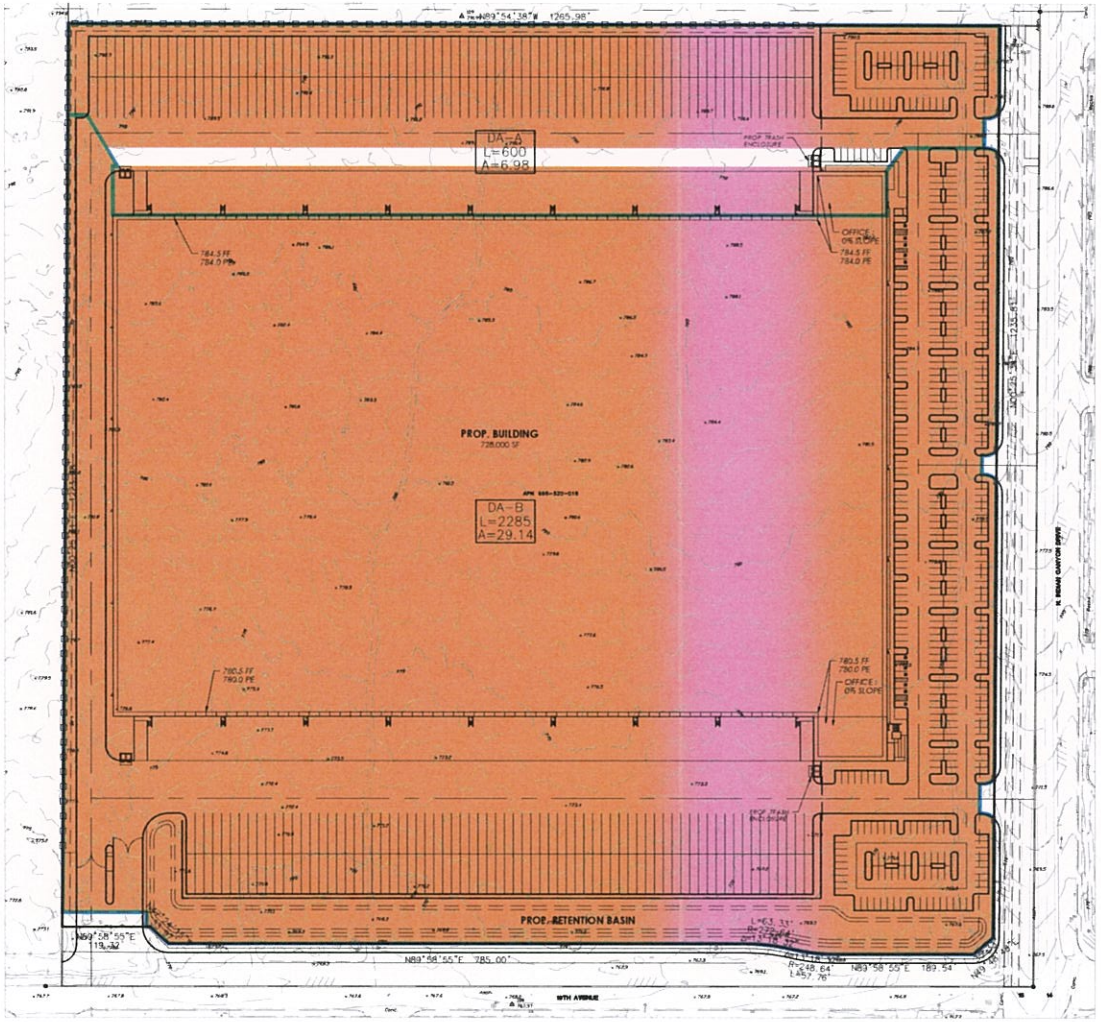
$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ — Q_{BMP} = 4.26 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

Appendix G

Preliminary Hydrology Exhibit
Preliminary Grading and Drainage Plan



DRAINAGE AREA 'DA-A'

PROPOSED LAND USE SUMMARY

LAND USE	OFF-SITE AREA (acres)	RI NUMBER	AMC II INFILTRATION RATE (in/hr)	IMPERVIOUS DECIMAL PERCENT
COMMERCIAL	6.99	32	0.74	0.90
TOTAL	6.98			

STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.55	2.03	2.33	2.75
FLOOD VOLUME	(cu-ft)	39,256	51,390	58,945	69,684
	(acre-ft)	0.90	1.18	1.35	1.60
PEAK FLOW	(cfs)	N/A	15.98	13.99	4.04
PERCOLATION	(ft)	0.08	0.25	0.50	2.00
PERCOLATION LOSSES	(cu ft)	1283.33	3850.00	7700.00	30800.00
REQUIRED STORAGE	(cu-ft)	37974.59	47539.52	51245.24	38884.03

UNDERGROUND RETENTION VOLUME SUMMARY

PROPOSED UNDERGROUND RETENTION
CONTROLLING VOLUME - 51,245 CF
2-90"Ø PERFORATED BARRELS - 770 LF
TOTAL RECTANGULAR FOOTPRINT (INCLUDING STONE AROUND SYSTEM) 165'x77'
TOTAL STORAGE PROVIDED - 51,371 CF (INCLUDING STONE VOIDS)
STONE PORosity - 40%
PERCOLATION RATE - 1 in/hr

DRAINAGE AREA 'DA-B'

PROPOSED LAND USE SUMMARY

LAND USE	OFF-SITE AREA (acres)	RI NUMBER	AMC II INFILTRATION RATE (in/hr)	IMPERVIOUS DECIMAL PERCENT
COMMERCIAL	29.14	32	0.74	0.90
TOTAL	29.14			

STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
TOTAL RAINFALL	(in)	1.69	2.45	3.16	5.11
RAINFALL VOLUME	(cuft)	178,786	259,158	334,260	540,529
SOIL LOSSES	(cuft)	14,872	44,617	88,177	249,613
EFFECTIVE RAIN	(in)	1.55	2.03	2.33	2.75
FLOOD VOLUME	(cu-ft)	163,883	214,540	246,084	290,916
	(acre-ft)	3.76	4.93	5.65	6.68
PEAK FLOW	(cfs)	N/A	69.71	58.26	16.86

RETENTION BASIN VOLUME SUMMARY

PROPOSED RETENTION BASIN
TOTAL BASE AREA OF BASIN - 23,203 SF
TOTAL AREA OF BASIN - 43,865 SF
TOTAL STORAGE PROVIDED - 109,883 CF

UNDERGROUND RETENTION VOLUME SUMMARY

PROPOSED UNDERGROUND RETENTION
CONTROLLING VOLUME - 136,917 CF
8-60"Ø PERFORATED BARRELS - 614 LF
TOTAL RECTANGULAR FOOTPRINT (INCLUDING STONE AROUND SYSTEM) 42'x81'
TOTAL STORAGE PROVIDED - 137,165 CF (INCLUDING STONE VOIDS)
STONE PORosity - 40%
PERCOLATION RATE - 1 in/hr

HYDROLOGIC AREA RECONCILIATION

PROPOSED LAND USE COMMERCIAL	36.2 AC
STREET DEDICATION	3.3 AC
SURVEY BOUNDARY	39.5 AC

PRELIMINARY WQMP SUMMARY

DRAINAGE AREA	TOTAL AREA (acres)	IMPERVIOUS AREA (acres)	DESIGN VOLUME (cu-ft)	DESIGN FLOW (cfs)
DA-A	6.98	6.28	12,753	1.63
DA-B	29.14	26.23	30,908	4.76

LAND USE LEGEND

COMMERCIAL

LEGEND

DRAINAGE FLOW →

TRIBUTARY AREA BOUNDARY

DRAINAGE SUB-AREA ID
FLOW TRAVEL LENGTH (FT)
AREA (AC)

A
L=XX
A=X.XXX

NORTH

0' 80' 160' 240' 320'

SCALE 1"=80'

PALM SPRINGS FULFILLMENT CENTER
PRELIMINARY SYNTHETIC UNIT HYDROGRAPH EXHIBIT

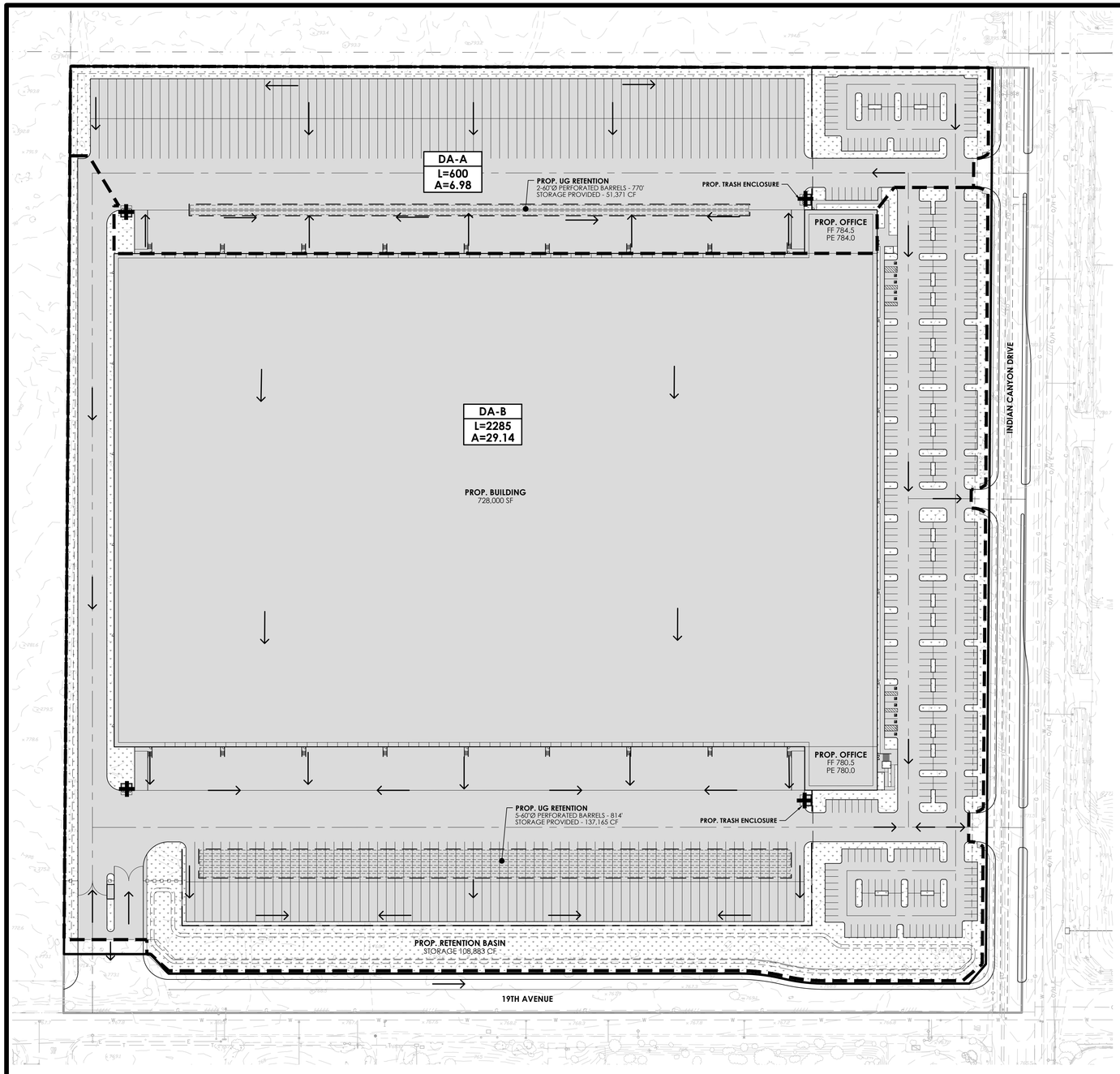
PROJECT NAME:	PALM SPRINGS FULFILLMENT CENTER
PREPARED FOR:	SNIDER INTERESTS, LLC
PLAN:	PRELIMINARY S.U.H. HYDROLOGY EXHIBIT
EXHIBIT DATE:	JANUARY 2023

MSA CONSULTING, INC.
Civil Engineering • Land Surveying • Landscape Architecture
Planning • Environmental Services • City Utility Coordination • GIS
34200 Bob Hope Drive Rancho Mirage, CA 92270 | 760.320.9811 | MSAConsultinginc.com

DESIGN BY	NM
DRAWN BY	NM
CHECK BY	MBR

Appendix J.2

Preliminary Water Quality Management Plan



NORTH

0' 80' 160' 240' 320'

SCALE 1"=80'

DYODS™
Design Your Own Detention System

CONTECH CMP DETENTION SYSTEMS

CONTECH CONSTRUCTION PRODUCTS INC.

For design assistance, drawings, and pricing send completed worksheet to:
dyods@contech-cpi.com

Project Summary

Date:	4/11/2023
Project Name:	Palm Springs Fulfillment Center
City / County:	Palm Springs / Riverside
State:	CA
Designed By:	NM
Company:	MSA Consulting
Telephone:	(760) 320-9811

Enter Information in Blue Cells

Corrugated Metal Pipe Calculator

Storage Volume Required (cf):	51,245	
Limiting Width (ft):	20.00	
Effective Depth Below Asphalt (ft):	6.00	
Solid or Perforated Pipe:	Perforated	
Shape Or Diameter:	60	19.63 ft2 Pipe Area
Spacing between Barrels (ft):	3.50	
Stone Width Around Perimeter of System (ft):	1.5	
Depth A: Porous Stone Above Pipe (in):	6	
Depth C: Porous Stone Below Pipe (in):	12	
Stone Porosity (0 to 40%):	40	

System Sizing — Use Custom Layout (at right) for layout adjustment

Pipe Storage:	30,277 cf	
Porous Stone Storage:	21,094 cf	
Total Storage Provided:	51,371 cf	100.2% Of Required Storage
Number of Barrels:	2 barrels	
Length Per Barrel:	771.00 ft	
Rectangular Footprint (W x L):	16.5 ft x 774. ft	

CONTECH Materials

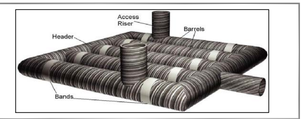
Total CMP Footage:	1,542 ft
Approximate Total Pieces:	66 pcs
Approximate Coupling Bands:	64 bands
Approximate Truckloads:	17 trucks

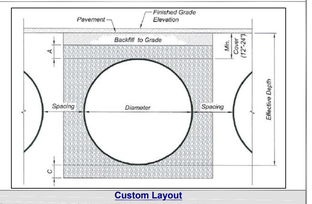
Construction Quantities**

Total Excavation:	2838 cy
Porous Stone Backfill For Storage:	1953 cy Stone
Backfill to Grade Excluding Stone:	-237 cy Fill

***Construction quantities are approximate and should be verified upon final design*

© 2007 CONTECH Stormwater Solutions





Custom Layout

To adjust layout, enter desired barrel length in the light blue boxes below.

Excess Footage = 0

Barrel 12	0	0
Barrel 11	0	0
Barrel 10	0	0
Barrel 9	0	0
Barrel 8	0	0
Barrel 7	0	0
Barrel 6	0	0
Barrel 5	0	0
Barrel 4	0	0
Barrel 3	0	0
Barrel 2	771	771
Barrel 1	771	771

Number Of Barrels Exceed Graph Limitations

0 200 400 600 800 1000

LEGEND

- PROJECT BOUNDARY
- PROPOSED DRAINAGE AREA BOUNDARIES
- PROPOSED TRASH ENCLOSURE
- PROPOSED DRAINAGE DIRECTION
- DA / L / A — DRAINAGE SUB-AREA ID; FLOW TRAVEL LENGTH (FT); AREA (AC)
- TRIBUTARY IMPERVIOUS AREA (BUILDINGS, HARDSCAPE, DRIVEWAYS, AND PARKING LOTS SUBJECT TO MAINTENANCE BY OWNER)
- TRIBUTARY PERVIOUS AREA (LANDSCAPED AREAS SUBJECT TO MAINTENANCE BY OWNER)

ABBREVIATIONS

AC.	ACREAGE	EX.	EXISTING
DA	DRAINAGE AREA	PROP.	PROPOSED
ELEV.	ELEVATION	RET.	RETENTION

BMP DESIGN VOLUME: DRAINAGE AREA "A"	
TRIBUTARY AREA TO BMP:	**6.980 AC.**
IMPERVIOUS AREA WITHIN TRIBUTARY AREA:	**6.280 AC**
IMPERVIOUS AREA RATIO:	**90%**
RUNOFF COEFFICIENT:	**0.73**
UNIT STORAGE VOLUME:	**0.29 AC-IN**
DESIGN STORAGE VOLUME OF BMP:	**7,397 CU-FT**
STORAGE PROVIDED	**51,371 CU-FT**

BMP DESIGN VOLUME: DRAINAGE AREA "B"	
TRIBUTARY AREA TO BMP:	**29.140 AC.**
IMPERVIOUS AREA WITHIN TRIBUTARY AREA:	**26.230 AC.**
IMPERVIOUS AREA RATIO:	**90%**
RUNOFF COEFFICIENT:	**0.73**
UNIT STORAGE VOLUME:	**0.29 AC-IN**
DESIGN STORAGE VOLUME OF BMP:	**30,908 CU-FT**
STORAGE PROVIDED	**246,048 CU-FT**

NOTE: ADDITIONAL FACILITY DETAILS WILL BE PROVIDED IN THE FINAL WQMP BASED ON FINAL GRADING AND HYDROLOGY DOCUMENTATION.

PRELIMINARY WQMP SUMMARY

DRAINAGE AREA	TOTAL AREA (acres)	IMPERVIOUS AREA (acres)	DESIGN VOLUME (cu-ft)	DESIGN FLOW (cfs)
DA-A	6.98	6.28	13,255	1.83
DA-B	29.14	26.23	30,908	4.26

PROJECT NAME:	**PALM SPRINGS FULFILLMENT CENTER**
PREPARED FOR:	**PS CANYON DEVELOPMENT, LLC**
PLAN:	**PRELIMINARY WQMP SITE PLAN**
EXHIBIT DATE:	**APRIL 2023**

MSA CONSULTING, INC.
Civil Engineering • Land Surveying • Landscape Architecture
Planning • Environmental Services • Dry Utility Coordination • GIS
34200 Bob Hope Drive Rancho Mirage, CA 92270 | 760.320.9811 | MSAConsultinginc.com

DESIGN BY	**JHC**
DRAWN BY	**DG**
CHECK BY	**JHC**

R:\2771\Acad\Grading\WQMP\2771 Preliminary WQMP.dwg, 4/11/2023 3:11:49 PM, dgutierrez, MSA Consulting, Inc.

Project Specific
Preliminary Water Quality Management Plan

For: **Palm Springs Fulfillment Center**

Northwest Corner of N. Indian Canyon Drive and 19th Avenue
City of Palm Springs, County of Riverside

DEVELOPMENT NO. **APN 666-320-018**

Prepared for:
PS Canyon Development, LLC
730 Arcady Road
Montecito, CA 93108
Telephone: (216) 785-0011

Prepared By:
Jesus Herrera-Cortes, CPSWQ, QSD / QSP

Prepared Under the Direction of:
Michael S. Rowe, PE
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270
Telephone: (760) 320-9811
Fax No. (760) 323-7893

Original Date Prepared: January 11, 2023

Revision Date(s): N/A

OWNER'S CERTIFICATION

This project-specific Water Quality Management Plan (WQMP) has been prepared for:

PS Canyon Development, LLC by MSA Consulting, Inc. for the project known as **Palm Springs Fulfillment Center** in the **City of Palm Springs, CA.**

This WQMP is intended to comply with the requirements of Palm Springs for **APN 666-320-018** which includes the requirement for the preparation and implementation of a project-specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity.

The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under the City of Palm Springs Water Quality Ordinance (Municipal Code Section 8.70).

If the undersigned transfers its interest in the subject property/project, the undersigned shall notify the successor in interest of its responsibility to implement this WQMP.

"I, the undersigned, certify under penalty of law that I am the owner of the property that is the subject of this WQMP, and that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

_____
Owner's Signature

_____
Owner's Printed Name

_____
Owner's Title/Position

_____
Date

PS Canyon Development, LLC
730 Arcady Road
Montecito, CA 93108
Telephone: (216) 785-0011

ATTEST

_____
Notary Signature

_____
Printed Name

_____
Title/Position

_____
Date

THIS FORM SHALL BE NOTARIZED BEFORE ACCEPTANCE OF THE FINAL PROJECT SPECIFIC WQMP

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V.1.A Site Design BMP Concepts and LID/Site Design BMPs 13
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APPENDICES

A. Conditions of Approval
B. Vicinity Map, WQMP Site Plan, and Receiving Waters Map
C. Supporting Detail Related to Hydrologic Conditions of Concern
D. Educational Materials
E. Soils Report
F. Structural BMP and/or Retention Facility Sizing Calculations and Design Details
G. Agreements – CC&Rs, Covenant and Agreements, BMP Maintenance Agreements and/or Other Mechanisms for ensuring ongoing Operation, Maintenance, Funding and Transfer of Requirements for this project-specific WQMP
H. Phase 1 Environmental Site Assessment – Summary of Site Remediation Conducted and Use Restrictions
I. Project-Specific WQMP Summary Data Form

I. Project Description

Project Owner: PS Canyon Development, LLC
730 Arcady Road
Montecito, CA 93108
Telephone: (216) 785-0011

WQMP Preparer: Michael S. Rowe, PE
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270
Telephone: (760) 323-7893
Fax No.: (760) 323-7893

Project Site Address:	**Northwest Corner of N. Indian Canyon Drive and 19th Avenue**
Planning Area:	**Coachella Valley Planning Area**
Community Name:	**Palm Springs**
Development Name:	**Palm Springs Fulfillment Center**
APN Number(s):	**666-320-018**
Latitude & Longitude:	**33.9121, -116.5476**
Receiving Water:	**Mission Creek**, **Whitewater River, Coachella Valley Stormwater Channel**
Property/Hydrology Area:	**36.12**

Standard Industrial Classification (SIC) Code(s):

4225: General Warehousing and Storage

Formation of Home Owners' Association (HOA)
or Property Owners Association (POA): Y ☐ N ☒

Additional Permits/Approvals required for the Project:

AGENCY	Permit required
State Department of Fish and Wildlife, Fish and Game Code §1602 Streambed Alteration Agreement	Y ☐ N☒
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Certification	Y ☐ N☒
US Army Corps of Engineers, CWA Section 404 permit	Y ☐ N☒
US Fish and Wildlife, Endangered Species Act Section 7 biological opinion	Y ☐ N☒
Statewide Construction General Permit Coverage	Y ☒ N☐
Statewide Industrial General Permit Coverage	Y ☐ N☒
Other: City of Palm Springs Grading Permit City of Palm Springs Building Permit	 Y ☒ N☐ Y ☒ N☐

- The proposed project activity will not divert or obstruct the natural flow or change the bed, channel, or bank of any stream, river or lake. Therefore, a State Department of Fish and Game, 1601 Streambed Alteration Agreement is not required.
- The proposed project activity will not result in discharge into navigable waters; therefore, a Clean Water Act Section 401 Water Quality Certification permit is not required.
- The proposed facility will not result in the discharge of dredged or fill materials into the waters of the United States, including wetlands. A Clean Water Act Section 404 Permit is not required for this project.
- The proposed project site is not recognized as a habitat of an endangered species nor does it form part of a Conservation Area under the Coachella Valley Multiple Species Habitat Conservation Plan. A U.S. Fish and Wildlife, Endangered Species Act Section 7 biological opinion is not required for this project.
- The proposed project is not industrial in nature. Therefore, coverage under the General Permit for Storm Water Discharges Associated with Industrial Activities is not required. This project will obtain coverage under the State Water Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

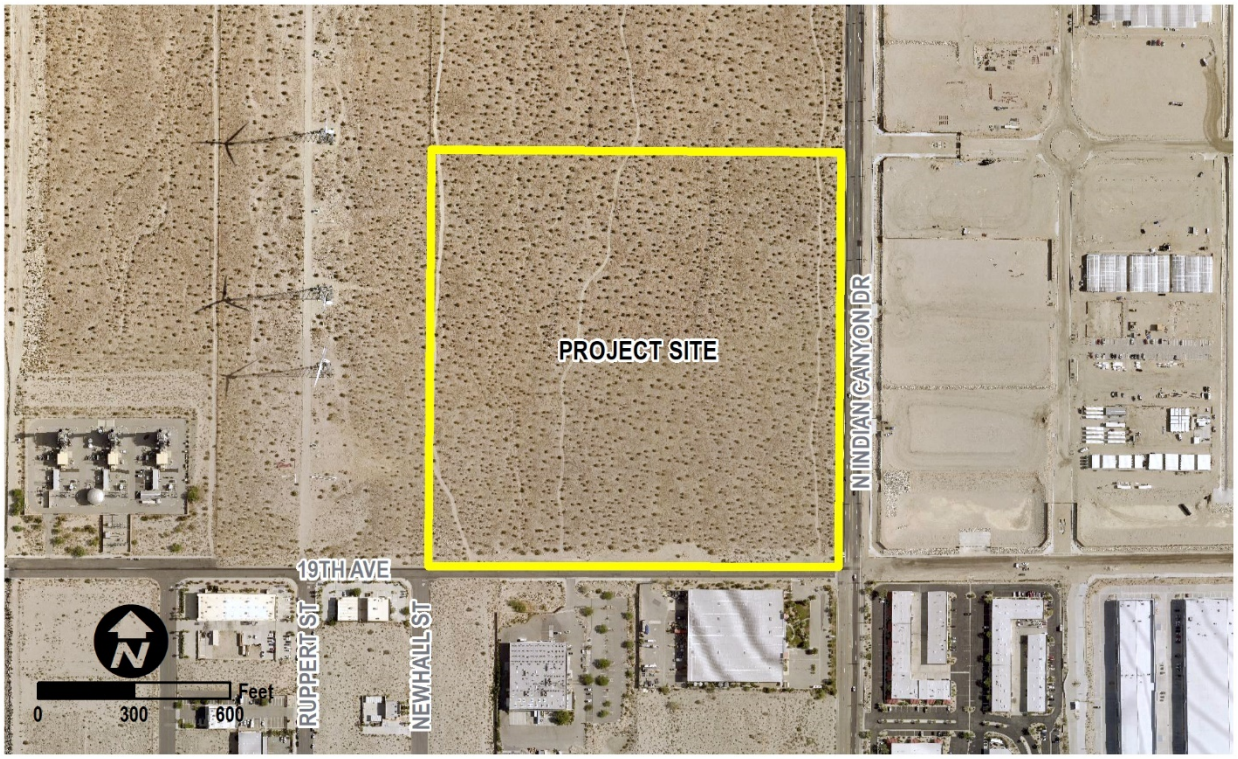
Location and Existing Conditions:

The Palm Springs Fulfillment Center ("Project Site," "Property," "Site") involves a survey boundary area of approximately 39.5 acres situated at the northwest corner of 19th Avenue and North Indian Canyon Drive, in the City of Palm Springs, California. The Property is currently identified by Riverside County Assessor's Parcel Number (APN) 666-320-018.

Site conditions consist of undeveloped land with relatively level terrain, sandy soils, and scattered vegetation coverage. Existing conditions also include various informal meandering dirt paths that traverse the Site in a north-south direction.

The eastern and southern boundaries are framed by existing public streets. Land directly to the north of the Project Site consists of vacant land with native terrain and scattered vegetation coverage. Land to the west consists of partially cleared land with the presence of wind turbines. Based on the relevant United States Geologic Service (USGS) Topographic Map, published in 2021, the Site is absent of any mapped naturally occurring drainage features.

Based on the USGS Web Soil Survey, the Site soils coverage is a composition of Carsitas fine sand, Carsitas cobbly sand, and Carsitas gravelly sand, corresponding to Hydrologic Soil Group A, which is characterized by USGS for having high infiltration rates and low runoff potential. For hydrology purposes, the design percolation rate of the proposed retention facilities is up to 1 inch per hour.



Proposed Project and Improvements:

This WQMP scope applies to the Palm Springs Fulfillment Center project, which includes one building partitioned into approximately 727,360 square feet for warehouse uses and approximately 24,000 square feet for related office operations. Associated on-site improvements include paved

parking, access and drive aisles, landscaping, and retention facilities with perimeter and gate controls, as illustrated in the Appendix B site plan documentation.

The Project Site has a survey boundary area of approximately 39.5 acres. The drainage management area for hydrology and WQMP purposes is 36.120 acres after excluding the non-tributary right-of-way dedications along Indian Canyon Drive and 19th Avenue. Consistent with the Preliminary Hydrology Report, the Project Site is subdivided into two on-site drainage areas: "A" and "B".

Drainage Area "A" includes the northernmost 6.980 acres with a post-development impervious coverage of approximately 90% for hardscape and paving improvements. Based on the *Whitewater Watershed BMP Design Volume Worksheet*, the volumetric-based stormwater quality design volume (V_{BMP}) for Drainage Area B is 7,397 cubic feet. Runoff from Drainage A will be conveyed to a dedicated underground retention structure that is designed to provide approximately 51,371 cubic feet of storage to handle the entirety of the flood volume resulting from the controlling 100-year, 24-hour storm event and the WQMP stormwater quality design volume requirement (V_{BMP}). The underground retention structure will consist of 60-inch-diameter corrugated metal pipe (CMP) wrapped with crushed rock and non-woven geotextile fabric.

Drainage Area "B" includes the remaining 29.140 acres with a post-development impervious coverage of 90% for the building, hardscape, and paving improvements. Based on the *Whitewater Watershed BMP Design Volume Worksheet*, the volumetric-based stormwater quality design volume (V_{BMP}) for Drainage Area A is approximately 30,908 cubic feet. Runoff from Drainage B will be conveyed via surface flows to retention facilities with a combined capacity to retain the entirety of the flood volume resulting from the controlling 100-year, 24-hour storm event and the WQMP stormwater quality design volume requirement (V_{BMP}). The initial facility to receive project runoff is a proposed surface retention basin with a capacity of approximately 108,883 cubic feet. Runoff in excess of this basin capacity will be conveyed via surface flows into a secondary retention system consisting of an underground retention structure with a capacity of approximately 137,165 cubic feet, consisting of 60-inch-diameter corrugated metal pipe (CMP) wrapped with crushed rock and non-woven geotextile fabric. The surface and underground retention facilities will work as a single system to serve Drainage Area "B". Further facility details will be provided in the Final WQMP documentation, taking into consideration the final engineering plans and hydrology study. The specific drainage area calculations, impervious percentage, design capture volume, and provided retention capacities are provided in Table A below.

Table A – Summary of Drainage Areas and Retention Capacities

Drainage Area ID	On-Site Area	Impervious Area and Percentage	WQMP V_{BMP}	Method of Retention	Provided Retention Capacity
DA-A	6.980 AC.	6.280 AC. (90%)	7,397CF	Underground Structure	51,371 CF
DA-B	29.140 AC.	26.230 AC. (90%)	30,908 CF	Underground Structure and Surface Basin	246,048 CF
Total Site	36.120 AC.	32.510 AC. (90%)	38,305 CF	See Above	297,419 CF

By providing capacity for the entirety of the controlling 100-year, 24-hour storm event volume, the proposed retention facilities will meet or exceed the local retention requirements that call for managing the proportionally smaller incremental increase in stormwater volume.

Location of Activities:

The project does not have a specific area involving outdoor storage or processing operations that would warrant additional site design, source control or treatment measures other than those provided for the project as a whole.

Waste Generation:

The proposed project is expected to generate non-hazardous solid waste typical of most commercial land uses. The project's waste will be collected and managed by Palm Springs Disposal Services on a typical commercial schedule. All forms of non-hazardous waste will be partially mitigated by on-site maintenance, waste reduction and recycling measures, such as those established in the City's Solid Waste Ordinance.

Materials Storage:

The project does not involve outdoor operations. All operation and storage activities will occur indoors. Outdoor activities will be limited to parking.

II. Site Characterization

Land Use Designation or Zoning:

Existing/Proposed General Plan Land Use: Industrial

Existing/Proposed Zoning: M-2

Current Property Use: Vacant

Proposed Property Use: Industrial Warehouse

Availability of Soils Report: Y ☒ N ☐

Phase 1 Site Assessment: Y ☐ N ☒

Receiving Waters for Urban Runoff from Site

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use Designated Receiving Waters
Mission Creek	Not listed as impaired.	MUN (*Potential*), AGR, GWR, REC I, REC II, WARM, WILD	Water body not classified as RARE
Whitewater River	Not listed as impaired.	MUN, AGR, GWR, REC I, REC II, WARM (*Intermittent*) COLD, WILD, POW	Water body not classified as RARE
Coachella Valley Stormwater Channel	Ammonia, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Disulfoton, Indicator Bacteria, Oxygen, Dissolved, PCBs (Polychlorinated biphenyls), Toxaphene, Toxicity	FRSH, REC I *c*, REC II *c*, WARM, WILD, RARE *d*	Approximately 20 miles

The preceding table is based on the **2020-2022 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report.**

Abbreviations:
I – Intermittent Beneficial Use
FRSH – Freshwater Replenishment
REC I – Water Contact Recreation
REC II – Non-Contact Water Recreation
WARM – Warm Freshwater Habitat
WILD – Wildlife Habitat
RARE – Preservation of Rare, Threatened, or Endangered Species
MUN – Municipal & Domestic Supply
AGR – Agricultural Supply
GWR – Groundwater Recharge
AQUA – Acuaculture
COLD – Cold Freshwater Habitat
POW – Hydropower Generation

a. Although it is not encouraged, children play in the water infrequently on the wildlife reserve
b. Section of perennial flow from approximately Indio to the Salton Sea.
c. Unauthorized use.
d. Rare, endangered, or threatened wildlife exists in or utilizes some of this waterway.

III. Pollutants of Concern

Table 1. Pollutant of Concern Summary

Pollutant Category	Potential for Project	Causing Receiving Water Impairment
Bacteria/Virus (Pathogens)	Yes	Yes (Pathogens)
Heavy Metals	Yes	No
Nutrients	Yes	Yes (Ammonia)
Toxic Organic Compounds	No	Yes
Sediment/Turbidity	Yes	No
Trash & Debris	Yes	No
Oil & Grease	Yes	No

Based on the 2020-2022 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report, the Coachella Valley Stormwater Channel is impaired by **Ammonia, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Disulfoton, Indicator Bacteria, Oxygen, Dissolved, PCBs (Polychlorinated biphenyls), Toxaphene, Toxicity**

- The project is not anticipated to generate DDT contamination because the use of this substance (synthetic organic compound) has been banned since 1972; therefore, it will not be handled or form part of the proposed development.
- The project is not anticipated to generate Dieldrin contamination because the use of this substance (synthetic organic compound) was related to agricultural operations (found in pesticides for crops) and it has been illegal since 1987; therefore, it will not be handled or form part of the proposed development.
- The project is not anticipated to produce polychlorinated biphenyls (PCBs) because manufacturing this substance (synthetic organic compound) stopped in 1977 and its application was banned in 1979; therefore, it will not be handled or form part of the proposed development.
- The proposed development is not anticipated to produce toxaphene because the use of this substance (synthetic organic compound) has been illegal since 1990; therefore, it will not be handled or form part of the proposed development.
- The proposed development will include landscaped areas in accordance with the City of Springs and Coachella Valley Water District (CVWD) landscaping requirements, including those applicable to water-efficient irrigation and desert-friendly plant selections. The preliminary landscaping design for this project does not include turf coverage. As a result, the project may involve the limited use of nitrogen-based plant nutrients. Ammonia contribution in runoff is typically associated with commercial fertilizers utilized in agricultural operations, which are not part of the project. Considering the required use of desert-friendly plants, efficient irrigation system, and on-site stormwater retention facilities in accordance with the local development standards, the project is not expected to be a considerable source of Nitrogen, ammonia (Total Ammonia).
- The project has the potential to generate small amounts of pathogens (bacteria/virus). These pollutants are generally associated with various human activities, but pathogens are also present in natural

environments. Moreover, pathogens can be associated with wild and domesticated animal waste. Source control measures to address this potential pollutant are discussed in the subsequent sections of this report.

- The project is not expected to generate or discharge toxicants, such as toxic metals and synthetic organic compounds that would result in detrimental physiological responses in human, plant, animal, or indigenous aquatic life in the receiving waters.

Table 1 (*Potential Pollutants Generated by Land Use Type*) of the *Riverside County Whitewater River Region Stormwater Quality Best Management Practice Design Handbook for Low Impact Development* identifies eight (8) land use categories with their corresponding potential pollutants that may be generated.

Type of Development (Land Use)	Sediment/ Turbidity	Nutrients	Toxic Organic Compounds	Trash & Debris	Bacteria & Viruses (*Also: Pathogens*)	Oil & Grease	Heavy Metals
Commercial/Industrial Development	P	P (1)	P (5)	P	P (3)	P	P (6)
Parking Lots	P	P (1)	P (4)	P	P	P	P

Abbreviations:

P = Potential N = Not potential

Notes:

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected.
(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected.
(3) A potential Pollutant if land use involves food or animal waste products.
(4) Specifically, petroleum hydrocarbons.
(5) Specifically, solvents; however, this Pollutant is not expected at commercial office or commercial retail sites, unless said retail is vehicle related.
(6) A potential Pollutant if the project includes outdoor storage or metal roofs; otherwise not expected.

Potential Project Pollutants: The logistics facilities have the generalized potential to produce sediment/turbidity; nutrients; trash and debris; oil and grease.

Legacy Pollutants: There is no evidence of legacy pollutants on-site.

Pollutants of Concern: Based on the comparison of potential project pollutants with the pollutant categories causing receiving water impairments, the pollutants of concern include **bacteria/virus** and **nutrients**. However, as demonstrated in this WQMP and the corresponding Hydrology Report, the retention facilities have adequate capacity to store the entirety of the 100-year storm runoff generated in the project area. Therefore, the provided retention capacity meets or exceeds the City's stormwater requirements for the project's drainage management areas.

IV. Hydrologic Conditions of Concern

Local Jurisdiction Requires On-Site Retention of Urban Runoff:

Yes ☒ The project will be required to retain urban runoff onsite in conformance with local ordinance (See Table 6 of the WQMP Guidance document, "Local Land use Authorities Requiring Onsite Retention of Stormwater"). This section does not need to be completed; however, retention facility design details and sizing calculations must be included in Appendix F.

The project is obligated to meet the City of Palm Spring's hydrologic requirements by demonstrating that the incremental increase in runoff due to development can be adequately retained on-site and that the incremental increase in runoff volume from the most conservative duration 100-year storm can be safely and adequately conveyed within the project. The project provides facilities to retain the entirety of the controlling 100-year, 24-hour storm event, therefore meeting or exceeding the City of Palm Springs stormwater retention ordinance as listed on Table 6 of the WQMP Guidance document. As a result, the project will not result in changes to the hydrologic regime that will permanently impact downstream channels, receiving waters, or habitat integrity. No Hydrologic Conditions of Concern are expected to result from the project.

No ☐ This section must be completed.

This Project meets the following condition:

☐ **Condition A**: 1) Runoff from the Project is discharged directly to a publicly-owned, operated and maintained MS4 or engineered and maintained channel, 2) the discharge is in full compliance with local land use authority requirements for connections and discharges to the MS4 (including both quality and quantity requirements), 3) the discharge would not significantly impact stream habitat in proximate Receiving Waters, **and** 4) the discharge is authorized by the local land use authority.

☐ **Condition B**: The project disturbs less than 1 acre and is not part of a larger common plan of development that exceeds 1 acre of disturbance. The disturbed area calculation must include all disturbances associated with larger plans of development.

☐ **Condition C**: The project's runoff flow rate, volume, velocity and duration for the post-development condition do not exceed the pre-development condition for the 2-year, 24-hour and 10-year 24-hour rainfall events. This condition can be achieved by, where applicable, complying with the local land use authority's on-site retention ordinance, or minimizing impervious area on a site and incorporating other Site-Design BMP concepts and LID/Site Design BMPs that assure non-exceedance of pre-development conditions. This condition must be substantiated by hydrologic modeling methods acceptable to the local land use authority.

☐ **None:** Refer to Section 3.4 of the Whitewater River Region WQMP Guidance document for additional requirements.

Supporting engineering studies, calculations, and reports are included in Appendix C.

V. Best Management Practices

This project implements Best Management Practices (BMPs) to address the Pollutants of Concern that may potentially be generated from the use of the project site. These BMPs have been selected and implemented to comply with Section 3.5 of the WQMP Guidance document, and consist of Site Design BMP concepts, Source Control, LID/Site Design and, if/where necessary, Treatment Control BMPs as described herein.

V.1 Site Design BMP Concepts, LID/Site Design and Treatment Control BMPs

Local Jurisdiction Requires On-Site Retention of Urban Runoff:

Yes ☒ The project will be required to retain Urban Runoff onsite in conformance with project-specific requirements (See Table 6 of the WQMP Guidance document, "Local Land use Authorities Requiring Onsite Retention of Stormwater). **The LID/Site Design measurable goal has thus been met (100%), and Sections V.1.A and V.1.B do not need to be completed**; however, retention facility design details and sizing calculations must be included in Appendix F, and '100%' should be entered into Column 3 of Table 6 below.

The project is obligated to meet the City of Palm Spring's hydrologic requirements by demonstrating that the incremental increase in runoff due to development can be adequately retained on-site and that the incremental increase in runoff volume from the most conservative duration 100-year storm can be safely and adequately conveyed within the project. The project provides facilities to retain the entirety of the controlling 100-year, 24-hour storm event, therefore meeting or exceeding the City of Palm Springs stormwater retention ordinance as listed on Table 6 of the WQMP Guidance document. As a result, the project will not result in changes to the hydrologic regime that will permanently impact downstream channels, receiving waters, or habitat integrity. No Hydrologic Conditions of Concern are expected to result from the project.

No ☐ Section V.1 must be completed.

This section of the Project-Specific WQMP documents the LID/Site Design BMPs and, if/where necessary, the Treatment Control BMPs that will be implemented on the project to meet the requirements detailed within Section 3.5.1 of the WQMP Guidance document. Section 3.5.1 includes requirements to implement Site Design Concepts and BMPs, and includes requirements to address Pollutants of Concern with BMPs. Further, sub-section 3.5.1.1 specifically requires that Pollutants of Concern be addressed with LID/Site Design BMPs to the extent feasible.

LID/Site Design BMPs are those BMPs listed within Table 2 below which promote retention and/or feature a natural treatment mechanism; off-site and regionally-based BMPs are also LID/Site Design BMPs, and therefore count towards the measurable goal, if they fit these criteria. This project incorporates LID/Site Design BMPs to fully address the Treatment Control BMP requirement where and to the extent feasible. If and where it has been acceptably demonstrated to the local land use authority that it is infeasible to fully meet this requirement with LID/Site Design BMPs, Section V.1.B (below) includes a description of the conventional Treatment Control BMPs that will be substituted to meet the same requirements. In addressing Pollutants of Concern, BMPs are selected using Table 2 below.

Table 2. BMP Selection Matrix Based Upon Pollutant of Concern Removal Efficiency [(1)]

(Sources: Riverside County Flood Control & Water Conservation District Design Handbook for Low Impact Development Best Management Practices, dated September 2011, the Orange County Technical Guidance Document for Water Quality Management Plans, dated May 19, 2011, and the Caltrans Treatment BMP Technology Report, dated April 2010 and April 2008)

Pollutant of Concern	Landscape Swale[2, 3]	Landscape Strip[2, 3]	Biofiltration (with underdrain)[2, 3]	Extended Detention Basin[2]	Sand Filter Basin[2]	Infiltration Basin[2]	Infiltration Trench[2]	Permeable Pavement[2]	Bioretention (w/o underdrain)[2, 3]	Other BMPs Including Proprietary BMPs[4, 6]
Sediment & Turbidity	M	M	H	M	H	H	H	H	H	Varies by Product[5]
Nutrients	L/M	L/M	M	L/M	L/M	H	H	H	H	
Toxic Organic Compounds	M/H	M/H	M/H	L	L/M	H	H	H	H	
Trash & Debris	L	L	H	H	H	H	H	L	H	
Bacteria & Viruses (also: Pathogens)	L	M	H	L	M	H	H	H	H	
Oil & Grease	M	M	H	M	H	H	H	H	H	
Heavy Metals	M	M/H	M/H	L/M	M	H	H	H	H	

Abbreviations:

L: Low removal efficiency M: Medium removal efficiency H: High removal efficiency

Notes:

(1) Periodic performance assessment and updating of the guidance provided by this table may be necessary.

(2) Expected performance when designed in accordance with the most current edition of the document, "Riverside County, Whitewater River Region Stormwater Quality Best Management Practice Design Handbook".

(3) Performance dependent upon design which includes implementation of thick vegetative cover. Local water conservation and/or landscaping requirements should be considered; approval is based on the discretion of the local land use authority.

(4) Includes proprietary stormwater treatment devices as listed in the CASQA Stormwater Best Management Practices Handbooks, other stormwater treatment BMPs not specifically listed in this WQMP (including proprietary filters, hydrodynamic separators, inserts, etc.), or newly developed/emerging stormwater treatment technologies.

(5) Expected performance should be based on evaluation of unit processes provided by BMP and available testing data. Approval is based on the discretion of the local land use authority.

(6) When used for primary treatment as opposed to pre-treatment, requires site-specific approval by the local land use authority.

V.1.A SITE DESIGN BMP CONCEPTS AND LID/SITE DESIGN BMPS

Note: This section is not applicable Due to conformance with local retention requirements per Section 3.5.1.2 of Whitewater River Region WQMP Guidance Document.

This section documents the Site Design BMP concepts and LID/Site Design BMPs that will be implemented on this project to comply with the requirements detailed in Section 3.5.1 of the WQMP Guidance document.

- Table 3 herein documents the implementation of the Site Design BMP Concepts described in sub-sections 3.5.1.3 and 3.5.1.4.
- Table 4 herein documents the extent to which this project has implemented the LID/Site Design goals described in sub-section 3.5.1.1.

Table 3. Implementation of Site Design BMP Concepts

Note: Completion of this sub-section is not required since the project is in conformance with the local retention requirements.

Design Concept	Technique	Specific BMP	Included			Brief Reason for BMPs Indicated as No or N/A
			Yes	No	N/A	
Site Design BMP Concept 1	**Minimize Urban Runoff, Minimize Impervious Footprint, and Conserve Natural Areas** **(See WQMP Section 3.5.1.3)**	Conserve natural areas by concentrating or clustering development on the least environmentally sensitive portions of a site while leaving the remaining land in a natural, undisturbed condition.	☐	☐	☐	
		Conserve natural areas by incorporating the goals of the Multi-Species Habitat Conservation Plan or other natural resource plans.	☐	☐	☐	
		Preserve natural drainage features and natural depressional storage areas on the site.	☐	☐	☐	
		Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.	☐	☐	☐	
		Use natural drainage systems.	☐	☐	☐	
		Where applicable, incorporate Self-Treating Areas	☐	☐	☐	
		Where applicable, incorporate Self-Retaining Areas	☐	☐	☐	
		Increase the building floor to area ratio (i.e., number of stories above or below ground).	☐	☐	☐	
		Construct streets, sidewalks and parking lot aisles to minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.	☐	☐	☐	
		Reduce widths of streets where off-street parking is available.	☐	☐	☐	
		Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.	☐	☐	☐	
		Other comparable and equally effective Site Design BMP concept(s) as approved by the local land use authority (Note: Additional narrative required to describe BMP and how it addresses site design concept).	☐	☐	☐	

Table 3. Site Design BMP Concepts (continued)

Note: Completion of this sub-section is not required since the project is in conformance with the local retention requirements.

Design Concept	Technique	Specific BMP	Included			Brief Reason for Each BMP Indicated as No or N/A
			Yes	No	N/A	
Site Design BMP Concept 2	**Minimize Directly Connected Impervious Area** **(See WQMP Section 3.5.1.4)**	Design residential and commercial sites to contain and infiltrate roof runoff, or direct roof runoff to landscaped swales or buffer areas.	☐	☐	☐	
		Drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.	☐	☐	☐	
		Incorporate landscaped buffer areas between sidewalks and streets.	☐	☐	☐	
		Use natural or landscaped drainage swales in lieu of underground piping or imperviously lined swales.	☐	☐	☐	
		Where soil conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration.	☐	☐	☐	
		Maximize the permeable area by constructing walkways, trails, patios, overflow parking, alleys, driveways, low-traffic streets, and other low-traffic areas with open-jointed paving materials or permeable surfaces such as pervious concrete, porous asphalt, unit pavers, and granular materials.	☐	☐	☐	
		Use one or more of the following:				
		Rural swale system: street sheet flows to landscaped swale or gravel shoulder, curbs used at street corners, and culverts used under driveways and street crossings.	☐	☐	☐	
		Urban curb/swale system: street slopes to curb; periodic swale inlets drain to landscaped swale or biofilter.	☐	☐	☐	
		Dual drainage system: first flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder; high flows connect directly to MS4s.	☐	☐	☐	
		Other comparable and equally effective Site Design BMP concept(s) as approved by the local land use authority (Note: Additional narrative required to describe BMP and how it addresses site design concept).	☐	☐	☐	
		Use one or more of the following for design of driveways and private residential parking areas:				
		Design driveways with shared access, flared (single lane at street), or wheel strips (paving only under the tires).	☐	☐	☐	
		Uncovered temporary or guest parking on residential lots paved with a permeable surface, or designed to drain into landscaping.	☐	☐	☐	

Table 3. Site Design BMP Concepts (continued)

Note: Completion of this sub-section is not required since the project is in conformance with the local retention requirements.

Design Concept	Technique	Specific BMP	Included			Brief Reason for Each BMP Indicated as No or N/A
			Yes	No	N/A	
Site Design BMP Concept 2 (cont'd)	**Minimize Directly Connected Impervious Area (See WQMP Section 3.5.1.4)**	Other comparable and equally effective Site Design BMP concept(s) as approved by the local land use authority (Note: Additional narrative required to describe BMP and how it addresses site design concept).	☐	☐	☐	
		Use one or more of the following for design of parking areas:				
		Where landscaping is proposed in parking areas, incorporate parking area landscaping into the drainage design.	☐	☐	☐	
		Overflow parking (parking stalls provided in excess of the Permittee's minimum parking requirements) may be constructed with permeable pavement.	☐	☐	☐	
		Other comparable and equally effective Site Design BMP (or BMPs) as approved by the local land use authority (Note: Additional narrative required describing BMP and how it addresses site design concept).	☐	☐	☐	

Project Site Design BMP Concepts:

Note: This section is not applicable Due to conformance with local retention requirements per Section 3.5.1.2 of Whitewater River Region WQMP Guidance Document.

Alternative Project Site Design BMP Concepts:

Not Applicable

Table 4. LID/Site Design BMPs Meeting the LID/Site Design Measurable Goal

(1) DRAINAGE SUB-AREA ID OR NO.	(2) LID/SITE DESIGN BMP TYPE* (See Table 2)	(3) POTENTIAL POLLUTANTS OF CONCERN WITHIN DRAINAGE SUB-AREA (Refer to Table 1)	(4) POTENTIAL POLLUTANTS WITHIN SUB-AREA CAUSING RECEIVING WATER IMPAIRMENTS (Refer to Table 1)	(5) EFFECTIVENESS OF LID/SITE DESIGN BMP AT ADDRESSING IDENTIFIED POTENTIAL POLLUTANTS (U, L, M, H/M, H; see Table 2)	(6) BMP MEETS WHICH DESIGN CRITERIA? (Identify as V_{BMP} OR Q_{BMP})	(7) TOTAL AREA WITHIN DRAINAGE SUB-AREA (Nearest 0.1 acre)
A	Infiltration BMP (Underground)	Bacteria/virus and Nutrients	Bacteria/virus and Nutrients	H	V_{BMP} = 7,397 CF Storage Provided = 51,371 CF	6.980
B	Infiltration BMP (Underground and Surface)	Bacteria/virus and Nutrients	Bacteria/virus and Nutrients	H	V_{BMP} = 30,908 CF Storage Provided = 246,048 CF	29.140
TOTAL PROJECT AREA TREATED WITH LID/SITE DESIGN BMPs (NEAREST 0.1 ACRE)						**36.120**

*** LID/Site Design BMPs listed in this table are those that <u>completely</u> address the 'Treatment Control BMP requirement' for their drainage sub-area.**

Note: Conformance with the local retention requirements will be satisfied by conveying project runoff into the proposed retention structures.

Justification of infeasibility for sub-areas not addressed with LID/Site Design BMPs

Not applicable.

V.1.B TREATMENT CONTROL BMPS

Conventional Treatment Control BMPs shall be implemented to address the project's Pollutants of Concern as required in WQMP Section 3.5.1 where, and to the extent that, Section V.1.A has demonstrated that it is infeasible to meet these requirements through implementation of LID/Site Design BMPs.

☒ The LID/Site Design BMPs described in Section V.1.A of this project-specific WQMP completely address the 'Treatment Control BMP requirement' for the entire project site (and where applicable, entire existing site) as required in Section 3.5.1.1 of the WQMP Guidance document. Supporting documentation for the sizing of these LID/Site Design BMPs is included in Appendix F. ***Section V.1.B does not need to be completed**.

☐ The LID/Site Design BMPs described in Section V.1.A of this project-specific WQMP do **NOT** completely address the 'Treatment Control BMP requirement' for the entire project site (or where applicable, entire existing site) as required in Section 3.5.1.1 of the WQMP. ***Section V.1.B must be completed.**

The Treatment Control BMPs identified in this section are selected, sized and implemented to treat the design criteria of V_{BMP} and/or Q_{BMP} for all project (and if required, existing site) drainage sub-areas which were not fully addressed using LID/Site Design BMPs. Supporting documentation for the sizing of these Treatment Control BMPs is included in Appendix F.

Table 5: Treatment Control BMP Summary

(1) DRAINAGE SUB-AREA ID OR NO.	(2) TREATMENT CONTROL BMP TYPE* (See Table 2)	(3) POTENTIAL POLLUTANTS OF CONCERN WITHIN DRAINAGE SUB-AREA (Refer to Table 1)	(4) POTENTIAL POLLUTANTS WITHIN SUB-AREA CAUSING RECEIVING WATER IMPAIRMENTS (Refer to Table 1)	(5) EFFECTIVENESS OF TREATMENT CONTROL BMP AT ADDRESSING IDENTIFIED POTENTIAL POLLUTANTS (U, L, M, H/M, H; see Table 2)	(6) BMP MEETS WHICH DESIGN CRITERIA? (Identify as V_{BMP} OR Q_{BMP})	(7) TOTAL AREA WITHIN DRAINAGE SUB-AREA (Nearest 0.1 acre)
N/A	N/A	N/A	N/A	N/A	N/A	N/A
	TOTAL PROJECT AREA TREATED WITH TREATMENT CONTROL BMPs (NEAREST 0.1 ACRE)					N/A

Note: Local retention ordinance requirements will be satisfied by conveying the project's design capture runoff volume and controlling 100-year, 24-hour storm event volume in accordance with the City's hydrologic requirements.

V.1.C MEASURABLE GOAL SUMMARY

This section documents the extent to which this project has met the measurable goal described in WQMP Section 3.5.1.1 of addressing 100% of the project's 'Treatment Control BMP requirement' with LID/Site Design BMPs. Projects required to retain Urban Runoff onsite in conformance with local ordinance are considered to have met the measurable goal; for these instances, '100%' is entered into Column 3 of the Table.

Table 6: Measurable Goal Summary

(1) **Total Area Treated with LID/Site Design BMPs** (Last row of Table 4)	(2) **Total Area Treated with Treatment Control BMPs** (Last row of Table 5)	(3) **% of Treatment Control BMP Requirement addressed with LID/Site Design BMPs**
36.120	**0**	**100**

V.2 SOURCE CONTROL BMPS

This section identifies and describes the Source Control BMPs applicable and implemented on this project.

Table 7. Source Control BMPs

BMP Name	Check One		If not applicable, state brief reason
	Included	Not Applicable	
Non-Structural Source Control BMPs			
Education for Property Owners, Operators, Tenants, Occupants, or Employees	☒	☐	
Activity Restrictions	☒	☐	
Irrigation System and Landscape Maintenance	☒	☐	
Common Area Litter Control	☒	☐	
Street Sweeping Private Streets and Parking Lots	☒	☐	
Drainage Facility Inspection and Maintenance	☒	☐	
Structural Source Control BMPs			
Storm Drain Inlet Stenciling and Signage	☒	☐	
Landscape and Irrigation System Design	☒	☐	
Protect Slopes and Channels	☐	☒	Not part of the proposed project
Provide Community Car Wash Racks	☐	☒	Not part of the proposed project
Properly Design*:			
Fueling Areas	☐	☒	Not part of the proposed project
Air/Water Supply Area Drainage	☐	☒	Not part of the proposed project
Trash Enclosures	☒	☐	
Loading Docks	☐	☒	Not part of the proposed project
Maintenance Bays	☐	☒	Not part of the proposed project
Vehicle and Equipment Wash Areas	☐	☒	Not part of the proposed project
Outdoor Material Storage Areas	☐	☒	Not part of the proposed project
Outdoor Work Areas or Processing Areas	☐	☒	Not part of the proposed project
Provide Wash Water Controls for Food Preparation Areas	☐	☒	Not part of the proposed project

*Details demonstrating proper design must be included in Appendix F.

Non-Structural Source Control BMPs

Education Program:

Project Owner(s) shall be informed on topics related to stormwater pollution, prevention and response, and shall train facility operators using the BMP Educational Materials in Appendix D through various means, such as standard operating procedures. Site operators shall also be duly informed of restrictions and other rules prohibiting the improper storage of hazardous materials. Facility operators may also refer to the education materials in Appendix D of this WQMP or the Riverside County Watershed Protection web site at: https://www.rcwatershed.org/ , to train site maintenance staff.

Activity Restrictions: The following are examples of activities that shall be prevented or prohibited on-site as part of the facility rules: littering; discharge and waste dumping into parking storm drain inlets; blowing, sweeping or hosing of debris into driveways or parking lots; discharge of nuisance flows, including car washing wastewater.

Irrigation System and Landscape Maintenance:

The irrigation and landscape maintenance will help increase the effectiveness of these systems and minimize the amount of runoff that enters the storm drain system. Erosion and the conveyance of pesticides/fertilizers in runoff shall also be prevented through proper routine maintenance. Routine irrigation system and landscape maintenance will also serve as a vector control measure due to the minimization of nuisance water runoff and stagnation.

Common Area Litter Control:

Common area litter control shall be implemented to reduce pollution in runoff. Any observed accumulated trash, vegetation debris or improper disposal shall be addressed promptly by designated staff. Litter control measures can be coordinated and improved by the landscaping maintenance that will take place at the site. The raking or sweeping of trash shall only be performed in a manner that avoids trash from entering the storm drain system. All landscape-related debris or maintenance deficiencies are to be corrected immediately.

Paved Area Sweeping and Cleaning: Paved area sweeping and cleaning shall be performed on-site on a routine basis to prevent trash, sediment, and other debris from being conveyed into the on-site storm drain system. Paved area sweeping shall be performed during dry weather and the frequency should be flexible to accommodate climate conditions and areas of concern. Street sweeping equipment must be operated only by trained personnel based on the manufacturer's specifications. Street sweeping equipment shall be properly maintained off-site by the operator. All collected debris must be taken to an approved permanent disposal site.

Structural Source Control BMPs

The project will incorporate measures to discourage illegal dumping in the proposed private storm drain system.

- **MS4 Stenciling: (Property management/operator)**

  At each storm drain inlet, a stenciled or affixed sign (including medallions) shall be applied by the owner and contain a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. The legibility of markers and signs shall be maintained throughout the life of the project.

- **Rules and Regulations: (Property management/operator)**

  Site management shall establish and implement rules that prohibit improper non-stormwater discharge into the storm drain system. This measure may also be considered non-structural and form part of the activity restrictions associated with the site's standard operating procedures.

- **Signage at the Trash Enclosures: (Property management/operator)**
  Language prohibiting illegal dumping into the storm drain system shall be integrated in the signage posted on the side of trash enclosures with the intent to discourage trash and waste misplacement that could ultimately impact the on-site storm drain system.

Landscape and Irrigation System Design: The site's structural source control BMP involves an efficient landscape irrigation design. The system will include native or drought-tolerant plants and mechanisms to minimize excess irrigation and nuisance water into the stormwater conveyance system while working to reduce soil amendments and irrigation frequency. The system shall also minimize the conveyance of landscape related chemicals, including pesticides. The storm drain system includes earthen swales in the landscaped areas designed to convey stormwater into the designated area drains and therefore shall be maintained unobstructed by landscape or other forms of debris. Instances of irrigation pipe leaks shall warrant prompt restoration of the swales to their design intent.

Trash Enclosures: Trash containers shall be leak proof and have attached covers or lids. Trash containers shall only be stored within the designated trash enclosures designed in accordance with Section 93.07.02 (Trash Enclosures) of the City's Municipal Code. Dumpster/container bins shall be covered at all times with lids.

Storm Drain System Facilities: Catch basins, storm drain lines and stormwater runoff retention/infiltration facilities shall be inspected, cleaned, and maintained routinely. Corrections or repairs to malfunctioning facilities shall be performed promptly.

Safer Alternative Products (CASQA SC-35): The use of less harmful products as alternatives to chemical fertilizers, pesticides, cleaning solutions, janitorial chemicals, and consumables. The objective of this Source Control BMP will be to integrate the measures as much as possible with the future programs at this facility.

Building and Grounds Maintenance (CASQA SC-41): A series of maintenance practices can be implemented to prevent or reduce the discharge of potential pollutants into the storm drain system resulting from building and grounds maintenance activities. The BMP implementation will be achieved with the following guidelines under SC-41: washing and cleaning up with as little water as possible; following good landscape management practices; preventing and cleaning up spills immediately; keeping debris from entering the storm drains; and properly maintaining the stormwater collection system.

Note about Wash Water Controls for Food Preparation Areas: Not applicable to the project.

Structural Source Control BMPs Not Applicable or Proposed:

Community Car Wash Racks, Fueling Areas, Air/Water Supply Area Drainage, Loading Docks, Maintenance Bays, Vehicle and Equipment Wash Areas, Outdoor Material Storage Areas, Outdoor Work Areas or Processing Areas.

Justification: The facilities listed above are not proposed as part of the project.

V.3 EQUIVALENT TREATMENT CONTROL BMP ALTERNATIVES

Not applicable.

V.4 REGIONALLY-BASED BMPS

Not Applicable

VI. Operation and Maintenance Responsibility for BMPs

TABLE 8 -OPERATIONS AND MAINTENANCE

BMP Requiring Maintenance	Party Responsibility	Recommended Inspection and Maintenance Frequency	Recommended Self-Inspection and Record Keeping	Implementation Period	Recommended O & M Activities and Process
Landscaped Areas	Property Owner	At least twice monthly or according to a maintenance schedule.	Quarterly summaries of inspection and maintenance activities shall be appended to the WQMP.	Post-Construction	(See the following page for descriptions)
Irrigation System	Property Owner	At least twice monthly or according to a maintenance schedule.			
Trash Enclosures	Property Owner	Based on trash pick-up intervals and according to a maintenance schedule.			
Paved Area Sweeping	Property Owner	Twice monthly or according to a maintenance schedule			
Storm Drain System	Property Owner	Monthly and after storm events or according to a maintenance schedule			
Underground Retention System	Property Owner	Quarterly and after storm events or according to an established maintenance schedule			
Retention Basin	Property Owner	Quarterly and after storm events or according to an established maintenance schedule			

*Note: "Storm events" refer to precipitation events producing 0.5 inches of rain or greater within a 48-hour period. The occurrence of these events may be confirmed against the local rain event summaries published in the National Weather Service or National Oceanic and Atmospheric Administration web site (www.noaa.gov). The recommended inspection, maintenance, and recordkeeping practices in this WQMP may be addressed by a formal schedule, operations manual, and other standard operating procedures which may be developed for this site.

Note: The following maintenance recommendations, including the responsible parties, inspection intervals, and maintenance intervals, are not intended to be exhaustive in nature and should not serve as the sole source of on-site operating procedures. Where applicable, refer to the equipment manufacturer's recommendations and other relevant maintenance recommendations.

Description of Maintenance Requirements:

Landscaped Areas: All trimming, pruning, and removal of fallen organic material from plants, shrubs, and trees shall be collected per an approved or adopted landscape maintenance plan, stored in an appropriate location and transported to an approved green-waste collection facility. Any equipment or material temporarily staged during maintenance activities shall be placed away from drainage courses and storm drain inlets. Contracted maintenance staff shall haul collected material promptly following the maintenance activities to avoid prolonged on-site storage. The planting materials are to remain as indicated on the approved set of landscape planting plans. In conjunction with the routine activities, maintenance staff shall verify that the landscape design continues to function properly by adjusting to eliminate overspray to hardscape areas and to verify that irrigation timing and cycle lengths are adjusted in accordance with water demands, given the time of year, weather and day or nighttime temperatures.

Irrigation Systems: Water conservation practices shall be maintained at all times per the approved irrigation plans and established practices. Monitoring of the irrigation system shall be provided as necessary to ensure that appropriate watering levels are maintained and to verify that no piping or irrigation heads are leaking. Any debris, sediment, mineral and grit deposits shall be removed from the irrigation system at regular intervals to provide consistent watering levels.

The irrigation and landscape maintenance will help increase the effectiveness of these systems and minimize the amount of runoff that enters the storm drain system. Erosion and the conveyance of pesticides/fertilizers in runoff will also be prevented through routine maintenance. Routine irrigation system and landscape maintenance will also serve as a vector control measure due to the minimization of nuisance water runoff and stagnation.

Trash Management and Common Area Litter Control: Common area litter control shall be implemented to reduce pollution in runoff. Routine or scheduled monitoring shall be performed in the common areas. Any observed accumulated trash, vegetation debris or improper disposal shall be addressed promptly by the designated staff. Common area litter control measures can be coordinated and improved by the landscaping maintenance that will take place at the site. Moreover, the raking or sweeping of trash shall only be performed in manner that avoids trash from entering the storm drain system. All landscape-related debris or maintenance deficiencies are to be corrected immediately. All trash is to be placed in the approved trash containers. No trash is allowed to be stored at the base of the containers. Pick-up intervals are to be determined so that the containers are not overfilled. Only approved materials and chemicals shall be allowed in the dumpsters. Each area is to be cleaned twice monthly or a necessary.

Storm Drain System: Storm water conveyance systems, including inlets, outlets, cleanouts, manholes and pipelines within the project are to be inspected monthly and after each major storm event. Stormwater inlet drains shall be inspected for evidence of illegal/illicit dumping and reported to owner, for investigation and storm drain inlets shall be routinely cleaned whenever significant debris levels, are evident. All parts of the system are to be periodically cleaned to ensure that the system works properly during any storm event. Any waste collected from the cleaning activities is to be stored and properly disposed of.

Paved Area Sweeping and Cleaning

Paved area sweeping and cleaning shall be performed on-site, specifically in the parking areas at a minimum monthly frequency, to prevent sediment, litter and other debris from being washed by runoff into the on-site storm drain system. Paved area sweeping shall be performed during dry weather if possible and the frequency shall be flexible to accommodate climate conditions and areas of concern. Street sweeping equipment must be operated only by trained personnel based on the manufacturer's specifications. Street sweeping equipment shall be properly maintained off-site by the operator. Sweeping equipment shall not be maintained or washed off on-site. All collected debris must be taken to an approved permanent disposal site.

Retention Basins: Retention basins shall be visually inspected on a quarterly basis or according to a landscaping maintenance schedule. Physical obstructions caused by vegetation debris or littering shall be

promptly cleared by the designated personnel to ensure that the basins continue to function as designed. Any material collected (e.g. landscape debris or trash) shall be properly handled and disposed of. Basin outlets must be inspected for signs of erosion or obstruction and cleaned/repaired as needed.

Before annual storm seasons and following rainfall events producing precipitation of 0.5 inches or more:

- Maintain landscaping and irrigation system as needed.
- Remove debris and litter from the entire basin to minimize clogging and improve aesthetics.
- Inspect for obvious problems and repair as needed. Address odor, insects, and overgrowth issues associated with stagnant or standing water in the basin bottom. No standing water should be present longer than 72 hours.
- Check for erosion and sediment laden areas in the basin. Repair as needed.
- Re-stabilize the basin slopes as needed.

Perform the following inspection procedures within 72 hours after a rainfall event producing precipitation of 0.5 inches or greater:

- Examine the tributary inlet for blockage, the embankment and spillway integrity, as well as damage to any structural element.
- Check for erosion, slumping and overgrowth. Repair as needed.
- Check basin depth for sediment build up and reduced total capacity. Scrape bottom as needed and remove sediment. Restore to original cross-section and infiltration rate. Replant basin vegetation.
- No water should be present 72 hours after a rainfall event. No long-term standing water should be present at all. No algae formation should be visible.

Underground Retention System: The project includes a Contech Perforated Underground Corrugated Metal Pipe (CMP) Retention System or approved equal in each drainage area. The locations of these facilities are shown in the WQMP Site Plan (Appendix B). The maintenance guide issued by Contech is included below.

Per the system manufacturer, the underground stormwater detention/infiltration must be properly inspected and maintained at regular intervals for purpose of performance and longevity. **Refer to the manufacturer for additional or updated information regarding inspection and maintenance.**

Inspection

Inspection is the key to effective maintenance and is easily performed. Contech recommends ongoing quarterly inspections. The rate at which the system collects pollutants will depend more heavily on site specific activities rather than the size or configuration of the system. Inspections shall be performed more often in instances in which higher accumulations of sediment or abrasive / corrosive conditions may exist. Inspection and maintenance records shall be maintained for the life of the system.

Maintenance

Systems shall be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice. Accumulated sediment and trash can typically be evacuated through the manhole over the outlet orifice. If maintenance is not performed as recommended, sediment and trash may accumulate in front of the outlet orifice. Manhole covers shall be securely seated following cleaning activities. Contech suggests that all systems be designed with an access/inspection manhole situated at or near the inlet and the outlet orifice. Shall it be necessary to get inside the system to perform maintenance activities, all appropriate precautions regarding confined space entry and OSHA regulations shall be followed.

Maintaining an underground detention or retention system is easiest when there is no flow entering the system. For this reason, it is a good idea to schedule the cleanout during dry weather.

The foregoing inspection and maintenance efforts help ensure underground pipe systems used for stormwater storage continue to function as intended by identifying recommended regular inspection and maintenance

practices. Inspection and maintenance related to the structural integrity of the pipe or the soundness of pipe joint connections is beyond the scope of this guide.

Record Keeping: A copy of this project-specific WQMP shall be maintained by the project owner or operator. Records of maintenance shall be appended to this WQMP based on the information provided by the contracted management.

VII. Funding

The funding source for operation and maintenance of each BMP identified in the Project Specific Master Water Quality Management Plan shall be the responsibility of **PS Canyon Development, LLC**. The owner recognizes that a source of funding is required to support the on-going operation and maintenance of BMPs, and that funding will continue for the life of the project.

By certifying the final project specific WQMP, the Project applicant is certifying that the funding responsibilities have been addressed and will be transferred to future owners. This includes maintenance of the required Best Management Practices listed in this document. A WQMP BMP Maintenance Covenant shall be completed, signed, and recorded against the title of this property with the County of Riverside. A photocopy of the owner-signed Covenant shall be attached in Appendix G.

Appendix A

CONDITIONS OF APPROVAL

(To be provided in the Final WQMP after project approval)

Appendix B

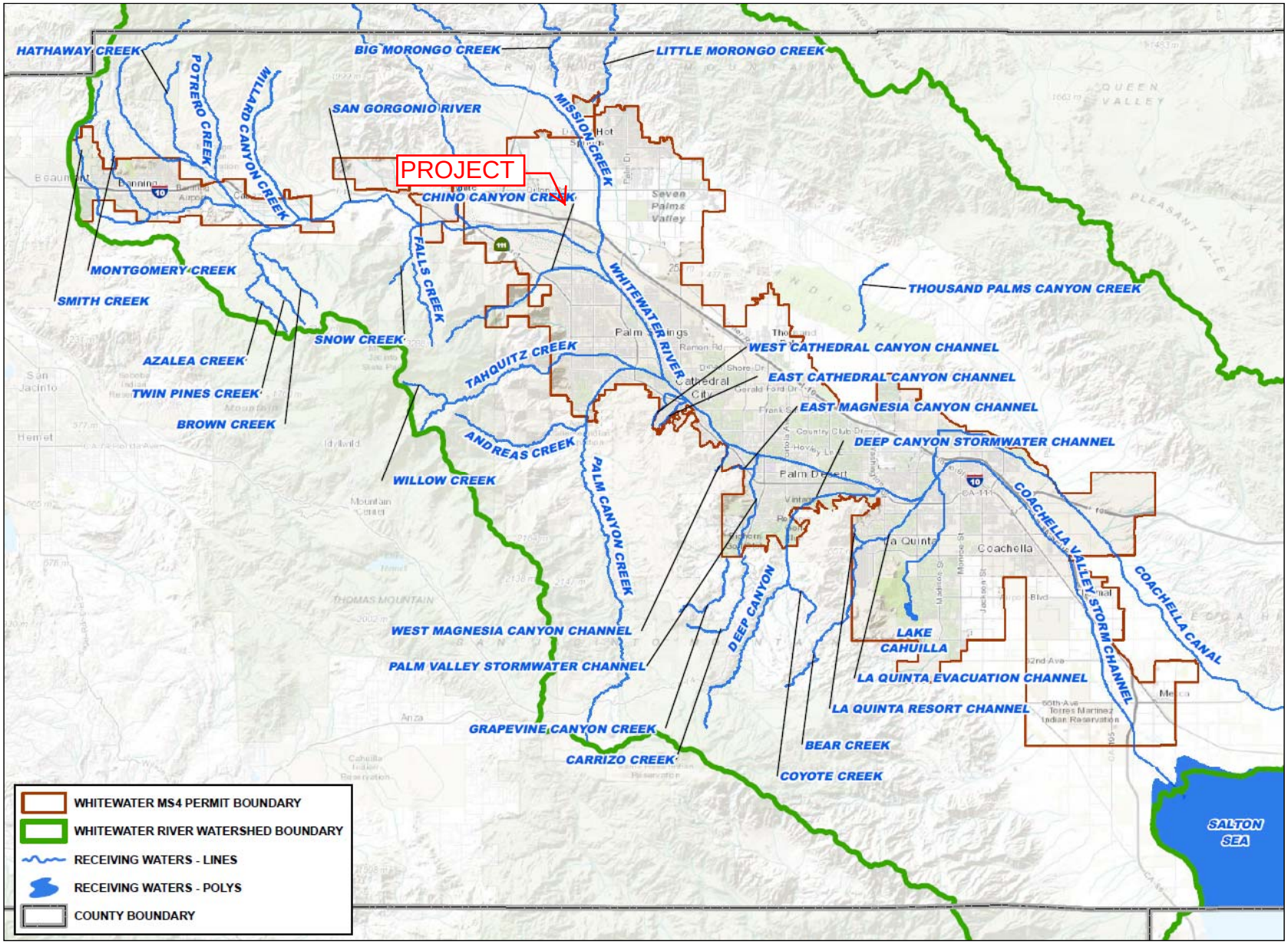
VICINITY MAP, WQMP SITE PLAN, AND RECEIVING WATERS MAP

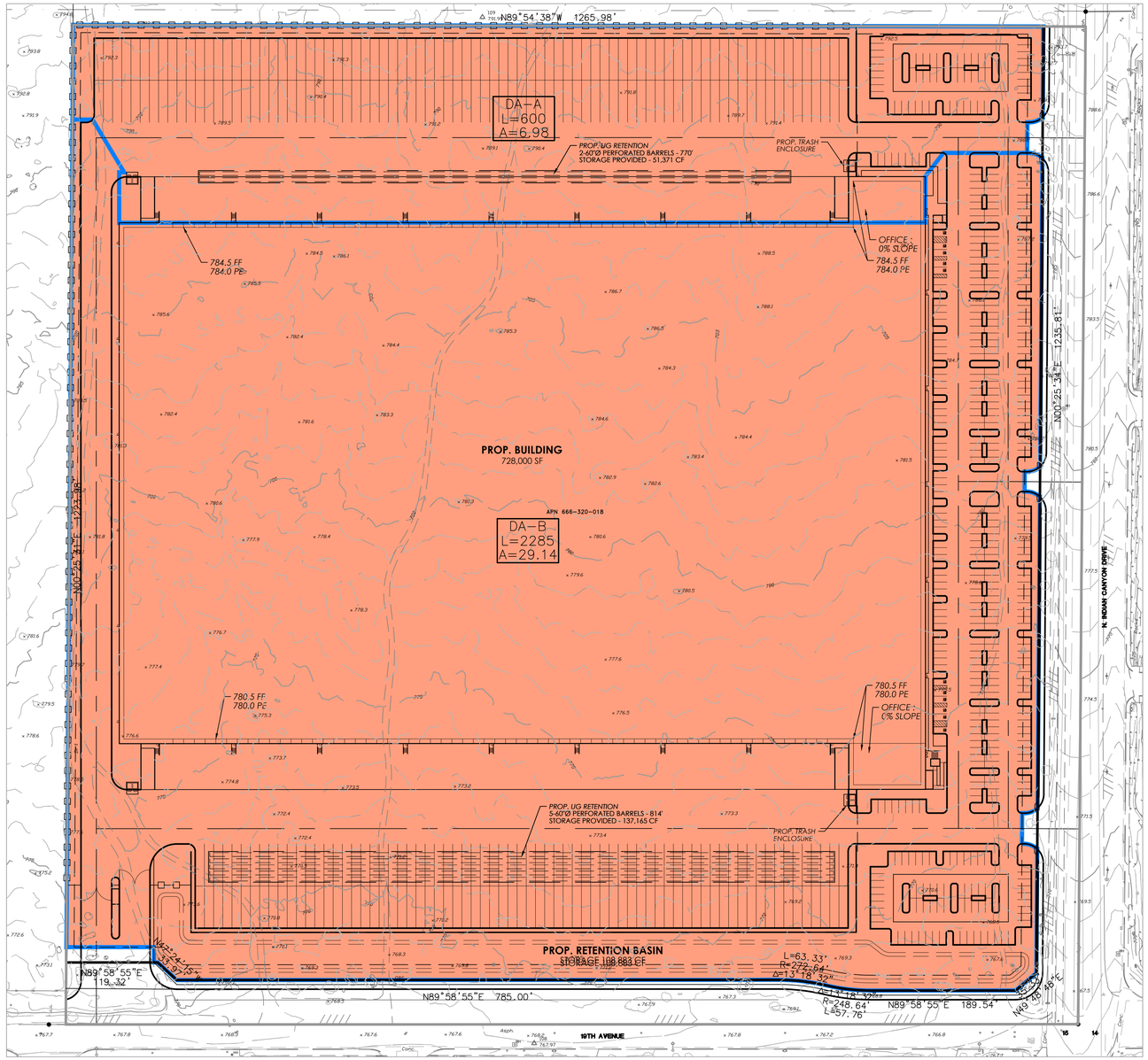
MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 5,000 FT

VICINITY MAP

Whitewater River Region Receiving Waters Map





BMP DESIGN VOLUME: DRAINAGE AREA "A"	
TRIBUTARY AREA TO BMP:	**6.980 AC.**
IMPERVIOUS AREA WITHIN TRIBUTARY AREA:	**6.280 AC**
IMPERVIOUS AREA RATIO:	**90%**
RUNOFF COEFFICIENT:	**0.73**
UNIT STORAGE VOLUME:	**0.29 AC-IN**
DESIGN STORAGE VOLUME OF BMP:	**7,397 CU-FT**
STORAGE PROVIDED	**51,371 CU-FT**

BMP DESIGN VOLUME: DRAINAGE AREA "B"	
TRIBUTARY AREA TO BMP:	**29.140 AC.**
IMPERVIOUS AREA WITHIN TRIBUTARY AREA:	**26.230 AC.**
IMPERVIOUS AREA RATIO:	**90%**
RUNOFF COEFFICIENT:	**0.73**
UNIT STORAGE VOLUME:	**0.29 AC-IN**
DESIGN STORAGE VOLUME OF BMP:	**30,908 CU-FT**
STORAGE PROVIDED	**246,048 CU-FT**

NOTE: ADDITIONAL FACILITY DETAILS WILL BE PROVIDED IN THE FINAL WQMP BASED ON FINAL GRADING AND HYDROLOGY DOCUMENTATION.

LAND USE LEGEND

COMMERCIAL

LEGEND

DRAINAGE FLOW →

TRIBUTARY AREA BOUNDARY

DRAINAGE SUB-AREA ID — A
FLOW TRAVEL LENGTH (FT) — L=XX
AREA (AC) — A=X.XXX

NORTH

0' 80' 160' 240' 320'

SCALE 1"=80'

PALM SPRINGS FULFILLMENT CENTER
PRELIMINARY WATER QUALITY MANAGEMENT PLAN

PROJECT NAME:	PALM SPRINGS FULFILLMENT CENTER
PREPARED FOR:	PS CANYON DEVELOPMENT, LLC
PLAN:	PRELIMINARY WQMP SITE PLAN
EXHIBIT DATE:	JANUARY 2023

MSA CONSULTING, INC.
Civil Engineering • Land Surveying • Landscape Architecture
Planning • Environmental Services • Dry Utility Coordination • GIS
34200 Bob Hope Drive Rancho Mirage, CA 92270 | 760.320.9811 | MSAConsultinginc.com

DESIGN BY
DRAWN BY
CHECK BY

Appendix C

SUPPORTING DETAIL RELATED TO HYDROLOGIC CONDITIONS OF CONCERN

(Not Applicable – Refer to Appendix F for Facility Sizing and Hydrology)

Appendix D

EDUCATIONAL MATERIALS

Checklist for Minimizing Vector Production in Stormwater Management Structures

Outdoor Cleaning Activities and Professional Mobile Service Providers

California Stormwater BMP Handbook - Municipal

SC-41: Building and Grounds Maintenance

SC-70: Road and Street Maintenance

SC-73: Landscape Maintenance

SC-74: Drainage System Maintenance

SD-12: Efficient Irrigation

SD-13: Storm Drain Signage

Adopt a pet from your local animal shelter or adoption centers at pet stores. A variety of animals, from purebred tomixed breed are waiting for loving arms and good homes. Consider volunteering at your local animal shelters. Volunteers, donations, food, newspapers, old towels and linens are needed to help the animals.

RIVERSIDE COUNTY ANIMAL SHELTER LOCATIONS:

BLYTHE
16450 West Hobson Way
Blythe, CA 92225
760-921-7857

HEMET
800 South Sanderson
Hemet, CA 92545
909 925-8025

INDIO
45-355 Van Buren
Indio, CA 92201
760-347-2319

RIVERSIDE
5950 Wilderness Avenue
Riverside, CA 92504
909-358-7387

FOR ALL OTHER AREAS
CALL 1-888-636-7387

Riverside County gratefully acknowledges the City of Los Angeles Stormwater Program for the design concept of this brochure.

What's the Scoop?

TIPS FOR A HEALTHY PET AND A HEALTHIER ENVIRONMENT

CREATE A HEALTHY ENVIRONMENT in and around your home by following these simple pet practices. Your pet, family and neighbors will appreciate their clean comfortable surroundings.

HOUSEHOLD PETS

We all love our pets, but pet waste is a subject everyone likes to avoid. Pet waste left on trails, sidewalks, streets, and grassy areas is immediately flushed into the nearest waterway when it rains. Even if you can't see water near you, the rain or waste water WASHES all that PET WASTE and BACTERIA INTO THE STORMDRAIN, where it travels to your neighborhood creek or lake untreated. These animal droppings also contain nutrients that can promote the growth of algae, if they enter our streams and lakes. The risk of STORMWATER CONTAMINATION INCREASES, if pet wastes is allowed to accumulate in animal pen areas or left on sidewalks, streets, or driveways where runoff can carry them to storm sewers.

Some of the DISEASES THAT CAN SPREAD from pet waste are:
Campylobacteriosis — a bacterial infection that causes diarrhea in humans.
Salmonellosis — the most common bacterial infection transmitted to humans from animals.
Toxocarisis — roundworms transmitted from animals to humans.

Flies and other pest insects can also increase when pet waste is disposed of improperly, becoming a nuisance and adding yet another vector for disease transmission.

WHAT CAN YOU DO?

- SCOOP up pet waste and flush it down the toilet.
- NEVER DUMP pet waste into a storm drain or catch basin.
- USE the complimentary BAGS or mutt mitts offered in dispensers at local parks.
- CARRY EXTRA BAGS when walking your dog and make them available to other pet owners who are without.
- TEACH CHILDREN how to properly clean up after a pet.
- TELL FRIENDS AND NEIGHBORS about the ill effects of animal waste on the environment. Encourage them to clean up after pets.

Did You Know ...
that Californians illegally dump about 80 million gallons of motor oil each year?

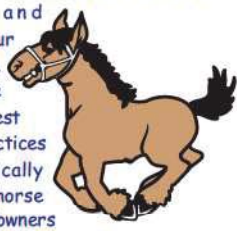
Many communities have "Scoop the Poop" laws that govern pet waste cleanup. Some of these laws specifically require anyone who walks an animal off of their property to carry a bag, shovel, or scooper. Any waste left by the animal must be cleaned up immediately. CALL YOUR LOCAL CODE ENFORCEMENT OFFICER to find out more about pet waste regulations.

Pets are only one of the many fixtures of suburban America that add to water pollution. Lawn fertilizers, rinse water from driveways and motor oil commonly end up in streams and lakes. **CALL 1-800-506-2555 FOR HOUSEHOLD HAZARDOUS WASTE COLLECTION LOCATION AND DATES.** Maintain your automobile to avoid leaks. Dispose of used vehicle fluids properly. Your pets can be poisoned if they ingest gas, oil or antifreeze that drips onto the pavement or is stored in open containers.

NEVER HOSE VEHICLE FLUIDS into the street or gutter. USE ABSORBENT MATERIALS such as cat litter to clean-up spills. SWEEP UP used absorbent materials and place in the trash.

HORSES AND LIVESTOCK

Fortunate enough to own a horse or livestock? You, too, can play a part in protecting and cleaning up our water resources. The following are a few simple Best Management Practices (BMPs) specifically designed for horse owners and landowners with horses.



- STORE your manure properly. Do not store unprotected piles of manure in places where runoff may enter streams, or flood waters may wash the manure away. Place a cover or tarp over the pile to keep rainwater out.
- CHECK with your local conservation district to design manure storage facilities to protect water quality. These structures usually consist of a concrete pad to protect ground water and a short wall on one or two sides to make manure handling easier.
- TRY composting – A vegetative cover placed around buildings or on steeper slopes can help minimize erosion and absorb nutrients while improving the appearance of your property. In addition, avoid costlier erosion controls, vegetative covers will provide animals with better traction during wet or icy conditions.

- KEEP animals out of steams – Designed stream crossings provide a safe, easy way for horses and livestock to ford streams. Fencing encourages the use of the crossing instead of the streambed to navigate streams. This will allow vegetation to stabilize stream banks and reduce sediment pollution.
- MOW pastures to proper height, six inches is typically recommended.
- Material STORAGE SAFETY TIPS – Many of the chemicals found in barns require careful handling and proper disposal. When using these chemicals, be certain to follow these common sense guidelines:
  - Buy only what you need.
  - Treat spills of hoof oils like fuel spill. Use kitty litter to soak up the oil and dispose in a tightly sealed plastic bag.
  - Store pesticides in a locked, dry, well-ventilated area.
  - Protect stored fertilizer and pesticides from rain and surface water.

Call 1-800-506-2555 to locate your local conservation district to find out what to do with your current backyard manure pile, how to re-establish a healthy pasture, what to do about weeds, and what grasses grow best in your soils.

Thank you for doing your part to protect your watershed, the environment, and the equestrian way of life in your community!

Helpful telephone numbers and links:

Riverside County Water Agencies:

City of Banning	(951) 922-3130
City of Beaumont	(951) 769-8520
City of Blythe	(760) 922-6161
City of Coachella	(760) 398-3502
Coachella Valley Water District	(760) 398-2651
City of Corona	(951) 736-2259
Desert Center CSA 51	(760) 227-3203
Eastern Municipal Water District	(951) 928-3777
Elsinore Valley MWD	(951) 674-3146
Farm Mutual Water Company	(951) 244-5196
City of Hemet	(951) 765-3712
Highland Water District	(951) 659-2143
Jurupa Community Services District	(951) 360-8795
Lake Hemet MWD	(951) 658-3241
Lee Lake Water District	(951) 277-1414
March Air Force Base	(951) 656-7000
Mission Springs Water District	(760) 329-6448
City of Palm Springs	(760) 323-8253
Rancho Calciatem	(951) 780-9272
Rancho California Water District	(951) 296-6900
Ripley, CSA #62	(760) 922-4951
City of Riverside	(951) 351-6170
Rubidoux Community Services District	(951) 684-7580
Silent Valley Club, Inc	(951) 849-4501
Valley Sanitary District	(760) 347-2356
Western Municipal Water District	(951) 789-5000
Yucaipa Valley Water District	(909) 797-5117

CALL 1-800-506-2555 to:

- Report clogged storm drains or illegal storm drain disposal from residential, industrial, construction and commercial sites into public streets, storm drains and/or water bodies.
- Find out about our various storm drain pollution prevention materials.
- Locate the dates and times of Household Hazardous Waste (HHW) Collection Event.
- Request adult neighborhood or classroom presentations.
- Locate other County environmental services.
- Receive grasscycling information and composting workshop information.

Or visit our (Riverside County Flood Control District website at: **www.floodcontrol.co.riverside.ca.us**

Other links to additional storm drain pollution information:

- County of Riverside Environmental Health: www.rivcoeh.org
- California State Water Resource Conservation Board: www.swrcb.ca.gov/stormwtr/links.html
- California Water Quality Task Force: www.cstormpreventpays.com/
- United State Environmental Protection Agency (EPA): www.epa.gov/npdes/pubs/owm0274.pdf#search=%22urban%20runoff%20pollution%20prevention%20brochures%22 (compliance assistance information)

Riverside County Only Rain in the Storm Drain Pollution Protection Program gratefully acknowledges the Bay Area Stormwater Management Agencies Association and the Cleaning Equipment Trade Association for information provided in this brochure.

StormWater Pollution

What you should know for...

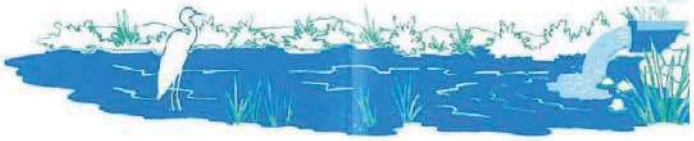
Swimming Pool, Jacuzzi and Fountain Maintenance

Do you know . . . where the water actually goes?

Storm Drains are not connected to sanitary sewer systems and treatment plants!

The primary purpose of storm drains is to carry rain water away from developed areas to prevent flooding. Untreated storm water and the pollutants it carries flow directly into rivers, lakes, and streams. Wastewater from residential swimming pools, jacuzzis, fishponds, and fountains often contain chemicals used for sanitizing or cleansing purposes. Toxic chemicals (such as chlorine or copper-based algaecides) can damage the environment when wastewater is allowed to flow into our local rivers, lakes, and streams by way of the storm drain system. Each of us can do our part to help clean our water, and that adds up to a pollution solution.

The Cities and County of Riverside have adopted ordinances for storm drain pollution management to maintain discharge control and prevent illegal storm drain discharge. In accordance with state and federal law, these local storm water ordinances prohibit the discharge of pollutants into the storm drain system or local surface waters. The Only Rain in the Storm Drain Pollution Program informs residents and businesses of storm drain pollution prevention activities such as those described in this brochure.



PLEASE NOTE: The discharge of pollutants into the street, gutters, storm drain system, or waterways – without a Regional Water Quality Control board permit or waiver – is strictly prohibited by local ordinances and state and federal law.

Do Your Part to Protect Our Waterways!

Use These Guidelines For Proper Draining of Your Swimming Pool, Jacuzzi and Fountain Water

Discharge Regulations

Requirements for pool draining may differ from city to city. Check with your water agency to see if disposal to the sanitary sewer line is allowed for pool discharges (see reverse side for Riverside County water purveyors).

If sewer discharge is allowed, a hose can be run from your swimming pool pump to the washing machine drain or a sink or bathtub. If sewer discharge is not allowed, or if your house is served by a septic tank, review the options presented below.

Discharge Options

If your local sewer agency will not accept pool water into their system, or if you are on a septic tank system, follow these guidelines:

1. Reduce or eliminate solids (e.g., debris, leaves or dirt) in the pool water.
2. Allow the chemicals in the pool water to dissipate. This could take up to seven (7) days depending on the time of year. Create a co-op; let your neighbor share your pool while theirs is being prepared for draining, then use their pool while yours is being drained. Chlorinated water should not be discharged into the storm drain or surface waters. This includes large pools such as community swimming pools or spas.
3. When the pool water is free of all chemicals (verify by a home pool water test kit) drain pool water to landscaped areas, lawns, yards, or any areas that will absorb the water.
4. You may have to drain the pool water over a period of a few days to allow the landscape areas to absorb most of the water.
5. Control the flow of the draining pool water to prevent soil erosion. Do not allow sediment to enter the street, gutter or storm drain.
6. Avoid discharging pool water into the street and storm drain system. Water runoff that enters the street can pick up motor oil, pet waste, trash and other pollutants, eventually carrying them into the storm drain system and local surface waters.

Refinishing Pool Surfaces

If you are resurfacing your pool, or resurfacing the pool patio area, be sure to hose down mixers, tools and trailers in a dirt area where rinse water won't flow into the street, gutter or storm drain. Local storm water ordinances strictly prohibit the discharge of pollutants into the storm drain system.

Residues from acid washing and similar activities require special handling. Never discharge low or high pH wastewater into the street, gutter or storm drain.

Cleaning Filters

Discharge of pool filter rinse water and backflush to a stream, ditch, or storm drain is prohibited. Backflush from pool filters must be discharged to the sanitary sewer, on-site septic tank and drainfield system (if properly designed and adequately sized), or a seepage pit. Alternatively, pool filter rinse water and backwash may be diverted to dirt or landscaped areas. Filter media and other solids should be picked up and disposed of in the trash.

Algaecides

Avoid using copper-based algaecides unless absolutely necessary. Control algae with chlorine, organic polymers or other alternatives to copper-based pool chemicals. Copper is a heavy metal that can be toxic to aquatic life.

Chemical Storage and Handling

- Use only the amount indicated on product labels.
- Store chlorine and other chemicals in a covered area to prevent runoff. Keep out of reach of children and pets.
- Chlorine kits, available at retail swimming pool equipment and supply stores, should be used to monitor the chlorine and pH levels.
- Chlorine and other pool chemicals should never be allowed to flow into the gutter or the storm drain system.

Proper Disposal of Pool Chemicals

If you need to dispose of unwanted pool chemicals, first try giving them to a neighbor with a pool. If that doesn't work, bring unwanted pool chemicals to a Household Hazardous Waste (HHW) Collection Event. There's no cost for bringing HHW items to collection events - it's FREE! Call **1-800-506-2555** for a schedule of HHW events in your community.

NEVER put unused chemicals into the trash, onto the ground or down a storm drain.

Building & Grounds Maintenance SC-41

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- ☐ Switch to non-toxic chemicals for maintenance to the maximum extent possible.
- ☐ Choose cleaning agents that can be recycled.
- ☐ Encourage proper lawn management and landscaping, including use of native vegetation.
- ☐ Encourage use of Integrated Pest Management techniques for pest control.
- ☐ Encourage proper onsite recycling of yard trimmings.
- ☐ Recycle residual paints, solvents, lumber, and other material as much as possible.

Objectives
■ *Cover*
■ *Contain*
■ *Educate*
■ *Reduce/Minimize*
■ *Product Substitution*

Targeted Constituents	
Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	✓
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION®

- ☐ Clean work areas at the end of each work shift using dry cleaning methods such as sweeping and vacuuming.

Good Housekeeping

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- ☐ In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.

- ☐ If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.

- ☐ If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- ☐ Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.

- ☐ Use mulch or other erosion control measures on exposed soils. See also SC-40, Contaminated and Erodible Areas, for more information.

Building Repair, Remodeling, and Construction

- ☐ Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.

- ☐ Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.

- ☐ Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.

- ☐ Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.

- ☐ Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and

solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- ☐ If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- ☐ Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- ☐ Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- ☐ Use mulch or other erosion control measures when soils are exposed.
- ☐ Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- ☐ Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- ☐ Use hand weeding where practical.

Fertilizer and Pesticide Management

- ☐ Do not use pesticides if rain is expected.
- ☐ Do not mix or prepare pesticides for application near storm drains.
- ☐ Use the minimum amount needed for the job.
- ☐ Calibrate fertilizer distributors to avoid excessive application.
- ☐ Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- ☐ Apply pesticides only when wind speeds are low.
- ☐ Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- ☐ Irrigate slowly to prevent runoff and then only as much as is needed.
- ☐ Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.

Inspection

- ☐ Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Building & Grounds Maintenance SC-41

Spill Response and Prevention Procedures

- ☐ Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- ☐ Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- ☐ Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- ☐ Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- ☐ Clean up spills immediately.

Material Handling and Waste Management

- ☐ Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- ☐ Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- ☐ Dispose of empty pesticide containers according to the instructions on the container label.
- ☐ Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- ☐ Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Employee Training Program

- ☐ Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- ☐ Train employees and contractors in proper techniques for spill containment and cleanup.
- ☐ Be sure the frequency of training takes into account the complexity of the operations and the needs of individual staff.

Quality Assurance and Record Keeping

- ☐ Keep accurate logs that document maintenance activities performed and minimum BMP measures implemented.
- ☐ Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- ☐ Establish procedures to complete logs and file them in the central office.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Additional capital costs are not anticipated for building and grounds maintenance. Implementation of the minimum BMPs described above should be conducted as part of regular site operations.

Maintenance

- Maintenance activities for the BMPs described above will be minimal, and no additional cost is anticipated.

Supplemental Information

Fire Sprinkler Line Flushing

Site fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

City of Seattle, Seattle Public Utilities Department of Planning and Development, 2009. *Stormwater Manual Vol. 1 Source Control Technical Requirements Manual.*

Kennedy/Jenks Consultants, 2007. *The Truckee Meadows Industrial and Commercial Storm Water Best Management Practices Handbook.* Available online at: http://www.cityofsparks.us/sites/default/files/assets/documents/env-control/construction/TM-I-C_BMP_Handbook_2-07-final.pdf.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities.

Sacramento Stormwater Management Program. *Best Management Practices for Industrial Storm Water Pollution Control.* Available online at:

http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf.

US EPA, 1997. *Best Management Practices Handbook for Hazardous Waste Containers*. Available online at: http://www.epa.gov/region6/6en/h/handbk4.pdf.

Ventura Countywide Stormwater Management Program Clean Business Fact Sheets. Available online at: http://www.vcstormwater.org/documents/programs_business/building.pdf.

Road and Street Maintenance SC-70

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Streets, roads, and highways are significant sources of pollutants in stormwater discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from roadway and bridge maintenance should be addressed on a site-specific basis. Use of the procedures outlined below, that address street sweeping and repair, bridge and structure maintenance, and unpaved roads will reduce pollutants in stormwater.

Approach

Pollution Prevention

- Use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal)
- Recycle paint and other materials whenever possible.
- Enlist the help of citizens to keep yard waste, used oil, and other wastes out of the gutter.

Suggested Protocols

Street Sweeping and Cleaning

- Maintain a consistent sweeping schedule. Provide minimum monthly sweeping of curbed streets.
- Perform street cleaning during dry weather if possible.

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- Avoid wet cleaning or flushing of street, and utilize dry methods where possible.
- Consider increasing sweeping frequency based on factors such as traffic volume, land use, field observations of sediment and trash accumulation, proximity to water courses, etc. For example:
  - Increase the sweeping frequency for streets with high pollutant loadings, especially in high traffic and industrial areas.
  - Increase the sweeping frequency just before the wet season to remove sediments accumulated during the summer.
  - Increase the sweeping frequency for streets in special problem areas such as special events, high litter or erosion zones.
- Maintain cleaning equipment in good working condition and purchase replacement equipment as needed. Old sweepers should be replaced with new technologically advanced sweepers (preferably regenerative air sweepers) that maximize pollutant removal.
- Operate sweepers at manufacturer requested optimal speed levels to increase effectiveness.
- To increase sweeping effectiveness consider the following:
  - Institute a parking policy to restrict parking in problematic areas during periods of street sweeping.
  - Post permanent street sweeping signs in problematic areas; use temporary signs if installation of permanent signs is not possible.
  - Develop and distribute flyers notifying residents of street sweeping schedules.
- Regularly inspect vehicles and equipment for leaks, and repair immediately.
- If available use vacuum or regenerative air sweepers in the high sediment and trash areas (typically industrial/commercial).
- Keep accurate logs of the number of curb-miles swept and the amount of waste collected.
- Dispose of street sweeping debris and dirt at a landfill.
- Do not store swept material along the side of the street or near a storm drain inlet.
- Keep debris storage to a minimum during the wet season or make sure debris piles are contained (e.g. by berming the area) or covered (e.g. with tarps or permanent covers).

Street Repair and Maintenance

Pavement marking

- Schedule pavement marking activities for dry weather.

- Develop paint handling procedures for proper use, storage, and disposal of paints.
- Transfer and load paint and hot thermoplastic away from storm drain inlets.
- Provide drop cloths and drip pans in paint mixing areas.
- Properly maintain application equipment.
- Street sweep thermoplastic grindings. Yellow thermoplastic grindings may require special handling as they may contain lead.
- Paints containing lead or tributyltin are considered a hazardous waste and must be disposed of properly.
- Use water based paints whenever possible. If using water based paints, clean the application equipment in a sink that is connected to the sanitary sewer.
- Properly store leftover paints if they are to be kept for the next job, or dispose of properly.

Concrete installation and repair

- Schedule asphalt and concrete activities for dry weather.
- Take measures to protect any nearby storm drain inlets and adjacent watercourses, prior to breaking up asphalt or concrete (e.g. place san bags around inlets or work areas).
- Limit the amount of fresh concrete or cement mortar mixed, mix only what is needed for the job.
- Store concrete materials under cover, away from drainage areas. Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff.
- Return leftover materials to the transit mixer. Dispose of small amounts of hardened excess concrete, grout, and mortar in the trash.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile, or dispose in the trash.
- When making saw cuts in pavement, use as little water as possible and perform during dry weather. Cover each storm drain inlet completely with filter fabric or plastic during the sawing operation and contain the slurry by placing straw bales, sandbags, or gravel dams around the inlets. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site. Alternatively, a small onsite vacuum may be used to pick up the slurry as this will prohibit slurry from reaching storm drain inlets.
- Wash concrete trucks off site or in designated areas on site designed to preclude discharge of wash water to drainage system.

Patching, resurfacing, and surface sealing

- Schedule patching, resurfacing and surface sealing for dry weather.
- Stockpile materials away from streets, gutter areas, storm drain inlets or watercourses. During wet weather, cover stockpiles with plastic tarps or berm around them if necessary to prevent transport of materials in runoff.
- Pre-heat, transfer or load hot bituminous material away from drainage systems or watercourses.
- Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and maintenance holes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean any debris from covered maintenance holes and storm drain inlets when the job is complete.
- Prevent excess material from exposed aggregate concrete or similar treatments from entering streets or storm drain inlets. Designate an area for clean up and proper disposal of excess materials.
- Use only as much water as necessary for dust control, to avoid runoff.
- Sweep, never hose down streets to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquid in storm drains.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Equipment cleaning maintenance and storage

- Inspect equipment daily and repair any leaks. Place drip pans or absorbent materials under heavy equipment when not in use.
- Perform major equipment repairs at the corporation yard, when practical.
- If refueling or repairing vehicles and equipment must be done onsite, use a location away from storm drain inlets and watercourses.
- Clean equipment including sprayers, sprayer paint supply lines, patch and paving equipment, and mud jacking equipment at the end of each day. Clean in a sink or other area (e.g. vehicle wash area) that is connected to the sanitary sewer.

Bridge and Structure Maintenance

Paint and Paint Removal

- Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle.
- Do not transfer or load paint near storm drain inlets or watercourses.

- Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint container.
- Plug nearby storm drain inlets prior to starting painting where there is significant risk of a spill reaching storm drains. Remove plugs when job is completed.
- If sand blasting is used to remove paint, cover nearby storm drain inlets prior to starting work.
- Perform work on a maintenance traveler or platform, or use suspended netting or tarps to capture paint, rust, paint removing agents, or other materials, to prevent discharge of materials to surface waters if the bridge crosses a watercourse. If sanding, use a sander with a vacuum filter bag.
- Capture all clean-up water, and dispose of properly.
- Recycle paint when possible (e.g. paint may be used for graffiti removal activities). Dispose of unused paint at an appropriate household hazardous waste facility.

Graffiti Removal

- Schedule graffiti removal activities for dry weather.
- Protect nearby storm drain inlets prior to removing graffiti from walls, signs, sidewalks, or other structures needing graffiti abatement. Clean up afterwards by sweeping or vacuuming thoroughly, and/or by using absorbent and properly disposing of the absorbent.
- When graffiti is removed by painting over, implement the procedures under Painting and Paint Removal above.
- Direct runoff from sand blasting and high pressure washing (with no cleaning agents) into a landscaped or dirt area. If such an area is not available, filter runoff through an appropriate filtering device (e.g. filter fabric) to keep sand, particles, and debris out of storm drains.
- If a graffiti abatement method generates wash water containing a cleaning compound (such as high pressure washing with a cleaning compound), plug nearby storm drains and vacuum/pump wash water to the sanitary sewer.
- Consider using a waterless and non-toxic chemical cleaning method for graffiti removal (e.g. gels or spray compounds).

Repair Work

- Prevent concrete, steel, wood, metal parts, tools, or other work materials from entering storm drains or watercourses.
- Thoroughly clean up the job site when the repair work is completed.
- When cleaning guardrails or fences follow the appropriate surface cleaning methods (depending on the type of surface) outlined in SC-71 Plaza & Sidewalk Cleaning fact sheet.

- If painting is conducted, follow the painting and paint removal procedures above.
- If graffiti removal is conducted, follow the graffiti removal procedures above.
- If construction takes place, see the Construction Activity BMP Handbook.
- Recycle materials whenever possible.

Unpaved Roads and Trails

- Stabilize exposed soil areas to prevent soil from eroding during rain events. This is particularly important on steep slopes.
- For roadside areas with exposed soils, the most cost-effective choice is to vegetate the area, preferably with a mulch or binder that will hold the soils in place while the vegetation is establishing. Native vegetation should be used if possible.
- If vegetation cannot be established immediately, apply temporary erosion control mats/blankets; a comma straw, or gravel as appropriate.
- If sediment is already eroded and mobilized in roadside areas, temporary controls should be installed. These may include: sediment control fences, fabric-covered triangular dikes, gravel-filled burlap bags, biobags, or hay bales staked in place.

Non-Stormwater Discharges

Field crews should be aware of non-stormwater discharges as part of their ongoing street maintenance efforts.

- Refer to SC-10 Non-Stormwater Discharges
- Identify location, time and estimated quantity of discharges.
- Notify appropriate personnel.

Training

- Train employees regarding proper street sweeping operation and street repair and maintenance.
- Instruct employees and subcontractors to ensure that measures to reduce the stormwater impacts of roadway/bridge maintenance are being followed.
- Require engineering staff and/or consulting A/E firms to address stormwater quality in new bridge designs or existing bridge retrofits.
- Use a training log or similar method to document training.
- Train employees on proper spill containment and clean up, and in identifying non-stormwater discharges.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Densely populated areas or heavily used streets may require parking regulations to clear streets for cleaning.
- No currently available conventional sweeper is effective at removing oil and grease. Mechanical sweepers are not effective at removing finer sediments.
- Limitations may arise in the location of new bridges. The availability and cost of land and other economic and political factors may dictate where the placement of a new bridge will occur. Better design of the bridge to control runoff is required if it is being placed near sensitive waters.

Requirements

Costs

- The maintenance of local roads and bridges is already a consideration of most community public works or transportation departments. Therefore, the cost of pollutant reducing management practices will involve the training and equipment required to implement these new practices.
- The largest expenditures for street sweeping programs are in staffing and equipment. The capital cost for a conventional street sweeper is between $60,000 and $120,000. Newer technologies might have prices approaching $180,000. The average useful life of a conventional sweeper is about four years, and programs must budget for equipment replacement. Sweeping frequencies will determine equipment life, so programs that sweep more often should expect to have a higher cost of replacement.
- A street sweeping program may require the following.
  - Sweeper operators, maintenance, supervisory, and administrative personnel are required.
  - Traffic control officers may be required to enforce parking restrictions.
  - Skillful design of cleaning routes is required for program to be productive.
  - Arrangements must be made for disposal of collected wastes.

- If investing in newer technologies, training for operators must be included in operation and maintenance budgets. Costs for public education are small, and mostly deal with the need to obey parking restrictions and litter control. Parking tickets are an effective reminder to obey parking rules, as well as being a source of revenue.

Maintenance

- Not applicable

Supplemental Information

Further Detail of the BMP

Street sweeping

There are advantages and disadvantages to the two common types of sweepers. The best choice depends on your specific conditions. Many communities find it useful to have a compliment of both types in their fleet.

Mechanical Broom Sweepers - More effective at picking up large debris and cleaning wet streets. Less costly to purchase and operate. Create more airborne dust.

Vacuum Sweepers - More effective at removing fine particles and associated heavy metals. Ineffective at cleaning wet streets. Noisier than mechanical broom sweepers which may restrict areas or times of operation. May require an advance vehicle to remove large debris.

Street Flushers - Not affected by biggest interference to cleaning, parked cars. May remove finer sediments, moving them toward the gutter and stormwater inlets. For this reason, flushing fell out of favor and is now used primarily after sweeping. Flushing may be effective for combined sewer systems. Presently street flushing is not allowed under most NPDES permits.

Cross-Media Transfer of Pollutants

The California Air Resources Board (ARB) has established state ambient air quality standards including a standard for respirable particulate matter (less than or equal to 10 microns in diameter, symbolized as PM10). In the effort to sweep up finer sediments to remove attached heavy metals, municipalities should be aware that fine dust, that cannot be captured by the sweeping equipment and becomes airborne, could lead to issues of worker and public safety.

Bridges

Bridges that carry vehicular traffic generate some of the more direct discharges of runoff to surface waters. Bridge scupper drains cause a direct discharge of stormwater into receiving waters and have been shown to carry relatively high concentrations of pollutants. Bridge maintenance also generates wastes that may be either directly deposited to the water below or carried to the receiving water by stormwater. The following steps will help reduce the stormwater impacts of bridge maintenance:

- Site new bridges so that significant adverse impacts to wetlands, sensitive areas, critical habitat, and riparian vegetation are minimized.

- Design new bridges to avoid the use of scupper drains and route runoff to land for treatment control. Existing scupper drains should be cleaned on a regular basis to avoid sediment/debris accumulation.
- Reduce the discharge of pollutants to surface waters during maintenance by using suspended traps, vacuums, or booms in the water to capture paint, rust, and paint removing agents. Many of these wastes may be hazardous. Properly dispose of this waste by referring to CA21 (Hazardous Waste Management) in the Construction Handbook.
- Train employees and subcontractors to reduce the discharge of wastes during bridge maintenance.

De-icing

- Do not over-apply deicing salt and sand, and routinely calibrate spreaders.
- Near reservoirs, restrict the application of deicing salt and redirect any runoff away from reservoirs.
- Consider using alternative deicing agents (less toxic, biodegradable, etc.).

References and Resources

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2001. Fresh Concrete and Mortar Application Best Management Practices for the Construction Industry. June.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2001. Roadwork and Paving Best Management Practices for the Construction Industry. June.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Roadway and Bridge Maintenance. On-line
http://www.epa.gov/npdes/menuofbmps/poll_13.htm

Landscape Maintenance SC-73

Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	
Oxygen Demanding	☑

Description

Landscape maintenance activities include vegetation removal; herbicide and insecticide application; fertilizer application; watering; and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. The major objectives of this BMP are to minimize the discharge of pesticides, herbicides and fertilizers to the storm drain system and receiving waters; prevent the disposal of landscape waste into the storm drain system by collecting and properly disposing of clippings and cuttings, and educating employees and the public.

Approach

Pollution Prevention

- Implement an integrated pest management (IPM) program. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools.
- Choose low water using flowers, trees, shrubs, and groundcover.
- Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Conduct appropriate maintenance (i.e. properly timed fertilizing, weeding, pest control, and pruning) to help preserve the landscapes water efficiency.

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- Consider grass cycling (grass cycling is the natural recycling of grass by leaving the clippings on the lawn when mowing. Grass clippings decompose quickly and release valuable nutrients back into the lawn).

Suggested Protocols

Mowing, Trimming, and Weeding

- Whenever possible use mechanical methods of vegetation removal (e.g mowing with tractor-type or push mowers, hand cutting with gas or electric powered weed trimmers) rather than applying herbicides. Use hand weeding where practical.
- Avoid loosening the soil when conducting mechanical or manual weed control, this could lead to erosion. Use mulch or other erosion control measures when soils are exposed.
- Performing mowing at optimal times. Mowing should not be performed if significant rain events are predicted.
- Mulching mowers may be recommended for certain flat areas. Other techniques may be employed to minimize mowing such as selective vegetative planting using low maintenance grasses and shrubs.
- Collect lawn and garden clippings, pruning waste, tree trimmings, and weeds. Chip if necessary, and compost or dispose of at a landfill (see waste management section of this fact sheet).
- Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to storm drains.

Planting

- Determine existing native vegetation features (location, species, size, function, importance) and consider the feasibility of protecting them. Consider elements such as their effect on drainage and erosion, hardiness, maintenance requirements, and possible conflicts between preserving vegetation and the resulting maintenance needs.
- Retain and/or plant selected native vegetation whose features are determined to be beneficial, where feasible. Native vegetation usually requires less maintenance (e.g., irrigation, fertilizer) than planting new vegetation.
- Consider using low water use groundcovers when planting or replanting.

Waste Management

- Compost leaves, sticks, or other collected vegetation or dispose of at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Reduce the use of high nitrogen fertilizers that produce excess growth requiring more frequent mowing or trimming.

- Avoid landscape wastes in and around storm drain inlets by either using bagging equipment or by manually picking up the material.

Irrigation

- Where practical, use automatic timers to minimize runoff.
- Use popup sprinkler heads in areas with a lot of activity or where there is a chance the pipes may be broken. Consider the use of mechanisms that reduce water flow to sprinkler heads if broken.
- Ensure that there is no runoff from the landscaped area(s) if re-claimed water is used for irrigation.
- If bailing of muddy water is required (e.g. when repairing a water line leak), do not put it in the storm drain; pour over landscaped areas.
- Irrigate slowly or pulse irrigate to prevent runoff and then only irrigate as much as is needed.
- Apply water at rates that do not exceed the infiltration rate of the soil.

Fertilizer and Pesticide Management

- Utilize a comprehensive management system that incorporates integrated pest management (IPM) techniques. There are many methods and types of IPM, including the following:
  - Mulching can be used to prevent weeds where turf is absent, fencing installed to keep rodents out, and netting used to keep birds and insects away from leaves and fruit.
  - Visible insects can be removed by hand (with gloves or tweezers) and placed in soapy water or vegetable oil. Alternatively, insects can be sprayed off the plant with water or in some cases vacuumed off of larger plants.
  - Store-bought traps, such as species-specific, pheromone-based traps or colored sticky cards, can be used.
  - Slugs can be trapped in small cups filled with beer that are set in the ground so the slugs can get in easily.
  - In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of (pruning equipment should be disinfected with bleach to prevent spreading the disease organism).
  - Small mammals and birds can be excluded using fences, netting, tree trunk guards.
  - Beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seed head weevils, and spiders that prey on detrimental pest species can be promoted.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.

- Use pesticides only if there is an actual pest problem (not on a regular preventative schedule).
- Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).
- Do not mix or prepare pesticides for application near storm drains.
- Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the pest.
- Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- Periodically test soils for determining proper fertilizer use.
- Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Purchase only the amount of pesticide that you can reasonably use in a given time period (month or year depending on the product).
- Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Dispose of empty pesticide containers according to the instructions on the container label.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- Inspect pesticide/fertilizer equipment and transportation vehicles daily.

Training

- Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution. Pesticide application must be under the supervision of a California qualified pesticide applicator.
- Train/encourage municipal maintenance crews to use IPM techniques for managing public green areas.
- Annually train employees within departments responsible for pesticide application on the appropriate portions of the agency's IPM Policy, SOPs, and BMPs, and the latest IPM techniques.

- Employees who are not authorized and trained to apply pesticides should be periodically (at least annually) informed that they cannot use over-the-counter pesticides in or around the workplace.
- Use a training log or similar method to document training.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a know in location
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- The Federal Pesticide, Fungicide, and Rodenticide Act and California Title 3, Division 6, Pesticides and Pest Control Operations place strict controls over pesticide application and handling and specify training, annual refresher, and testing requirements. The regulations generally cover: a list of approved pesticides and selected uses, updated regularly; general application information; equipment use and maintenance procedures; and record keeping. The California Department of Pesticide Regulations and the County Agricultural Commission coordinate and maintain the licensing and certification programs. All public agency employees who apply pesticides and herbicides in "agricultural use" areas such as parks, golf courses, rights-of-way and recreation areas should be properly certified in accordance with state regulations. Contracts for landscape maintenance should include similar requirements.
- All employees who handle pesticides should be familiar with the most recent material safety data sheet (MSDS) files.
- Municipalities do not have the authority to regulate the use of pesticides by school districts, however the California Healthy Schools Act of 2000 (AB 2260) has imposed requirements on California school districts regarding pesticide use in schools. Posting of notification prior to the application of pesticides is now required, and IPM is stated as the preferred approach to pest management in schools.

Requirements

Costs

Additional training of municipal employees will be required to address IPM techniques and BMPs. IPM methods will likely increase labor cost for pest control which may be offset by lower chemical costs.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

Waste Management

Composting is one of the better disposal alternatives if locally available. Most municipalities either have or are planning yard waste composting facilities as a means of reducing the amount of waste going to the landfill. Lawn clippings from municipal maintenance programs as well as private sources would probably be compatible with most composting facilities

Contractors and Other Pesticide Users

Municipal agencies should develop and implement a process to ensure that any contractor employed to conduct pest control and pesticide application on municipal property engages in pest control methods consistent with the IPM Policy adopted by the agency. Specifically, municipalities should require contractors to follow the agency's IPM policy, SOPs, and BMPs; provide evidence to the agency of having received training on current IPM techniques when feasible; provide documentation of pesticide use on agency property to the agency in a timely manner.

References and Resources

King County Stormwater Pollution Control Manual. Best Management Practices for Businesses. 1995. King County Surface Water Management. July. On-line: http://dnr.metrokc.gov/wlr/dss/spcm.htm

Los Angeles County Stormwater Quality Model Programs. Public Agency Activities http://ladpw.org/wmd/npdes/model_links.cfm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Landscaping and Lawn Care. Office of Water. Office of Wastewater Management. On-line: http://www.epa.gov/npdes/menuofbmps/poll_8.htm

Drainage System Maintenance SC-74

Photo Credit: Geoff Brosseau

Objectives

- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Suggested Protocols

Catch Basins/Inlet Structures

- Municipal staff should regularly inspect facilities to ensure the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC-75 Waste Handling and Disposal).
- Clean catch basins, storm drain inlets, and other conveyance structures in high pollutant load areas just before the wet season to remove sediments and debris accumulated during the summer.

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- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed of. Do not dewater near a storm drain or stream.
- Except for small communities with relatively few catch basins that may be cleaned manually, most municipalities will require mechanical cleaners such as eductors, vacuums, or bucket loaders.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect flushed effluent and pump to the sanitary sewer for treatment.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge from cleaning a storm drain pump station or other facility to reach the storm drain system.
- Conduct quarterly routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.
- Sample collected sediments to determine if landfill disposal is possible, or illegal discharges in the watershed are occurring.

Open Channel

- Consider modification of storm channel characteristics to improve channel hydraulics, to increase pollutant removals, and to enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies

(SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS

Illicit Connections and Discharges

- During routine maintenance of conveyance system and drainage structures field staff should look for evidence of illegal discharges or illicit connections:
  - Is there evidence of spills such as paints, discoloring, etc.
  - Are there any odors associated with the drainage system
  - Record locations of apparent illegal discharges/illicit connections
  - Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of up gradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
  - Once the origin of flow is established, require illicit discharger to eliminate the discharge.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

- The State Department of Fish and Game has a hotline for reporting violations called Cal TIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).
- The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Only properly trained individuals are allowed to handle hazardous materials/wastes.
- Train municipal employees from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report illegal dumping.
- Train municipal employees and educate businesses, contractors, and the general public in proper and consistent methods for disposal.
- Train municipal staff regarding non-stormwater discharges (See SC-10 Non-Stormwater Discharges).

Spill Response and Prevention

- Refer to SC-11, Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Cleanup activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and disposal of flushed effluent to sanitary sewer may be prohibited in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Private property access rights may be needed to track illegal discharges up gradient.

- Requirements of municipal ordinance authority for suspected source verification testing for illicit connections necessary for guaranteed rights of entry.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget. A careful study of cleaning effectiveness should be undertaken before increased cleaning is implemented. Catch basin cleaning costs are less expensive if vacuum street sweepers are available; cleaning catch basins manually can cost approximately twice as much as cleaning the basins with a vacuum attached to a sweeper.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary. Encouraging reporting of illicit discharges by employees can offset costs by saving expense on inspectors and directing resources more efficiently. Some programs have used funds available from "environmental fees" or special assessment districts to fund their illicit connection elimination programs.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.

- Identifying illicit discharges requires teams of at least two people (volunteers can be used), plus administrative personnel, depending on the complexity of the storm sewer system.

- Arrangements must be made for proper disposal of collected wastes.

- Requires technical staff to detect and investigate illegal dumping violations, and to coordinate public education.

Supplemental Information

Further Detail of the BMP

Storm Drain flushing

Sanitary sewer flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in sanitary sewer systems. The same principles that make sanitary sewer flushing effective can be used to flush storm drains. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as to an open channel, to another point where flushing will be initiated, or over to the sanitary sewer and on to the treatment facilities, thus preventing re-suspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. The deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to

cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce the impacts of stormwater pollution, a second inflatable device, placed well downstream, may be used to re-collect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to re-collect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75 percent for organics and 55-65 percent for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm drain flushing.

Flow Management

Flow management has been one of the principal motivations for designing urban stream corridors in the past. Such needs may or may not be compatible with the stormwater quality goals in the stream corridor.

Downstream flood peaks can be suppressed by reducing through flow velocity. This can be accomplished by reducing gradient with grade control structures or increasing roughness with boulders, dense vegetation, or complex banks forms. Reducing velocity correspondingly increases flood height, so all such measures have a natural association with floodplain open space. Flood elevations laterally adjacent to the stream can be lowered by increasing through flow velocity.

However, increasing velocity increases flooding downstream and inherently conflicts with channel stability and human safety. Where topography permits, another way to lower flood elevation is to lower the level of the floodway with drop structures into a large but subtly excavated bowl where flood flows we allowed to spread out.

Stream Corridor Planning

Urban streams receive and convey stormwater flows from developed or developing watersheds. Planning of stream corridors thus interacts with urban stormwater management programs. If local programs are intended to control or protect downstream environments by managing flows delivered to the channels, then it is logical that such programs should be supplemented by management of the materials, forms, and uses of the downstream riparian corridor. Any proposal for steam alteration or management should be investigated for its potential flow and stability effects on upstream, downstream, and laterally adjacent areas. The timing and rate of flow from various tributaries can combine in complex ways to alter flood hazards. Each section of channel is unique, influenced by its own distribution of roughness elements, management activities, and stream responses.

Flexibility to adapt to stream features and behaviors as they evolve must be included in stream reclamation planning. The amenity and ecology of streams may be enhanced through the landscape design options of 1) corridor reservation, 2) bank treatment, 3) geomorphic restoration, and 4) grade control.

Corridor reservation - Reserving stream corridors and valleys to accommodate natural stream meandering, aggradation, degradation, and over bank flows allows streams to find their own form and generate less ongoing erosion. In California, open stream corridors in recent urban developments have produced recreational open space, irrigation of streamside plantings, and the aesthetic amenity of flowing water.

Bank treatment - The use of armoring, vegetative cover, and flow deflection may be used to influence a channel's form, stability, and biotic habitat. To prevent bank erosion, armoring can be done with rigid construction materials, such as concrete, masonry, wood planks and logs, riprap, and gabions. Concrete linings have been criticized because of their lack of provision of biotic habitat. In contrast, riprap and gabions make relatively porous and flexible linings. Boulders, placed in the bed reduce velocity and erosive power.

Riparian vegetation can stabilize the banks of streams that are at or near a condition of equilibrium. Binding networks of roots increase bank shear strength. During flood flows, resilient vegetation is forced into erosion-inhibiting mats. The roughness of vegetation leads to lower velocity, further reducing erosive effects. Structural flow deflection can protect banks from erosion or alter fish habitat. By concentrating flow, a deflector causes a pool to be scoured in the bed.

Geomorphic restoration – Restoration refers to alteration of disturbed streams so their form and behavior emulate those of undisturbed streams. Natural meanders are retained, with grading to gentle slopes on the inside of curves to allow point bars and riffle-pool sequences to develop. Trees are retained to provide scenic quality, biotic productivity, and roots for bank stabilization, supplemented by plantings where necessary.

A restorative approach can be successful where the stream is already approaching equilibrium. However, if upstream urbanization continues new flow regimes will be generated that could disrupt the equilibrium of the treated system.

Grade Control - A grade control structure is a level shelf of a permanent material, such as stone, masonry, or concrete, over which stream water flows. A grade control structure is called a sill, weir, or drop structure, depending on the relation of its invert elevation to upstream and downstream channels.

A sill is installed at the preexisting channel bed elevation to prevent upstream migration of nick points. It establishes a firm base level below which the upstream channel can not erode.

A weir or check dam is installed with invert above the preexisting bed elevation. A weir raises the local base level of the stream and causes aggradation upstream. The gradient, velocity, and erosive potential of the stream channel are reduced. A drop structure lowers the downstream invert below its preexisting elevation, reducing downstream gradient and velocity. Weirs and drop structure control erosion by dissipating energy and reducing slope velocity.

When carefully applied, grade control structures can be highly versatile in establishing human and environmental benefits in stabilized channels. To be successful, application of grade control structures should be guided by analysis of the stream system both upstream and downstream from the area to he reclaimed.

Examples

The California Department of Water Resources began the Urban Stream Restoration Program in 1985. The program provides grant funds to municipalities and community groups to implement stream restoration projects. The projects reduce damages from streambank aid watershed instability arid floods while restoring streams' aesthetic, recreational, and fish and wildlife values.

In Buena Vista Park, upper floodway slopes are gentle and grassed to achieve continuity of usable park land across the channel of small boulders at the base of the slopes.

The San Diego River is a large, vegetative lined channel, which was planted in a variety of species to support riparian wildlife while stabilizing the steep banks of the floodway.

References and Resources

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

Los Angeles County Stormwater Quality. Public Agency Activities Model Program. On-line: http://ladpw.org/wmd/npdes/public_TC.cfm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP) Municipal Activities Model Program Guidance. 2001. Project Clean Water. November.

United States Environmental Protection Agency (USEPA). 1999. Stormwater Management Fact Sheet Non-stormwater Discharges to Storm Sewers. EPA 832-F-99-022. Office of Water, Washington, D.C. September.

United States Environmental Protection Agency (USEPA). 1999. Stormwater O&M Fact Sheet Catch Basin Cleaning. EPA 832-F-99-011. Office of Water, Washington, D.C. September.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Illegal Dumping Control. On line: http://www.epa.gov/npdes/menuofbmps/poll_7.htm

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line: http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Efficient Irrigation SD-12

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

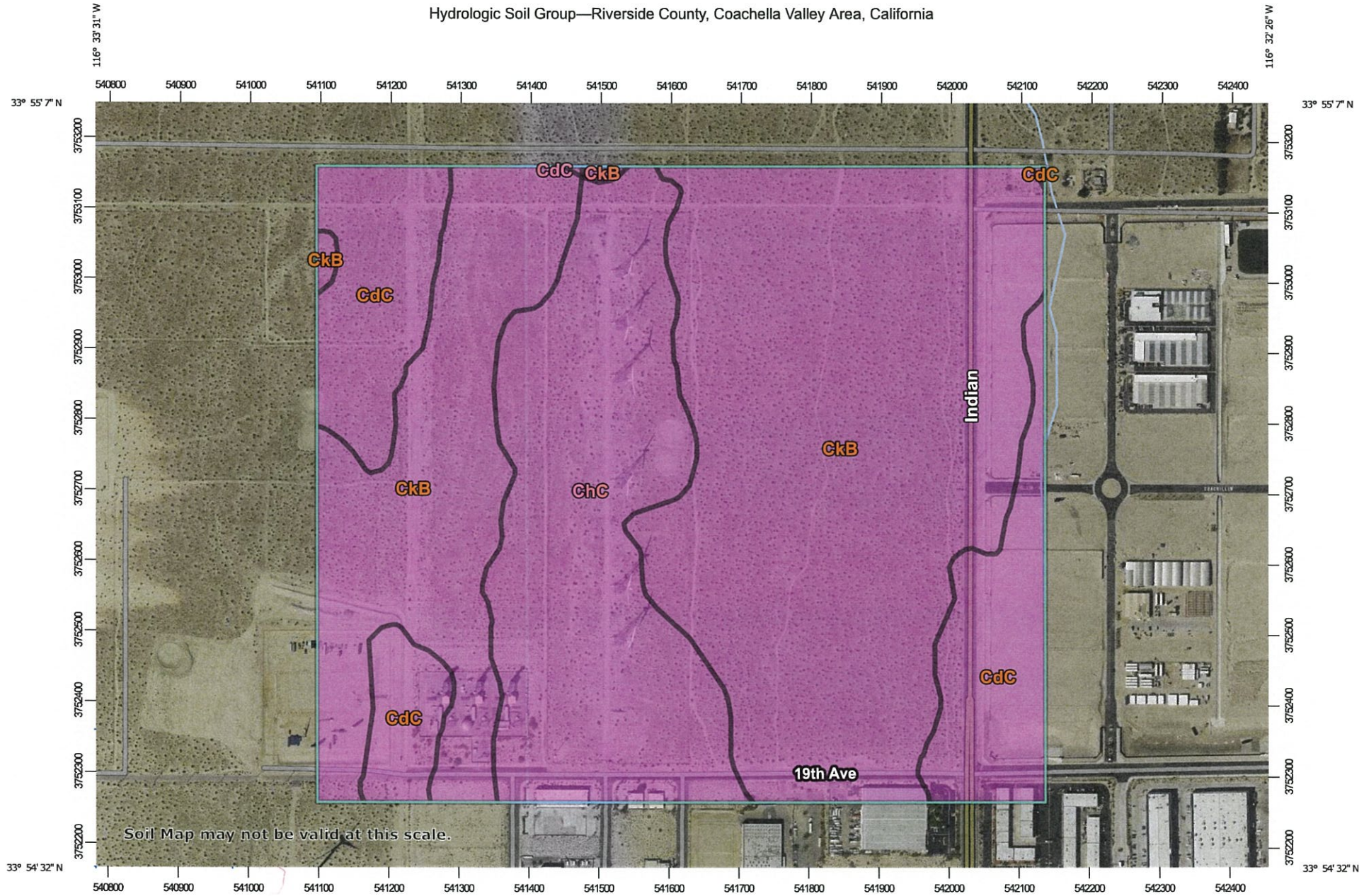
Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Appendix E

SOILS REPORT



Map Scale: 1:7,650 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Riverside County, Coachella Valley Area, California
Survey Area Data: Version 14, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 15, 2022—May 28, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CdC	Carsitas gravelly sand, 0 to 9 percent slopes	A	37.6	16.2%
ChC	Carsitas cobbly sand, 2 to 9 percent slopes	A	54.2	23.3%
CkB	Carsitas fine sand, 0 to 5 percent slopes	A	140.7	60.5%
Totals for Area of Interest			**232.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Appendix F

STRUCTURAL BMP AND/OR RETENTION FACILITY SIZING CALCULATIONS AND DESIGN DETAILS

Whitewater Watershed

BMP Design Volume, V_{BMP} & Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend: Required Entries / Calculated Cells

Company Name	MSA Consulting, Inc	Date	January 5, 2023
Designed By	NM	County/City Case No.	
Company Project Number/Name	2771 / Palm Springs Fulfillment Center		
Drainage Area Number/Name	DA-A		

Enter the Area Tributary to this Feature (A_{TRIB}) — A_{TRIB} = 6.980 acres

Determine the Impervious Area Ratio

Determine the Impervious Area Within A_{TRIB} (A_{IMP}) — A_{IMP} = 6.280 acres

Calculate the Impervious Area Ratio (I_F)

$I_F = A_{IMP}/A_{TRIB}$ — I_F = 0.90

Calculate the Composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ — C_{BMP} = 0.73

Determine Design Storage Volume, V_{BMP}

Calculate V_U, the 80% Unit Storage Volume $V_U = 0.40 \times C_{BMP}$ — V_U = 0.29 (in*ac)/ac

Calculate the design storage volume of the BMP, V_{BMP}

$$V_{BMP}\ (ft^3) = \frac{V_U\ (in\text{-}ac/ac) \times A_T\ (ac) \times 43{,}560\ (ft^2/ac)}{12(in/ft)}$$

V_{BMP} = 7,397 ft^3

BMP Design Flow Rate, Q_{BMP}

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ — Q_{BMP} = 1.02 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

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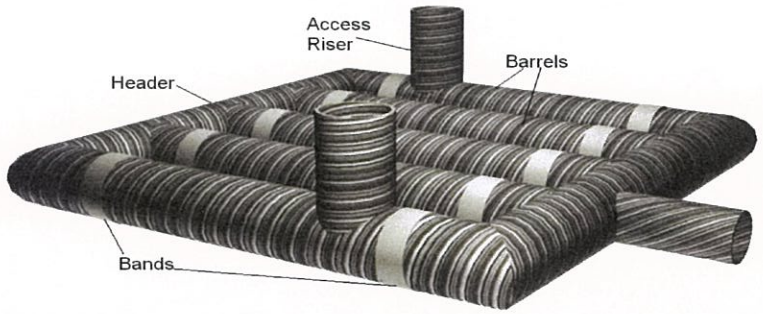
CONTECH CONSTRUCTION PRODUCTS INC.

For design assistance, drawings, and pricing send completed worksheet to:
dyods@contech-cpi.com



Project Summary

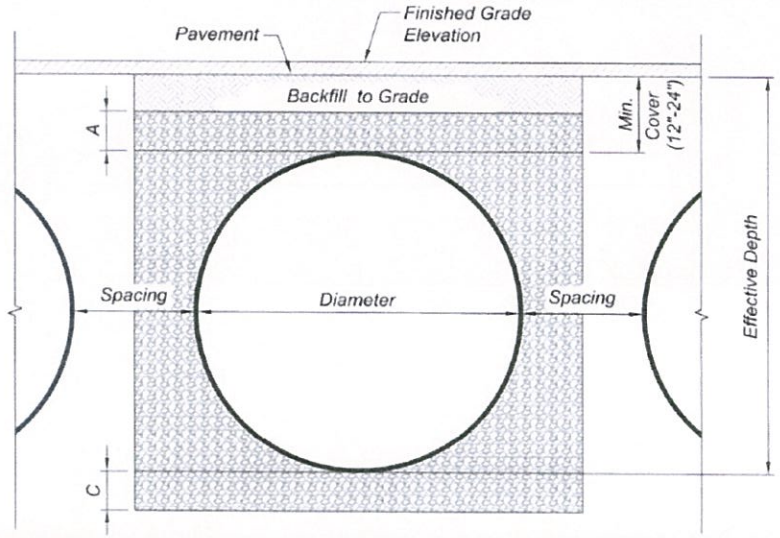
Date:	1/5/2023
Project Name:	Palm Springs Fulfillment Center
City / County:	Palm Springs / Riverside
State:	CA
Designed By:	NM
Company:	MSA Consulting
Telephone:	(760) 320-9811

Enter Information in Blue Cells

Corrugated Metal Pipe Calculator

Storage Volume Required (cf):	51,245
Limiting Width (ft):	20.00
Effective Depth Below Asphalt (ft):	6.00
Solid or Perforated Pipe:	Perforated
Shape Or Diameter:	60
Spacing between Barrels (ft):	3.50
Stone Width Around Perimeter of System (ft):	1.5
Depth A: Porous Stone Above Pipe (in):	6
Depth C: Porous Stone Below Pipe (in):	12
Stone Porosity (0 to 40%):	40

19.63 ft^2 Pipe Area



System Sizing

Use Custom Layout (at right) for layout adjustment

Pipe Storage:	30,277 cf	
Porous Stone Storage:	21,094 cf	
Total Storage Provided:	51,371 cf	100.2% Of Required Storage
Number of Barrels:	2 barrels	
Length Per Barrel:	771.00 ft	
Rectangular Footprint (W x L):	16.5 ft x 774. ft	

CONTECH Materials

Total CMP Footage:	1,542 ft
Approximate Total Pieces:	66 pcs
Approximate Coupling Bands:	64 bands
Approximate Truckloads:	17 trucks

Construction Quantities**

Total Excavation:	2838 cy
Porous Stone Backfill For Storage:	1953 cy Stone
Backfill to Grade Excluding Stone:	-237 cy Fill

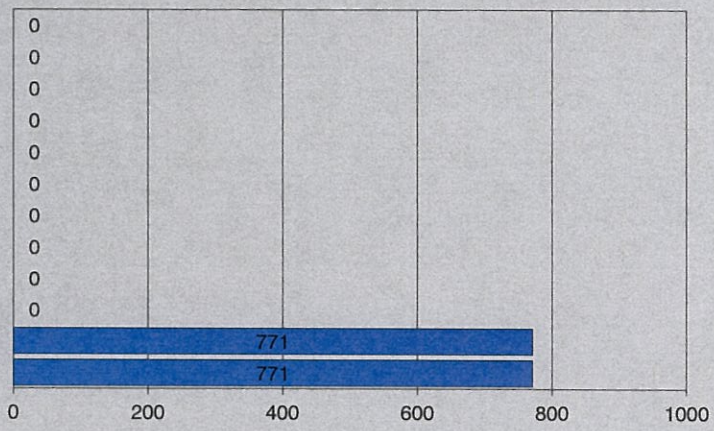
***Construction quantities are approximate and should be verified upon final design*

Custom Layout

To adjust layout, enter desired barrel length in the light blue boxes below.

Excess Footage = 0

Barrel 12	0
Barrel 11	0
Barrel 10	0
Barrel 9	0
Barrel 8	0
Barrel 7	0
Barrel 6	0
Barrel 5	0
Barrel 4	0
Barrel 3	0
Barrel 2	771
Barrel 1	771



Whitewater Watershed

BMP Design Volume, V_{BMP} & Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend:		Required Entries
		Calculated Cells

Company Name	MSA Consulting, Inc	Date	January 5, 2023
Designed By	NM	County/City Case No.	
Company Project Number/Name	2771 / Palm Springs Fulfillment Center		
Drainage Area Number/Name	DA-B		

Enter the Area Tributary to this Feature (A_{TRIB}) — A_{TRIB} = 29.140 acres

Determine the Impervious Area Ratio

Determine the Impervious Area Within A_{TRIB} (A_{IMP}) — A_{IMP} = 26.230 acres

Calculate the Impervious Area Ratio (I_F)

$I_F = A_{IMP}/A_{TRIB}$ — I_F = 0.90

Calculate the Composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ — C_{BMP} = 0.73

Determine Design Storage Volume, V_{BMP}

Calculate V_U, the 80% Unit Storage Volume $V_U = 0.40 \times C_{BMP}$ — V_U = 0.29 (in*ac)/ac

Calculate the design storage volume of the BMP, V_{BMP}

$$V_{BMP}\ (ft^3) = \frac{V_U\ (in\text{-}ac/ac) \times A_T\ (ac) \times 43{,}560\ (ft^2/ac)}{12(in/ft)}$$

V_{BMP} = 30,908 ft^3

BMP Design Flow Rate, Q_{BMP}

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ — Q_{BMP} = 4.26 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

JOB NAME: 2771
JOB #:
RETENTION BASIN
DATE:
BASIN CHARACTERISTICS

CONTOUR ELEVATION	DEPTH INCR (ft)	DEPTH TOTAL (ft)	AREA INCR (sf)	AREA TOTAL (sf)	VOLUME INCR (cuft)	VOLUME TOTAL (cuft)	VOLUME TOTAL (acre-ft)
763.6	0	0		20,233	0	0	0.00
764	0.4	0.4	2,763	22,997	8,646	8,646	0.20
765	1	1.4	6,899	29,895	26,446	35,092	0.81
766	1	2.4	6,971	36,866	33,381	68,472	1.57
767	1	3.4	7,089	43,955	40,411	108,883	2.50

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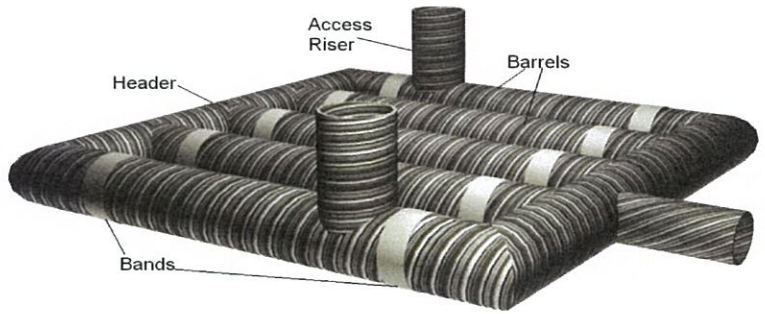


Project Summary

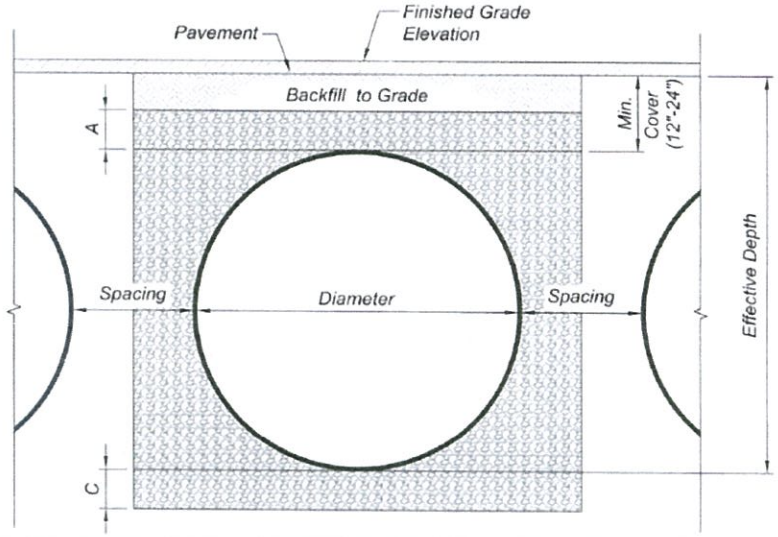
Date:	1/5/2023
Project Name:	Palm Springs Fulfillment Center
City / County:	Palm Springs / Riverside
State:	CA
Designed By:	NM
Company:	MSA Consulting
Telephone:	(760) 320-9811

Enter Information in Blue Cells

Corrugated Metal Pipe Calculator

Storage Volume Required (cf):	137,000
Limiting Width (ft):	50.00
Effective Depth Below Asphalt (ft):	10.00
Solid or Perforated Pipe:	Perforated
Shape Or Diameter:	60
Spacing between Barrels (ft):	3.50
Stone Width Around Perimeter of System (ft):	1.5
Depth A: Porous Stone Above Pipe (in):	6
Depth C: Porous Stone Below Pipe (in):	12
Stone Porosity (0 to 40%):	40

19.63 ft^2 Pipe Area



System Sizing

Use Custom Layout (at right) for layout adjustment

Pipe Storage:	79,914 cf	
Porous Stone Storage:	57,251 cf	
Total Storage Provided:	137,165 cf	100.1% Of Required Storage
Number of Barrels:	5 barrels	
Length Per Barrel:	814.00 ft	
Rectangular Footprint (W x L):	42. ft x 817. ft	

CONTECH Materials

Total CMP Footage:	4,070 ft
Approximate Total Pieces:	170 pcs
Approximate Coupling Bands:	165 bands
Approximate Truckloads:	43 trucks

Construction Quantities**

Total Excavation:	12709 cy
Porous Stone Backfill For Storage:	5301 cy Stone
Backfill to Grade Excluding Stone:	4448 cy Fill

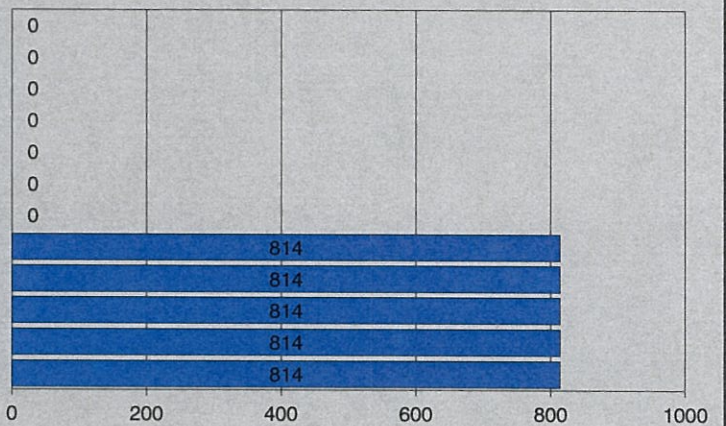
***Construction quantities are approximate and should be verified upon final design*

Custom Layout

To adjust layout, enter desired barrel length in the light blue boxes below.

Excess Footage = 0

Barrel 12	0
Barrel 11	0
Barrel 10	0
Barrel 9	0
Barrel 8	0
Barrel 7	0
Barrel 6	0
Barrel 5	814
Barrel 4	814
Barrel 3	814
Barrel 2	814
Barrel 1	814



Appendix G

AGREEMENTS – CC&RS, COVENANT AND AGREEMENTS, BMP MAINTENANCE AGREEMENTS AND/OR OTHER MECHANISMS FOR ENSURING ONGOING OPERATION, MAINTENANCE, FUNDING AND TRANSFER OF REQUIREMENTS FOR THIS PROJECT-SPECIFIC WQMP

Appendix H

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT – SUMMARY OF SITE REMEDIATION CONDUCTED AND USE RESTRICTIONS

Appendix I

PROJECT-SPECIFIC WQMP SUMMARY DATA FORM

Project-Specific WQMP Summary Data Form

Applicant Information	
Name and Title	David Snider
Company	PS Canyon Development, LLC
Phone	(216) 785-0011
Email	dsnider@sniderinterests.com

Project Information	
Project Name (as shown on project application/project-specific WQMP)	Palm Springs Fulfillment Center
Street Address	Northwest Corner of N. Indian Canyon Drive and 19th Avenue
Nearest Cross Streets	Indian Canyon Drive
Municipality (City or Unincorporated County)	Palm Springs
Zip Code	92262
Tract Number(s) and/or Assessor Parcel Number(s)	APN: 666-320-018
Other (other information to help identify location of project)	

Indicate type of project.	**Priority Development Projects (Use an "X" in cell preceding project type):**	
		SF hillside residence; impervious area ≥ 10,000 sq. ft.; Slope ≥ 25%
		SF hillside residence; impervious area ≥ 10,000 sq. ft.; Slope ≥ 10% & erosive soils
	X	Commercial or Industrial ≥ 100,000 sq. ft.
		Automotive repair shop
		Retail Gasoline Outlet disturbing > 5,000 sq. ft.
		Restaurant disturbing > 5,000 sq. ft.
		Home subdivision ≥ 10 housing units
	X	Parking lot ≥ 5,000 sq. ft. or ≥ 25 parking spaces

Date Project-Specific WQMP Submitted	January 11, 2023
Size of Project Area (nearest 0.1 acre)	36.12 Acres
Will the project replace more than 50% of the impervious surfaces on an existing developed site?	No
Project Area managed with LID/Site Design BMPs (nearest 0.1 acre)	36.12 Acres
Are Treatment Control BMPs required?	No
Is the project subject to onsite retention by ordinance or policy?	Yes
Did the project meet the 100% LID/Site Design Measurable Goal?	Yes
Name of the entity that will implement, operate, and maintain the post-construction BMPs	PS Canyon Development, LLC
Contact Name	David Snider
Street or Mailing Address	730 Arcady Road
City	Montecito, CA
Zip Code	93108
Phone	(216) 785-0011

Space Below for Use by City/County Staff Only	
Preceding Information Verified by (consistent with information in project-specific WQMP)	**Name:** **Date:**
Date Project-Specific WQMP Approved:	
Data Entered by	**Name:** **Date:**
Other Comments	

Appendix K

Noise Study

\

North Indian Canyon/19th Ave High-Cube Warehouse

NOISE IMPACT ANALYSIS

CITY OF PALM SPRINGS

PREPARED BY:

William Maddux
bmaddux@urbanxroads.com
(619) 778-1971

JULY 12, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	North Indian Canyon/19th Ave High-Cube Warehouse
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed North Indian Canyon/19th Ave High-Cube Warehouse development ("Project"). The Project site is located at the northwest corner of the intersection of North Indian Canyon Road and 19th Street (APN 666-320-018), in the City of Palm Springs. The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet. The Project site is currently an undeveloped lot that is surrounded by industrial and utility land uses. The nearest off-site noise-sensitive receiver is approximately 2,000 feet northeast of the Project site. This noise study has been prepared to satisfy applicable City of Palm Springs noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	-
Operational Noise	9	*Less Than Significant*	-
Construction Noise	10	*Less Than Significant*	-
Construction Vibration		*Less Than Significant*	-

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed North Indian Canyon/19th Ave High-Cube Warehouse ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential short-term construction noise and vibration impacts.

1.1 SITE LOCATION

located at the northwest corner of the intersection of North Indian Canyon Road and 19th Street (APN 666-320-018) in the City of Palm Springs, as shown on Exhibit 1-A. Project site is located approximately 2,000 feet north of freeway 10 in North Palm Springs.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet as shown on Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Palm Springs relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. Based on guidance from the U.S. Department of Transportation, Federal Highway Administration (FHWA), Office of Environment and Planning, Noise and Air Quality Branch, the way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation

associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (4)

2.3.5 REFLECTION

Field studies conducted by the FHWA have shown that the reflection from barriers and buildings does not substantially increase noise levels (5). If all the noise striking a structure was reflected back to a given receiving point, the increase would be theoretically limited to 3 dBA. Further, not all the acoustical energy is reflected back to same point. Some of the energy would go over the structure, some is reflected to points other than the given receiving point, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by intervening structures and/or obstacles (e.g., the noise source itself). Additionally, some of the reflected energy is lost due to the longer path that the noise must travel. FHWA measurements made to quantify reflective increases in traffic noise have not shown an increase of greater than 1-2 dBA; an increase that is not perceptible to the average human ear.

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by up to 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (4)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

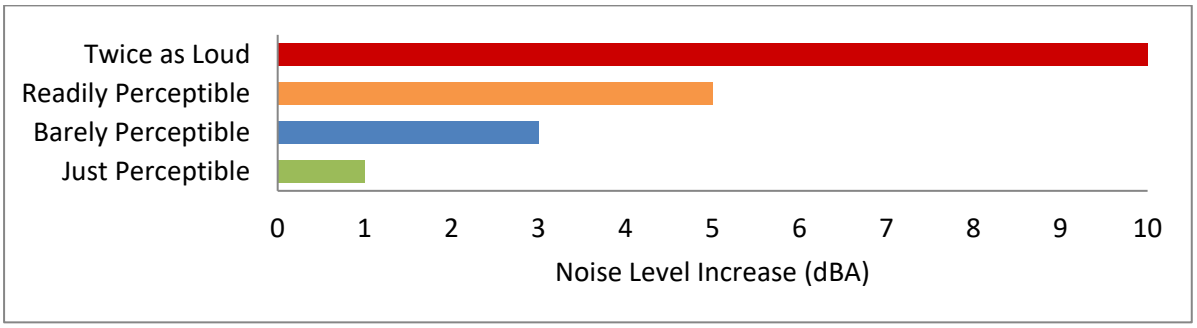
Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (7) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When

traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (7) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (8)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area.

2.9 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual*, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne

vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

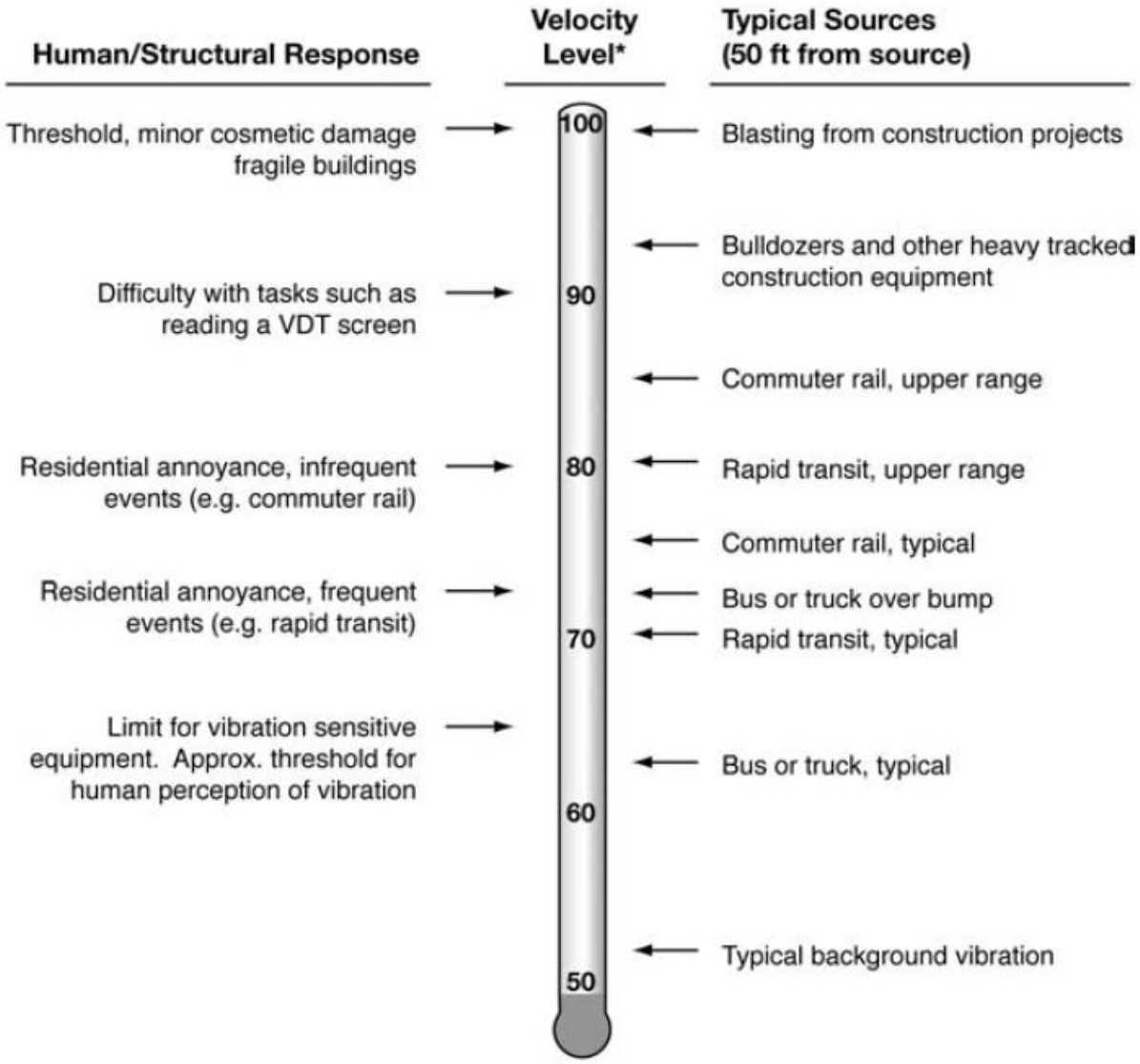
Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (9). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (9). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structurers reduce vibration levels due to the coupling of the building to the soil.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal (9). The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body (9). However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV (10). Thus, either can be used on the description of vibration impacts.

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits (11). Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels.

As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



** RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.

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3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (12) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF PALM SPRINGS GENERAL PLAN NOISE ELEMENT

The City of Palm Springs has adopted a Noise Element of the General Plan (13) to control and abate environmental noise, and to protect the citizens of the City of Palm Springs from excessive exposure to noise. The Noise Element specifies the maximum exterior and interior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. In addition, the Noise Element identifies noise polices designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. To protect City residents from excessive noise, the Noise Element contains the following two goals related to the Project:

NS1 *Protect residential areas and other sensitive land uses from impacts generated by exposure to excessive noise.*

NS2 *Minimize, to the greatest extent possible, the impact of transportation related noise on residential areas and other sensitive land uses.*

The noise policies specified in the City of Palm Springs Noise Element provide the guidelines necessary to satisfy these two goals. To protect residential areas from excessive noise (NS1), the City encourages the application of site planning and architectural design techniques that reduce noise impacts on new developments. The Noise Element also provides several policies to reduce noise impacts from transportation (NS2), which includes requiring noise mitigation measures for new developments in areas exposed to noise levels greater than 60 dBA CNEL.

3.2.1 LAND USE COMPATIBILITY

The noise criteria identified in the City of Palm Springs Noise Element are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

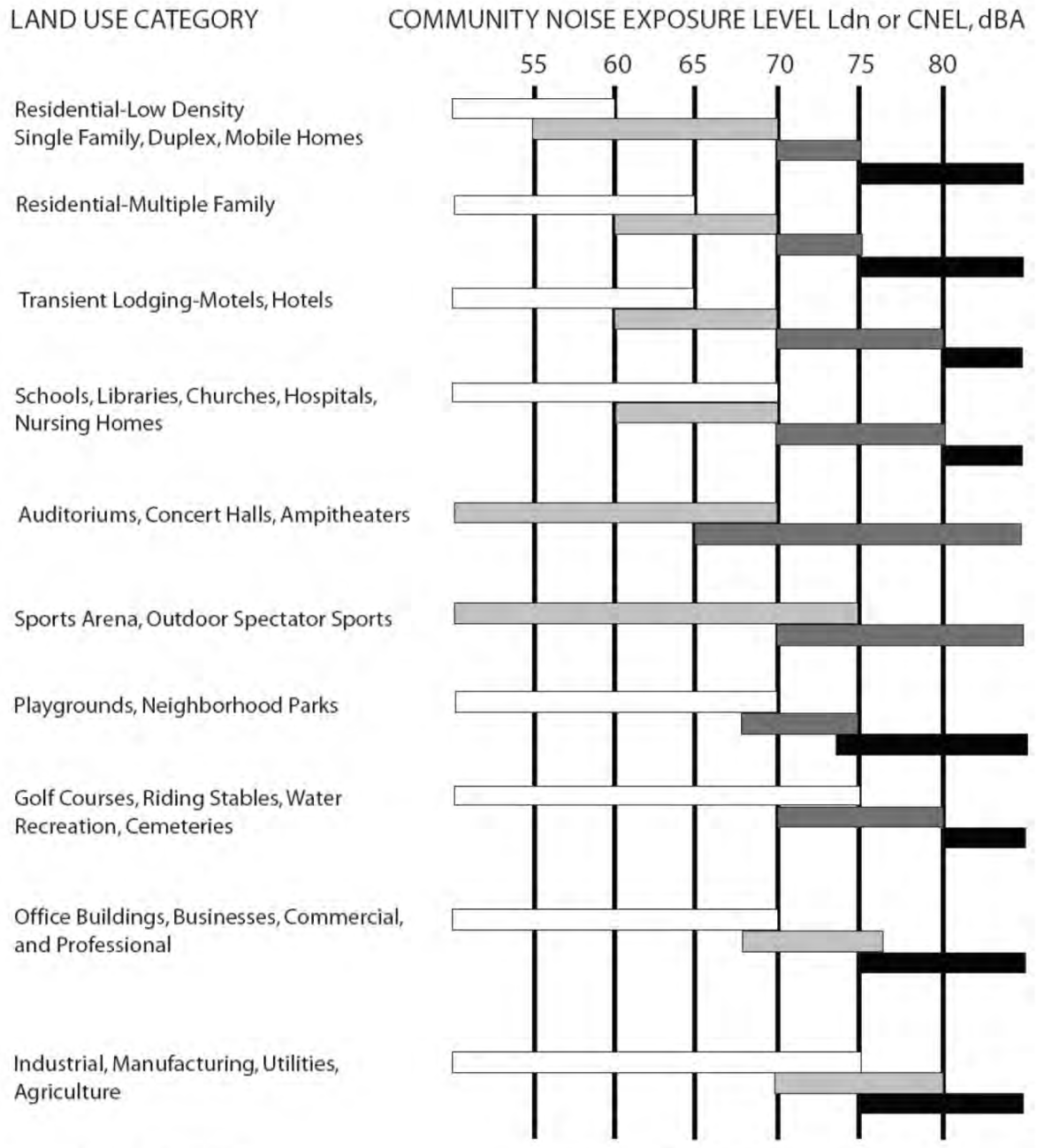
The *Land Use Compatibility for Community Noise Exposure* (Figure 8-2) matrix in the City of Palm Springs General Plan provides guidelines to evaluate the acceptability of the transportation related noise level impacts. Single-family residential land uses are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL and *conditionally acceptable* with noise levels below 70 dBA CNEL. For *conditionally acceptable* land use, *new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.* (13)

3.2.2 NOISE STANDARDS

The City of Palm Springs Noise Element, Table 8-3 *State of California Interior and Exterior Noise Standards*, provides specific interior and exterior noise level standards for various land use categories. For noise-sensitive residential uses, the Noise Element requires an exterior noise level not to exceed 65 dBA CNEL. The exterior noise level standards apply to outdoor living areas including those identified by the *State of California Interior and Exterior Noise Standards*, such as private yards, and private patios or balconies. However, as indicated in Table 8-3 of the Noise Element, balconies 6 feet deep or less are exempt from these standards. Exhibit 3-B shows the interior noise levels for residential land use may not exceed 45 dBA CNEL.

Based on the City of Palm Springs land use compatibility guidelines and noise standards, this noise study has been prepared to satisfy an exterior noise level for outdoor living areas of less than 65 dBA CNEL and an interior noise level of less than 45 dBA CNEL for residential land use. This approach is consistent with Figure 8-2 and Table 8-3 of the City of Palm Springs General Plan Noise Element.

EXHIBIT 3-A: LAND USE COMPATIBILITY FOR COMMUNITY NOISE EXPOSURE



Source: California Office of Noise Control (as adopted from Wiley Labs for the Environmental Protection Agency, 1976).

EXHIBIT 3-B: STATE OF CALIFORNIA INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use		CNEL (dBA)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multiple family, duplex	45[3]	65
	Mobile homes	—	65[4]
Commercial	Hotel, motel, transient housing	45	—
	Commercial retail, bank, restaurant	55	—
	Office building, research and development, professional offices	50	—
	Amphitheater, concert hall, auditorium, movie theater	45	—
	Gymnasium (Multipurpose)	50	—
	Sports Club	55	—
	Manufacturing, warehousing, wholesale, utilities	65	—
	Movie Theaters	45	—
Institutional / Public	Hospital, school, classrooms/playgrounds	45	65
	Church, library	45	—
Open Space	Parks	—	65

[1] Indoor environment excluding: bathrooms, kitchens, toilets, closets, and corridors

[2] Outdoor environment limited to:
- Private yard of single-family dwellings
- Multiple-family private patios or balconies accessed from within the dwelling (Balconies 6 feet deep or less are exempt)
- Mobile home parks
- Park picnic areas
- School playgrounds
- Hospital patios

[3] Noise-level requirement with closed windows, mechanical ventilation, or other means of natural ventilation shall be provided as per Chapter 12, Section 1205 of the Uniform Building Code.

[4] Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the North Indian Canyon/19th Ave High-Cube Warehouse Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, and trash enclosure activity are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan.

Section 11.74.031 *Noise Level Limit* (included in Appendix 3.1) identifies exterior noise level standards, which for the purpose of this report, are used to evaluate potential Project-related operational noise levels at noise sensitive exterior use areas. The nearest noise sensitive land uses are residential land uses. The City of Palm Springs Municipal Code identifies residential property noise limits of 50 dBA L_{eq} between the hours of 7 a.m. and 6 p.m., with noise limits of 45 dBA L_{eq} between the hours of 6 p.m. and 10 p.m., and noise limits of 40 dBA L_{eq} between the hours of 10 p.m. and 7 a.m.. (14) If the measured ambient noise level exceeds the standards in Section 11.74.031, the ambient noise level becomes the standard.

3.4 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of North Indian Canyon/19th Ave High-Cube Warehouse, noise from construction activities is typically evaluated against standards established under a City's Municipal Code. The City of Palm Springs Municipal Code, Section 8.04.220 included in Appendix 3.1 indicates that construction, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. weekdays, and from 8:00 a.m. to 5:00 p.m. on Saturdays. Construction activity is not permitted on Sundays or major holidays. (15) However, neither the City of Palm Springs General Plan Noise Element or Municipal Codes establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or permanent increase in ambient noise levels*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use with a nighttime exterior construction noise level of 70 dBA L_{eq} (16 p. 179).

3.5 CONSTRUCTION VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration (16). To analyze vibration impacts originating from the operation and construction of the North Indian Canyon/19th Ave High-Cube Warehouse, vibration-generating activities are appropriately evaluated against standards established under the Municipal Code if such standards exist. While Section 11.74.020 states the "perception threshold shall be presumed to be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hz." This standard is applicable to operations, however, the City of Palm Springs does not identify specific construction vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (10 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. To be conservative the Project construction vibration impacts are evaluated based on the "older residential structures" maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

3.6 PALM SPRINGS AIRPORT LAND USE COMPATIBILITY

The Palm Springs Airport (PSP) is located approximately five miles southeast of the Project site. The *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP) includes the policies for determining the land use compatibility of the Project since it is located within 1 mile of an airport runway. Policy 4.1.4 *Noise Exposure in Residential Areas* of the RC ALUCP indicates that maximum CNEL considered *normally acceptable* for new residential land uses in the vicinity of the airports covered by this Plan is 60 dBA for all airports. (17) The Table 2B *Supporting Compatibility Criteria: Noise* matrix is shown on Exhibit 3-B and indicates that *normally acceptable* public hospital land uses experience exterior noise levels below 55 dBA CNEL and *marginally acceptable* exterior noise levels below 60 dBA CNEL. For *marginally acceptable* noise levels: *the indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged*. (17)

The noise contour boundaries used to determine the potential aircraft-related noise impacts at the Project site are found on Exhibit PS-3 of the RC ALUCP and are presented on Exhibit 3-C of this report. Based on the RC ALUCP noise level contours for PSP, the Project is entirely located outside the 60 dBA CNEL noise level contour boundaries and is considered *normally acceptable.* Therefore, based on the RC ALUCP compatibility criteria, *conventional construction methods will eliminate noise intrusions above 60 dBA CNEL upon indoor activities and thus is allowed under the RC ALUCP*. (17)

EXHIBIT 3-B: RC ALUCP SUPPORTING COMPATIBILITY CRITERIA: NOISE

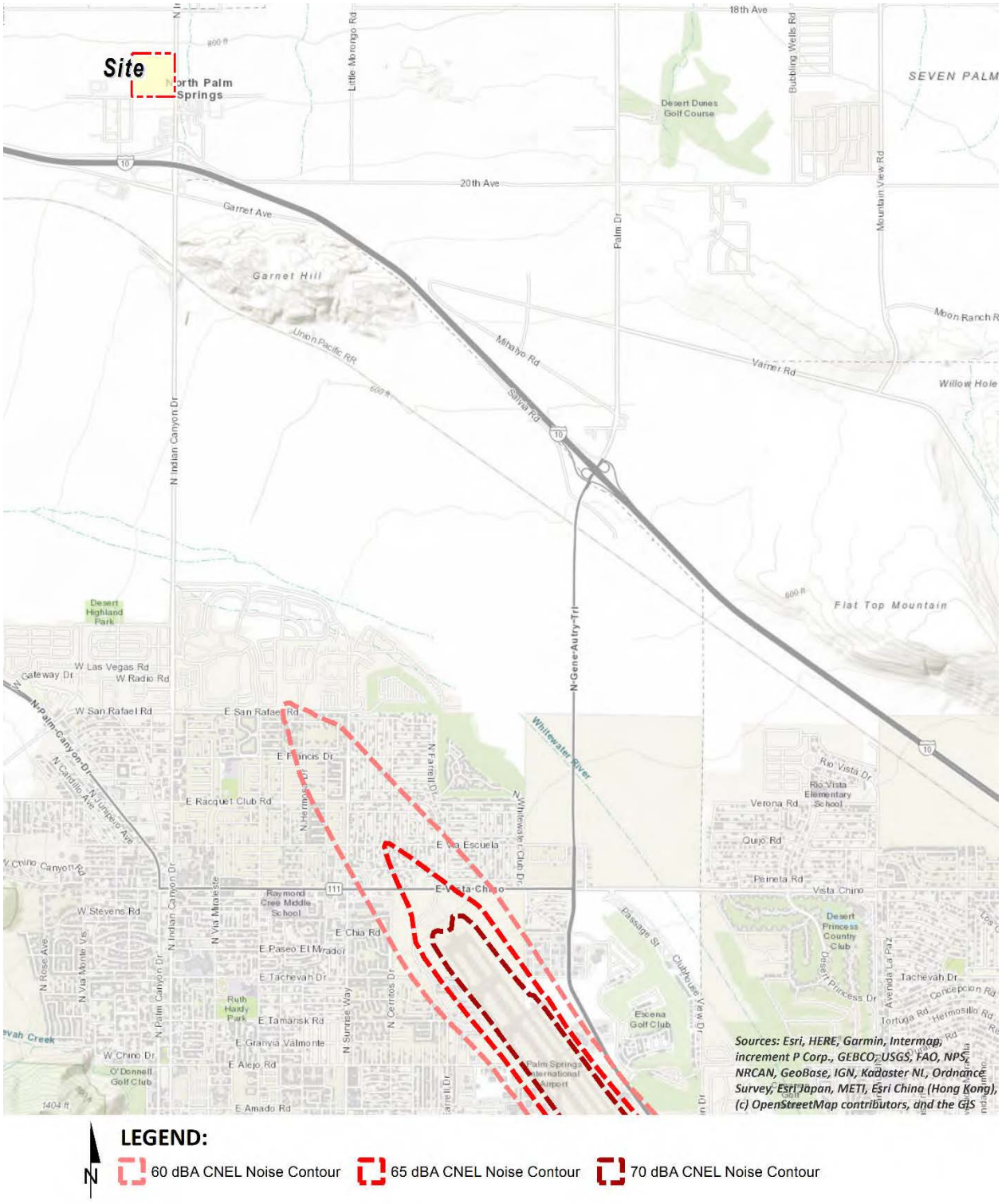
Land Use Category	CNEL (dB) 50–55	55–60	60–65	65–70	70–75
Residential *					
single-family, nursing homes, mobile homes	++	o	–	– –	– –
multi-family, apartments, condominiums	++	+	o	– –	– –
Public					
schools, libraries, hospitals	+	o	–	– –	– –
churches, auditoriums, concert halls	+	o	o	–	– –
transportation, parking, cemeteries	++	++	++	+	o
Commercial and Industrial					
offices, retail trade	++	+	o	o	–
service commercial, wholesale trade, warehousing, light industrial	++	++	+	o	o
general manufacturing, utilities, extractive industry	++	++	++	+	+
Agricultural and Recreational					
cropland	++	++	++	++	+
livestock breeding	++	+	o	o	–
parks, playgrounds, zoos	++	+	+	o	–
golf courses, riding stables, water recreation	++	++	+	o	o
outdoor spectator sports	++	+	+	o	–
amphitheaters	+	o	–	– –	– –

Land Use Acceptability		Interpretation/Comments
++	*Clearly Acceptable*	The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.
+	*Normally Acceptable*	Noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.
o	*Marginally Acceptable*	The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged.
–	*Normally Unacceptable*	Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.
– –	*Clearly Unacceptable*	Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.

* Subtract 5 dB for low-activity outlying airports (Chiriaco Summit and Desert Center)

Source: Riverside County Airport Land Use Compatibility Plan, Table 2B.

EXHIBIT 3-C: PSP AIRPORT NOISE CONTOURS



4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (18) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

While the City of Palm Springs General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under Guideline A. CEQA Appendix G Guideline C applies to nearby public and private airports.

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders a noise impact significant.* (19) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (20) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders a noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (19) For example, if the ambient noise environment is quiet (<60

dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance at noise sensitive receiver locations are consistent with guidance provided by both the Federal Highway Administration (21 p. 9) and Caltrans (22 p. 2_48).

4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The *Land Use Compatibility Criteria* outlined in Section 3.2 was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for the Project related non-noise-sensitive warehouse/industrial land use is 75 dBA CNEL. To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 75 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the *normally acceptable* 75 dBA CNEL exterior noise level criteria outlined in *Land Use Noise Compatibility Criteria* for warehouse/industrial land use.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.4, the vibration impacts originating from the construction of North Indian Canyon/19th Ave High-Cube Warehouse, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as “older residential structures” with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

The Project site is not located within two miles of a public airport or within an airport land use plan. The closest airport is the San Gabriel Valley Airport located over 3.2 miles southwest of the Project site. As shown in Exhibit 3-C, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant,* and no further noise analysis is conducted in relation to Guideline C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria		
			Daytime	Evening	Nighttime
Off-Site	Noise-Sensitive	If ambient is < 60 dBA Leq[1]	≥ 5 dBA L_{eq} Project increase		
		If ambient is 60 - 65 dBA Leq[1]	≥ 3 dBA L_{eq} Project increase		
		If ambient is > 65 dBA Leq[1]	≥ 1.5 dBA L_{eq} Project increase		
	Non-Sensitive	If ambient is > 70 dBA CNEL	≥ 3 dBA L_{eq} Project increase		
Operational	Commercial	Exterior Noise Level Standards[2]	50 dBA L_{eq}	45 dBA L_{eq}	40 dBA L_{eq}
		If ambient is < 60 dBA Leq[1]	≥ 5 dBA L_{eq} Project increase		
		If ambient is 60 - 65 dBA Leq[1]	≥ 3 dBA L_{eq} Project increase		
		If ambient is > 65 dBA Leq[1]	≥ 1.5 dBA L_{eq} Project increase		
Construction	Noise-Sensitive	Noise Level Threshold[3]	80 dBA L_{eq}	n/a	n/a
		Vibration Level Threshold[4]	0.3 PPV (in/sec)	n/a	n/a

[1] FICON, 1992.
[2] The City of Palm Springs Section 11.74.031.
[3] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, 2018.
[4] Caltrans Transportation and Construction Vibration Guidance Manual.
"Daytime" = 7:00 a.m. to 6:00 p.m.; "Evening" = 6:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted; "RMS" = root-mean-square

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at three locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, October 13, 2022. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime, evening, and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (23)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (2) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (24)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (24) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels

and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 6:00 p.m.), evening (6:00 p.m. to 10:00 p.m.), and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Additional median noise levels (L_{50}) are provided on Table 5-1 consistent with the City of Palm Springs Municipal Code exterior noise level standards.

TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]			Energy Average Noise Level (dBA L_{50})[2]		
		Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
L1	Located near existing noise sensitive residence at 64088 Teagarden Drive.	55.2	51.9	41.8	46.8	46.5	41.7
L2	Located near existing noise sensitive residence at 17725 Covey Street.	51.9	54.4	51.6	48.8	52.8	50.2
L3	Located Near trailer home residence at 10769 N Canyon Drive.	62.6	61.5	53.9	60.4	57.8	51.8

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the (energy average) noise levels used to describe the daytime, evening, and nighttime ambient conditions. These daytime, evening, and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime, evening, and nighttime periods. The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

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6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (25) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (26) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (27)

6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 identifies the 13 off-site study area roadway segments, the distance from the centerline to adjacent receiving land use based on the functional roadway classifications per the City of Palm Springs General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study are presented on Table 6-2 are based on the *North Indian Canyon/19th Ave High-Cube Warehouse Traffic Impact Analysis* prepared by Urban Crossroads, Inc. for the following traffic scenarios:

- Existing
- Existing plus Project
- Buildout Year (2024) without Project Conditions
- Buildout Year (2024) with Project Conditions

The volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic analysis. The Project is anticipated to generate a net total of 1,574 two-way trips per day (actual vehicles) that includes 280 truck trips. Approximately 90 percent of theses trucks would use Indian Canyon Road to travel south to the I-10 Freeway and would not impact noise sensitive receivers along affected roadways.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Classification[1]	Receiving Land Use[2]	Distance from Centerline to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
1	Indian Canyon Road	n/o Coachillin Way	Major	Non-Sensitive	64'	55
2	Indian Canyon Road	n/o 19th Avenue	Major	Non-Sensitive	64'	55
3	Indian Canyon Road	n/o 20th Avenue	Major	Non-Sensitive	64'	55
4	Indian Canyon Road	n/o Garnet Avenue	Major	Non-Sensitive	64'	55
5	Indian Canyon Road	s/o Garnet Avenue	Major	Non-Sensitive	64'	55
6	19th Avenue	w/o Newhall Street	Secondary	Non-Sensitive	64'	35
7	19th Avenue	w/o Indian Canyon Road	Secondary	Non-Sensitive	64'	35
8	19th Avenue	e/o 19th Avenue	Secondary	Non-Sensitive	64'	35
9	20th Avenue	w/o Indian Canyon Road	Collector	Non-Sensitive	30'	35
10	20th Avenue	w/o Indian Canyon Road	Collector	Non-Sensitive	30'	35
11	Garnet Avenue	w/o I-10 EB Ramp	Secondary	Non-Sensitive	64'	45
12	Garnet Avenue	w/o Indian Canyon Road	Secondary	Non-Sensitive	64'	45
13	Garnet Avenue	e/o Indian Canyon Road	Secondary	Non-Sensitive	64'	45

[1] N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis, Urban Crossroads, Inc.
[2] Based on a review of existing aerial imagery.
[3] Distance to receiving land use is based upon the right-of-way distances.

TABLE 6-2: PROJECT AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]			
			Existing		OYC (2024)	
			Without Project	With Project	Without Project	With Project
1	Indian Canyon Road	n/o Coachillin Way	17,400	17,900	27,900	28,300
2	Indian Canyon Road	n/o 19th Avenue	17,400	18,700	34,700	35,900
3	Indian Canyon Road	n/o 20th Avenue	19,800	21,400	37,900	39,500
4	Indian Canyon Road	n/o Garnet Avenue	20,200	23,100	37,300	38,200
5	Indian Canyon Road	s/o Garnet Avenue	17,500	17,700	21,500	21,700
6	19th Avenue	w/o Newhall Street	300	300	400	400
7	19th Avenue	w/o Indian Canyon Road	400	900	600	1,100
8	19th Avenue	e/o 19th Avenue	1,100	1,200	2,900	3,000
9	20th Avenue	w/o Indian Canyon Road	2,300	2,300	2,700	2,700
10	20th Avenue	w/o Indian Canyon Road	6,300	6,600	16,100	16,400
11	Garnet Avenue	w/o I-10 EB Ramp	1,900	1,900	2,000	2,000
12	Garnet Avenue	w/o Indian Canyon Road	5,300	6,000	15,200	15,900
13	Garnet Avenue	e/o Indian Canyon Road	2,300	2,300	2,400	2,400

[1] N Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis, Urban Crossroads, Inc.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

[1] Typical Southern California vehicle mix.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: WITHOUT PROJECT VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Roadways[1]	95.48%	2.99%	1.53%	100.00%

[1] Typical Southern California vehicle mix.

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7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *North Indian Canyon/19th Ave High-Cube Warehouse Traffic Analysis* prepared by Urban Crossroads, Inc. (28)

7.1 NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at receiving land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area.

Tables 7-1 through 7-4 present a summary of the exterior traffic noise levels, without barrier attenuation, for the 13 study area roadway segments analyzed under each traffic condition. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Indian Canyon Road	n/o Coachillin Way	Non-Sensitive	70.2	66	142	306
2	Indian Canyon Road	n/o 19th Avenue	Non-Sensitive	70.2	66	142	306
3	Indian Canyon Road	n/o 20th Avenue	Non-Sensitive	70.8	72	155	334
4	Indian Canyon Road	n/o Garnet Avenue	Non-Sensitive	70.8	73	157	338
5	Indian Canyon Road	s/o Garnet Avenue	Non-Sensitive	70.2	66	143	307
6	19th Avenue	w/o Newhall Street	Non-Sensitive	47.0	2	4	9
7	19th Avenue	w/o Indian Canyon Road	Non-Sensitive	48.3	2	5	11
8	19th Avenue	e/o 19th Avenue	Non-Sensitive	52.7	4	10	21
9	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	60.8	7	16	34
10	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	65.2	14	31	66
11	Garnet Avenue	w/o I-10 EB Ramp	Non-Sensitive	57.7	10	21	45
12	Garnet Avenue	w/o Indian Canyon Road	Non-Sensitive	62.2	19	42	90
13	Garnet Avenue	e/o Indian Canyon Road	Non-Sensitive	58.6	11	24	51

[1] Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: EXISTING WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Indian Canyon Road	n/o Coachillin Way	Non-Sensitive	70.3	67	145	312
2	Indian Canyon Road	n/o 19th Avenue	Non-Sensitive	70.5	69	149	321
3	Indian Canyon Road	n/o 20th Avenue	Non-Sensitive	71.1	76	163	351
4	Indian Canyon Road	n/o Garnet Avenue	Non-Sensitive	71.4	80	172	370
5	Indian Canyon Road	s/o Garnet Avenue	Non-Sensitive	70.3	67	144	310
6	19th Avenue	w/o Newhall Street	Non-Sensitive	47.0	2	4	9
7	19th Avenue	w/o Indian Canyon Road	Non-Sensitive	51.8	4	8	18
8	19th Avenue	e/o 19th Avenue	Non-Sensitive	53.1	5	10	22
9	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	60.8	7	16	34
10	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	65.4	15	32	68
11	Garnet Avenue	w/o I-10 EB Ramp	Non-Sensitive	57.7	10	21	45
12	Garnet Avenue	w/o Indian Canyon Road	Non-Sensitive	62.7	21	45	98
13	Garnet Avenue	e/o Indian Canyon Road	Non-Sensitive	58.6	11	24	51

[1] Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OPENING YEAR CUMULATIVE (2025) WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Indian Canyon Road	n/o Coachillin Way	Non-Sensitive	72.2	90	195	419
2	Indian Canyon Road	n/o 19th Avenue	Non-Sensitive	73.2	105	225	485
3	Indian Canyon Road	n/o 20th Avenue	Non-Sensitive	73.6	111	239	514
4	Indian Canyon Road	n/o Garnet Avenue	Non-Sensitive	73.5	110	236	509
5	Indian Canyon Road	s/o Garnet Avenue	Non-Sensitive	71.1	76	164	353
6	19th Avenue	w/o Newhall Street	Non-Sensitive	48.3	2	5	11
7	19th Avenue	w/o Indian Canyon Road	Non-Sensitive	50.1	3	6	14
8	19th Avenue	e/o 19th Avenue	Non-Sensitive	56.9	9	18	40
9	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	61.5	8	17	38
10	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	69.2	27	58	124
11	Garnet Avenue	w/o I-10 EB Ramp	Non-Sensitive	58.0	10	22	47
12	Garnet Avenue	w/o Indian Canyon Road	Non-Sensitive	66.8	39	84	181
13	Garnet Avenue	e/o Indian Canyon Road	Non-Sensitive	58.8	11	25	53

[1] Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: OPENING YEAR CUMULATIVE (2025) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Indian Canyon Road	n/o Coachillin Way	Non-Sensitive	72.3	91	197	423
2	Indian Canyon Road	n/o 19th Avenue	Non-Sensitive	73.3	107	230	496
3	Indian Canyon Road	n/o 20th Avenue	Non-Sensitive	73.8	114	245	529
4	Indian Canyon Road	n/o Garnet Avenue	Non-Sensitive	73.6	111	240	517
5	Indian Canyon Road	s/o Garnet Avenue	Non-Sensitive	71.2	76	165	355
6	19th Avenue	w/o Newhall Street	Non-Sensitive	48.3	2	5	11
7	19th Avenue	w/o Indian Canyon Road	Non-Sensitive	52.7	4	10	21
8	19th Avenue	e/o 19th Avenue	Non-Sensitive	57.0	9	19	41
9	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	61.5	8	17	38
10	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	69.3	27	58	125
11	Garnet Avenue	w/o I-10 EB Ramp	Non-Sensitive	58.0	10	22	47
12	Garnet Avenue	w/o Indian Canyon Road	Non-Sensitive	67.0	40	87	187
13	Garnet Avenue	e/o Indian Canyon Road	Non-Sensitive	58.8	11	25	53

[1] Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report. This condition is provided solely for informational purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 47.0 to 70.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 47.0 to 71.4 dBA CNEL. Table 7-5 shows that the Project off-site traffic noise level impacts will range from less than 0.1 to 3.5 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.3 OPENING YEAR CUMULATIVE 2024 TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Opening Year Cumulative 2024 without Project conditions CNEL noise levels. The Background 2024 without Project exterior noise levels are expected to range from 48.3 to 73.6 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year Cumulative 2024 with Project conditions will range from 48.3 to 73.8 dBA CNEL. Table 7-6 shows that the Project off-site traffic noise level increases will range from less than 0.1 to 2.6 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

TABLE 7-5: EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Indian Canyon Road	n/o Coachillin Way	Non-Sensitive	70.2	70.3	0.1	3.0	No
2	Indian Canyon Road	n/o 19th Avenue	Non-Sensitive	70.2	70.5	0.3	3.0	No
3	Indian Canyon Road	n/o 20th Avenue	Non-Sensitive	70.8	71.1	0.3	3.0	No
4	Indian Canyon Road	n/o Garnet Avenue	Non-Sensitive	70.8	71.4	0.6	3.0	No
5	Indian Canyon Road	s/o Garnet Avenue	Non-Sensitive	70.2	70.3	0.0	3.0	No
6	19th Avenue	w/o Newhall Street	Non-Sensitive	47.0	47.0	0.0	n/a	No
7	19th Avenue	w/o Indian Canyon Road	Non-Sensitive	48.3	51.8	3.5	n/a	No
8	19th Avenue	e/o 19th Avenue	Non-Sensitive	52.7	53.1	0.4	n/a	No
9	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	60.8	60.8	0.0	n/a	No
10	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	65.2	65.4	0.2	n/a	No
11	Garnet Avenue	w/o I-10 EB Ramp	Non-Sensitive	57.7	57.7	0.0	n/a	No
12	Garnet Avenue	w/o Indian Canyon Road	Non-Sensitive	62.2	62.7	0.5	n/a	No
13	Garnet Avenue	e/o Indian Canyon Road	Non-Sensitive	58.6	58.6	0.0	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
"n/a" Per the City of Victorville General Plan Noise Element Table N-3, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 70 dBA CNEL land use compatibility criteria.

TABLE 7-6: OPENING YEAR CUMULATIVE (2025) TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Indian Canyon Road	n/o Coachillin Way	Non-Sensitive	72.2	72.3	0.1	3.0	No
2	Indian Canyon Road	n/o 19th Avenue	Non-Sensitive	73.2	73.3	0.1	3.0	No
3	Indian Canyon Road	n/o 20th Avenue	Non-Sensitive	73.6	73.8	0.2	3.0	No
4	Indian Canyon Road	n/o Garnet Avenue	Non-Sensitive	73.5	73.6	0.1	3.0	No
5	Indian Canyon Road	s/o Garnet Avenue	Non-Sensitive	71.1	71.2	0.0	3.0	No
6	19th Avenue	w/o Newhall Street	Non-Sensitive	48.3	48.3	0.0	n/a	No
7	19th Avenue	w/o Indian Canyon Road	Non-Sensitive	50.1	52.7	2.6	n/a	No
8	19th Avenue	e/o 19th Avenue	Non-Sensitive	56.9	57.0	0.1	n/a	No
9	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	61.5	61.5	0.0	n/a	No
10	20th Avenue	w/o Indian Canyon Road	Non-Sensitive	69.2	69.3	0.1	n/a	No
11	Garnet Avenue	w/o I-10 EB Ramp	Non-Sensitive	58.0	58.0	0.0	n/a	No
12	Garnet Avenue	w/o Indian Canyon Road	Non-Sensitive	66.8	67.0	0.2	n/a	No
13	Garnet Avenue	e/o Indian Canyon Road	Non-Sensitive	58.8	58.8	0.0	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
"n/a" Per the City of Victorville General Plan Noise Element Table N-3, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 70 dBA CNEL land use compatibility criteria.

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8 SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, three receiver locations in the vicinity of the Project site were identified. All distances are measured from the Project site boundary to the outdoor living areas (e.g., private backyards) or at the building façade, whichever is closer to the Project site. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

R1: Location R1 represents existing noise sensitive trailer home residence at 10769 N Canyon Drive, approximately 3,327 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the building façade. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R2: Location R2 represents the existing noise sensitive residence located at 64088 Teagarden Drive, approximately 2,795 feet northeast of the Project site. R2 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise sensitive residence at 17725 Covey Street, approximately 2,054 feet northeast of the Project site. R3 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

EXHIBIT 8-A: RECEIVER LOCATIONS

9 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the Project. Exhibit 9-A identifies the representative receiver locations and on-site noise source locations used to assess the hourly average L_{eq} operational noise levels consistent with the City of Palm Springs noise related CEQA thresholds guidance for noise sensitive receivers included in Appendix 4.1. (29)

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical daytime, evening, and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, loading dock activity, gate opening activity, truck movements, parking lot activity, and trash enclosure activity.

9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the roof-top air conditioning units, loading dock activity, gate opening activity, truck movements, parking lot activity, and trash enclosure activity all operating at the same time. These sources of noise activity will likely vary throughout the day.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

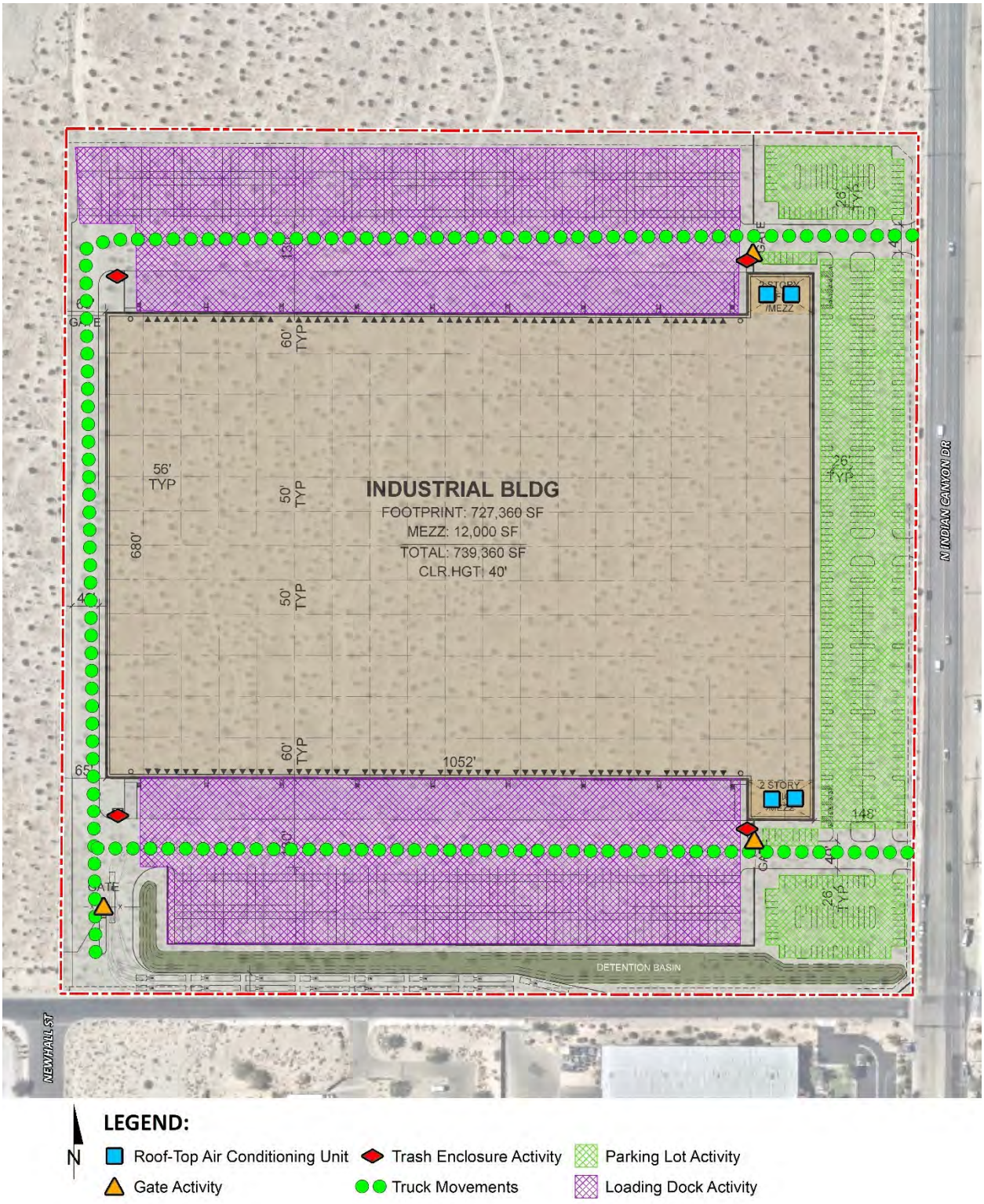
Noise Source[1]	Noise Source Height (Feet)	Min./Hour[2]			Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[3]
		Day	Evening	Night		
Roof-top Air Conditioning Units	3'	45	45	30	57.3	88.9
Loading Dock Activity	8'	60	60	60	79.9	111.5
Gate Opening Activity	8'	60	60	60	61.6	93.2
Truck Movements	8'	60	60	60	61.6	93.2
Parking Lot Activity	5'	60	60	60	49.5	81.1
Trash Enclosure Activity	8'	10	10	10	57.4	89.0

[1] As measured by Urban Crossroads, Inc.

[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 6:00 p.m.; "Evening" = 6:00 p.m. – 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source.

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS



9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (30)

9.2.2 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units, reference noise level measurements were collected from Lennox SCA120 series 10-ton model packaged air conditioning unit. At a uniform reference distance of 50 feet, the roof-top air conditioning units generate a reference noise level of 57.7 dBA L_{max} and 57.2 dBA L_{eq}. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime and evening hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime and evening temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

9.2.3 LOADING DOCK ACTIVITY

To describe the loading dock activities, a reference noise level measurement was collected to represent the truck activities. The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.2.4 TRUCK MOVEMENTS/GATE OPENING ACTIVITIES

The truck movements reference noise level measurement was taken over a 15-minute period and represents multiple noise sources producing a reference noise level of 73.1 dBA L_{max} and 58.0 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for the rattling and squeaking during normal opening and closing operations, the gate closure equipment, truck engines idling outside the entry gate, truck movements through the entry gate, and background truck court activities and forklift backup alarm noise.

9.2.5 PARKING LOT ACTIVITY

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of an Amazon warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 60.2 dBA L_{max} and 56.1 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime, evening, and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.2.6 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project site. The measured reference noise level at the uniform 50-foot reference distance is 71.1 dBA L_{max} and 56.8 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for each of the Project buildings. Typical trash enclosure activities are estimated to occur for 5 minutes per hour.

9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source

(i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for simi-hard ground surfaces.

9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include roof-top air conditioning units, loading dock activity, gate opening activity, truck movements, parking lot activity, and trash enclosure activity, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 6:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 37.2 to 40.8 dBA L_{eq}.

TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
Roof-top Air Conditioning Units	18.3	16.1	14.7
Loading Dock Activity	40.8	38.4	37.2
Gate Opening Activity	23.4	20.8	19.3
Truck Movements	14.6	12.2	11.0
Parking Lot Activity	14.3	11.6	9.8
Trash Enclosure Activity	13.3	10.8	9.5
Total (All Noise Sources)	**40.8**	**38.4**	**37.2**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Table 9-3 shows the Project operational noise levels during the evening hours of 6:00 p.m. to 10:00 p.m. The evening hourly noise levels at the off-site receiver locations are expected to range from 40.2 to 43.9 dBA L_{eq}.

TABLE 9-3: EVENING PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
Roof-top Air Conditioning Units	21.3	19.1	17.8
Loading Dock Activity	43.9	41.5	40.2
Gate Opening Activity	26.4	23.8	22.3
Truck Movements	14.6	12.2	11.0
Parking Lot Activity	17.3	14.7	12.8
Trash Enclosure Activity	16.3	13.8	12.5
Total (All Noise Sources)	**43.9**	**41.5**	**40.2**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Table 9-4 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 38.0 to 41.6 dBA L_{eq}.

TABLE 9-4: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
Roof-top Air Conditioning Units	17.3	15.1	13.8
Loading Dock Activity	41.6	39.2	38.0
Gate Opening Activity	24.1	21.6	20.0
Truck Movements	14.6	12.2	11.0
Parking Lot Activity	15.0	12.4	10.6
Trash Enclosure Activity	14.1	11.6	10.3
Total (All Noise Sources)	**41.6**	**39.2**	**38.0**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Palm Springs exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-5 shows the operational noise levels associated with North Indian Canyon/19th Ave High-Cube Warehouse Project will satisfy the City of Palm Springs daytime, evening, and nighttime exterior noise level standards at the nearest noise-sensitive residential receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 9-5: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]			Noise Level Standards (dBA Leq)[3]			Noise Level Standards Exceeded?[4]		
	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
R1	40.8	43.9	41.6	50.0	46.5	41.7	No	No	No
R2	38.4	41.5	39.2	50.0	52.8	50.2	No	No	No
R3	37.2	40.2	38.0	60.4	57.8	51.8	No	No	No

[1] See Exhibit 8-A for the receiver locations.
[2] Proposed Project operational noise levels as shown on Tables 9-2, 9-3, and 9-4.
[3] Exterior noise level standards reflect ambient noise level measurements.
[4] Do the estimated Project operational noise source activities exceed the noise level standards?
"Daytime" = 7:00 a.m. - 6:00 p.m.; "Evening" = 6:00 p.m. – 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

9.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise,

decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment.

As indicated on Tables 9-6, the Project will generate an unmitigated daytime operational noise level increase ranging from 0.0 to 0.1 dBA L_{eq} at the nearest receiver locations. Table 9-7 shows that the Project will generate an unmitigated evening operational noise level increase ranging from 0.0 to 0.2 dBA L_{eq} at the nearest receiver locations. Table 9-8 shows that the Project will generate an unmitigated nighttime operational noise level increase ranging from 0.2 to 1.9 dBA L_{eq} at the nearest receiver locations. As indicated on Tables 9-6 through 9-8, the Project-related operational noise level increases will satisfy the noise level increase significance criteria presented on Table 4-1. Therefore, the incremental Project operational noise level increases are considered *less than significant* at all receiver locations.

TABLE 9-6: DAYTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	40.8	L3	62.6	62.6	0.0	3	No
R2	38.4	L1	55.2	55.3	0.1	5	No
R3	37.2	L2	51.9	52.0	0.1	5	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 9-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

TABLE 9-7: EVENING OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	40.8	L3	61.5	61.5	0.0	3	No
R2	38.4	L1	51.9	52.1	0.2	5	No
R3	37.2	L2	54.4	54.5	0.1	5	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project evening operational noise levels as shown on Table 9-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed evening ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

TABLE 9-8: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	41.6	L3	53.9	54.1	0.2	5	No
R2	39.2	L1	41.8	43.7	1.9	5	No
R3	38.0	L2	51.6	51.8	0.2	5	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 9-4.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction noise source locations in relation to the nearest sensitive receiver locations previously described in Section 8. The City of Palm Springs Municipal Code, provided in Appendix 3.1, indicates that construction activity is considered exempt from the noise level standards on private properties. However, neither the City of Palm Springs General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use (16 p. 179).

10.1 CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (31) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

EXHIBIT 10-A: CONSTRUCTION ACTIVITY

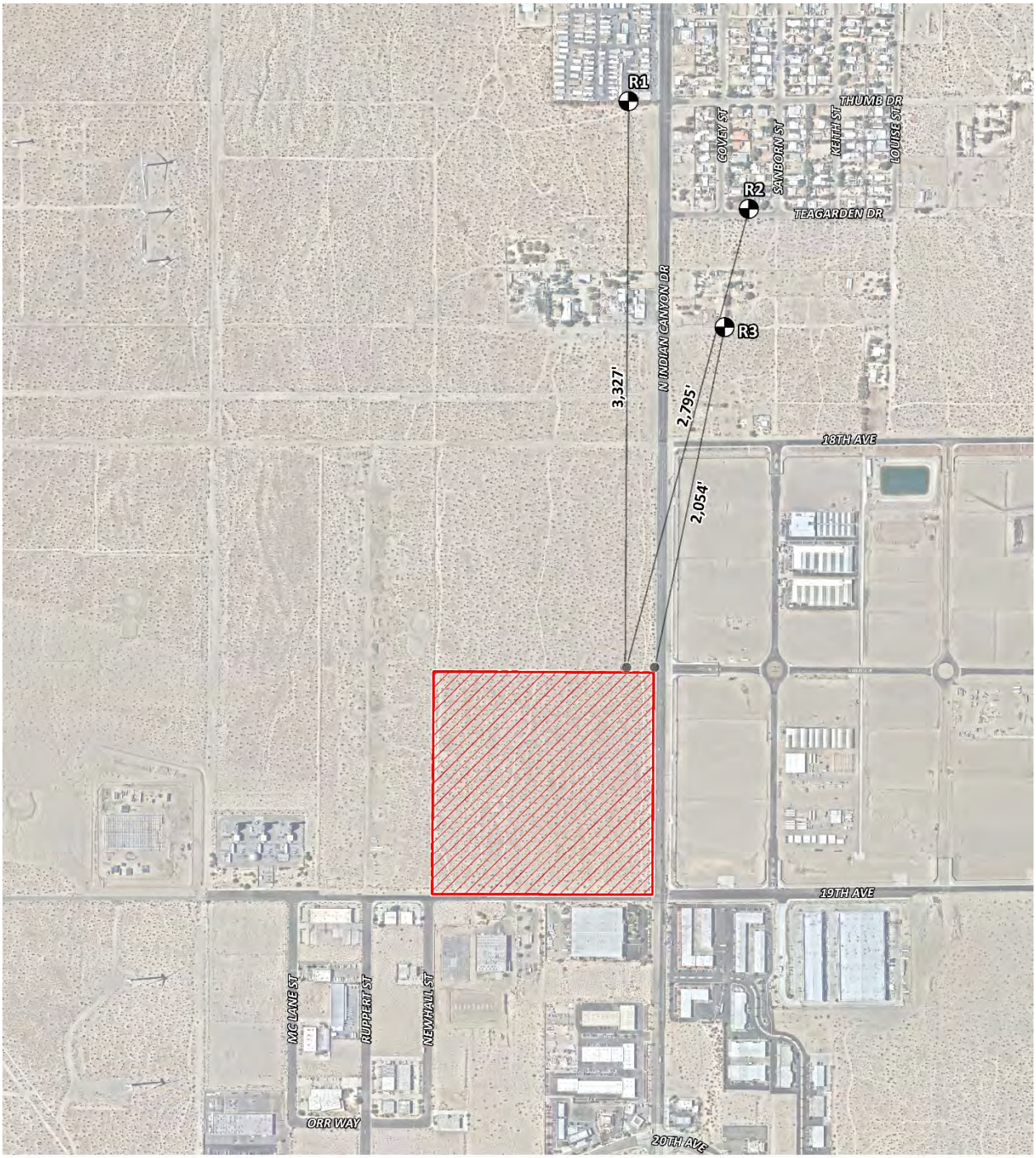


TABLE 10-1: TYPICAL CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})	Reference Power Level (dBA L_w)
Site Preparation	Dozer	78.0	83.4	115.1
	Front End Loader	75.0		
	Grader	81.0		
Grading	Excavator	77.0	84.0	115.6
	Tractor	80.0		
	Scraper	80.0		
Building Construction	Crane	73.0	77.4	109.1
	Backhoe	74.0		
	Generator (<25kVA)	70.0		
Paving	Paver	74.0	77.8	109.5
	Dump Truck	72.0		
	Roller	73.0		
Architectural Coating	Man Lift	68.0	76.2	107.8
	Compressor (air)	74.0		
	Generator (<25kVA)	70.0		

[1] FHWA Road Construction Noise Model.

10.3 CADNAA NOISE PREDICTION MODEL

To fully describe the construction noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The construction noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source

(i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces.

10.4 TYPICAL CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearest sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming all equipment operates at the same time. To account for the dynamic nature of construction activities, the Project construction noise analysis models the equipment as multiple moving points within the construction area (Project site boundary). Construction impacts are based on the highest noise level calculated at each receiver location. As shown in Table 10-2, the construction noise levels are expected to range from 35.7 to 47.1 dBA L_{eq}, and the highest construction levels are expected to range from 43.5 to 47.1 dBA L_{eq} at the nearest noise-sensitive receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

TABLE 10-2: TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	46.6	47.1	40.5	41.0	39.3	47.1
R2	44.3	44.8	38.2	38.7	37.0	44.8
R3	43.0	43.5	36.9	37.4	35.7	43.5

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.5 TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise is considered *less than significant* at all receiver locations.

TABLE 10-3: TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	47.1	80	No
R2	44.8	80	No
R3	43.5	80	No

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Highest construction noise level operating at the Project site boundary to nearby receiver locations (Table 10-2).
[3] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.6 TYPICAL CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels using the following vibration assessment methods defined by Caltrans. To calculate the vibration of equipment at distance Caltrans provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.1}$

TABLE 10-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.

- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA) and the California Department of Transportation (Caltrans). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 10-4 and the construction vibration assessment methodology published by Caltrans, it is possible to estimate the Project vibration impacts. Table 10-5 presents the expected Project related vibration levels at the nearby receiver locations.

As shown on Table 10-5, at distances ranging from 2,054 to 3,327 feet from primary construction activities, construction vibration velocity levels are estimated to be less than 0.01 PPV (in/sec) and will not exceed City of Palm Springs vibration threshold of 0.30 PPV (in/sec) at any sensitive receiver location. The construction vibration analysis shows that the unmitigated Project-related vibration impacts will be *less than significant* during the construction activities at the Project site.

TABLE 10-5: UNMITIGATED PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Receiver Levels (in/sec) PPV[2]					Threshold PPV (in/sec)[4]	Threshold Exceeded?[5]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration		
R1	3,327'	0.000	0.000	0.000	0.000	0.000	0.30	No
R2	2,794'	0.000	0.000	0.000	0.000	0.000	0.30	No
R3	2,054'	0.000	0.000	0.000	0.000	0.000	0.30	No

[1] Receiver locations are shown on Exhibit 10-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 10-4.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Caltrans Transportation and Construction Vibration Manual, April 2020.
[5] Does the vibration level exceed the maximum acceptable vibration threshold?

11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
2. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
4. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
5. —. *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
8. **Occupational Safety and Health Administration.** *Standard 29 CRF, Part 1910.*
9. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123.* September 2018.
10. **California Department of Transportation.** *Transportation and Construction Vibration Guidance Manual.* April 2020.
11. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual, FTA-VA-90-1003-06.* May 2006.
12. **Office of Planning and Research.** *State of California General Plan Guidelines.* 2018.
13. **City of Palm Springs.** *General Plan Noise Element.* 2007.
14. **City of Plam Springs.** *Municipal Code, Chapter 11.74 Noise Ordinance.*
15. **City of Palm Springs.** *Municipal Code, Sections 8.04.220.*
16. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
17. **County of Riverside.** *Airport Land Use Compatibility Plan.* October 2004.
18. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
19. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
20. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
21. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
22. **California Department of Transportation.** *Technical Noise Supplement.* November 2009.

23. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*

24. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.

25. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.

26. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.

27. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.

28. **Urban Crossroads, Inc.** *N Indian Canyon/19th Ave High Cube Warehouse Traffic Analysis.* March 1, 2023.

29. **City of Jurupa Valley Planning Department.** *Noise Thresholds of Significance Guidance (MA16170, Project: Agua Mansa Commerce Park Specific Plan, Noise Comment 2).* December 19, 2018.

30. **Office of Planning and Research.** *State of California General Plan Guidelines.* October 2017.

31. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.

12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed North Indian Canyon/19th Ave High-Cube Warehouse Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (619) 778-1971.

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EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
INCE – Institute of Noise Control Engineers

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
Approved Air Quality Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008.

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APPENDIX 3.1:

CITY OF PALM SPRINGS MUNICIPAL CODE

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Chapter 11.74 NOISE ORDINANCE

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11.74.051 Preexisting noise sources.

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11.74.010 Declaration of policy.

It is the policy of the city of Palm Springs to reduce noise in the community and to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels, noise can be detrimental to the health, welfare, safety and quality of life of the citizenry and in the public interest it shall be restricted. In order to implement the goals of the noise element of the city's general plan and adopt a comprehensive noise ordinance to prohibit unwanted and unnecessary sounds of all types within the community, this chapter has been created. This chapter shall be referred to and cited as the "Palm Springs Noise Ordinance." (Ord. 1167 § 1, 1982)

11.74.020 Definitions.

Terminology used in this chapter shall be in conformance with definitions in the Palm Springs zoning ordinance and is defined herein as follows:

(1) “Ambient noise level” means an existing level of all-encompassing noise associated with a given environment, usually a composite of sounds from many sources near and far, without inclusion of intruding noises from isolated identifiable sources.

(2) “A-weighted sound level” means the sound pressure level in decibels as measured on a sound level meter using the A-weighting network. The level so read is designated dB(A) or dBA.

(3) “Commercial area” means land utilized for business purposes other than residential or industrial uses.

(4) “Day” means the time period from seven a.m. to ten p.m.

(5) “Decibel (dB)” means a unit for measuring the volume of a sound equal to twenty times the logarithm to the base ten of the ratio of the pressure of the sound measured to the reference pressure, which is twenty micropascals.

(6) “Emergency work” means any work performed necessary to restore property to a safe condition due to property damage threatened or caused by an emergency.

(7) “Enforcement officer” means the building and safety director or his designee who may enforce the provisions of this chapter.

(8) “Equivalent A-weighted sound level (Leg)” means the constant sound level that, in a given situation and time period, conveys the same sound energy as the actual time-varying A-weighted sound for a given period of time. For the purposes of this chapter, it is an eight-hour period of time.

(9) “Fixed noise source” means a stationary device which creates sounds, including but not limited to agricultural, commercial, industrial, and residential machinery and equipment, pumps, fans, compressors, air conditioners and refrigeration equipment.

(10) “Gross vehicle weight rating (GVWR)” means the value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. In cases where trailers and tractors are separable, the gross combination weight rating (GCWR), which is the value specified by the manufacturer as the recommended maximum loaded weight of the combination vehicle shall be used.

(11) “Impulsive sound” means a short duration sound of one second or less with an abrupt onset and rapid decay (includes explosion, drop forge impact, or firearm discharge).

(12) “Intrusive noise” means a sound which intrudes over and above the existing ambient noise level at a given location.

(13) “Mobile noise source” means any noise source other than a fixed source.

(14) “Motor vehicles” means any and all self-propelled vehicles, on or off road, subject to identification under California Vehicle Code.

(15) “Muffler or sound dissipation device” means a device for abating the sound of escaping gases of an internal combustion engine.

(16) “Night” means the time period from ten p.m. to seven a.m.

(17) “Noise disturbance” means any sound which (a) endangers or injures the safety or health of humans or animals, or (b) annoys or disturbs a reasonable person of normal sensitivities, or (c) endangers or injures personal or real property.

(18) “Noise sensitive areas” means quiet zones of the city which contain more sensitive activities. Existing quiet zones shall be considered noise sensitive areas until otherwise designated.

(19) “Person” means any individual, association, partnership, or corporation, and includes any officer, employee, department, agency or entity, public or private.

(20) “Powered model vehicle” means any self-propelled airborne, waterborne, or landborne plane, vessel, or vehicle, which is not designed to carry persons, including but not limited to, any model airplane, boat, car or rocket.

(21) “Residential area” means land which is utilized or zoned for residential purposes.

(22) “Sound amplifying equipment” means any device used for the amplification of the human voice, music or any other sound. Excluded are standard automobile radios when used and heard only by the occupants of the vehicle in which the radio is held or installed. Also excluded are warning devices on authorized emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.

(23) “Sound level meter” means an instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement of sound levels, which meets or exceeds the requirements pertinent for Type S2A meters in American National Standards Institute specifications for sound level meters, S1.4-1971, or the most recent revision thereof.

(24) “Sound truck” means any motor vehicle, or other vehicle, regardless of motive power, whether in motion or stationary, having mounted thereon, or attached thereto, any sound amplifying equipment.

(25) “Vibration perception threshold” means the minimum ground, or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hz.

(26) “Weekday” means any day, Monday through Friday, which is not a legal holiday.

(Ord. 1167 § 1, 1982)

11.74.030 Fixed and nonstationary sources.

On or after the effective date of the ordinance codified in this chapter, unless a permit has been granted by the board of appeals, it shall be unlawful for any person to operate or cause to be operated any single or combination of fixed source or non-stationary source type of equipment or machinery except construction equipment used in connection with construction operations, that individually or collectively constitute an identifiable sound source in such a manner as to cause the sound level at any point on the property line of any property to exceed by five decibels or more, the noise level limits set forth in Section 11.74.031, plus allowances for time duration in Section 11.74.032. (Ord. 1167 § 1, 1982)

11.74.031 Noise level limit.

The noise level or sound level referred to in this section shall mean the higher of the following:

(1) Actual measured ambient noise level; or

(2) That noise level limit as determined from the table in this subsection:

Zone	Time	Sound Level(A-weighted) Decibels
Residential	7 a.m. to 6 p.m.	50
Low Density	6 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
Residential	7 a.m. to 6 p.m.	60
High Density	6 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial	7 a.m. to 6 p.m.	60
	6 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Industrial	7 a.m. to 6 p.m.	70
	6 p.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55

If the measurement location is on a boundary between two different zones, the noise level limit applicable to the lower noise zone plus five dB shall apply. (Ord. 1167 § 1, 1982)

11.74.032 Time duration correction table.

The time duration allowances set forth in the table below shall apply to those noise level limits set forth in Section 11.74.031 during the daytime hours:

Duration of Sound	dB(A) Allowance
Up to 30 minutes per hour	+ 3
Up to 15 minutes per hour	+ 6
Up to 10 minutes per hour	+ 8
Up to 5 minutes per hour	+11
Up to 2 minutes per hour	+15
Up to 1 minutes per hour	+18
Up to 30 seconds per hour	+21
Up to 15 seconds per hour	+24

The provisions of this section shall not apply to construction equipment used in connection with emergency work. (Ord. 1167 § 1, 1982)

11.74.033 Noise measurement procedure.

Upon receipt of a complaint from a citizen, or a request to investigate, the enforcement agent, equipped with sound level measurement equipment, may investigate the complaint. The investigation shall consist of measurement(s) and the gathering of data to adequately define the noise problem and shall include the following:

(a) Type of noise source;

(b) Location of noise source relative to complainant’s property;

(c) Time period during which noise source is considered by complainant to be intrusive;

(d) Total duration of noise produced by noise source;

(e) Date and time of noise measurement survey.

(Ord. 1167 § 1, 1982)

11.74.034 Maximum permissible sound levels by receiving land use.

(1) The noise standards for the various categories of land use identified in Section 11.74.031 shall, unless otherwise specifically indicated, apply to all such property within a designated zone.

(2) No person shall operate or cause to be operated any source of sound at any location which causes the noise level, when measured on any other property, to exceed the limits set forth in Sections 11.74.031 and 11.74.032.

(3) If the measurement location is on a boundary between two different zones, the noise level limit applicable to the lower noise zone plus five dB, shall apply.

(Ord. 1167 § 1, 1982)

11.74.035 Maximum permissible dwelling interior sound levels.

(1) The interior noise standards for multifamily residential dwellings as presented in the following table shall apply, unless otherwise specifically indicated, within all such dwellings with windows in their open position:

Land Use	Time Interval	Allowable Interior Noise Level (dBA)
Multifamily	10 p.m. to 7 a.m.	35
Residential	7 a.m. to 10 p.m.	45

(2) No person shall operate or cause to be operated within a dwelling unit, any source of sound or allow the creation of any noise which causes the noise level when measured inside a neighboring receiving dwelling unit to exceed:

(a) The noise standard as specified in subsection (1) of this section for a cumulative period of more than five minutes in any hour; or

(b) The noise standard plus five dB for a cumulative period of more than one minute in any hour; or

(c) The noise standard plus the ten dB or the maximum measured ambient for any period of time.

(3) If the measured ambient noise level differs from that permissible within any of the allowable interior noise level categories above, the allowable interior noise level shall be adjusted in five-dB increments in each category as appropriate to reflect the measured ambient noise level.

(Ord. 1167 § 1, 1982)

11.74.040 General guidelines.

Notwithstanding the provisions of Sections 11.74.030 through 11.74.035, it shall be unlawful for any person to make, continue, or cause to be made or continued, within the limits of the city, any loud, unnecessary or unusual noise which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

The characteristics and conditions to be considered in determining a violation of the provisions of this section include, but are not limited to the following:

(1) The intensity of the noise;

(2) Whether the nature of the noise is usual or unusual;

(3) The level and intensity of the background noise;

(4) The proximity of the noise to sleeping facilities;

(5) The nature and zoning of the area within which the noise emanates;

(6) The density of habitation of the area within which the noise emanates;

(7) The time of the day or night the noise occurs;

(8) The duration of the noise;

(9) Whether the noise is recurrent, intermittent, or constant; and

(10) Whether the noise is produced by a commercial or noncommercial activity.

(Ord. 1167 § 1, 1982)

11.74.041 Controlled hours of operation.

(a) It shall be unlawful for any person to operate, permit, use or cause to operate, any of the following between the hours of eight p.m. to eight a.m. in residential zones and between the hours of eight p.m. to seven a.m. in all other zones:

(1) Powered model vehicles;

(2) Loading and unloading vehicles such as trash collectors, fork lifts, or cranes within one thousand feet of a residence;

(3) Domestic power tools;

(4) Non-emergency exterior hardscape and landscape activities, including without limitation tree trimming, re-seeding, lawn mowing, leaf blowing, dust and debris clearing, and any other landscaping or nonemergency exterior hardscape maintenance activities which would utilize any motorized saw, sander, drill, grinder, leaf-blower, lawn mower, hedge trimmer, edger, or any other similar tool or device.

(b) Notwithstanding the foregoing, this Section shall not prohibit the operation or use of any such equipment at any time within said zones by the city, its officers or employees, or any agent or franchisee of the city.

(c) The regular mowing or grooming of golf courses, grass tennis courts, grass croquet courts, and lawn bowling areas shall be exempt from the restrictions set forth in this Section. The allowed work hours for mowing or green preparation for golf courses, grass tennis courts, grass croquet courts, and lawn bowling areas shall be between five-thirty a.m. and eight p.m., seven days per week and during all seasons of the year. (Ord. 1851 § 2, 2014; Ord. 1383 § 1, 1991; Ord. 1167 § 1, 1982)

11.74.042 Construction.

It shall be unlawful for any person within the city to operate construction tools or equipment in the performance of any outside construction or repair work on buildings, structures, or projects except in accordance with Section 8.04.220, of this code. (Ord. 1167 § 1, 1982)

11.74.043 Loud, unusual noises.

The following acts, among others, are declared to be loud, disturbing, and unnecessary noises in violation of this section, but said enumeration shall not be deemed to be exclusive:

(a) Mufflers or Sound Dissipative Devices.

No person shall operate or cause to be operated any motor vehicle in violation of the exhaust noise levels as established by the State of California Vehicle Code Division 12, Section 27158.5 Article 2.5.

(b) Horns and Signaling Devices.

No person shall operate or cause to be operated any motor vehicle horn, siren, or amplification device in violation of the State of California Vehicle Code Division 12, Section 27001 Chapter 5 Article 1.

(c) Motorized Recreational Vehicles Operating Off Public Right-of-Way.

No person shall operate or cause to be operated any motorized recreational vehicle off a public right-of-way in such a manner that the sound levels emitted therefrom violate the provisions of this chapter.

(d) Standing Motor Vehicles.

No person shall operate or permit the operation of any motor vehicle with a gross vehicle weight rating (GVWR) in excess of ten thousand pounds, or of any auxiliary equipment attached to such a vehicle, for a period longer than fifteen minutes in any hour while the vehicle is stationary, and on a public right-of-way or public space within one hundred fifty feet of a residential area or designated noise sensitive zone, between the hours of seven p.m. and seven a.m., except when movement of said vehicle is restricted by other traffic.

(e) Vehicle or Motorboat Repairs and Testing.

It shall be unlawful for any person to repair, rebuild, modify, or test any motor vehicle, motorcycle, or motorboat in such a manner as to cause a noise disturbance on residential property.

(f) Loudspeakers and Other Sound Amplifying Devices/Musical Instruments.

It shall be unlawful for any person to play, use, operate or permit to be played, used or operated, any radio receiver, musical instrument, phonograph, loudspeaker, sound amplifier, or other machine or device for the producing or reproducing of any sound upon any public street, alley, sidewalk, passageway or thoroughfare, or in or upon any public park or other public place so as to unreasonably interfere with the peace and quiet of any other person; or if such act is done upon any private property, so as to unreasonably interfere with the peace and quiet of any person outside the boundary of such private property.

(g) Hawkers and Peddlers.

It shall be unlawful for any person to sell anything by outcry within any area of the city utilized for residential or commercial purposes. This section shall not be construed to prohibit the selling by outcry of merchandise, food and beverages at licensed sporting events, parades, fairs, circuses and similar licensed public entertainment events or auctions.

(h) Animals and Fowl.

No person shall keep or maintain, or permit the keeping of, upon any premises owned, occupied or controlled by such person, any animal or fowl otherwise permitted to be kept which, by any sound, cry or behavior shall cause annoyance or discomfort to a reasonable person of normal sensitiveness on any residential property. (See also Section 10.28.020, Noise disturbances by animals.)

(i) Machinery, Equipment, Fans and Air Conditioning.

It shall be unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line or party wall line of any residential property to exceed the ambient noise level by more than five decibels.

(j) Vibration.

Operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or one hundred fifty feet from the source if on a public space or public right-of-way, is unlawful.

(k) Gasoline Powered Leaf Blowers.

The use of gasoline powered leaf blowers, to produce a current of air and thereby push, propel or blow cuttings, refuse or debris, or otherwise shall be prohibited within the corporate limits of the City.

(Ord. 1932 § 2, 2017; Ord. 1289 § 1, 1987; Ord. 1167 § 1, 1982)

11.74.044 Wind energy conversion systems (WECS).

(a) Permit Approval.

A commercial WECS permit shall not be granted unless the applicant demonstrates that the projected WECS noise level will be no greater than that limit specified in subsection (c) of this section and shall be calculated in accordance with the technical specifications and criteria adopted pursuant to subsections (f) through (h) of this section. Noise level limits for WECS shall be considered a property development standard and variances thereunto may be granted pursuant to Section 9406.00 of the zoning ordinance.

(b) Point of Measurement.

The point of measurement for the calculation of the WECS noise level projected pursuant to subsection (c) of this section shall be determined as follows:

(1) All lots in the vicinity of the commercial WECS project property which are actually used for residential, hotel, hospital, school, library or convalescent home purposes shall be identified. For purposes of this subsection, no lot included in the commercial WECS project property shall be deemed actually used for residential, hotel, hospital, school, library or convalescent home purposes.

(2) The point of measurement shall be ten feet from the outside surface of the wall of such structure, identified in subsection (b)(1) of this section, nearest the WECS being measured.

(c) Noise Level Limits.

The noise level or sound level referred to in this section shall mean the higher of the following:

(1) Fifty-five dB(A) at the point of measurement;

(2) The noise level limit shall be reduced by five dB(A) where it is projected that pure tone noise will be generated. A pure tone shall exist if the one-third octave band sound pressure level in the band width of the tone exceeds the arithmetic average of the sound pressure levels on the two contiguous one-third octave bands by 5 dB for center frequencies of 500 Hz and above, and eight dB for center frequencies between 160 and 400 Hz and by 15 dB for center frequencies less than or equal to 125 Hz.

(d) Noise Zones.

(1) The development of wind turbines shall be prohibited within two hundred feet of any existing land use described in subsection (b)(1) of this section.

(2) The development of wind turbines at a distance between two hundred feet and three thousand feet from any land use described in subsection (b)(1) of this section shall require the submittal of an acoustical report indicating compliance with the noise level limits and the measurement methodology described in this section.

(3) At distances greater than three thousand feet from any land use described in subsection (b)(1) of this section, wind turbine development may be permitted without acoustical study.

(e) Commercial WECS Characteristics.

All noise reports submitted to the city shall include the following information:

(1) The dimensions of the commercial WECS including tower height, total height, hub height and rotor diameter;

(2) The name of the manufacturer of the commercial WECS and any applicable model number;

(3) A description of the commercial WECS, including axis and wind orientation; and

(4) Maximum rated power output and the power curve of the WECS and wind speed plotted relative to power produced.

(f) Measurement Methodology for a Single Commercial WECS.

All noise measurements shall be made and reported as follows:

(1) (1) All noise measurements shall be made using a sound level meter meeting ANSI standard specifications for Type I equipped with Bruel and Kjaer Windscreen (Model No. UA 9237 or 0207) and calibrated to standards of National Bureau of Standards, or other instrumentation as approved by the Development Services Director. The specific instrumentation used shall be described in the noise report.

(2) Noise measurements shall be made at a height of five feet above local terrain. Unusual circumstances may require a different measurement height, but any variance shall be explained in the noise report.

(3) Noise measurement data shall be reported as sound pressure levels derived from dB, A weighted. Noise data indexes shall be measured utilizing slow response at a sampling rate of one-quarter second or faster. A noise measurement of ten-minute duration should be made with the measurements being recorded on a strip chart recording or similar device. The L_{eq}, L_{50}, L_{80}, L_{90} and L_{99} should be measured. The measurements should be conducted during a period of relatively constant wind speed. The strip chart recording will show a fairly constant noise level that is intermittently interrupted by higher noise levels due to wind noise and possibly vegetation noise. The lower noise levels recorded on the strip chart are primarily attributable to the WECS. This noise level should correspond roughly to the L_{90} noise level. The L_{90} should be considered as the noise level attributable to the WECS. The wind speed during the measurement period should not exceed twenty-five miles per hour as measured at ten feet above ground. For compliance testing, the ten-minute measurements should be repeated three times.

(4) The following parameters during noise measurements shall be noted and included in the noise report:

(A) Average wind speed;

(B) Gust wind speed;

(C) Wind direction;

(D) Temperature;

(E) Relative humidity;

(F) General weather conditions (e.g. cloudy, clear, inversions);

(G) Terrain (e.g. hills, level, ravines); and

(H) Surrounding vegetation.

(5) Three ten-minute noise measurements should be made for compliance testing.

(6) The noise level used will be the arithmetic average of the L_{90} levels recorded during the three measurement periods.

(7) Noise measurements shall be made in low, medium and high wind speeds and shall be included in the noise report. For low wind speeds, noise measurements shall be made in winds producing an average power output over a minimum thirty-minute sampling period of twenty percent plus or minus five percent of maximum rated power output. For medium wind speeds, noise measurements shall be made in winds producing an average power output over a minimum thirty-minute sampling period of fifty percent plus or minus ten percent of maximum rated power output. For high wind speeds, noise measurements shall be made in winds producing an average power output over a minimum thirty-minute sampling period of ninety percent plus or minus ten percent maximum rated power output.

(8) In order to determine the dB, A weighted, reference level for low wind speeds, noise measurements shall be made four hundred feet downwind from the WECS under low speed conditions, i.e. under wind conditions producing an average power output over a minimum fifteen-minute sampling period of twenty percent plus or minus five percent of maximum rated power output. These measurements shall be included in the noise report.

(9) The dB, A weighted, reference level for high wind speeds will be calculated using the L_{90} levels measured under subsections (f)(7) and (f)(8) of this section. The high wind speed reference level shall be the sum of low wind speed reference level measured pursuant to subsection (f)(8) of this section plus the difference between the low wind speed noise level and the high wind speed noise level measured pursuant to subsection (f)(7) of this section.

(10) If the Development Services Director determines that any data provided in the noise report is inconsistent or inadequate, a supplemental noise report prepared by an independent acoustical consultant may be required.

(g) Modeling for Projected Noise Levels from Commercial WECS Arrays.

Projected WECS noise level shall be supplied by the permit applicant in accordance with the following procedures:

(1) Determine the noise level of each WECS (NLW) at the receptor by using the reference noise level (RNL) at four hundred feet at high speeds calculated pursuant to subsection (f)(9) of this section and the following formula:

NLW = RNL + 20 log (400/RD) - AAL

Where:

RD = Receptor Distance to the WECS noise source. WECS noise source shall be assumed to be at the rotor hub for horizontal axis WECS and at the midpoint of the rotor axis for vertical axis WECS.

AAL = Atmospheric Attenuation Loss determined from Table of Atmospheric Absorption Losses (U.S. Dept. of Transportation, Oct. 1980; Report No. FAA-EE-80-46, Volume III) Method A at 50% humidity and 70°F.

(2) Determine projected WECS noise level (PWNL) using the following formula:

PWNL = 10 log [antilog (NLW_1/10) + antilog (NLW_2/10) + antilog (NLW_n/10)]

Where:

NLW_1 = Noise level of first WECS at receptor.

NLW_2 = Noise level of second WECS at receptor.

NLW_n = Noise level of nth WECS at receptor.

(h) Measurement Methodology for a Commercial WECS Array.

All noise measurements shall be made and reported as follows:

(1) Required acoustical reports shall be prepared by a registered professional engineer who has an expertise in acoustical engineering or by an Institute of Noise Control engineer (INCE). The report will be reviewed and, if appropriate, approved by the city before the issuance of permits.

(2) All noise measurements shall be made using a sound level meter meeting ANSI standard specifications for Type I equipped with Bruel and Kjaer Windscreen (Model No. UA 0237 or 0207) and calibrated to standards of National Bureau of Standards. The specific instrumentation used shall be described in the noise report.

(3) Noise measurements shall be made at a height five feet above local terrain. Unusual circumstances may require a different measurement height, but any variance shall be explained in the noise report.

(4) Noise measurement data shall be reported as sound pressure levels derived from dB, A weighted. Noise data indexes shall be measured utilizing slow response at a sampling rate of one-quarter second or faster. A noise measurement of ten-minute duration should be made with the measurements being recorded on a strip chart recording or similar device. The L_{eq}, L_{50}, L_{80}, L_{90} and L_{99} should be measured. The measurements should be conducted during a period of relatively constant wind speed. The strip chart recording will show a fairly constant noise level that is intermittently interrupted by higher noise levels due to wind noise and possibly vegetation noise. The lower noise levels recorded on the strip chart are primarily attributable to the WECS. This noise level should correspond roughly to the L_{90} noise level. The L_{90} should be considered as the noise level attributable to the WECS. The wind speed during the measurement period should not exceed twenty-five miles per hour as measured at ten feet above ground. For compliance testing, the ten-minute measurements should be repeated three times.

(5) The following parameters during noise measurements shall be noted and included in the noise report:

(A) Average wind speed;

(B) Gust wind speed;

(C) Wind direction;

(D) Temperature;

(E) Relative humidity;

(F) General weather conditions (e.g. cloudy, clear, inversions);

(G) Terrain (e.g. hills, level, ravines); and

(H) Surrounding vegetation.

(6) Three ten-minute noise measurements should be made for compliance testing.

(7) The noise level used will be the arithmetic average of the L_{90} levels recorded during the three measurement periods.

(Ord. 2031 § 29, 2020; Ord. 1473 § 1, 1994)

11.74.050 Exceptions.

The following noise sources are specifically excluded from the provisions of this chapter:

(1) The emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work;

(2) The operation of refuse collection under franchise agreement with the city of Palm Springs.

(Ord. 1167 § 1, 1982)

11.74.051 Preexisting noise sources.

Those commercial and/or industrial noise sources in existence prior to the date of adoption of the ordinance codified in this chapter, which noise sources are an integral part of a building, structure, or similar fixed and permanent installation if in compliance with local zoning statutes, shall be granted a five-year period from the date of adoption with which to comply with the provisions of this chapter. If, at the end of the five-year period, it can be shown that compliance with the provisions herein constitutes a hardship in terms of technical and economic feasibility, the time to comply may be extended on an annual basis until such time as compliance may be affected. (Ord. 1167 § 1, 1982)

11.74.052 Violation—Infraction.

Any person violating any provision of this chapter shall be guilty of an infraction for the first instance of any such violation. (Ord. 1409 § 1, 1992; Ord. 1167 § 1, 1982)

11.74.053 Continuing or subsequent violations—Misdemeanor.

Any person having been cited for violation of any provision of this chapter who within one year thereafter commits a second or any subsequent violation of the same provision of this chapter, including, without limitation thereby, suffering or permitting said violation to continue for a second or subsequent day, shall be guilty of a misdemeanor. (Ord. 1409 § 1, 1992; Ord. 1167 § 1, 1982)

11.74.054 Severability.

If any provision of this chapter is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, the remaining provisions of this chapter shall not be invalidated. (Ord. 1167 § 1, 1982)

Contact:

City Clerk: 760-323-8204

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APPENDIX 5.1:

STUDY AREA PHOTOS

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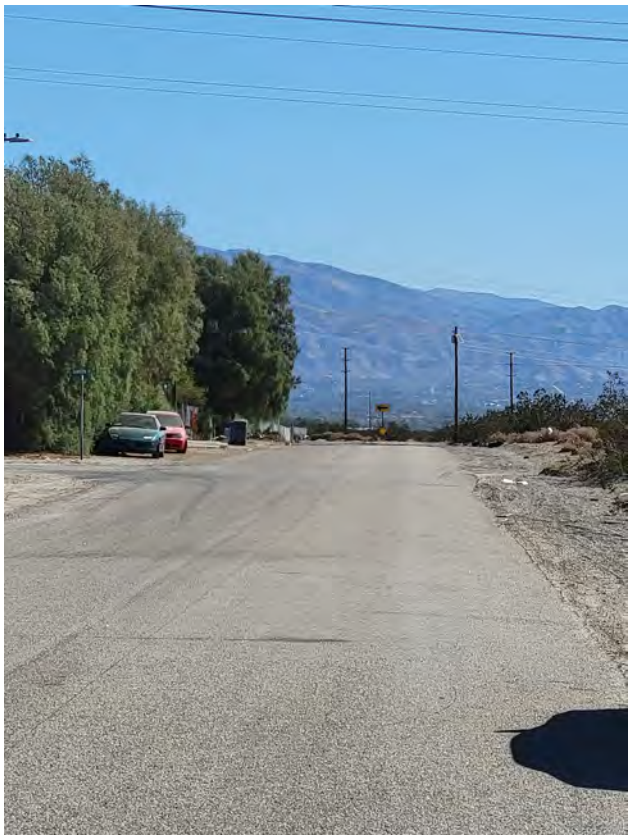
JN: 15097 - North Indian Canyon/19th Ave High-Cube Warehouse

15097_L1_East
33, 55' 16.473720"116, 32' 38.837759"

15097_L1_North
33, 55' 16.430520"116, 32' 38.742360"



15097_L1_South
33, 55' 16.511160"116, 32' 38.831639"

15097_L1_West
33, 55' 16.430520"116, 32' 38.742360"

JN: 15097 - North Indian Canyon/19th Ave High-Cube Warehouse

15097_L2_East
33, 55' 9.932159"116, 32' 42.049680"

15097_L2_North
33, 55' 9.876360"116, 32' 41.887680"

15097_L2_South
33, 55' 10.059239"116, 32' 42.071639"

15097_L2_West
33, 55' 10.059239"116, 32' 42.071639"

JN: 15097 - North Indian Canyon/19th Ave High-Cube Warehouse

15097_L3_Eas
33, 55' 22.330199"116, 32' 43.689479"

15097_L3_North
33, 55' 22.477800"116, 32' 43.562400"

15097_L3_South
33, 55' 22.464840"116, 32' 43.642679"

15097_L3_West
33, 55' 22.477800"116, 32' 43.562400"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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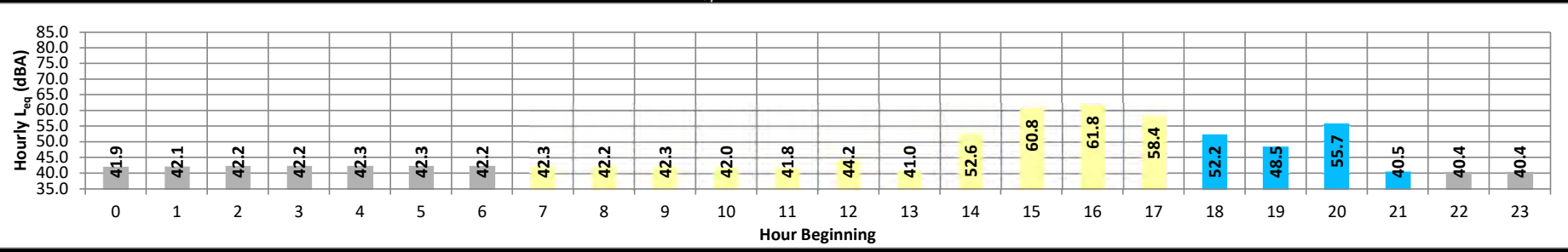
24-Hour Noise Level Measurement Summary

Date: Thursday, October 13, 2022 *Location:* L1 - Located near existing noise sensitive residence at 64088 *Meter:* Piccolo II *JN:* 15097

Project: Indian Canyon Warehouse and Distribution Center *Source:* Teagarden Drive. *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	41.9	42.2	41.7	42.0	42.0	41.9	41.9	41.9	41.8	41.7	41.7	41.6	41.9	10.0	51.9
	1	42.1	42.4	41.9	42.2	42.2	42.1	42.1	42.1	42.0	41.9	41.9	41.8	42.1	10.0	52.1
	2	42.2	42.5	41.9	42.3	42.2	42.2	42.2	42.1	42.1	42.0	42.0	41.9	42.2	10.0	52.2
	3	42.2	42.5	42.0	42.3	42.3	42.2	42.2	42.2	42.1	42.0	42.0	41.9	42.2	10.0	52.2
	4	42.3	42.5	42.0	42.4	42.3	42.3	42.3	42.2	42.2	42.1	42.1	42.0	42.3	10.0	52.3
	5	42.3	42.6	42.0	42.4	42.3	42.3	42.3	42.2	42.1	42.0	42.0	41.9	42.3	10.0	52.3
	6	42.2	43.3	41.8	42.5	42.4	42.3	42.3	42.2	42.1	42.0	41.9	41.8	42.2	10.0	52.2
Day	7	42.3	43.2	41.9	42.6	42.5	42.4	42.3	42.2	42.2	42.0	42.0	41.9	42.3	0.0	42.3
	8	42.2	43.2	41.6	42.6	42.5	42.4	42.4	42.2	42.1	41.9	41.8	41.7	42.2	0.0	42.2
	9	42.3	46.3	41.7	43.9	42.7	42.5	42.4	42.2	42.1	41.9	41.9	41.8	42.3	0.0	42.3
	10	42.0	42.7	41.5	42.2	42.2	42.1	42.0	41.9	41.9	41.7	41.7	41.6	42.0	0.0	42.0
	11	41.8	42.7	41.4	42.1	42.0	41.9	41.9	41.8	41.7	41.5	41.5	41.4	41.8	0.0	41.8
	12	44.2	63.1	40.6	54.2	49.2	43.8	43.2	42.1	41.6	40.9	40.8	40.7	44.2	0.0	44.2
	13	41.0	43.8	39.9	42.6	42.2	41.8	41.6	41.2	40.8	40.2	40.1	39.9	41.0	0.0	41.0
	14	52.6	71.6	41.5	63.4	58.9	55.4	54.2	51.5	49.2	43.9	43.1	41.8	52.6	0.0	52.6
	15	60.8	75.7	49.1	69.6	67.4	65.3	64.1	61.0	58.4	53.4	52.1	50.5	60.8	0.0	60.8
	16	61.8	79.4	47.4	70.1	67.5	65.9	65.1	62.2	59.1	52.5	51.2	48.6	61.8	0.0	61.8
	17	58.4	74.0	43.4	67.3	65.0	62.6	61.5	59.0	56.2	48.3	46.2	44.1	58.4	0.0	58.4
Evening	18	52.2	70.9	41.1	63.1	58.4	55.7	54.5	51.1	48.9	44.9	42.9	41.6	52.2	0.0	52.2
	19	48.5	67.3	39.7	60.0	55.6	51.6	50.5	47.5	45.1	41.4	40.5	39.9	48.5	5.0	53.5
	20	55.7	78.6	41.4	67.0	61.9	56.0	53.3	50.3	47.7	44.7	43.1	41.8	55.7	5.0	60.7
	21	40.5	41.0	40.1	40.7	40.6	40.6	40.5	40.4	40.4	40.2	40.2	40.1	40.5	5.0	45.5
Night	22	40.4	40.8	40.0	40.6	40.5	40.5	40.4	40.3	40.2	40.1	40.1	40.0	40.4	10.0	50.4
	23	40.4	40.8	40.1	40.5	40.5	40.5	40.4	40.4	40.3	40.2	40.1	40.1	40.4	10.0	50.4

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	41.0	42.7	39.9	42.1	42.0	41.8	41.6	41.2	40.8	40.2	40.1	39.9
	Max	61.8	79.4	49.1	70.1	67.5	65.9	65.1	62.2	59.1	53.4	52.1	50.5
Energy Average		48.1	Average:		52.8	51.1	49.6	49.2	47.9	46.8	44.4	43.8	43.1
Day	Min	40.5	41.0	39.7	40.7	40.6	40.6	40.5	40.4	.	40.2	40.2	39.9
	Max	55.7	78.6	41.4	67.0	61.9	56.0	54.5	51.1	48.9	44.9	43.1	41.8
Energy Average		51.9	Average:		63.1	58.2	53.6	51.9	48.8	46.5	43.3	41.9	40.9
Night	Min	40.4	40.8	40.0	40.5	40.5	40.5	40.4	40.3	40.2	40.1	40.1	40.0
	Max	42.3	43.3	42.0	42.5	42.4	42.3	42.3	42.2	42.2	42.1	42.1	42.0
Energy Average		41.8	Average:		41.9	41.9	41.8	41.8	41.7	41.7	41.6	41.5	41.5

L_{eq} (dBA)		
Daytime (7am-6pm)	*Evening (6pm-10pm)*	*Nighttime (10pm-7am)*
55.2	**51.9**	**41.8**

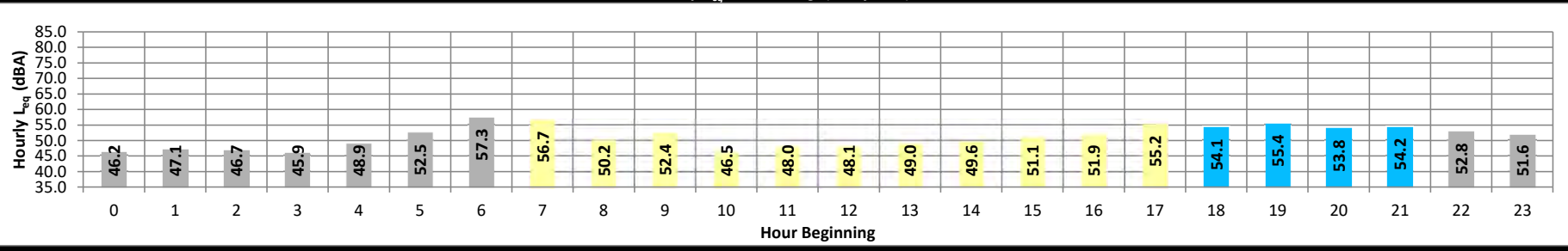
24-Hour
52.7

24-Hour Noise Level Measurement Summary

Date: Thursday, October 13, 2022 *Location:* L1 - Located near existing noise sensitive residence at 64088 *Meter:* Piccolo II *JN:* 15097

Project: Indian Canyon Warehouse and Distribution Center *Source:* Teagarden Drive. *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	46.2	51.0	43.1	50.7	50.5	49.8	49.2	46.6	45.1	43.6	43.4	43.2	46.2	10.0	56.2
	1	47.1	52.5	43.6	52.3	52.0	51.1	50.3	47.6	46.0	44.2	44.0	43.7	47.1	10.0	57.1
	2	46.7	52.5	43.3	52.0	51.6	50.9	50.3	47.1	45.3	43.9	43.7	43.4	46.7	10.0	56.7
	3	45.9	51.9	42.0	51.5	51.1	50.1	49.3	46.4	44.5	42.7	42.4	42.1	45.9	10.0	55.9
	4	48.9	54.1	44.0	53.9	53.6	52.8	52.4	49.8	47.8	45.0	44.6	44.1	48.9	10.0	58.9
	5	52.5	57.3	48.0	57.1	56.8	56.1	55.5	53.4	51.6	49.0	48.6	48.1	52.5	10.0	62.5
	6	57.3	64.5	52.0	64.1	63.6	62.4	61.4	57.6	55.6	53.0	52.6	52.2	57.3	10.0	67.3
Day	7	56.7	64.0	51.7	63.7	63.4	62.0	60.5	56.6	54.9	52.6	52.2	51.8	56.7	0.0	56.7
	8	50.2	57.4	45.1	57.0	56.6	55.2	54.2	50.4	48.3	46.0	45.6	45.3	50.2	0.0	50.2
	9	52.4	61.8	42.6	61.3	60.9	59.8	58.3	50.3	47.2	43.9	43.3	42.8	52.4	0.0	52.4
	10	46.5	54.3	39.7	54.0	53.7	52.8	51.6	46.3	43.5	40.7	40.3	39.8	46.5	0.0	46.5
	11	48.0	56.0	40.2	55.7	55.4	54.3	53.2	48.1	44.5	41.4	40.8	40.4	48.0	0.0	48.0
	12	48.1	55.4	42.4	54.9	54.4	52.9	52.0	48.7	45.8	43.5	43.1	42.6	48.1	0.0	48.1
	13	49.0	57.2	42.9	56.9	56.5	55.3	53.6	48.9	45.9	43.7	43.3	43.0	49.0	0.0	49.0
	14	49.6	59.6	42.8	58.9	58.3	56.5	54.4	48.1	45.6	43.7	43.3	42.9	49.6	0.0	49.6
	15	51.1	59.8	43.0	59.5	59.0	57.8	56.2	51.3	46.9	44.0	43.6	43.2	51.1	0.0	51.1
	16	51.9	60.2	44.8	59.7	59.1	58.0	56.9	52.2	48.5	45.6	45.2	44.9	51.9	0.0	51.9
	17	55.2	65.0	46.8	64.7	64.2	61.6	60.5	54.3	50.7	47.9	47.4	47.0	55.2	0.0	55.2
Evening	18	54.1	60.5	49.3	60.1	59.7	58.6	57.8	54.6	52.7	50.3	49.9	49.4	54.1	0.0	54.1
	19	55.4	66.5	48.5	65.4	64.4	61.7	59.6	54.2	51.5	49.4	49.0	48.6	55.4	5.0	60.4
	20	53.8	58.8	50.0	58.5	58.2	57.3	56.5	54.3	53.0	51.1	50.7	50.3	53.8	5.0	58.8
	21	54.2	58.8	50.6	58.4	58.1	57.3	56.6	54.7	53.6	51.7	51.3	50.9	54.2	5.0	59.2
Night	22	52.8	59.3	48.5	58.9	58.5	57.3	56.2	53.2	51.3	49.5	49.1	48.7	52.8	10.0	62.8
	23	51.6	61.8	44.3	61.4	60.9	58.4	56.7	49.9	47.3	45.0	44.7	44.4	51.6	10.0	61.6

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	46.5	54.3	39.7	54.0	53.7	52.8	51.6	46.3	43.5	40.7	40.3	39.8
	Max	56.7	66.5	51.7	65.4	64.4	62.0	60.5	56.6	54.9	52.6	52.2	51.8
Energy Average		51.9	Average:		59.3	58.8	57.4	56.1	51.5	48.8	46.4	45.9	45.5
Evening	Min	53.8	58.8	48.5	58.4	58.1	57.3	56.5	54.2	51.5	49.4	49.0	48.6
	Max	55.4	66.5	50.6	65.4	64.4	61.7	59.6	54.7	53.6	51.7	51.3	50.9
Energy Average		54.4	Average:		61.7	61.0	59.1	57.8	54.5	52.8	50.7	50.3	49.9
Night	Min	45.9	51.0	42.0	50.7	50.5	49.8	49.2	46.4	44.5	42.7	42.4	42.1
	Max	57.3	64.5	52.0	64.1	63.6	62.4	61.4	57.6	55.6	53.0	52.6	52.2
Energy Average		51.6	Average:		55.8	55.4	54.3	53.5	50.2	48.3	46.2	45.9	45.6

L_{eq} (dBA)

Daytime (7am-6pm)	*Evening (6pm-10pm)*	*Nighttime (10pm-7am)*
51.9	**54.4**	**51.6**

24-Hour

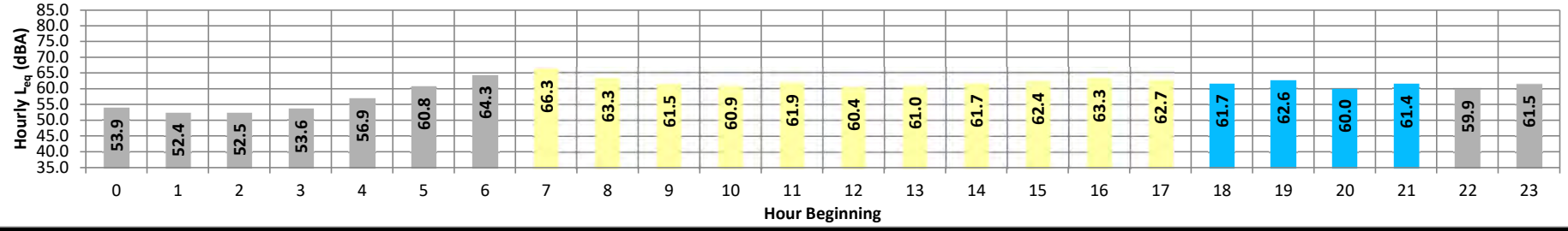
52.3

24-Hour Noise Level Measurement Summary

Date: Thursday, October 13, 2022 *Location:* L3 - Near trailer home residence at 10769 N Canyon Drive. *Meter:* Piccolo II *JN:* 15097

Project: Indian Canyon Warehouse and Distribution Center *Source:* *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	53.9	63.4	43.2	63.1	62.6	60.9	59.4	53.6	48.2	43.9	43.5	43.2	53.9	10.0	63.9
	1	52.4	62.9	43.1	62.5	62.0	59.7	57.9	50.8	46.6	43.6	43.4	43.1	52.4	10.0	62.4
	2	52.5	62.7	42.7	62.3	61.8	60.1	58.1	51.4	46.2	43.1	42.8	42.6	52.5	10.0	62.5
	3	53.6	64.1	42.5	63.8	63.3	61.0	59.3	52.1	46.3	43.0	42.7	42.5	53.6	10.0	63.6
	4	56.9	66.7	45.4	66.4	65.8	63.9	62.4	56.6	51.6	46.3	45.9	45.5	56.9	10.0	66.9
	5	60.8	69.7	49.2	69.3	68.7	67.1	65.8	61.4	57.0	50.7	49.9	49.3	60.8	10.0	70.8
	6	64.3	73.1	54.2	72.7	72.0	69.9	68.6	65.0	61.5	56.1	55.2	54.3	64.3	10.0	74.3
Day	7	66.3	76.8	54.6	76.0	75.2	71.7	70.0	66.5	63.8	56.9	55.6	54.7	66.3	0.0	66.3
	8	63.3	72.0	50.7	71.5	70.9	69.5	68.5	63.5	60.6	53.8	52.2	51.0	63.3	0.0	63.3
	9	61.5	70.0	48.7	69.6	69.1	67.5	66.3	62.1	59.0	51.6	50.2	48.9	61.5	0.0	61.5
	10	60.9	69.7	47.6	69.2	68.5	66.5	65.3	61.7	58.2	50.3	48.8	47.8	60.9	0.0	60.9
	11	61.9	72.9	47.5	72.3	71.2	68.4	66.0	61.4	58.1	50.5	48.7	47.7	61.9	0.0	61.9
	12	60.4	68.9	48.7	68.4	67.8	66.2	64.8	61.2	58.1	51.1	49.9	48.9	60.4	0.0	60.4
	13	61.0	68.5	49.2	68.1	67.6	66.2	65.2	62.0	59.1	51.9	50.5	49.4	61.0	0.0	61.0
	14	61.7	69.5	50.1	69.2	68.8	67.4	65.9	62.5	59.9	53.2	51.5	50.3	61.7	0.0	61.7
	15	62.4	69.0	52.0	68.8	68.3	67.0	66.0	63.6	61.1	55.0	53.4	52.2	62.4	0.0	62.4
	16	63.3	70.9	52.1	70.6	69.9	68.2	67.2	64.4	61.6	55.3	53.8	52.3	63.3	0.0	63.3
	17	62.7	70.6	51.0	70.2	69.6	68.0	66.8	63.7	60.8	54.0	52.4	51.2	62.7	0.0	62.7
Evening	18	61.7	70.4	50.7	70.0	69.3	67.3	66.1	62.5	59.4	53.1	51.9	50.9	61.7	0.0	61.7
	19	62.6	74.5	48.7	74.0	72.9	69.1	67.1	61.5	57.8	51.3	50.0	48.9	62.6	5.0	67.6
	20	60.0	68.5	48.5	68.1	67.5	65.9	64.7	61.0	57.0	50.2	49.3	48.6	60.0	5.0	65.0
	21	61.4	73.2	48.4	72.7	71.8	68.3	65.1	60.3	56.4	50.1	49.2	48.6	61.4	5.0	66.4
Night	22	59.9	70.0	47.5	69.6	68.9	67.0	65.1	59.7	55.3	49.0	48.3	47.7	59.9	10.0	69.9
	23	61.5	73.6	45.8	73.3	72.5	69.5	66.6	58.7	53.7	47.1	46.5	45.9	61.5	10.0	71.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	60.4	68.5	47.5	68.1	67.6	66.2	64.8	61.2	58.1	50.3	48.7	47.7
	Max	66.3	76.8	54.6	76.0	75.2	71.7	70.0	66.5	63.8	56.9	55.6	54.7
Energy Average		62.6	Average:		71.0	70.3	68.2	66.8	63.3	60.4	53.5	52.1	50.9
Evening	Min	60.0	68.5	48.4	68.1	67.5	65.9	64.7	60.3	56.4	50.1	49.2	48.6
	Max	62.6	74.5	50.7	74.0	72.9	69.1	67.1	62.5	59.4	53.1	51.9	50.9
Energy Average		61.5	Average:		71.7	70.8	67.8	65.8	61.4	57.8	51.4	50.2	49.4
Night	Min	52.4	62.7	42.5	62.3	61.8	59.7	57.9	50.8	46.2	43.0	42.7	42.5
	Max	64.3	73.6	54.2	73.3	72.5	69.9	68.6	65.0	61.5	56.1	55.2	54.3
Energy Average		59.3	Average:		67.0	66.4	64.3	62.6	56.6	51.8	47.0	46.5	46.0

L_{eq} (dBA)		
Daytime (7am-6pm)	*Evening (6pm-10pm)*	*Nighttime (10pm-7am)*
62.6	**61.5**	**59.3**

24-Hour
61.4

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Canyon Road
Road Segment: n/o Coachillin Way

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,436 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.25	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.49	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.45	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	61.7	61.1	54.7	53.2	61.6	61.9
Heavy Trucks:	61.8	61.2	52.2	53.4	61.8	61.9
Vehicle Noise:	69.9	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	132	285	613
CNEL:	66	142	306	660

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Canyon Road
Road Segment: n/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,436 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.25	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.49	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.45	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	61.7	61.1	54.7	53.2	61.6	61.9
Heavy Trucks:	61.8	61.2	52.2	53.4	61.8	61.9
Vehicle Noise:	69.9	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	132	285	613
CNEL:	66	142	306	660

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Canyon Road
Road Segment: n/o 20th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,800 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,634 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.69	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-17.93	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.89	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.9	67.8	66.1	60.0	68.6	69.2
Medium Trucks:	62.3	61.6	55.3	53.7	62.2	62.4
Heavy Trucks:	62.3	61.8	52.7	54.0	62.3	62.4
Vehicle Noise:	70.5	69.6	66.6	61.7	70.3	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	67	144	310	668
CNEL:	72	155	334	719

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Canyon Road
Road Segment: n/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,200 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,667 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.60	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-17.84	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.80	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.0	67.9	66.2	60.1	68.7	69.3
Medium Trucks:	62.4	61.7	55.4	53.8	62.3	62.5
Heavy Trucks:	62.4	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.6	69.6	66.7	61.8	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	68	146	314	677
CNEL:	73	157	338	729

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Canyon Road
Road Segment: s/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,500 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,444 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.23	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.47	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.42	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.4	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	61.8	61.1	54.7	53.2	61.6	61.9
Heavy Trucks:	61.8	61.2	52.2	53.4	61.8	61.9
Vehicle Noise:	69.9	69.0	66.1	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	133	286	616
CNEL:	66	143	307	662

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 19th Avenue
Road Segment: w/o Newhall Street

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	25 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-16.92	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-34.16	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-38.12	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	44.6	43.5	41.7	35.7	44.3	44.9
Medium Trucks:	38.8	38.1	31.8	30.2	38.7	38.9
Heavy Trucks:	40.6	40.1	31.0	32.3	40.6	40.8
Vehicle Noise:	46.8	45.9	42.5	38.1	46.6	47.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2	4	8	18
CNEL:	2	4	9	19

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 19th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	33 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-15.67	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-32.91	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-36.87	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.8	44.7	43.0	36.9	45.6	46.2
Medium Trucks:	40.0	39.4	33.0	31.5	39.9	40.2
Heavy Trucks:	41.9	41.3	32.3	33.5	41.9	42.0
Vehicle Noise:	48.0	47.2	43.7	39.3	47.9	48.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2	5	10	21
CNEL:	2	5	11	23

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 19th Avenue
Road Segment: e/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,100 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	91 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-11.28	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-28.52	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-32.48	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.2	49.1	47.4	41.3	49.9	50.5
Medium Trucks:	44.4	43.8	37.4	35.9	44.3	44.5
Heavy Trucks:	46.3	45.7	36.7	37.9	46.3	46.4
Vehicle Noise:	52.4	51.6	48.1	43.7	52.3	52.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	19	42
CNEL:	4	10	21	45

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	190 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-8.08	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-25.32	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-29.27	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.3	57.2	55.5	49.4	58.0	58.6
Medium Trucks:	52.6	51.9	45.5	44.0	52.4	52.7
Heavy Trucks:	54.4	53.8	44.8	46.0	54.4	54.5
Vehicle Noise:	60.5	59.7	56.2	51.8	60.4	60.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	7	15	32	68
CNEL:	7	16	34	73

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	520 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-3.70	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-20.94	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-24.90	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.7	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	56.9	56.3	49.9	48.4	56.8	57.1
Heavy Trucks:	58.8	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	64.9	64.0	60.6	56.2	64.7	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	134
CNEL:	14	31	66	143

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Garnet Avenue
Road Segment: w/o I-10 EB Ramp

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	157 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-10.00	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-27.24	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-31.19	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.6	54.6	52.8	46.8	55.4	56.0
Medium Trucks:	49.4	48.7	42.4	40.8	49.3	49.5
Heavy Trucks:	50.3	49.7	40.6	41.9	50.2	50.4
Vehicle Noise:	57.5	56.6	53.4	48.8	57.3	57.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	9	20	42	91
CNEL:	10	21	45	98

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Garnet Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	437 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.54	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-22.78	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-26.74	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	53.9	53.2	46.8	45.3	53.7	54.0
Heavy Trucks:	54.7	54.1	45.1	46.3	54.7	54.8
Vehicle Noise:	61.9	61.0	57.9	53.2	61.7	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	84	180
CNEL:	19	42	90	193

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Garnet Avenue
Road Segment: e/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	190 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.17	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-26.41	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-30.36	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.5	55.4	53.6	47.6	56.2	56.8
Medium Trucks:	50.2	49.6	43.2	41.7	50.1	50.4
Heavy Trucks:	51.1	50.5	41.5	42.7	51.1	51.2
Vehicle Noise:	58.3	57.4	54.3	49.6	58.1	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	10	22	48	103
CNEL:	11	24	51	111

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Indian Canyon Road
Road Segment: n/o Coachillin Way

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,477 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.13	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.37	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.32	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.5	67.4	65.6	59.6	68.2	68.8
Medium Trucks:	61.9	61.2	54.8	53.3	61.7	62.0
Heavy Trucks:	61.9	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.0	69.1	66.2	61.3	69.8	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	135	290	625
CNEL:	67	145	312	672

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Indian Canyon Road
Road Segment: n/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,700 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,543 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.94	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.18	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.13	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.7	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	62.1	61.4	55.0	53.5	61.9	62.2
Heavy Trucks:	62.1	61.5	52.5	53.7	62.1	62.2
Vehicle Noise:	70.2	69.3	66.4	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	139	299	643
CNEL:	69	149	321	692

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Indian Canyon Road
Road Segment: n/o 20th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,766 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.35	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-17.59	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.55	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.2	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	62.6	62.0	55.6	54.1	62.5	62.8
Heavy Trucks:	62.7	62.1	53.1	54.3	62.7	62.8
Vehicle Noise:	70.8	69.9	66.9	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	70	152	327	704
CNEL:	76	163	351	757

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Indian Canyon Road
Road Segment: n/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,100 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,906 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.02	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-17.26	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.22	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.6	68.5	66.7	60.7	69.3	69.9
Medium Trucks:	63.0	62.3	55.9	54.4	62.9	63.1
Heavy Trucks:	63.0	62.4	53.4	54.6	63.0	63.1
Vehicle Noise:	71.2	70.2	67.3	62.4	71.0	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	74	160	344	741
CNEL:	80	172	370	797

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Indian Canyon Road
Road Segment: s/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,700 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,460 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.18	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.42	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.37	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.4	67.4	65.6	59.5	68.2	68.8
Medium Trucks:	61.8	61.1	54.8	53.2	61.7	61.9
Heavy Trucks:	61.9	61.3	52.2	53.5	61.8	62.0
Vehicle Noise:	70.0	69.1	66.1	61.2	69.8	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	134	288	620
CNEL:	67	144	310	667

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: 19th Avenue
Road Segment: w/o Newhall Street

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	25 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-16.92	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-34.16	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-38.12	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	44.6	43.5	41.7	35.7	44.3	44.9
Medium Trucks:	38.8	38.1	31.8	30.2	38.7	38.9
Heavy Trucks:	40.6	40.1	31.0	32.3	40.6	40.8
Vehicle Noise:	46.8	45.9	42.5	38.1	46.6	47.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2	4	8	18
CNEL:	2	4	9	19

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: 19th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	74 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-12.15	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-29.39	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-33.35	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	49.3	48.3	46.5	40.4	49.1	49.7
Medium Trucks:	43.6	42.9	36.5	35.0	43.4	43.7
Heavy Trucks:	45.4	44.8	35.8	37.0	45.4	45.5
Vehicle Noise:	51.6	50.7	47.2	42.9	51.4	51.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	8	17	37
CNEL:	4	8	18	39

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: 19th Avenue
Road Segment: e/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,200 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	99 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-10.90	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-28.14	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-32.10	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.6	49.5	47.8	41.7	50.3	50.9
Medium Trucks:	44.8	44.1	37.8	36.2	44.7	44.9
Heavy Trucks:	46.7	46.1	37.0	38.3	46.7	46.8
Vehicle Noise:	52.8	51.9	48.5	44.1	52.6	53.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	10	21	45
CNEL:	5	10	22	48

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	190 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-8.08	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-25.32	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-29.27	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.3	57.2	55.5	49.4	58.0	58.6
Medium Trucks:	52.6	51.9	45.5	44.0	52.4	52.7
Heavy Trucks:	54.4	53.8	44.8	46.0	54.4	54.5
Vehicle Noise:	60.5	59.7	56.2	51.8	60.4	60.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	7	15	32	68
CNEL:	7	16	34	73

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	545 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-3.50	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-20.74	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-24.69	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.9	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	57.1	56.5	50.1	48.6	57.0	57.3
Heavy Trucks:	59.0	58.4	49.4	50.6	59.0	59.1
Vehicle Noise:	65.1	64.2	60.8	56.4	64.9	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	30	64	138
CNEL:	15	32	68	147

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Garnet Avenue
Road Segment: w/o I-10 EB Ramp

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	157 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-10.00	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-27.24	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-31.19	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.6	54.6	52.8	46.8	55.4	56.0
Medium Trucks:	49.4	48.7	42.4	40.8	49.3	49.5
Heavy Trucks:	50.3	49.7	40.6	41.9	50.2	50.4
Vehicle Noise:	57.5	56.6	53.4	48.8	57.3	57.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	9	20	42	91
CNEL:	10	21	45	98

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Garnet Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,000 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	495 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.00	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-22.24	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-26.20	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.6	59.6	57.8	51.8	60.4	61.0
Medium Trucks:	54.4	53.7	47.4	45.8	54.3	54.5
Heavy Trucks:	55.3	54.7	45.6	46.9	55.2	55.4
Vehicle Noise:	62.5	61.6	58.4	53.7	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	42	91	196
CNEL:	21	45	98	210

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 109
Road Name: Garnet Avenue
Road Segment: e/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	190 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.17	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-26.41	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-30.36	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.5	55.4	53.6	47.6	56.2	56.8
Medium Trucks:	50.2	49.6	43.2	41.7	50.1	50.4
Heavy Trucks:	51.1	50.5	41.5	42.7	51.1	51.2
Vehicle Noise:	58.3	57.4	54.3	49.6	58.1	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	10	22	48	103
CNEL:	11	24	51	111

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Indian Canyon Road
Road Segment: n/o Coachillin Way

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	2,302 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.80	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-16.44	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.40	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.4	69.3	67.6	61.5	70.1	70.7
Medium Trucks:	63.8	63.1	56.8	55.2	63.7	63.9
Heavy Trucks:	63.8	63.2	54.2	55.5	63.8	63.9
Vehicle Noise:	72.0	71.0	68.1	63.2	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	84	181	390	840
CNEL:	90	195	419	904

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Indian Canyon Road
Road Segment: n/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,700 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	2,863 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.75	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-15.49	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.45	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	64.7	64.1	57.7	56.2	64.6	64.9
Heavy Trucks:	64.8	64.2	55.2	56.4	64.8	64.9
Vehicle Noise:	72.9	72.0	69.0	64.2	72.7	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	97	209	451	972
CNEL:	105	225	485	1,045

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Indian Canyon Road
Road Segment: n/o 20th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	3,127 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.13	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-15.11	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.07	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	70.7	68.9	62.8	71.5	72.1
Medium Trucks:	65.1	64.5	58.1	56.5	65.0	65.2
Heavy Trucks:	65.2	64.6	55.5	56.8	65.1	65.3
Vehicle Noise:	73.3	72.4	69.4	64.5	73.1	73.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	103	222	478	1,030
CNEL:	111	239	514	1,108

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Indian Canyon Road
Road Segment: n/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	3,077 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.06	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-15.18	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.14	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	70.6	68.8	62.8	71.4	72.0
Medium Trucks:	65.1	64.4	58.0	56.5	64.9	65.2
Heavy Trucks:	65.1	64.5	55.5	56.7	65.1	65.2
Vehicle Noise:	73.2	72.3	69.4	64.5	73.0	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	102	220	473	1,019
CNEL:	110	236	509	1,097

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Indian Canyon Road
Road Segment: s/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,500 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,774 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.33	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-17.57	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.53	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.3	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	62.7	62.0	55.6	54.1	62.5	62.8
Heavy Trucks:	62.7	62.1	53.1	54.3	62.7	62.8
Vehicle Noise:	70.8	69.9	67.0	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	71	152	328	706
CNEL:	76	164	353	760

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: 19th Avenue
Road Segment: w/o Newhall Street

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	33 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-15.67	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-32.91	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-36.87	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.8	44.7	43.0	36.9	45.6	46.2
Medium Trucks:	40.0	39.4	33.0	31.5	39.9	40.2
Heavy Trucks:	41.9	41.3	32.3	33.5	41.9	42.0
Vehicle Noise:	48.0	47.2	43.7	39.3	47.9	48.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2	5	10	21
CNEL:	2	5	11	23

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: 19th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	600 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	50 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-13.91	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-31.15	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-35.11	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	47.6	46.5	44.7	38.7	47.3	47.9
Medium Trucks:	41.8	41.1	34.8	33.2	41.7	41.9
Heavy Trucks:	43.7	43.1	34.0	35.3	43.6	43.8
Vehicle Noise:	49.8	48.9	45.5	41.1	49.6	50.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	13	28
CNEL:	3	6	14	30

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: 19th Avenue
Road Segment: e/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	239 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-7.07	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-24.31	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-28.27	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.4	53.4	51.6	45.5	54.2	54.8
Medium Trucks:	48.6	48.0	41.6	40.1	48.5	48.8
Heavy Trucks:	50.5	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	56.6	55.8	52.3	47.9	56.5	56.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	17	37	80
CNEL:	9	18	40	86

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,700 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	223 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-7.38	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-24.62	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-28.58	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.0	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.3	52.6	46.2	44.7	53.1	53.4
Heavy Trucks:	55.1	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	61.2	60.4	56.9	52.5	61.1	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	16	35	76
CNEL:	8	17	38	81

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,100 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,328 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	0.37	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-16.87	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-20.82	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.7	65.7	63.9	57.9	66.5	67.1
Medium Trucks:	61.0	60.3	54.0	52.4	60.9	61.1
Heavy Trucks:	62.9	62.3	53.2	54.5	62.9	63.0
Vehicle Noise:	69.0	68.1	64.7	60.3	68.8	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	54	116	250
CNEL:	27	58	124	267

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Garnet Avenue
Road Segment: w/o I-10 EB Ramp

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,000 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	165 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.78	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-27.01	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-30.97	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.9	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	49.6	49.0	42.6	41.1	49.5	49.7
Heavy Trucks:	50.5	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	57.7	56.8	53.6	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	9	20	44	94
CNEL:	10	22	47	101

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Garnet Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,200 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,254 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.97	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-18.21	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-22.16	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.7	63.6	61.8	55.8	64.4	65.0
Medium Trucks:	58.4	57.8	51.4	49.9	58.3	58.6
Heavy Trucks:	59.3	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	66.5	65.6	62.5	57.8	66.3	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	78	169	364
CNEL:	39	84	181	390

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Parcel 210
Road Name: Garnet Avenue
Road Segment: e/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	198 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-8.98	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-26.22	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-30.18	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.7	55.6	53.8	47.8	56.4	57.0
Medium Trucks:	50.4	49.8	43.4	41.8	50.3	50.5
Heavy Trucks:	51.3	50.7	41.6	42.9	51.3	51.4
Vehicle Noise:	58.5	57.6	54.4	49.8	58.3	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	23	49	106
CNEL:	11	25	53	114

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Indian Canyon Road
Road Segment: n/o Coachillin Way

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	2,335 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.86	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-16.38	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.33	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	69.4	67.6	61.6	70.2	70.8
Medium Trucks:	63.9	63.2	56.8	55.3	63.7	64.0
Heavy Trucks:	63.9	63.3	54.3	55.5	63.9	64.0
Vehicle Noise:	72.0	71.1	68.2	63.3	71.8	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	85	183	394	848
CNEL:	91	197	423	912

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Indian Canyon Road
Road Segment: n/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	2,962 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.89	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-15.35	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.30	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.5	70.4	68.7	62.6	71.2	71.8
Medium Trucks:	64.9	64.2	57.9	56.3	64.8	65.0
Heavy Trucks:	64.9	64.3	55.3	56.6	64.9	65.0
Vehicle Noise:	73.1	72.1	69.2	64.3	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	99	214	461	994
CNEL:	107	230	496	1,069

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Indian Canyon Road
Road Segment: n/o 20th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,500 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	3,259 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.31	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-14.93	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.89	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.9	70.8	69.1	63.0	71.6	72.2
Medium Trucks:	65.3	64.6	58.3	56.7	65.2	65.4
Heavy Trucks:	65.3	64.8	55.7	57.0	65.3	65.4
Vehicle Noise:	73.5	72.6	69.6	64.7	73.3	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	106	228	492	1,059
CNEL:	114	245	529	1,139

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Indian Canyon Road
Road Segment: n/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,200 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	3,152 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.16	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-15.08	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.03	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.8	70.7	68.9	62.9	71.5	72.1
Medium Trucks:	65.2	64.5	58.1	56.6	65.0	65.3
Heavy Trucks:	65.2	64.6	55.6	56.8	65.2	65.3
Vehicle Noise:	73.3	72.4	69.5	64.6	73.1	73.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	104	223	481	1,036
CNEL:	111	240	517	1,114

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Indian Canyon Road
Road Segment: s/o Garnet Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,700 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,790 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.29	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-17.53	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.49	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.3	68.2	66.5	60.4	69.0	69.6
Medium Trucks:	62.7	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	62.7	62.2	53.1	54.4	62.7	62.8
Vehicle Noise:	70.9	70.0	67.0	62.1	70.7	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	71	153	330	710
CNEL:	76	165	355	764

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: 19th Avenue
Road Segment: w/o Newhall Street

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	33 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-15.67	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-32.91	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-36.87	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.8	44.7	43.0	36.9	45.6	46.2
Medium Trucks:	40.0	39.4	33.0	31.5	39.9	40.2
Heavy Trucks:	41.9	41.3	32.3	33.5	41.9	42.0
Vehicle Noise:	48.0	47.2	43.7	39.3	47.9	48.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2	5	10	21
CNEL:	2	5	11	23

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: 19th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,100 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	91 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-11.28	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-28.52	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-32.48	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.2	49.1	47.4	41.3	49.9	50.5
Medium Trucks:	44.4	43.8	37.4	35.9	44.3	44.5
Heavy Trucks:	46.3	45.7	36.7	37.9	46.3	46.4
Vehicle Noise:	52.4	51.6	48.1	43.7	52.3	52.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	19	42
CNEL:	4	10	21	45

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: 19th Avenue
Road Segment: e/o 19th Avenue

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,000 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	248 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-6.92	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	75.75	-24.16	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	81.57	-28.12	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.6	53.5	51.7	45.7	54.3	54.9
Medium Trucks:	48.8	48.1	41.8	40.2	48.7	48.9
Heavy Trucks:	50.6	50.1	41.0	42.3	50.6	50.8
Vehicle Noise:	56.8	55.9	52.5	48.1	56.6	57.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	18	38	82
CNEL:	9	19	41	88

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,700 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	223 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-7.38	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-24.62	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-28.58	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.0	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.3	52.6	46.2	44.7	53.1	53.4
Heavy Trucks:	55.1	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	61.2	60.4	56.9	52.5	61.1	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	16	35	76
CNEL:	8	17	38	81

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: 20th Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,353 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.816
Medium Trucks:	29.518
Heavy Trucks:	29.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	0.45	3.26	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	75.75	-16.78	3.33	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	81.57	-20.74	3.32	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.8	65.8	64.0	57.9	66.6	67.2
Medium Trucks:	61.1	60.4	54.1	52.5	61.0	61.2
Heavy Trucks:	63.0	62.4	53.3	54.6	62.9	63.1
Vehicle Noise:	69.1	68.2	64.7	60.4	68.9	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	55	117	253
CNEL:	27	58	125	270

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Garnet Avenue
Road Segment: w/o I-10 EB Ramp

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,000 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	165 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.78	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-27.01	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-30.97	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.9	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	49.6	49.0	42.6	41.1	49.5	49.7
Heavy Trucks:	50.5	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	57.7	56.8	53.6	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	9	20	44	94
CNEL:	10	22	47	101

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Garnet Avenue
Road Segment: w/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,900 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	1,312 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.77	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-18.01	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-21.97	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.9	63.8	62.0	56.0	64.6	65.2
Medium Trucks:	58.6	58.0	51.6	50.1	58.5	58.8
Heavy Trucks:	59.5	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	66.7	65.8	62.7	58.0	66.5	67.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	38	81	174	375
CNEL:	40	87	187	402

Monday, July 10, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + Project
Road Name: Garnet Avenue
Road Segment: e/o Indian Canyon Road

Project Name: Winchester Hills SP. 293
Job Number: 8528

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,400 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	198 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.063
Medium Trucks:	62.923
Heavy Trucks:	62.937

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-8.98	-1.62	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	79.45	-26.22	-1.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-30.18	-1.60	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.7	55.6	53.8	47.8	56.4	57.0
Medium Trucks:	50.4	49.8	43.4	41.8	50.3	50.5
Heavy Trucks:	51.3	50.7	41.6	42.9	51.3	51.4
Vehicle Noise:	58.5	57.6	54.4	49.8	58.3	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	23	49	106
CNEL:	11	25	53	114

Monday, July 10, 2023

APPENDIX 9.1:

OPERATIONAL CADNA RESULTS

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15097 - North Indian Canyon/19th Ave High-Cube Warehouse

CadnaA Noise Prediction Model: 15097-02_Operation.cna
Date: 12.07.23
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr				Limit. Value				Land Use			Height		Coordinates		
			Day	Evening	Night	CNEL	Day	Evening	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	41.0	44.0	41.8	48.6	0.0	0.0	0.0	0.0		x	Total	5.00	r	6472431.43	2278307.73	5.00
R2		R2	38.6	41.6	39.4	46.2	0.0	0.0	0.0	0.0		x	Total	5.00	r	6472573.78	2278996.04	5.00
R3		R3	37.3	40.3	38.1	45.0	0.0	0.0	0.0	0.0		x	Total	5.00	r	6471872.91	2279623.52	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
AC1		AC1	88.9	88.9	88.9	Lw	88.9		380.00	190.00	261.00	3.00	g	6471790.61	2276053.60	43.00
AC2		AC2	88.9	88.9	88.9	Lw	88.9		380.00	190.00	261.00	3.00	g	6471827.42	2276053.60	43.00
AC3		AC3	88.9	88.9	88.9	Lw	88.9		380.00	190.00	261.00	3.00	g	6471833.09	2275296.43	43.00
AC4		AC4	88.9	88.9	88.9	Lw	88.9		380.00	190.00	261.00	3.00	g	6471797.94	2275295.13	43.00
GATE1		GATE1	93.2	93.2	93.2	Lw	93.2		600.00	300.00	540.00	8.00	r	6471771.64	2275232.63	8.00
GATE2		GATE2	93.2	93.2	93.2	Lw	93.2		600.00	300.00	540.00	8.00	r	6470793.58	2275133.29	8.00
GATE3		GATE3	93.2	93.2	93.2	Lw	93.2		600.00	300.00	540.00	8.00	r	6471769.63	2276115.86	8.00
TRASH1		TRASH1	89.0	89.0	89.0	Lw	89.0		100.00	50.00	90.00	8.00	r	6470813.98	2276080.59	8.00
TRASH2		TRASH2	89.0	89.0	89.0	Lw	89.0		100.00	50.00	90.00	8.00	r	6470815.15	2275269.51	8.00
TRASH3		TRASH3	89.0	89.0	89.0	Lw	89.0		100.00	50.00	90.00	8.00	r	6471760.90	2275249.25	8.00
TRASH4		TRASH4	89.0	89.0	89.0	Lw	89.0		100.00	50.00	90.00	8.00	r	6471760.73	2276103.94	8.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
Trucks1		Trucks1	86.4	86.4	86.4	57.9	57.9	57.9	PWL-Pt	93.2					12.0	12.0	12.0	25.0	8	r
Trucks2		Trucks2	83.7	83.7	83.7	57.9	57.9	57.9	PWL-Pt	93.2					12.0	12.0	12.0	25.0	8	r

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
Trucks1	Trucks1	8.00	r			6472010.26	2276142.12	8.00	0.00
						6470804.04	2276135.63	8.00	0.00
						6470766.70	2276121.02	8.00	0.00
						6470781.99	2275046.18	8.00	0.00
Trucks2	Trucks2	8.00	r			6472009.91	2275214.08	8.00	0.00
						6470782.58	2275220.57	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
LOAD1		LOAD1	111.5	111.5	111.5	68.1	68.1	68.1	Lw	111.5		600.00	300.00	540.00	8	r
LOAD2		LOAD2	111.5	111.5	111.5	68.4	68.4	68.4	Lw	111.5		600.00	300.00	540.00	8	r
PARK1		PARK1	81.1	81.1	81.1	48.1	48.1	48.1	Lw	81.1		600.00	300.00	540.00	5	r
PARK2		PARK2	81.1	81.1	81.1	59.8	59.8	59.8	Lw	81.1		600.00	300.00	540.00	5	r
PARK3		PARK3	81.1	81.1	81.1	41.1	41.1	41.1	Lw	81.1		600.00	300.00	540.00	5	r
PARK4		PARK4	81.1	81.1	81.1	58.2	58.2	58.2	Lw	81.1		600.00	300.00	540.00	5	r
PARK5		PARK5	81.1	81.1	81.1	47.5	47.5	47.5	Lw	81.1		600.00	300.00	540.00	5	r

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
LOAD1	LOAD1	8.00	r			6470751.58	2276274.20	8.00	0.00
						6471749.50	2276272.11	8.00	0.00
						6471750.19	2276163.09	8.00	0.00
						6471748.79	2276091.78	8.00	0.00
						6471747.41	2276022.81	8.00	0.00
						6470843.93	2276028.52	8.00	0.00
						6470842.87	2276087.90	8.00	0.00
						6470842.00	2276159.95	8.00	0.00
						6470757.89	2276160.13	8.00	0.00
LOAD2	LOAD2	8.00	r			6470849.24	2275327.94	8.00	0.00
						6471750.61	2275326.13	8.00	0.00
						6471750.28	2275077.42	8.00	0.00
						6470889.34	2275076.90	8.00	0.00
						6470891.43	2275192.53	8.00	0.00
						6470849.24	2275192.53	8.00	0.00
PARK1	PARK1	5.00	r			6471788.36	2276275.35	5.00	0.00
						6471976.07	2276275.35	5.00	0.00
						6471978.24	2276256.90	5.00	0.00
						6471996.69	2276255.82	5.00	0.00
						6471995.60	2276165.76	5.00	0.00
						6471941.35	2276165.76	5.00	0.00
						6471808.97	2276167.93	5.00	0.00
						6471808.97	2276193.97	5.00	0.00
						6471788.36	2276193.97	5.00	0.00
PARK2	PARK2	5.00	r			6471782.93	2276099.57	5.00	0.00
						6471781.85	2276116.93	5.00	0.00
						6471866.48	2276116.93	5.00	0.00
						6471864.31	2276099.57	5.00	0.00
PARK3	PARK3	5.00	r			6471996.71	2276106.25	5.00	0.00
						6471998.06	2275249.86	5.00	0.00
						6471872.19	2275251.16	5.00	0.00
						6471871.19	2276106.25	5.00	0.00
PARK4	PARK4	5.00	r			6471785.17	2275249.86	5.00	0.00
						6471867.11	2275249.29	5.00	0.00
						6471866.76	2275223.60	5.00	0.00
						6471784.47	2275223.94	5.00	0.00
PARK5	PARK5	5.00	r			6471809.61	2275180.17	5.00	0.00
						6471998.50	2275180.17	5.00	0.00
						6471997.80	2275166.98	5.00	0.00
						6471998.50	2275073.92	5.00	0.00
						6471976.97	2275073.92	5.00	0.00
						6471976.97	2275055.17	5.00	0.00
						6471809.61	2275055.87	5.00	0.00
						6471809.61	2275076.00	5.00	0.00
						6471788.78	2275076.00	5.00	0.00
						6471788.08	2275160.03	5.00	0.00
						6471808.92	2275159.34	5.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinates				
							Begin		x	y	z	Ground	
							(ft)		(ft)	(ft)	(ft)	(ft)	
BUILDING			BUILDING00001	x	0		40.00	a	6470798.50	2276025.63	40.00	0.00	
									6471760.09	2276023.01	40.00	0.00	
									6471760.52	2276084.64	40.00	0.00	
									6471859.91	2276084.64	40.00	0.00	
									6471862.65	2275260.92	40.00	0.00	
									6471761.61	2275261.96	40.00	0.00	
									6471762.13	2275325.50	40.00	0.00	
									6470796.76	2275329.67	40.00	0.00	

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

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APPENDIX 10.1:

CONSTRUCTION CADNA RESULTS

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15097 - North Indian Canyon/19th Ave High-Cube Warehouse

CadnaA Noise Prediction Model: 15097-02_Construction.cna
Date: 10.07.23
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	47.1	-55.8	44.1	0.0	0.0	0.0		x	Total	5.00	r	6472431.43	2278307.73	5.00
R2		R2	44.8	-58.2	41.8	0.0	0.0	0.0		x	Total	5.00	r	6472573.78	2278996.04	5.00
R3		R3	43.5	-59.4	40.5	0.0	0.0	0.0		x	Total	5.00	r	6471872.91	2279623.52	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height	Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
ConstructionActivity		CA1	118.6	15.6	15.6	66.7	-36.3	-36.3	PWL-Pt	115.6					8	r

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
ConstructionActivity	CA1	8.00	r			6470737.52	2276302.47	8.00	0.00
						6472018.47	2276295.21	8.00	0.00
						6472009.89	2275000.16	8.00	0.00
						6470729.15	2275002.23	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Appendix L.1

Traffic Study

URBAN | CROSSROADS

N INDIAN CANYON/19TH AVE HIGH-CUBE WAREHOUSE

TRAFFIC ANALYSIS

PREPARED BY: Janette Cachola | jcachola@urbanxroads.com
Marlie Whiteman, P.E. | mwhiteman@urbanxroads.com
John Kain, AICP | jkain@urbanxroads.com

Reference Number	Agency	Date
15097-03 TA Report.docx	City of Palm Springs	March 1, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CAMUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
EAC	Existing Plus Ambient Plus Cumulative
EAPC	Existing Plus Ambient Plus Project Plus Cumulative
emp	Employee
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
PHF	Peak Hour Factor
Project	N Indian Canyon/19th Ave High-Cube Warehouse
sf	Square Feet
TA	Traffic Analysis

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1 INTRODUCTION

This report presents the results of the traffic analysis (TA) for N Indian Canyon/19th Ave High-Cube Warehouse ("Project"), located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, as shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and recommend improvements to achieve acceptable circulation system operational conditions. This TA has been prepared based in accordance with the City of Palm Springs TIA Guidelines (July 2020). (1) To ensure that this TA satisfies the City of Palm Springs's traffic study requirements, Urban Crossroads, Inc. prepared a traffic study scoping package for review by County staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The Agreement approved by the City is included in Appendix 1.1.

1.1 PROJECT OVERVIEW

The Project is proposed to consist of a high-cube warehouse of approximately 739,360 square feet. It is anticipated that the Project would be fully developed by year 2024. A preliminary site plan of the proposed Project is shown in Exhibit 1-1. Access to the Project will be provided along Indian Canyon Drive and 19th Avenue. There are two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive. The proposed full access driveway along 19th Avenue will be utilized by truck traffic only.

In order to develop the traffic characteristics of the proposed project, trip-generation rates provided in the TUMF High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) are utilized.

The Project is anticipated to generate a total of 2,134 Passenger Car Equivalent (PCE) trip-ends per day with 118 PCE AM peak hour trips and 155 PCE PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.2 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2022) Conditions
- Existing Plus Project Conditions
- Background Conditions: Existing plus Ambient plus Cumulative (EAC) (2024) Conditions
- Background Plus Project Conditions: Existing plus Ambient plus Project plus Cumulative (EAPC) (2024) Conditions

EXHIBIT 1-1: PRELIMINARY SITE PLAN

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This report presents the results of the traffic analysis (TA) for N Indian Canyon/19th Ave High-Cube Warehouse ("Project"), located on the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs, as shown on Exhibit 1-1.

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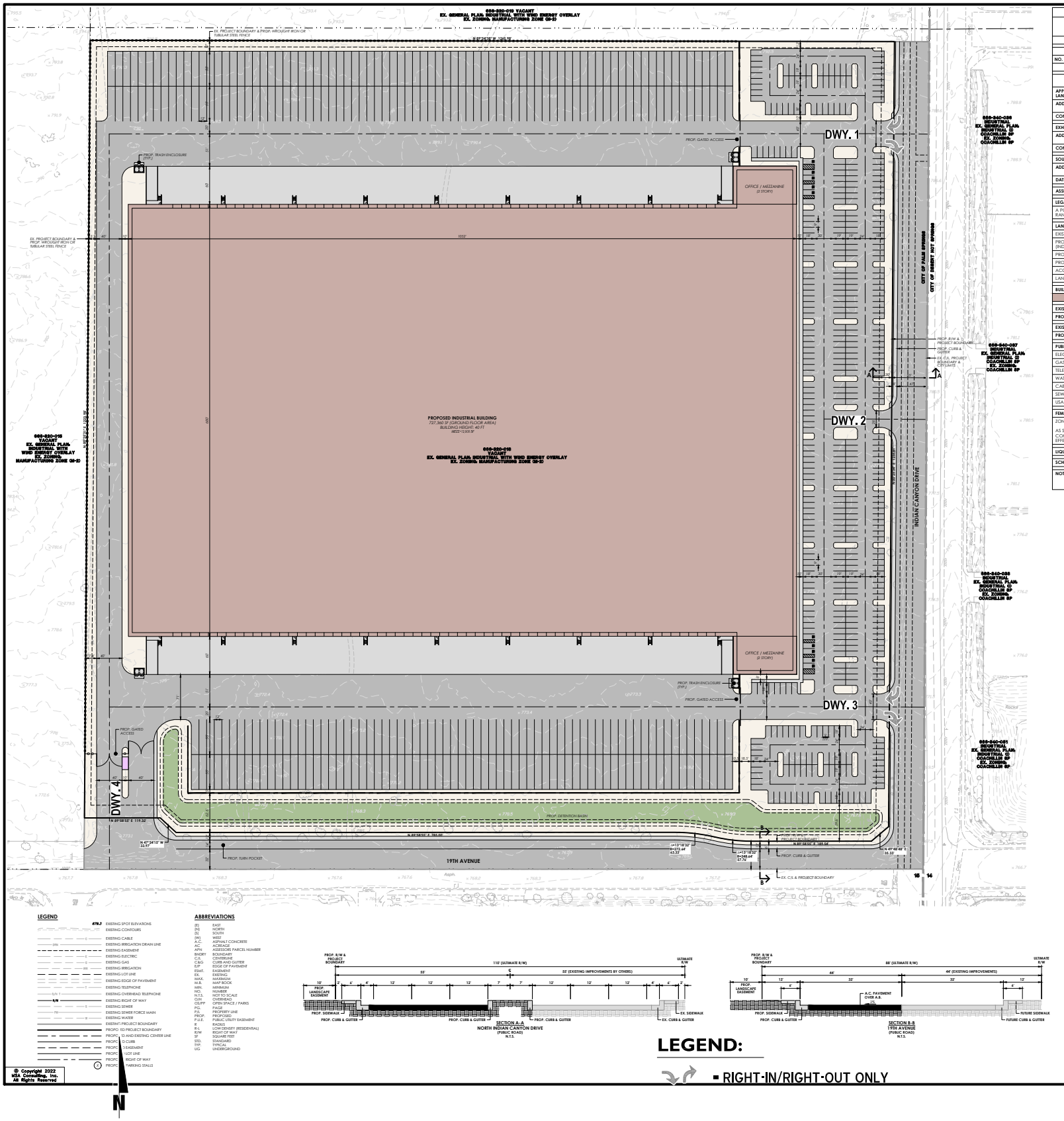
- Existing Plus Project Conditions
- Background Conditions: Existing plus Ambient plus Cumulative (EAC) (2024) Conditions
- Background Plus Project Conditions: Existing plus Ambient plus Project plus Cumulative (EAPC) (2024) Conditions

EXHIBIT 1-1: PRELIMINARY SITE PLAN



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1.2.1 EXISTING (2022) CONDITIONS

For the intersection of Newhall Street/19th Avenue, traffic count data has been collected in January, 2023 during the AM peak period of 7:00 AM to 9:00 AM and PM peak period of 4:00 PM to 6:00 PM. For the remaining existing study intersections, traffic count data collected in March and May 2022 are utilized.

For detailed discussion regarding existing traffic conditions, see Chapter 3 of this report.

1.2.2 EXISTING PLUS PROJECT CONDITIONS

The Existing plus Project (E+P) conditions analysis determines traffic deficiencies that would occur on the existing roadway system with the addition of Project traffic.

1.2.2 BACKGROUND CONDITIONS: EXISTING PLUS AMBIENT PLUS CUMULATIVE (EAC) (2024)

The Background Conditions: Existing plus Ambient plus Cumulative (EAC) conditions analysis determines the potential near-term cumulative circulation system deficiencies without the Project. To account for background traffic growth, an ambient growth factor from Existing conditions of 4.04% (2% per year, compounded annually over 2 years) is included for EAC (2024) traffic conditions. The ambient growth is consistent with the growth used by other projects in the area within the City of Palm Springs. The cumulative project list was compiled from information provided by the City of Palm Springs.

1.2.3 BACKGROUND PLUS PROJECT CONDITIONS: EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC) (2024)

The Background Plus Project Conditions: Existing plus Ambient plus Project plus Cumulative (EAPC) (2024) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. The Project is added to the Existing plus Ambient plus Cumulative (EAC) conditions.

1.3 STUDY AREA

The Project study area was defined in coordination with the City of Palm Springs. Consistent with City of Palm Springs TIA Guidelines, the study area includes any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed project will add 50 or more peak hour trips. Exhibit 1-2 presents the study area and intersection analysis locations.

The "50 peak hour trip" criteria generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively impacted by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of impact (i.e., study area).

The following study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TA based on consultation with City of Palm Springs.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection	#	Intersection
1	Indian Cyn. Dr. / Dillon Rd.	8	I-10 Eastbound Ramps / Garnet Av.
2	Indian Cyn. Dr. / 19th Avenue	9	I-10 Westbound Ramps / 20th Av.
3	Indian Cyn. Dr. / Commercial Plaza	10	Newhall St. - Dwy. 4 / 19th Av.
4	Indian Cyn. Dr. / 20th Avenue	11	Indian Cyn. Dr. / Coachillin Wy.
5	Indian Cyn. Dr. / I-10 Westbound On-Ramp	12	Indian Cyn. Dr. / Dwy. 1
6	Indian Cyn. Dr. / I-10 Eastbound On-Ramp	13	Indian Cyn. Dr. / Dwy. 2
7	Indian Cyn. Dr. / Garnet Avenue	14	Indian Cyn. Dr. / Dwy. 3

1.4 ANALYSIS FINDINGS

This section provides a summary of the analysis results for Existing (2022), Existing Plus Project, EAC (2024), and EAPC (2024) conditions. Table 1-2 presents a summary of study area LOS conditions for each analysis scenario.

1.4.1 EXISTING (2022) CONDITIONS

For Existing (2022) traffic conditions, the study intersection of Indian Canyon Drive / 19th Avenue (#2) is currently operating at an unacceptable LOS (LOS "E" or worse) during the PM peak hour.

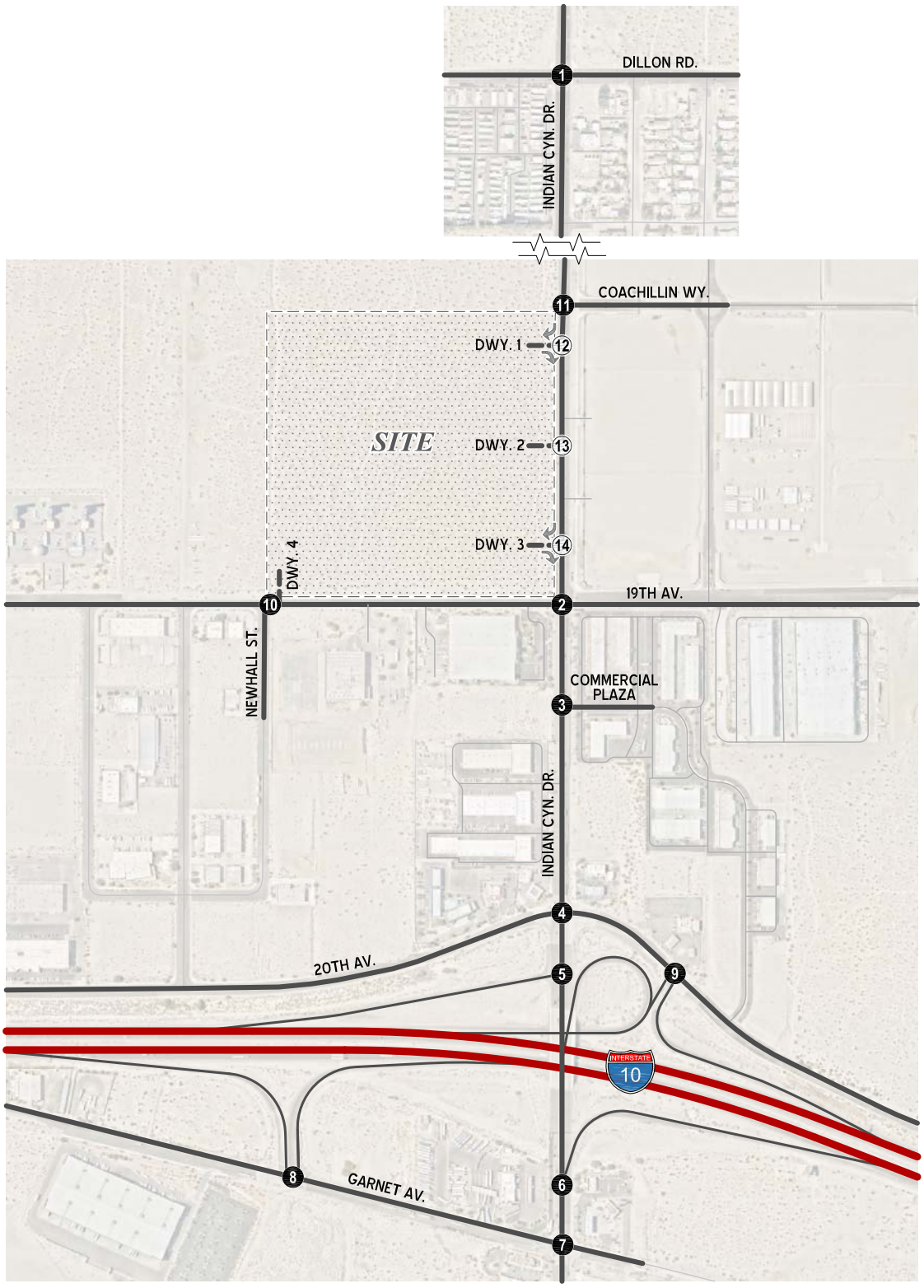
The intersection of Indian Canyon Drive / 19th Avenue (#2) currently meets the volume warrants for installation of a traffic signal based upon existing traffic counts.

For Existing Plus Project conditions, no other study area intersections meet the volume warrants for installation of a traffic signal.

1.4.2 BACKGROUND (2024) CONDITIONS

For EAC (2024) and EAPC (2024) traffic conditions, there are no new study intersections found to operate at an unacceptable LOS (i.e., LOS "E" or better) during AM and PM peak hours, with or without the addition of Project traffic. In addition, for EAC and EAPC conditions, no other study area intersections meet the volume warrants for installation of a traffic signal beyond the existing signal warrant for Indian Canyon Drive / 19th Avenue (#2).

EXHIBIT 1-2: TRAFFIC ANALYSIS STUDY AREA



LEGEND:

- 11 = EXISTING ANALYSIS LOCATION
- (3) = FUTURE ANALYSIS LOCATION
- = RIGHT-IN/RIGHT-OUT ONLY
- = FUTURE ROADWAY

N

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TABLE 1-2: LEVEL OF SERVICE (LOS) SUMMARY

#	Intersection	Existing AM	Existing PM	E+P AM	E+P PM	EAC (2024) AM	EAC (2024) PM	EAPC (2024) AM	EAPC (2024) PM
1	Indian Canyon Dr. / Dillon Rd.	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
2	Indian Canyon Dr. / 19th Av.								
	- Without Improvements	A - D	F	A - D	F	F	F	F	F
	- With Improvements	N/A	N/A	A - D	A - D	A - D	A - D	A - D	A - D
3	Indian Canyon Dr. / Commercial Plaza	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
4	Indian Canyon Dr. / 20th Av.	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
5	Indian Canyon Dr. / I-10 WB On-Ramp	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
6	Indian Canyon Dr. / I-10 EB On-Ramp	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
7	Indian Canyon Dr. / Garnet Av.	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
8	I-10 EB Ramps / Garnet Av.	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
9	I-10 WB Ramps / 20th Av.	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
10	Newhall St. - Dwy. 4 / 19th Av.	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
11	Indian Canyon Dr. / Coachillin	A - D	A - D	A - D	A - D	A - D	A - D	A - D	A - D
12	Indian Canyon Dr. / Dwy. 1	N/A	N/A	A - D	A - D	N/A	N/A	A - D	A - D
13	Indian Canyon Dr. / Dwy. 2	N/A	N/A	A - D	A - D	N/A	N/A	A - D	A - D
14	Indian Canyon Dr. / Dwy. 3	N/A	N/A	A - D	A - D	N/A	N/A	A - D	A - D

Legend:

A - D = A - D E = E F = F

F:\UXRjobs_14600-15000\15097\02_LOS\Excel\[15097 - Report.xlsx]1-2_LOS Summary

1.5 CIRCULATION SYSTEM DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

Installation of off-site traffic signal at the off-site intersection of Indian Canyon Drive / 19th Avenue (#2) address intersection operational deficiencies for opening year (2024) conditions. Fair share financial contribution based on the Project's estimated peak hour volumes at this location may be imposed at the discretion of the City of Palm Springs.

Detailed fair share calculations, for each peak hour, are provided in Table 1-3 for the intersection of Indian Canyon Drive / 19th Avenue (#2).

1.6 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS

Access to the Project will be provided along Indian Canyon Drive and 19th Avenue. There are two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive. In addition, a proposed full access driveway along 19th Avenue will be utilized by truck traffic only. Roadway improvements necessary to provide site access and on-site circulation are assumed to be constructed in conjunction with site development and are described below. These improvements should be in place prior to occupancy.

- Construct 19th Avenue between the Project's western boundary to Indian Canyon Drive at its ultimate half-section width as a Secondary Thoroughfare, with a minimum pavement width of 64 feet.
- Construct Indian Canyon Drive between the northern Project boundary to 19th Avenue at its ultimate half-section width as a Major Thoroughfare, with a minimum pavement width of 76 feet.

The following access intersection traffic controls are recommended:

Indian Canyon Drive / 19th Avenue (#2)

- Install a traffic signal.
- Provide separate eastbound left turn lane.
- Modify westbound striping to provide a dedicated left turn lane.

Driveway 4 / 19th Avenue (#10)

- Install a cross-street stop control on the southbound approach.
- Provide one southbound shared left-through-right lane.
- Proposed site plan incorporates an extended westbound right turn storage area for the staging of entering trucks.

Indian Canyon Drive / Driveway 1 (#12)

- Restrict left turn movements to/from Indian Canyon Drive by providing double solid yellow line median striping from the Coachillin Way intersection to 300' south of Driveway 1.
- Provide single eastbound right turn lane within driveway with cross-street stop control.

TABLE 1-3: EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2024) FAIR SHARE CALCULATIONS

#	Intersection	Existing Traffic	EAPC (2024) Traffic[3]	Project Only Traffic	Total New Traffic[1]	Project Fair Share (%)[2]
2	Indian Canyon Dr. / 19th Av.					
	• AM Peak Hour	1,583	2,770	93	1,187	7.8%
	• PM Peak Hour	1,557	3,092	122	1,535	**7.9%**

[1] Total New Traffic = (EAPC 2024 - Existing Traffic)

[2] Project Fair Share % = (Project Only Traffic / Total New Traffic)

[3] Existing Plus Ambient Plus Project Plus Cumulative (2024) Conditions

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Indian Canyon Drive / Driveway 2 (#13)

- Provide 150' northbound left turn lane within striped median of Indian Canyon Drive.
- Provide one eastbound shared left-right turn lane with cross-street stop control.

Indian Canyon Drive / Driveway 3 (#14)

- Restrict left turn movements to/from Indian Canyon Drive by providing double solid yellow line median striping from the 19th Avenue intersection to north of Driveway 3 as indicated on Exhibit 8-1.
- Provide single eastbound right turn lane within driveway with cross-street stop control.

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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with the City of Palm Springs TIA Guidelines. (1)

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors, such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near Capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (2)The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Palm Springs requires signalized intersection operations analysis based on the methodology described in the HCM. (2) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is related to the average control delay per vehicle and is correlated to a LOS designation as described on Table 2-1.

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection Capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and Capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

A saturation flow rate of 1900 has been utilized for all study area intersections located within the study area. The peak hour traffic volumes are adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak

15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (2)

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0[1]
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F

Source: HCM, 6th Edition

[1] If V/C is greater than 1.0 then LOS is F per HCM.

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Palm Springs requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (2) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection.

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0[1]
Little or no delays.	0 to 10.00	A
Short traffic delays.	10.01 to 15.00	B
Average traffic delays.	15.01 to 25.00	C
Long traffic delays.	25.01 to 35.00	D
Very long traffic delays.	35.01 to 50.00	E
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F

Source: HCM, 6th Edition

[1] If V/C is greater than 1.0 then LOS is F per HCM.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or determine the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (3)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (3) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions and for all future analysis scenarios for existing unsignalized intersections. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics. For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection. Urban warrants have been used as posted speed limits on the major roadways with unsignalized intersections are 40 miles per hour or below and rural warrants have been used on roadways with speeds greater than 40 miles per hour.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Similarly, the speed limit has been used as the basis for determining the use of Urban and Rural warrants.

Traffic signal warrant analyses were performed for the following unsignalized study area intersection shown in Table 2-3:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

#	Intersection	#	Intersection
2	Indian Canyon Dr. / 19th Av.	10	Newhall St. - Dwy. 4 / 19th Av.
3	Indian Canyon Dr. / Commercial Plaza	13	Indian Canyon Dr. / Dwy. 2

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 6 EAC *(2024) Traffic Conditions* and Section 7 *EAPC (2024) Traffic Conditions* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

The City of Palm Springs' General Plan recommends a minimum LOS standard of LOS D or better. If during the LOS evaluations an intersection or roadway segment is found to not meet the requisite LOS standard as established by the' General Plan, improvement modifications will be evaluated to bring the forecasted deficiency to within acceptable LOS thresholds.

2.5 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria has been utilized for the City of Palm Springs to determine whether the addition of project-related traffic at a study intersection would result in a deficiency:

- A deficiency occurs at study area intersections if the pre-Project condition is at or better than LOS D (i.e., acceptable LOS), and the addition of project trips causes the peak hour LOS of the study area intersection to operate at unacceptable LOS (i.e., LOS E or F). Per the City of Palm Springs traffic study guidelines, for intersections currently operating at unacceptable LOS (LOS E or F), a deficiency will occur if the Project contributes 50 or more peak hour trips to pre-project traffic conditions.

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Palm Springs General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of Palm Springs staff (Appendix 1.1), the study area includes 14 existing and future intersections as shown previously on Exhibit 1-2, where the Project is anticipated to contribute 50 or more peak hour trips or has been added at the direction of City staff. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF PALM SPRINGS GENERAL PLAN CIRCULATION ELEMENT

As noted previously, the Project site is located within the City of Palm Springs. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of Palm Springs General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the City of Palm Springs General Plan Circulation Element and Exhibit 3-3 illustrates the City of Palm Springs General Plan roadway cross-sections.

Indian Canyon Drive is classified as a Major Thoroughfare which can accommodate four travel lanes north of 19th Avenue and six travel lanes south of 19th Avenue in the study area.

Dillon Road is classified as a Major Thoroughfare within the study area which can accommodate four travel lanes.

19th Avenue is classified as a Secondary Thoroughfare within the study area, which typically have four travel lanes without a center raised median.

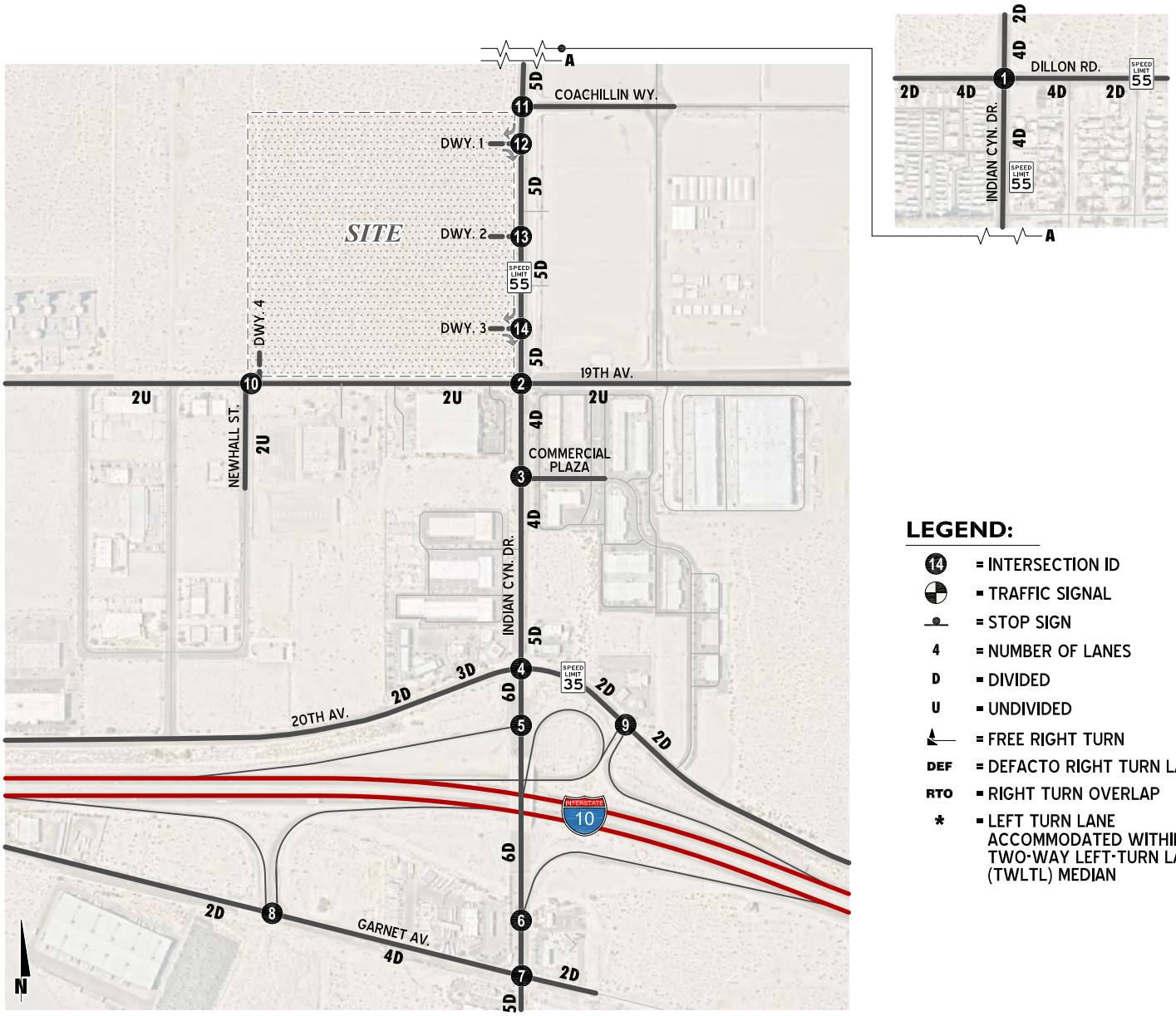
20th Avenue is classified as a Collector within the study area. A Collector typically has two travel lanes.

Garnet Avenue is classified as a Secondary Thoroughfare within the study area, which typically have four travel lanes without a center raised median.

3.3 TRANSIT SERVICE

The City of Palm Springs is currently served by the SunLine Transit Agency, but current bus services are not located within the Project study area. The nearest Sunline transit routes (2 and 5) are located along Palm Drive to the east. Transit service is reviewed and updated by Sunline periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS

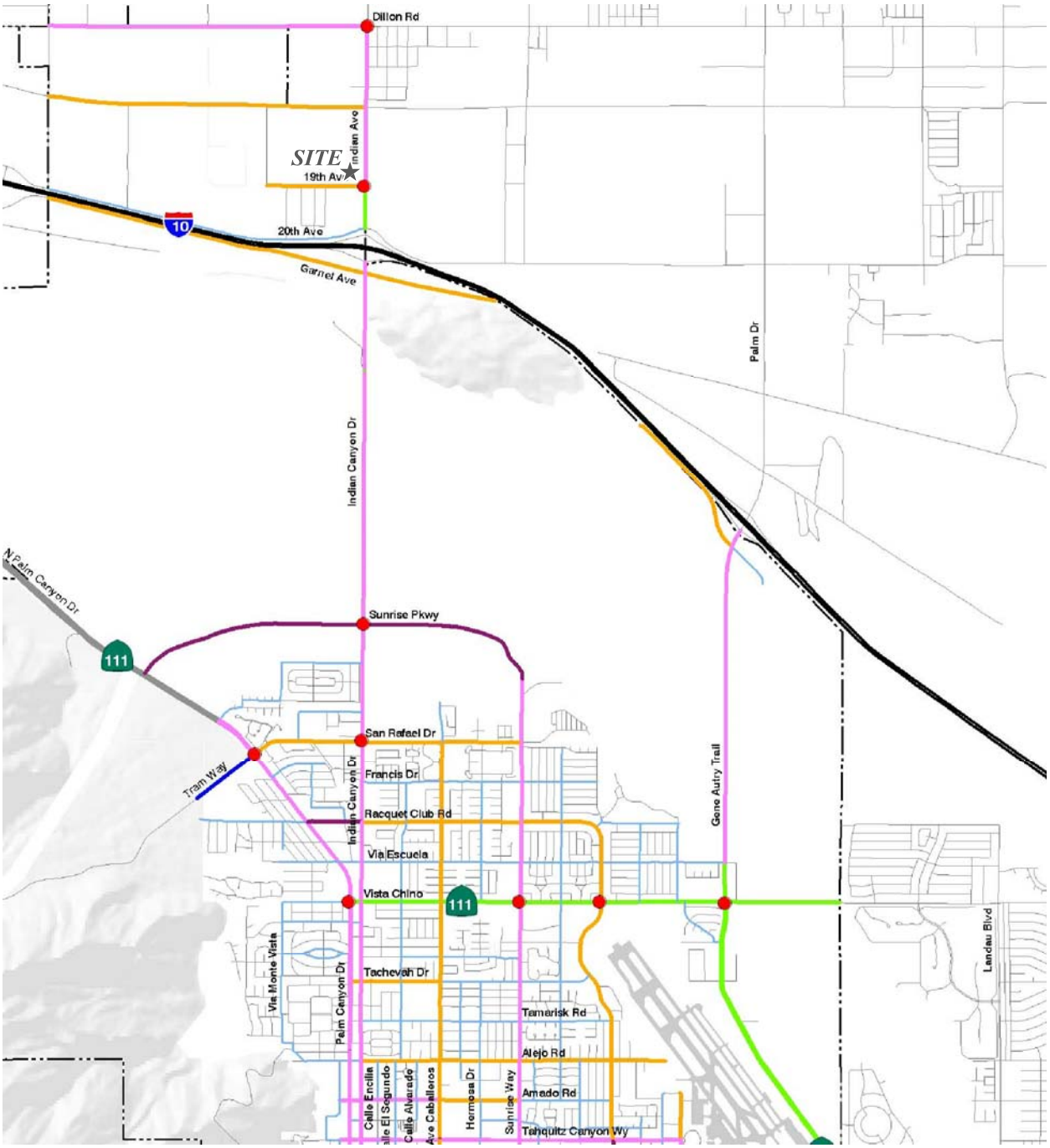


LEGEND:

- 14 = INTERSECTION ID
- = TRAFFIC SIGNAL
- = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- = FREE RIGHT TURN
- DEF = DEFACTO RIGHT TURN LANE
- RTO = RIGHT TURN OVERLAP
- * = LEFT TURN LANE ACCOMMODATED WITHIN TWO-WAY LEFT-TURN LANE (TWLTL) MEDIAN

1 Indian Cyn. Dr. & Dillon Rd.	2 Indian Cyn. Dr. & 19th Av.	3 Indian Cyn. Dr. & Commercial Plaza	4 Indian Cyn. Dr. & 20th Av.	5 Indian Cyn. Dr. & I-10 WB On-Ramps	6 Indian Cyn. Dr. & I-10 EB On-Ramp	7 Indian Cyn. Dr. & Garnet Av.
8 I-10 EB Ramps & Garnet Av.	9 I-10 WB Ramps & 20th Av.	10 Newhall St. - Dwy. 4 & 19th Av.	11 Coachillin Wy. & Indian Av.	12 Dwy. 1 & Indian Av.	13 Dwy. 2 & Indian Av.	14 Dwy. 3 & Indian Av.
RTO		DEF		FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

EXHIBIT 3-2: CITY OF PALM SPRINGS CIRCULATION PLAN



SOURCE: CITY OF PALM SPRINGS GENERAL PLAN (2007)

LEGEND:

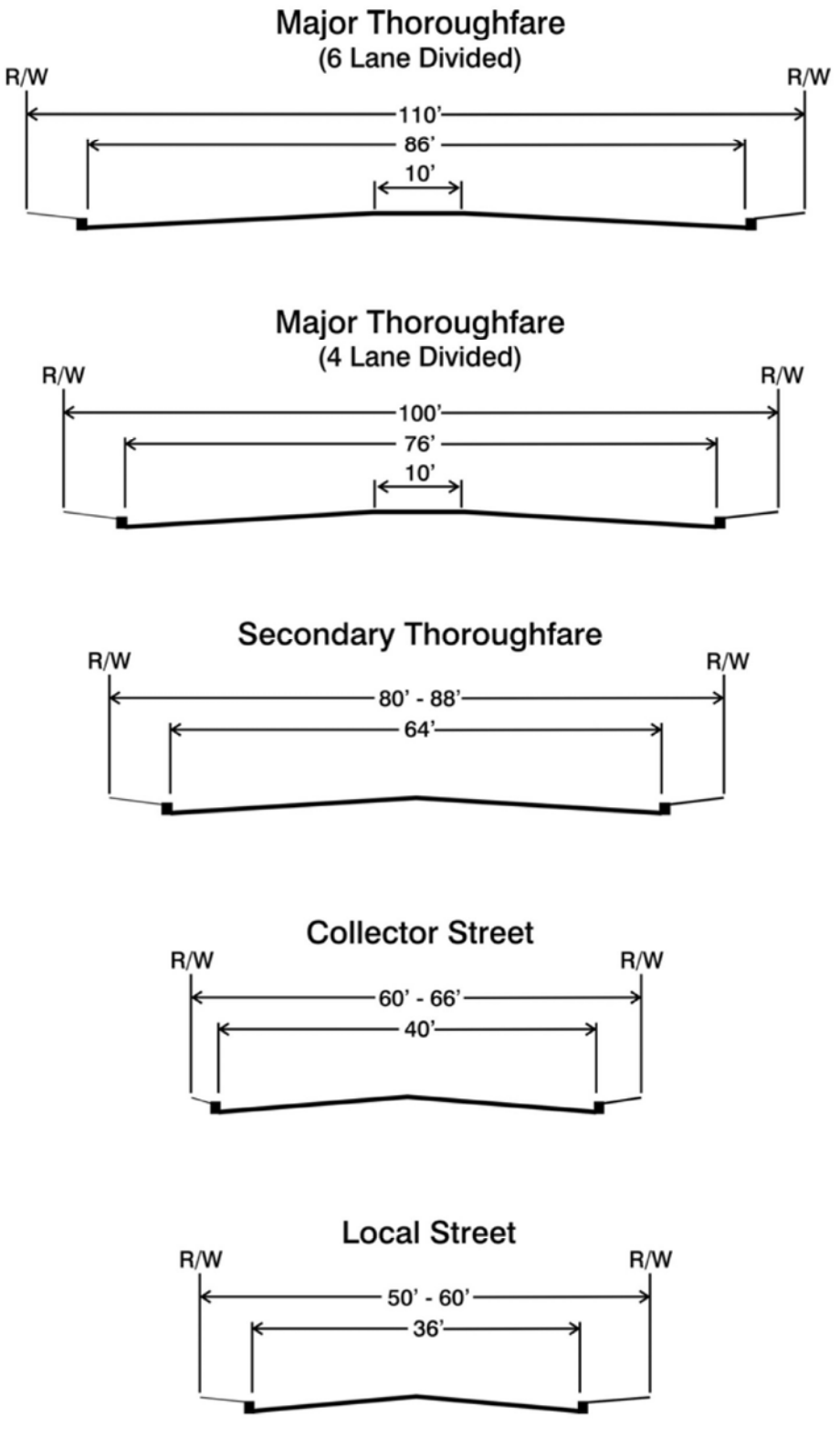
- Freeway
- Expressway
- Major Thoroughfare (6 - lane divided)
- Major Thoroughfare (4 - lane divided)
- Secondary Thoroughfare (4 - lane divided)
- Secondary Thoroughfare (4 - lane undivided)
- Collector (2 - lane divided)
- Collector (2 - lane undivided)
- Local

- City Boundary
- Sphere of Influence
- Critical Intersection*

*Intersection improvements required to maintain acceptable LOS.

N

EXHIBIT 3-3: CITY OF PALM SPRINGS TYPICAL STREET CROSS-SECTIONS



SOURCE: CITY OF PALM SPRINGS GENERAL PLAN (2007)

3.4 PEDESTRIAN AND BICYCLE FACILITIES

Exhibits 3-4 and 3-5 illustrates the City of Palm Springs recreational trails map and bikeway system, respectively.

The existing pedestrian facilities within the study area are shown on Exhibit 3-6. As shown on Exhibit 3-6, existing on-street bike lanes are located along Indian Canyon Drive. Sidewalks also exist on some portions Indian Canyon Drive, 19th Avenue, 20th Avenue, and Garnet Avenue.

3.5 EXISTING (2022) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in March and May 2022, and January 2023. The City of Palm Springs experiences seasonal population variations over the course of the year, with relatively higher populations during the winter months from January to the end of March. To compensate for the discrepancy, counts not taken during this peak winter period (January 2 to March 31) require seasonal adjustments. A 10% increase is applied to counts taken in May to estimate peak season. This factor consistent with other nearby jurisdictions within the Coachella Valley area.

The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1.

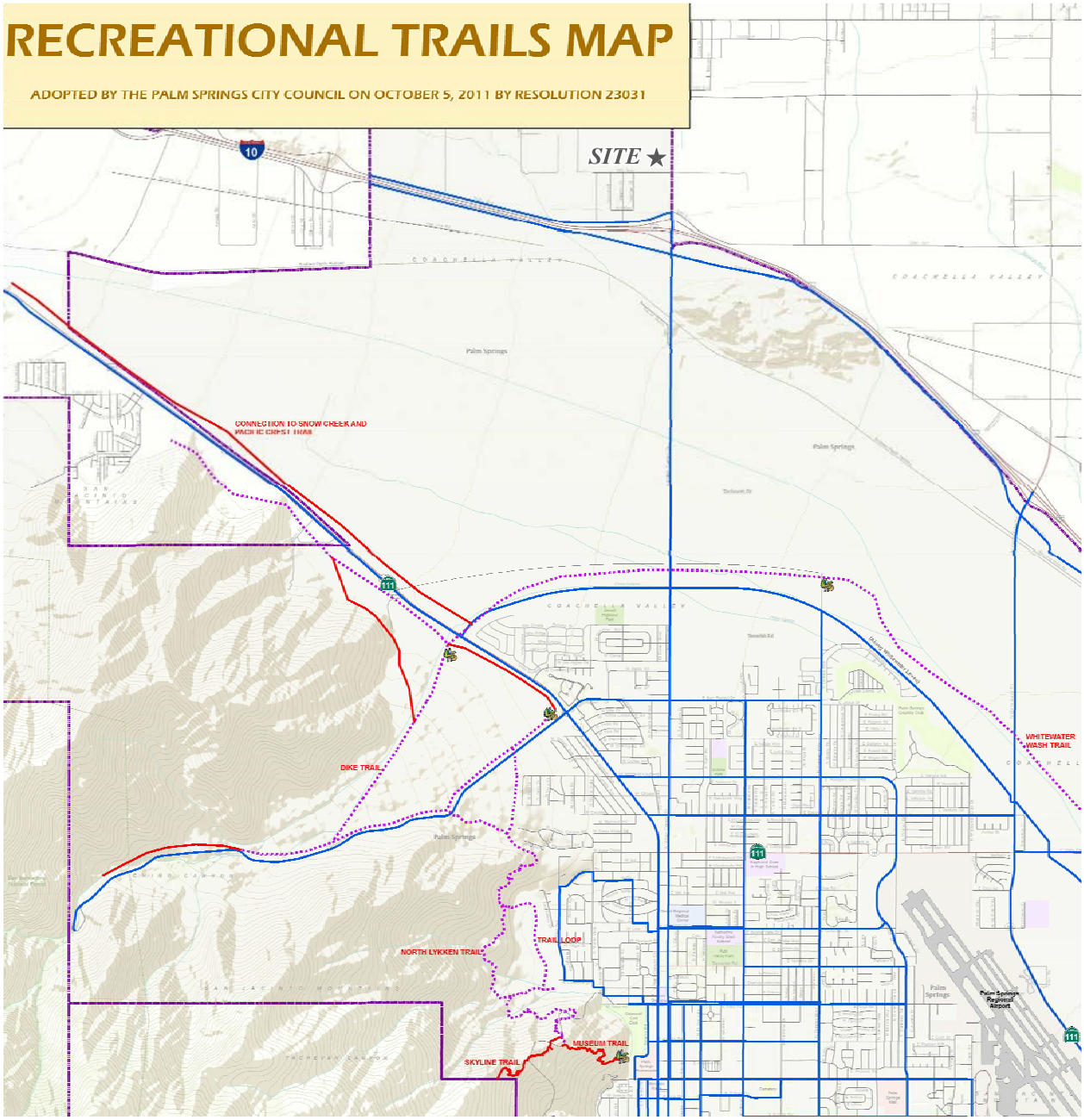
The weekday AM and PM peak hour count data are representative of typical peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. These raw turning volumes have been flow conserved between intersections with limited access, no access and where there are currently no uses generating traffic.

Existing weekday ADT volumes are shown on Exhibit 3-7. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 12.987 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.70 percent. As such, the above equation utilizing a factor of 12.987 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.70 percent (i.e., 1/0.0770 = 12.987) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday peak hour intersection volumes are also shown on Exhibit 3-7.

EXHIBIT 3-4: CITY OF PALM SPRINGS RECREATIONAL TRAILS MAP



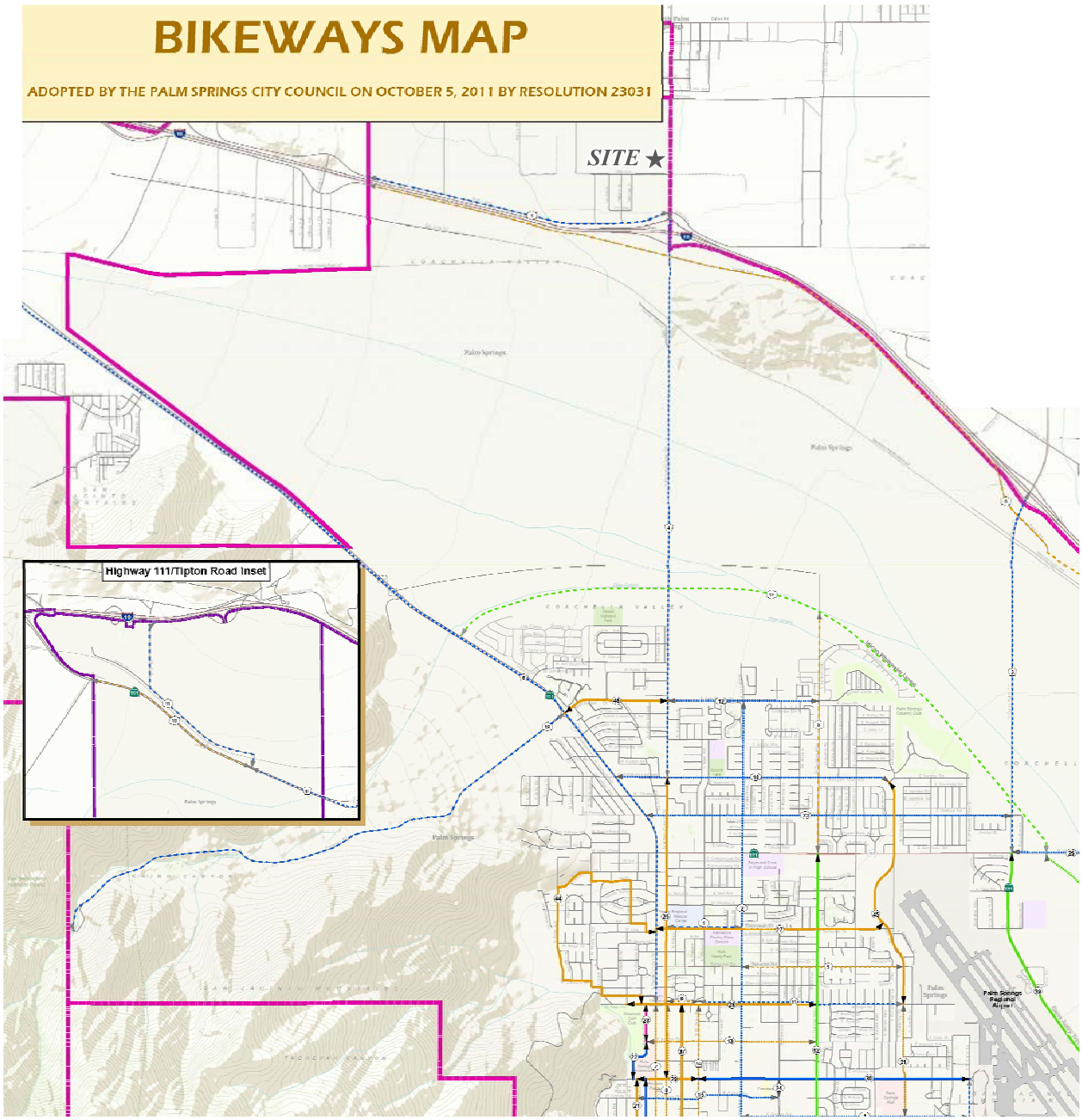
SOURCE: CITY OF PALM SPRINGS GENERAL PLAN

LEGEND:

- TrailHeads
- Hiking/Equestrian
- 4-Wheel Drive
- Unpaved Road
- Proposed Hiking/Equestrian/Backpacking
- Bike Paths
- Streets
- City and Sphere Limits

N

EXHIBIT 3-5: CITY OF PALM SPRINGS BIKEWAYS MAP



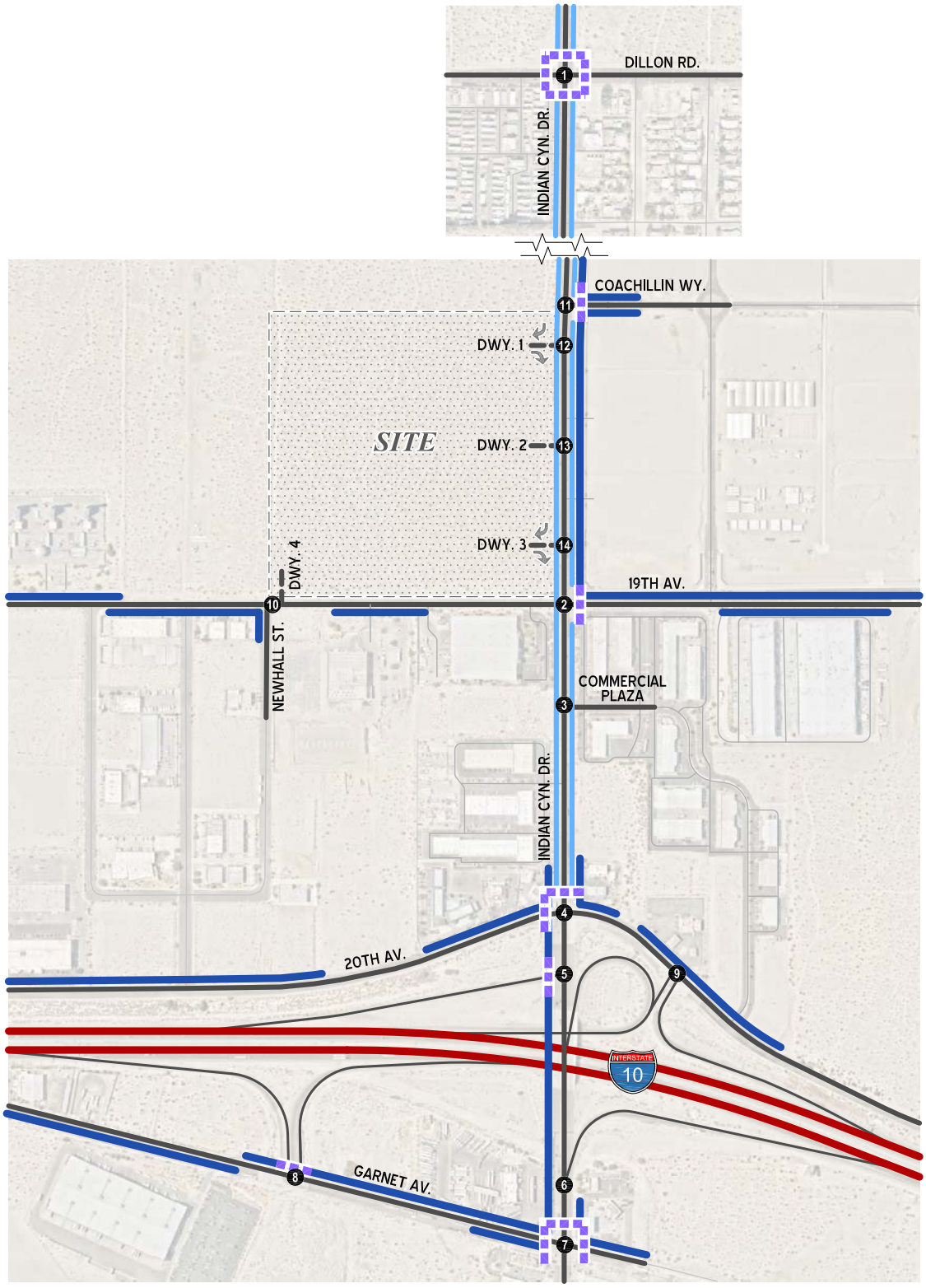
SOURCE: CITY OF PALM SPRINGS GENERAL PLAN

LEGEND:

Existing Bikeways	Top Priority Projects	2nd Priority Projects	3rd Priority Projects
Class I, Bike Path	Class I, Bike Path	Class I, Bike Path	Class I, Bike Path
Class II, Bike Lane	Class II, Bike Lane	Class II, Bike Lane	Class II, Bike Lane
Class III, Bike Route	Class III, Bike Route	Class III, Bike Route	Class III, Bike Route
Mixed Use Bike Route	Mixed Use II		Streets
			City and Sphere Limits

N

EXHIBIT 3-6: EXISTING PEDESTRIAN AND BIKE FACILITIES

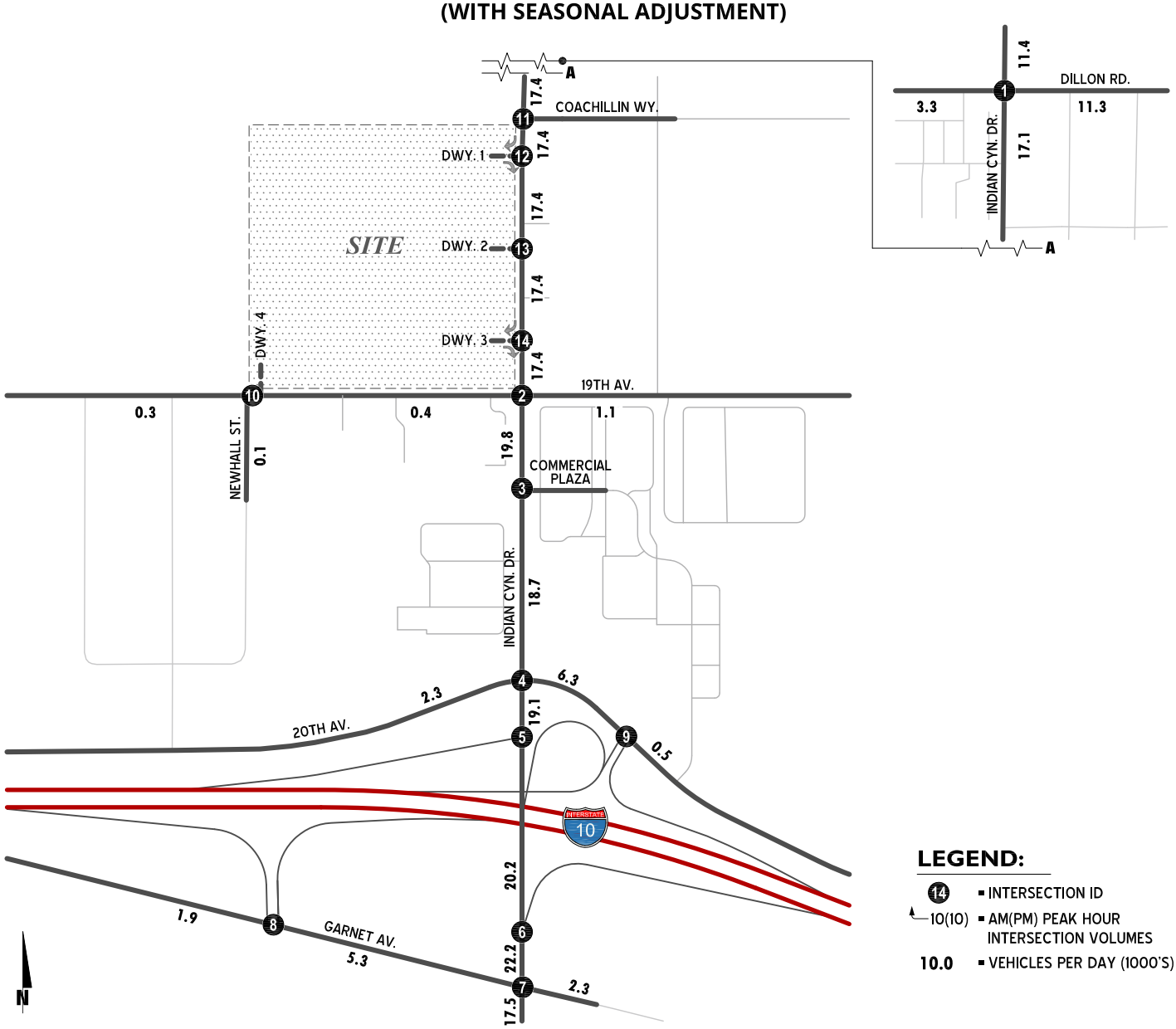


LEGEND:

- 14 = INTERSECTION ID
- = RIGHT-IN/RIGHT-OUT ONLY
- = FUTURE ROADWAY
- = SIDEWALK/PATH
- = CROSSWALK
- = ON-STREET BIKE LANES

N

EXHIBIT 3-7: EXISTING TRAFFIC VOLUMES (WITH SEASONAL ADJUSTMENT)



LEGEND:

- 14 = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)

1 Indian Cyn. Dr. & Dillon Rd. 3(2) 541(226) 24(34) → 24(43) ← 97(131) ← 408(206) 3(4) → 83(93) → 28(15) → 15(11) ↑ 235(565) ↑ 108(302)	**2** Indian Cyn. Dr. & 19th Av. 7(3) 1081(509) 36(1) → 7(20) ← 1(3) ← 13(53) 2(7) → 1(1) → 6(9) → 19(3) ↑ 356(942) ↑ 54(6)	**3** Indian Cyn. Dr. & Commercial Plaza 1087(565) 13(6) → 7(14) ← 12(10) 422(937) ↑ 17(13)	**4** Indian Cyn. Dr. & 20th Av. 12(22) 1048(511) 4(4) → 109(256) ← 31(30) ← 229(230) 39(23) → 3(6) → 48(68) → 20(31) ↑ 309(625) ↑ 9(7)	**5** Indian Cyn. Dr. & I-10 WB On-Ramps 64(103) 1261(706) → LOOP ON-RAMP ON-RAMP → 338(663) 92(184)	**6** Indian Cyn. Dr. & I-10 EB On-Ramp 1261(706) → LOOP ON- RAMP 430(847) 290(318)	**7** Indian Cyn. Dr. & Garnet Av. 175(118) 850(426) 123(131) → 7(7) ← 6(3) ← 13(4) 143(178) → 26(18) → 312(59) → 17(34) ↑ 413(809) ↑ 18(12)
8 I-10 EB Ramps & Garnet Av. 12(11) 427(174) → 183(101) ← 42(61) 8(21) → 35(52) →	**9** I-10 WB Ramps & 20th Av. 21(20) ← 2(15) 8(5) → 2(1) → 380(496) ↑ 8(8) ↑	**10** Newhall St. - Dwy. 4 & 19th Av. 13(8) ← 2(2) 8(15) → 1(1) → 1(1) → 1(2) ↑	**11** Coachillin Wy. & Indian Av. 1124(513) 1(1) → 1(1) ← 1(1) 365(969) ↑ 1(1) ↑	**12** Dwy. 1 & Indian Av. **FUTURE INTERSECTION**	**13** Dwy. 2 & Indian Av. **FUTURE INTERSECTION**	**14** Dwy. 3 & Indian Av. **FUTURE INTERSECTION**

3.6 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized on Table 3-1, which indicates that the intersection of Indian Canyon Drive / 19th Avenue (#2) operates at unacceptable LOS (LOS "E" or worse) during the PM peak hour. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

3.7 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on 2022 peak hour intersection turning volumes (see Appendix 3.3). For Existing (2022) traffic conditions, the unsignalized intersection of Indian Canyon Drive / 19th Avenue (#2) currently meets volume warrants for installation of a traffic signal.

As mentioned previously, a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2022) CONDITIONS

#	Intersection	Traffic Control[1]	Intersection Approach Lanes[2]												Delay[3] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Indian Canyon Dr. / Dillon Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	1	30.0	27.6	C	C
2	Indian Canyon Dr. / 19th Av.	CSS	1	2	1	1	2	0	0	1!	0	0	1!	0	26.9	65.5	D	F
3	Indian Canyon Dr. / Commercial Plaza	CSS	0	2	d	1*	2	0	0	0	0	1	0	d	13.6	15.7	B	C
4	Indian Canyon Dr. / 20th Av.	TS	1	2	1	1	3	0	1	1	1	2	0.5	1.5	21.5	24.8	C	C
5	Indian Canyon Dr. / I-10 WB On-Ramp	UNC	0	3	1>>	0	3	1>>	0	0	0	0	0	0	0.0	0.0	A	A
6	Indian Canyon Dr. / I-10 EB On-Ramp	UNC	0	3	1>>	0	3	0	0	0	0	0	0	0	0.0	0.0	A	A
7	Indian Canyon Dr. / Garnet Av.	TS	1	3	0	1	2	1	2	1	1>	1	1	0	27.4	21.8	C	C
8	I-10 EB Ramps / Garnet Av.	TS	0	0	0	2	0	1	1	1	0	0	1	1>	31.9	29.8	C	C
9	I-10 WB Ramps / 20th Av.	TS	2	0	1	0	0	0	0	1	0	1	2	0	22.9	22.2	C	C
10	Newhall St. - Dwy. 4 / 19th Av.	CSS	1	0	d	0	0	0	0	1	0	0.5	0.5	0	8.6	8.7	A	A
11	Indian Canyon Dr. / Coachillin	TS	0	3	0	1	2	0	0	0	0	1	0	d	3.0	6.4	A	A
12	Indian Canyon Dr. / Dwy. 1		Future Intersection															
13	Indian Canyon Dr. / Dwy. 2		Future Intersection															
14	Indian Canyon Dr. / Dwy. 3		Future Intersection															

[1] TS = Traffic Signal; CSS = Cross-street Stop; UNC = Uncontrolled

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; > = Right-Turn Overlap Phasing; >> = Free-Right Turn; * = Turn lane accommodated within two-way left-turn lane (TWLTL) median

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. The Project is proposed to consist of a logistics facility with approximately 739,360 square feet.

It is anticipated that the Project would be fully developed by year 2024. Access to the Project will be provided along Indian Canyon Drive and 19th Avenue. There are two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive. The proposed full access driveway along 19th Avenue will be utilized by truck traffic only.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

In order to develop the traffic characteristics of the proposed project, the trip generation rates provided in the in the TUMF High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) have been utilized for the logistics Project. The purpose of WSP 2019 study was to gather enough data to develop reliable trip generation rates for centers for use in traffic impact studies in the Inland Empire.

The "sort" label for high cube warehouses with fulfillment capabilities has historically been associated with high concentrations of employment used to separate packages for small vehicle deliveries. The "non-sort" label is typically applied to either non-fulfillment or highly automated fulfillment operations which are less employee intensive.

Operations at this high cube warehouse facility are not anticipated to focused on sort operations with a high concentration of employment. Instead, this project will be developed consistent with, and pursuant to, today's standards of normal high cube warehouse operations that moderate employee intensity by incorporating reasonable means of mechanical sorting in support of possible fulfillment capabilities.

Table 4-1 shows the vehicle trip generation rates (actual) for the Project, as well as the vehicle trip generation summary with daily and peak hour trip generation estimates. As shown on Table 4-1, the Project is anticipated to generate a total of 1,574 (actual) vehicle trip-ends per day with 89 AM (actual) peak vehicle hour trips and 122 PM (actual) peak hour vehicle trips.

Table 4-2 presents the passenger-car-equivalent (PCE) trip generation rates for the Project with the resulting PCE daily and peak hour trip generation estimates.

TABLE 4-1: PROJECT TRIP GENERATION SUMMARY - ACTUAL VEHICLES

Project Trip Generation Rates

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	--	739.360 TSF	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4-Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217

Project Trip Generation Results

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4-Axle Trucks			*4*	*1*	*5*	*2*	*6*	*8*	*120*
5+-Axle Trucks			*6*	*2*	*8*	*2*	*5*	*7*	*160*
- Net Truck Trips (Actual Vehicles)			10	3	13	4	11	15	280
TOTAL TRIPS (ACTUAL VEHICLES)[3]			68	21	89	34	88	122	1,574

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] High-Cube Warehouse Subtotal (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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TABLE 4-2: PROJECT TRIP GENERATION SUMMARY - PASSENGER CAR EQUIVALENTS (PCE)

Project Trip Generation Rates

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	-	739.360 TSF	0.121	0.039	0.160	0.058	0.149	0.207	2.887
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4 Axle Trucks (PCE = 3.0)[3]			0.018	0.006	0.024	0.009	0.024	0.033	0.486
5+-Axle Trucks (PCE = 3.0)[3]			0.024	0.009	0.033	0.009	0.021	0.030	0.651

Project Trip Generation Results

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4 Axle Trucks (PCE = 3.0)			*13*	*4*	*17*	*7*	*18*	*25*	*359*
5+-Axle Trucks (PCE = 3.0)			*18*	*7*	*25*	*7*	*16*	*23*	*481*
- Net Truck Trips (PCE)[3]			31	11	42	14	34	48	840
TOTAL TRIPS (PCE)[4]			89	29	118	44	111	155	2,134

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] PCE = Passenger Car Equivalent
The County of Riverside TIA & VMT Guidelines (December 2020) provide the following PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+ axle = 3.0.
Since the WSP study does not provide a breakdown between the 2 to 4-axle trucks, the highest PCE factor of 3 has been utilized.

[4] High-Cube Warehouse Subtotal (PCE) = Passenger Cars + Net Truck Trips (PCE).

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Refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further subdivided by truck type (or number of axles). Passenger Car Equivalent (PCE) factors were then applied to the trip generation rates for heavy trucks.

PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. As shown on Table 4-2, the Project is anticipated to generate a total of 2,134 PCE trip-ends per day, 118 PCE AM peak hour trips and 155 PCE PM peak hour trips.

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. Trip distribution patterns proposed for the Project heavy trucks for inbound and outbound conditions are illustrated on Exhibits 4-1 and 4-2, respectively. As shown on Exhibit 4-1, truck inbound traffic from the I-10 freeway is oriented to the 19th Avenue entrance located at the southwest corner of the site.

Exhibits 4-3 and 4-4 show the passenger car trip distribution patterns for inbound and outbound conditions, respectively. As shown on Exhibit 4-3, passenger car inbound traffic from the I-10 freeway is oriented to the Project central driveway on Indian Canyon Drive.

4.3 MODAL SPLIT

The potential for Project trips (non-truck) to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes.

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project weekday ADT and weekday peak hour intersection turning movement volumes are shown on Exhibit 4-5.

EXHIBIT 4-1: PROJECT TRUCK (INBOUND) TRIP DISTRIBUTION

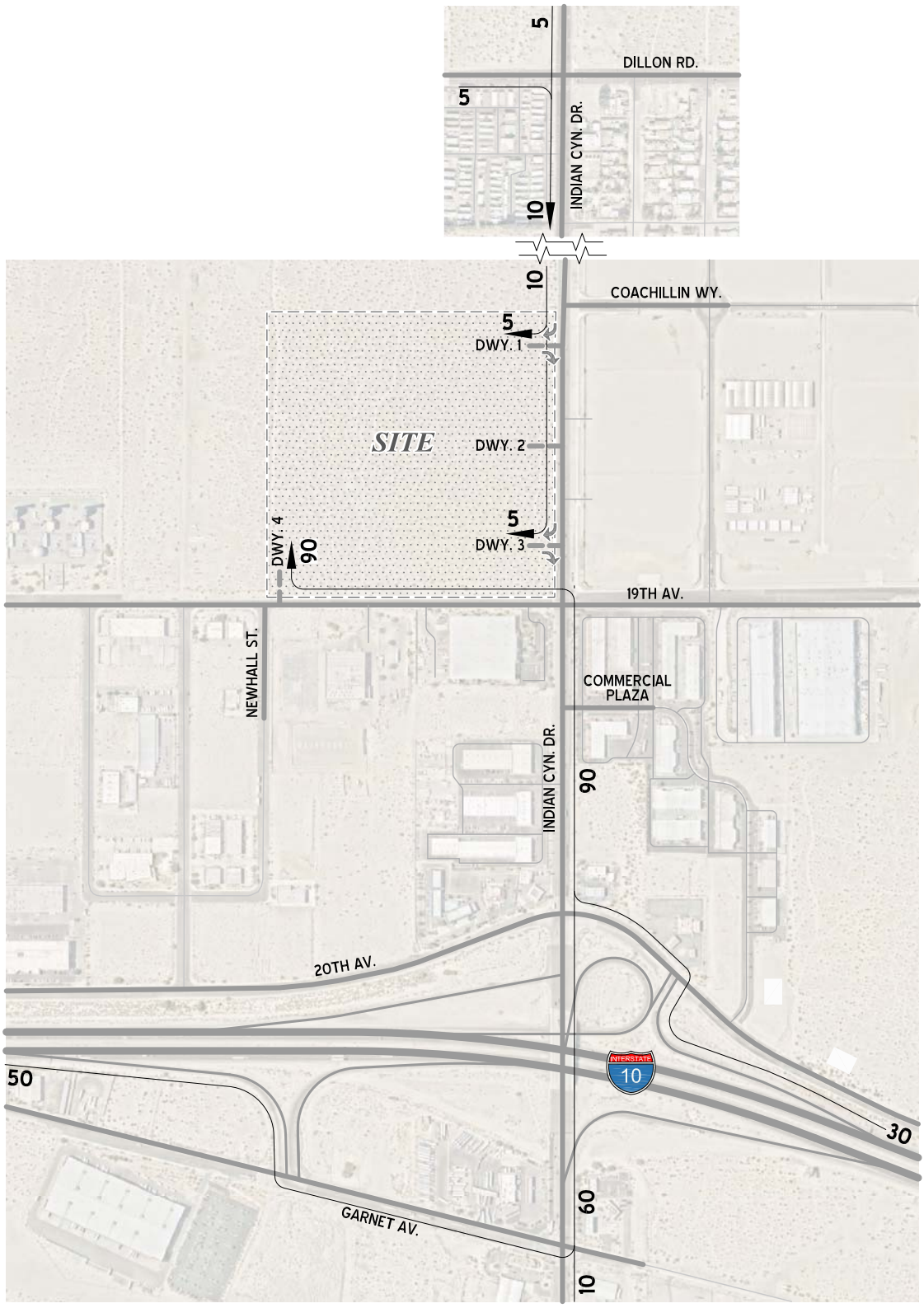


EXHIBIT 4-2: PROJECT TRUCK (OUTBOUND) TRIP DISTRIBUTION

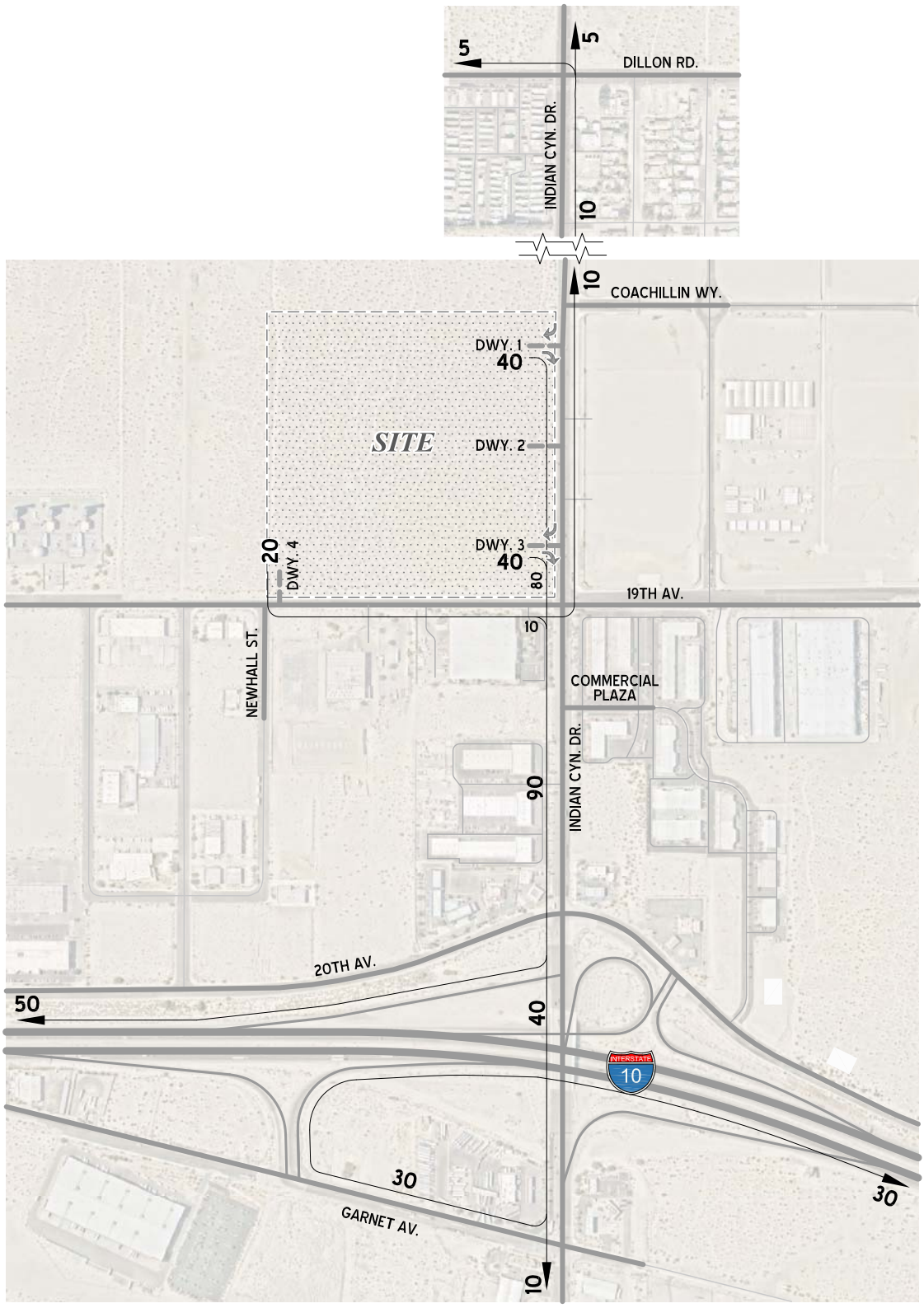


EXHIBIT 4-3: PROJECT PASSENGER CAR (INBOUND) TRIP DISTRIBUTION

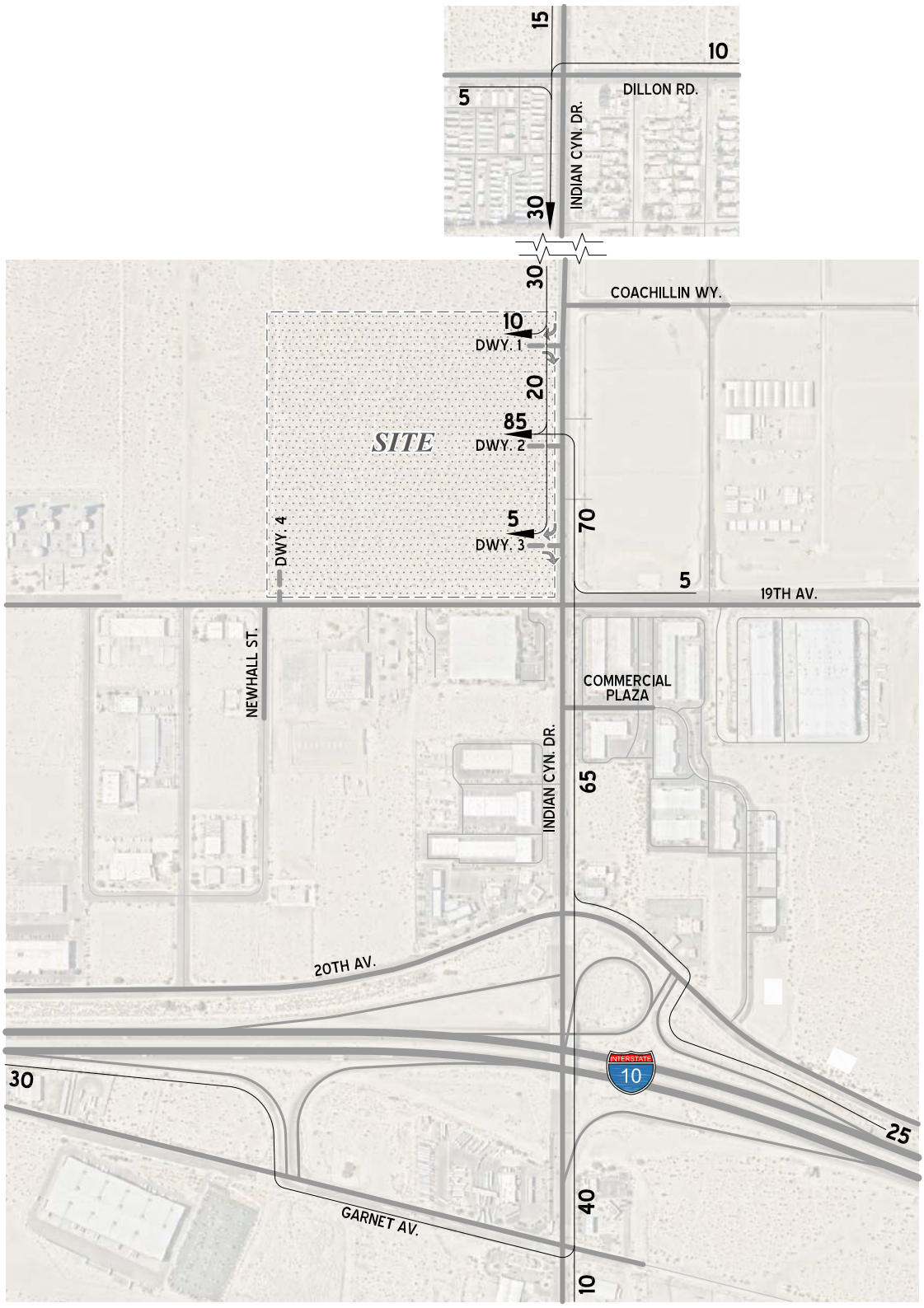


EXHIBIT 4-4: PROJECT PASSENGER CAR (OUTBOUND) TRIP DISTRIBUTION

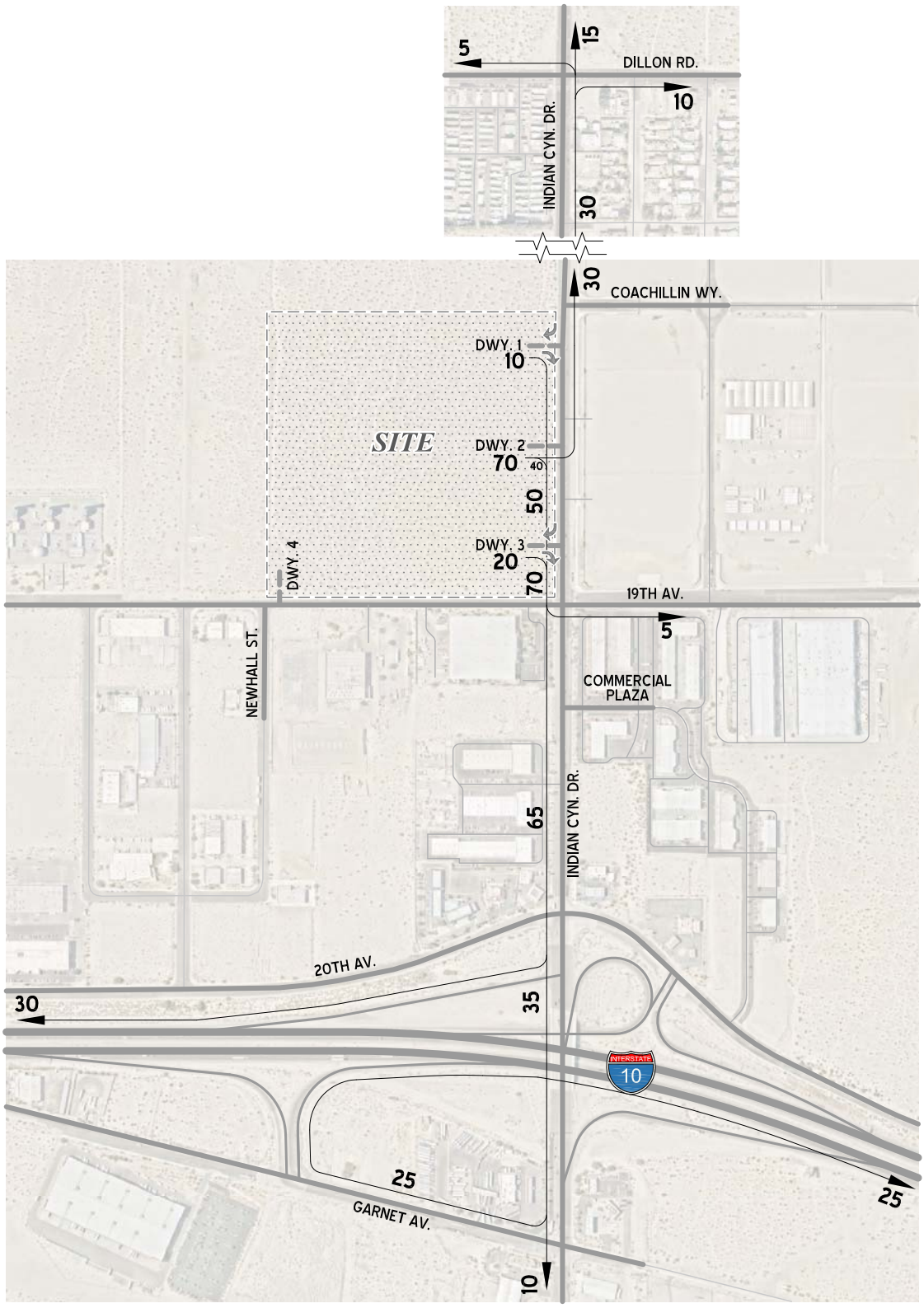
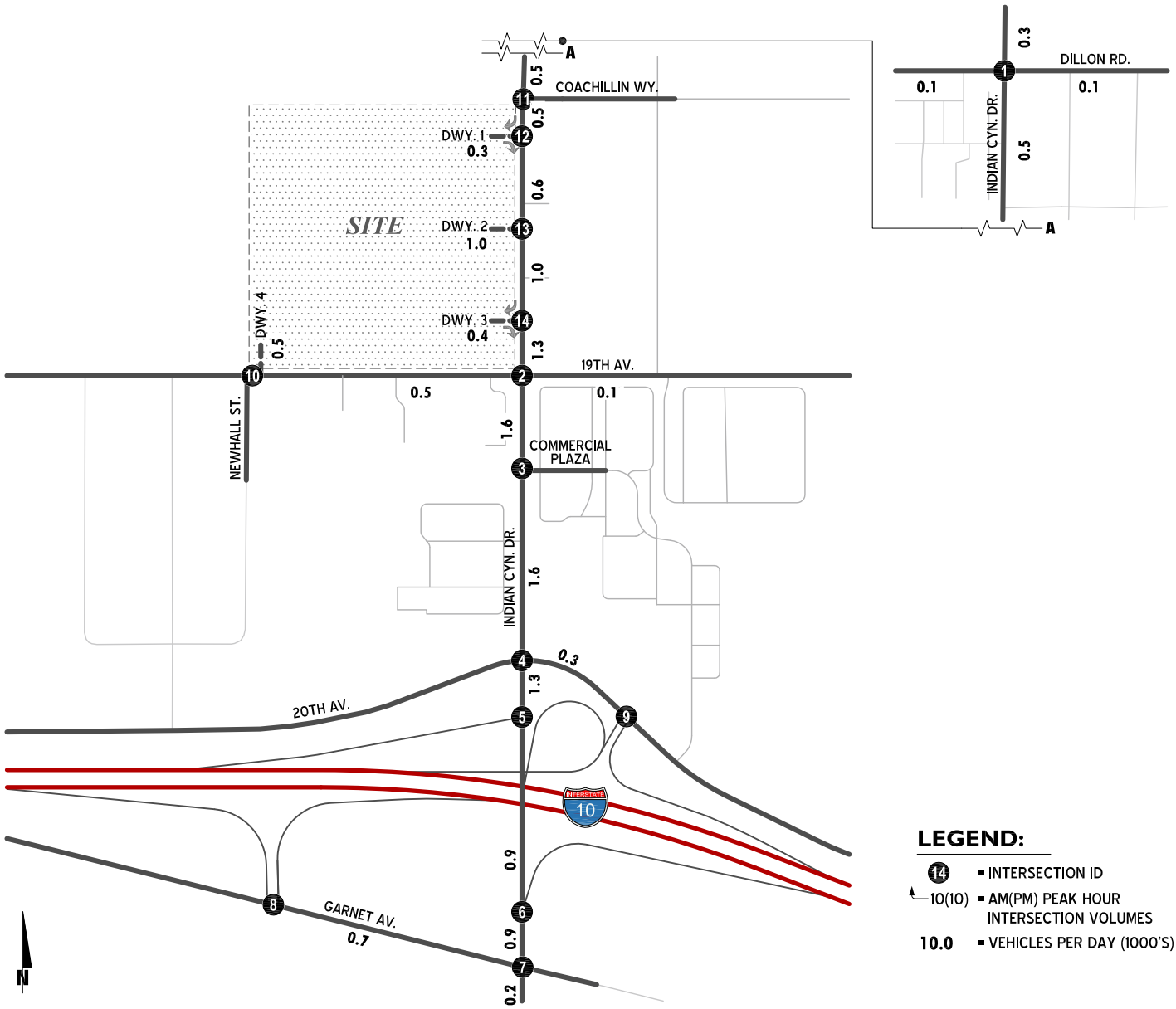
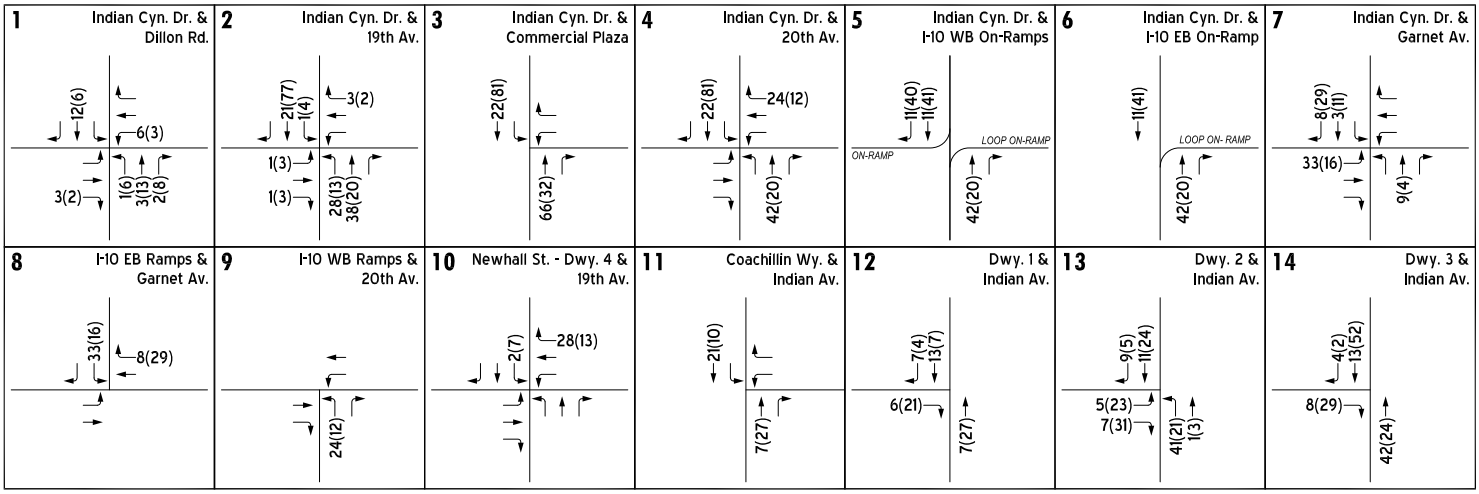


EXHIBIT 4-5: PROJECT ONLY TRAFFIC VOLUMES (PCE)





4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 2% per year for 2024 traffic conditions. The total ambient growth is 4.04% for 2024 traffic conditions. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in conjunction with traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

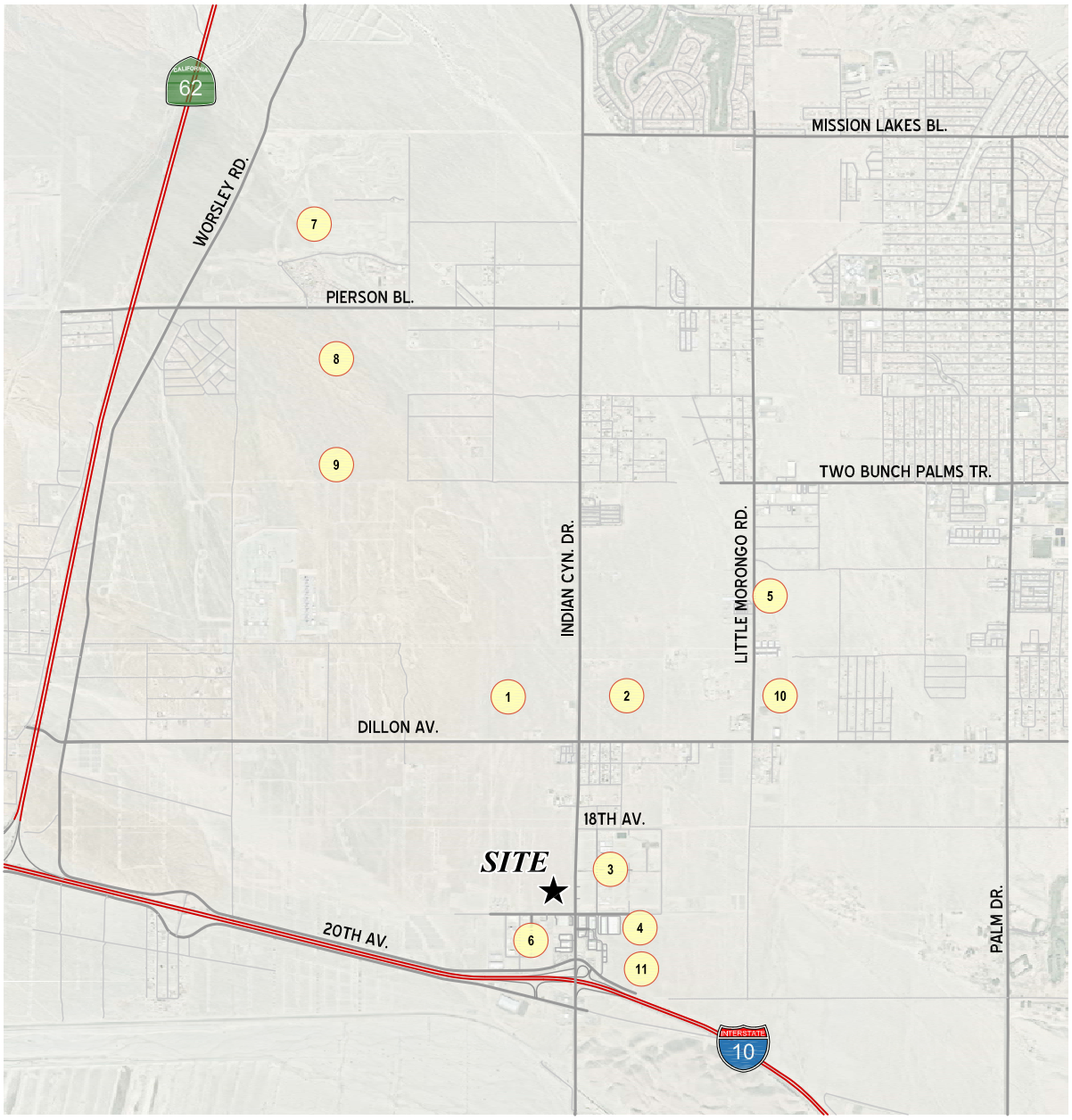
Exhibit 4-6 illustrates the cumulative development location map. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. A summary of cumulative development projects and their proposed land uses are shown on Table 4-2. If applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative forecasts to ensure that traffic generated by the listed cumulative development projects on Table 4-2 are reflected as part of the background traffic. Cumulative ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-7.

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- EAC (2024)
  - Existing (2022) volumes
  - Ambient growth traffic (4.04% over 2 years)
  - Cumulative development traffic
- EAPC (2024)
  - Existing (2022) volumes
  - Ambient growth traffic (4.04% over 2 years)
  - Project traffic
  - Cumulative development traffic

The traffic generated by the proposed Project was then manually added to the base volume to determine EAC/EAPC forecasts.

EXHIBIT 4-6: CUMULATIVE DEVELOPMENT LOCATION MAP



LEGEND:

(#) = CUMULATIVE DEVELOPMENT ID

N

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TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use[1]	Quantity	Units[2]
1	Angel View Salvage & Recycling Facility	Gen. Light Industrial	13.650	TSF
		Factory Outlet Center	9.000	TSF
		General Office	3.600	TSF
2	Cultivation Center	Nursery (Wholesale)	38.00	AC
3	Coachillin	Marijuana Cultivation and Processing Facility	2,772.487	TSF
		Commercial/Dispensary/Restaurant	27.513	TSF
		Coachillin Subtotal	2,800.000	TSF
4	Blackstar Industrial Properties	Business Park	621.920	TSF
5	DHS Light Industrial w/ Cannabis Overlay	Marijuana Cultivation and Processing Facility	116.00	TSF
6	Palm Springs Business Park	Business Park	37.874	TSF
7	Skyborne Active Adult Community at Stoneridge	Senior Adult Housing - Detached	1,141	DU
		SFDR	801	DU
		Clubhouse	5.000	TSF
8	Vista Rosa Residential (Phase 1)	Senior Adult Housing - Detached	702	DU
		Passive Parks	21.78	AC
9	PM32692	SFDR	3	DU
10	Oxford Properties Cultivation Center	Nursery (Wholesale)	70.26	AC
11	Desert Gateway	High-Cube Warehouse	1059.240	TSF
		Hotel	150	OCC RM
		Commercial Retail	42.00	TSF

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Unit; RM = Room; TSF = Thousand Square Feet; AC = Acre; OCC RM = Occupied Room

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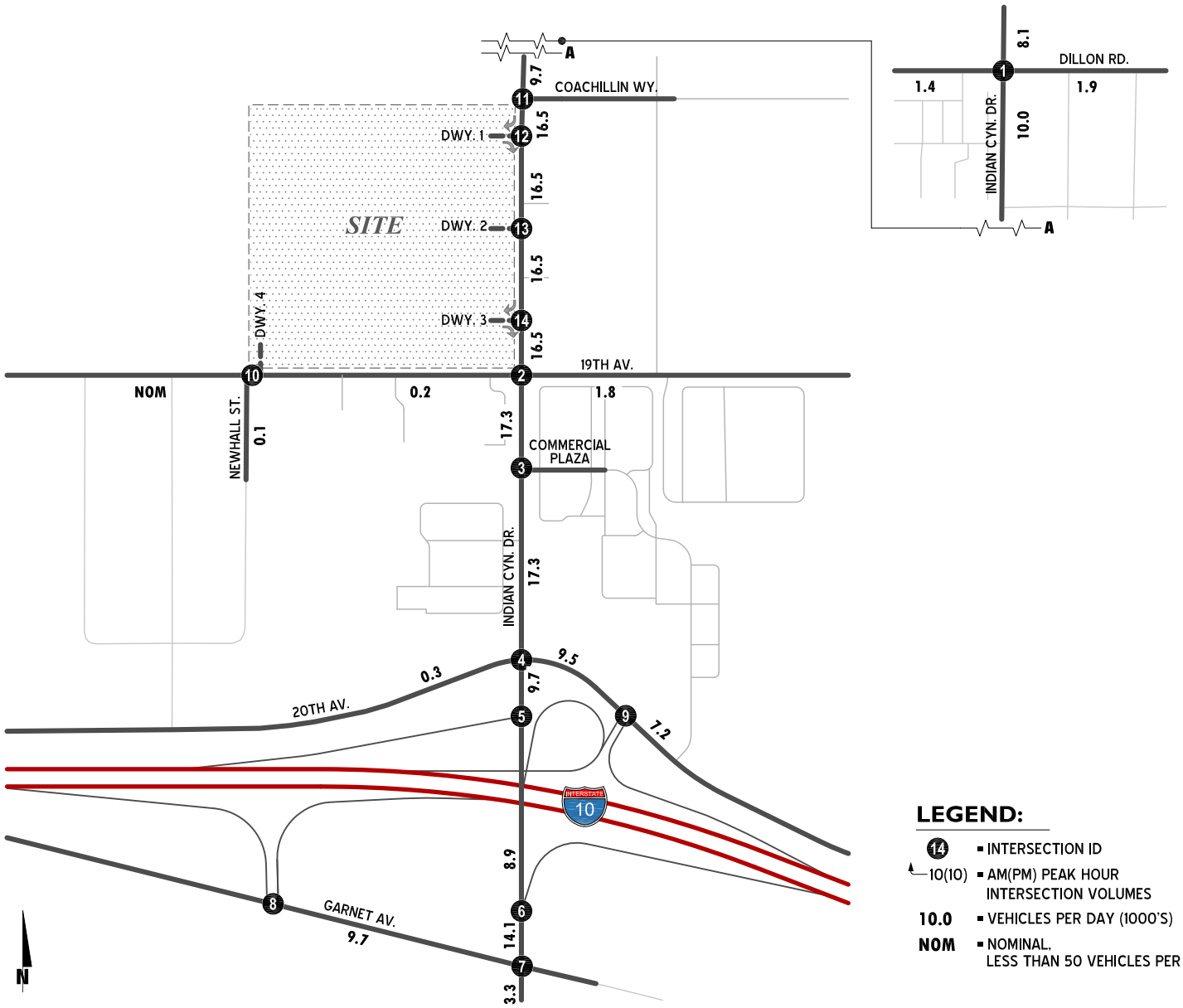
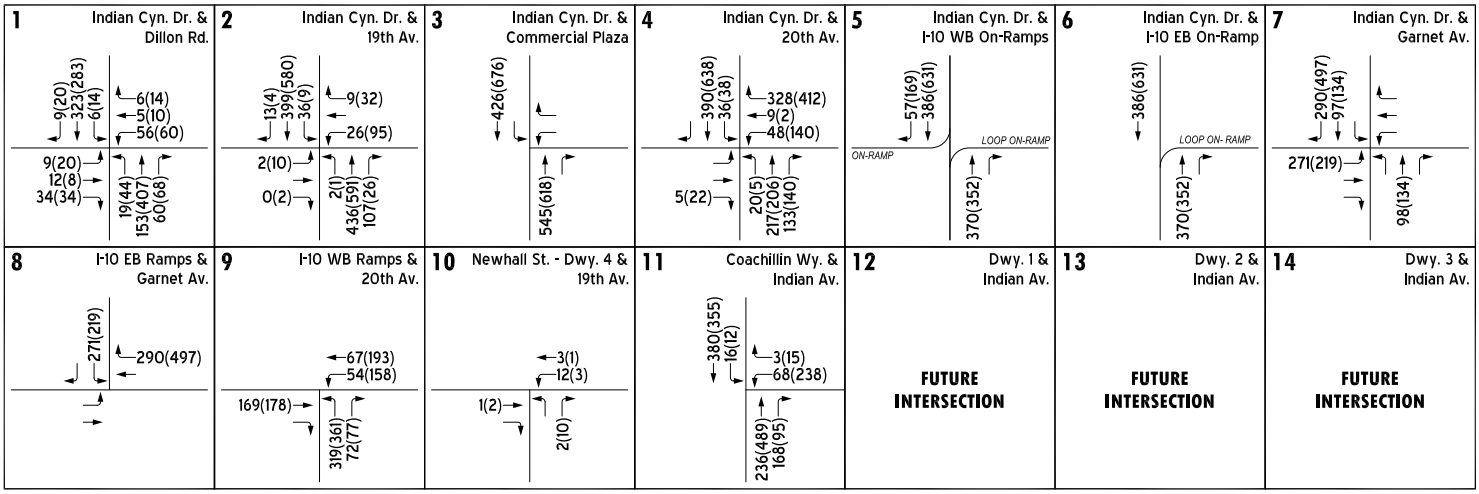
EXHIBIT 4-7: CUMULATIVE DEVELOPMENT ONLY TRAFFIC VOLUMES



LEGEND:

- 14 = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



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5 EXISTING PLUS PROJECT CONDITIONS TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations and traffic signal warrant analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of Project driveways and those facilities assumed to be constructed by the Project to provide site access (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus the addition of Project traffic. The weekday ADT and weekday peak hour intersection turning movement volumes which can be expected for E+P traffic conditions are shown on Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 Methodologies of this TA. The intersection analysis results are summarized in Table 5-1, which indicates that Indian Canyon Drive / 19th Avenue (#2) operates at an unacceptable LOS (LOS "E" or worse) under E+P conditions without installation of a traffic signal. The intersection operations analysis worksheets for E+P traffic conditions is included in Appendix 5.1 of this TA.

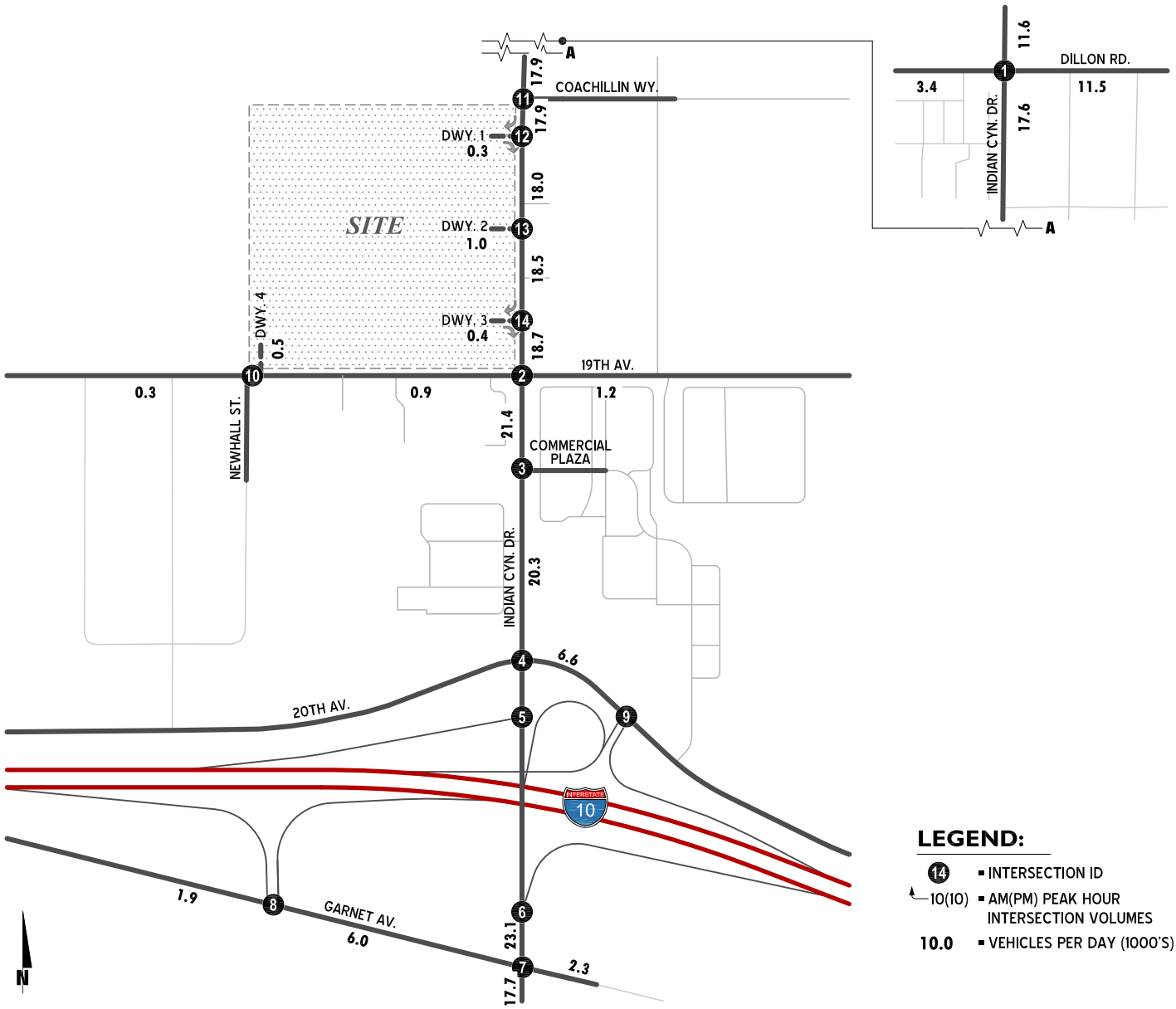
5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for E+P traffic conditions provided in Appendix 3.3. As noted previously, the intersection of Indian Canyon Drive / 19th Avenue (#2) meets volume warrants for a traffic signal. The remaining unsignalized intersections are not anticipated to meet peak hour volume-based warrants and daily volume-based warrants with the addition of Project traffic (see Appendix 3.3).

5.5 RECOMMENDED IMPROVEMENTS

Installation of traffic signal at the off-site deficient intersection of Indian Canyon Drive / 19th Avenue (#2) address intersection operational deficiencies for opening year (2024) conditions, with or without the addition of Project traffic. The effectiveness of the recommended traffic signal at this location is presented in Table 5-1 for E+P traffic conditions. The intersection operations analysis worksheets for E+P traffic conditions, with traffic signal improvements, are included in Appendix 5.1 of this TA.

EXHIBIT 5-1: EXISTING PLUS PROJECT TRAFFIC VOLUMES



1 Indian Cyn. Dr. & Dillon Rd. 3(2) 553(232) 24(34) 24(43) 97(131) 414(209) 3(4) 83(93) 31(17) 16(17) 238(578) 110(310)	**2** Indian Cyn. Dr. & 19th Av. 7(3) 1102(586) 37(5) 10(22) 1(3) 13(53) 3(10) 1(1) 7(12) 47(16) 394(962) 54(6)	**3** Indian Cyn. Dr. & Commercial Plaza 1109(646) 13(6) 7(14) 12(10) 488(969) 17(13)	**4** Indian Cyn. Dr. & 20th Av. 12(22) 1070(592) 4(4) 133(268) 31(30) 229(230) 39(23) 3(6) 48(68) 20(31) 351(645) 9(7)	**5** Indian Cyn. Dr. & I-10 WB On-Ramps 75(143) 1272(747) LOOP ON-RAMP ON-RAMP 380(683) 92(184)	**6** Indian Cyn. Dr. & I-10 EB On-Ramp 1272(747) LOOP ON- RAMP 472(867) 290(318)	**7** Indian Cyn. Dr. & Garnet Av. 183(147) 853(437) 123(131) 7(7) 6(3) 13(4) 176(194) 26(18) 312(59) 17(34) 422(813) 18(12)
8 I-10 EB Ramps & Garnet Av. 12(11) 460(190) 191(130) 42(61) 8(21) 35(52)	**9** I-10 WB Ramps & 20th Av. 21(20) 2(15) 8(5) 2(1) 404(508) 8(8)	**10** Newhall St. - Dwy. 4 & 19th Av. 0(0) 0(0) 2(7) 28(13) 13(8) 2(2) 0(0) 8(15) 1(1) 1(1) 0(0) 1(2)	**11** Coachillin Wy. & Indian Av. 1145(523) 1(1) 1(1) 1(1) 372(996) 1(1)	**12** Dwy. 1 & Indian Av. 7(4) 1137(520) 6(21) 372(996)	**13** Dwy. 2 & Indian Av. 9(5) 1135(537) 5(23) 7(31) 41(21) 366(972)	**14** Dwy. 3 & Indian Av. 4(2) 1137(565) 8(29) 407(993)

TABLE 5-1: INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

#	Intersection	Traffic Control[1]	Intersection Approach Lanes[2]												Delay[3] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Indian Canyon Dr. / Dillon Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	1	30.3	27.6	C	C
2	Indian Canyon Dr. / 19th Av.	CSS	1	2	1	1	2	0	0	1!	0	0	1!	0	27.6	68.3	D	F
	- With Improvements	**TS**	1	2	1	1	2	0	**1**	1	0	**1**	1	0	7.9	9.1	A	A
3	Indian Canyon Dr. / Commercial Plaza	CSS	0	2	d	1*	2	0	0	0	0	1	0	d	14.2	16.2	B	C
4	Indian Canyon Dr. / 20th Av.	TS	1	2	1	1	3	0	1	1	1	2	0.5	1.5	22.5	25.6	C	C
5	Indian Canyon Dr. / I-10 WB On-Ramp	UNC	0	3	1>>	0	3	1>>	0	0	0	0	0	0	0.0	0.0	A	A
6	Indian Canyon Dr. / I-10 EB On-Ramp	UNC	0	3	1>>	0	3	0	0	0	0	0	0	0	0.0	0.0	A	A
7	Indian Canyon Dr. / Garnet Av.	TS	1	3	0	1	2	1	2	1	1>	1	1	0	27.9	22.0	C	C
8	I-10 EB Ramps / Garnet Av.	TS	0	0	0	2	0	1	1	1	0	0	1	1>	31.9	31.1	C	C
9	I-10 WB Ramps / 20th Av.	TS	2	0	1	0	0	0	0	1	0	1	2	0	23.2	22.5	C	C
10	Newhall St. - Dwy. 4 / 19th Av.	CSS	0.5	0.5	d	0	**1!**	0	0	1!	0	0.5	0.5	**1**	8.7	8.9	A	A
11	Indian Canyon Dr. / Coachillin	TS	0	3	0	1	2	0	0	0	0	1	0	d	3.0	6.5	A	A
12	Indian Canyon Dr. / Dwy. 1	**CSS**	0	3	0	0	2	0	0	0	**1**	0	0	0	13.4	10.2	B	B
13	Indian Canyon Dr. / Dwy. 2	**CSS**	**1**	3	0	0	2	0	0	**1!**	0	0	0	0	18.4	13.2	C	B
14	Indian Canyon Dr. / Dwy. 3	**CSS**	0	3	0	0	2	0	0	0	**1**	0	0	0	13.4	10.4	B	B

[1] TS = Traffic Signal; CSS = Cross-street Stop; UNC = Uncontrolled

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; > = Right-Turn Overlap Phasing; >> = Free-Right Turn; * = Turn lane accommodated within two-way left-turn lane (TWLTL) median; **1** = Improvement

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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6 EAC (2024) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Ambient plus Cumulative (EAC) conditions and the resulting intersection operations and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAC (2024) conditions are consistent with those shown previously on Exhibit 3-1, with the exception driveways and those facilities assumed to be constructed by cumulative projects to provide site access are also assumed to be in place for EAC (2024) conditions only (e.g., intersection and roadway improvements at the cumulative projects' frontage and driveways).

6.2 EAC TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 4.04% and the addition of cumulative projects traffic. The weekday ADT and weekday peak hour intersection turning movement volumes which can be expected for EAC (2024) traffic conditions are shown on Exhibit 6-1.

6.3 INTERSECTION OPERATIONS ANALYSIS

EAC peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 Methodologies of this TA. The intersection analysis results are summarized in Table 6-1, which indicates that Indian Canyon Drive / 19th Avenue (#2) operates at an unacceptable LOS (LOS "E" or worse) under EAC conditions without installation of a traffic signal. The intersection operations analysis worksheets for EAC traffic conditions is included in Appendix 6.1 of this TA.

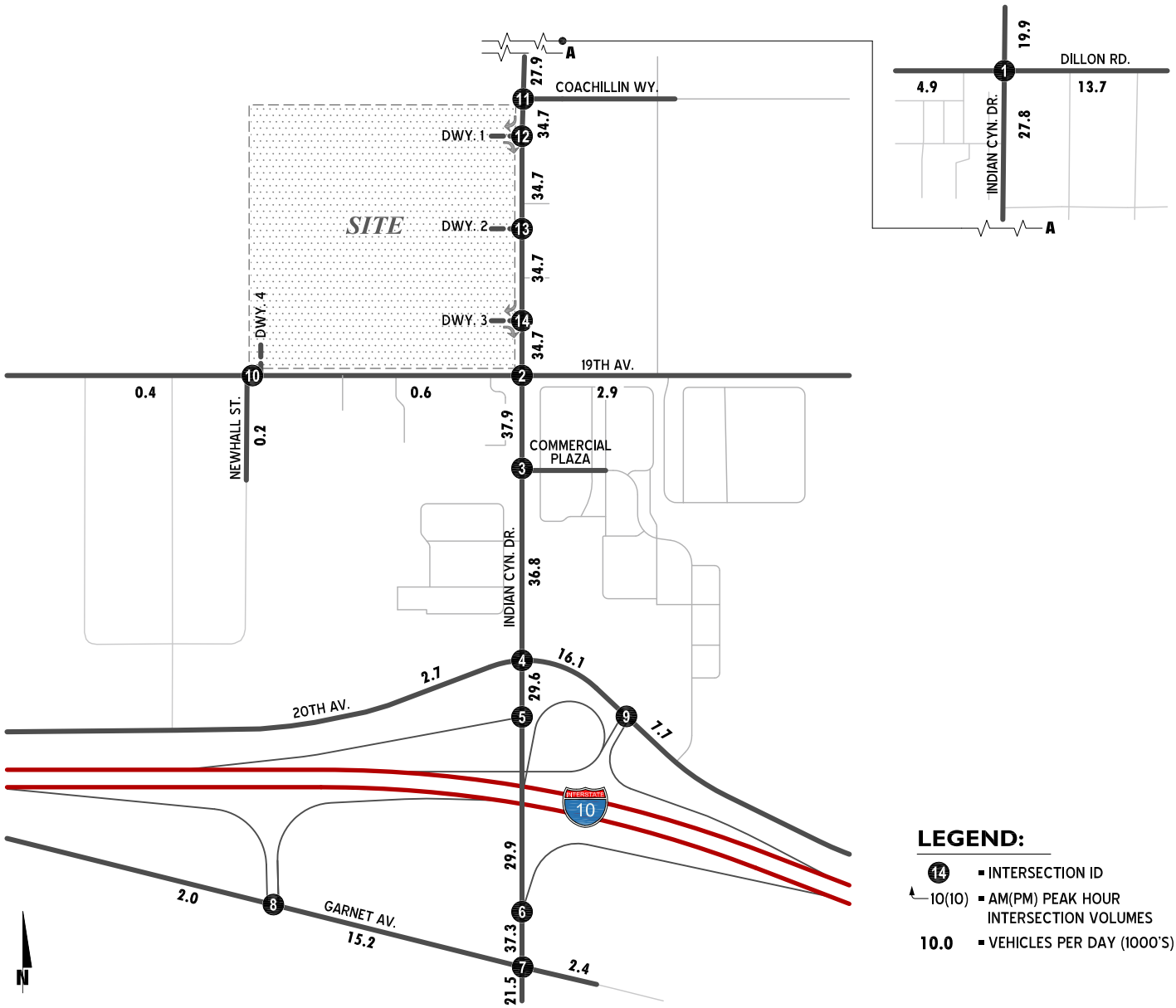
6.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for EAC (2024) traffic conditions provided in Appendix 3.3. As noted previously, the intersection of Indian Canyon Drive / 19th Avenue (#2) meets volume warrants for a traffic signal. The remaining unsignalized intersections are not anticipated to meet peak hour volume-based warrants and daily volume-based warrants for background conditions (see Appendix 3.3).

6.5 RECOMMENDED IMPROVEMENTS

Installation of traffic signal at the off-site deficient intersection of Indian Canyon Drive / 19th Avenue (#2) address intersection operational deficiencies for EAC (2024) conditions, for background conditions. The effectiveness of the recommended traffic signal at this location is presented in Table 6-1 for EAC (2024) traffic conditions. The intersection operations analysis worksheets for EAC (2024) traffic conditions, with traffic signal improvements, are included in Appendix 6.1 of this TA.

EXHIBIT 6-1: EXISTING PLUS AMBIENT PLUS CUMULATIVE (2024) TRAFFIC VOLUMES



LEGEND:

- 14 = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)

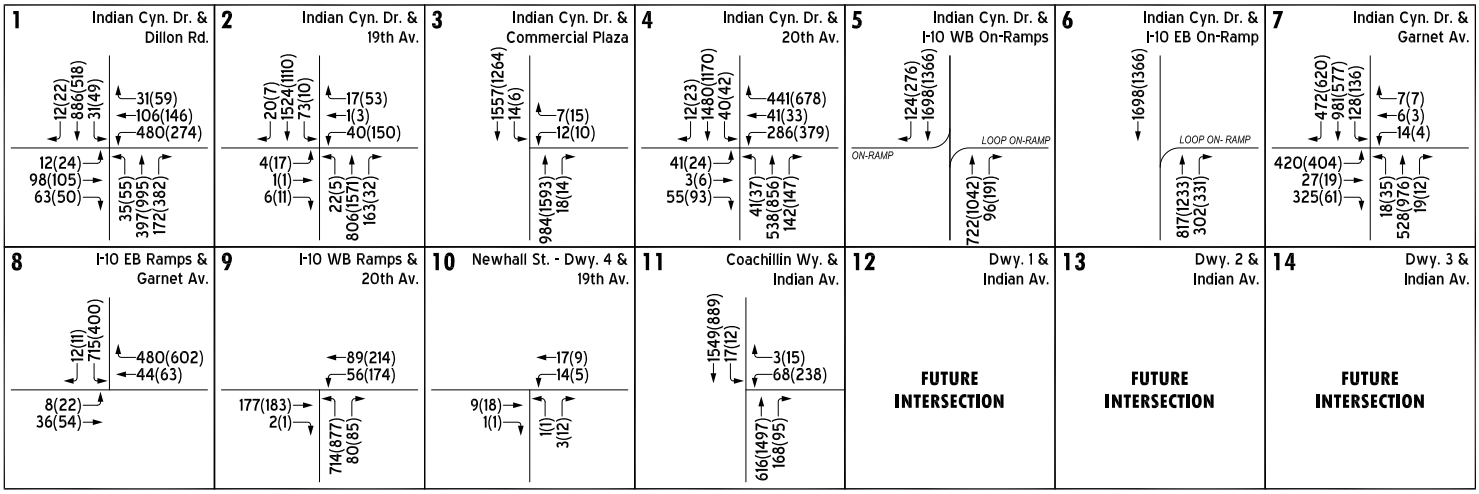


TABLE 6-1: INTERSECTION ANALYSIS FOR EAC (2024) CONDITIONS

#	Intersection	Traffic Control[1]	Intersection Approach Lanes[2]												Delay[3] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Indian Canyon Dr. / Dillon Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	1	37.4	33.7	D	C
2	Indian Canyon Dr. / 19th Av.	CSS	1	2	1	1	2	0	0	1!	0	0	1!	0	>80	>80	F	F
	- With Improvements	**TS**	1	2	1	1	2	0	**1**	1	0	**1**	1	0	8.4	12.3	A	B
3	Indian Canyon Dr. / Commercial Plaza	CSS	0	2	d	1*	2	0	0	0	0	1	0	d	22.0	29.9	C	D
4	Indian Canyon Dr. / 20th Av.	TS	1	2	1	1	3	0	1	1	1	2	0.5	1.5	26.8	31.6	C	C
5	Indian Canyon Dr. / I-10 WB On-Ramp	UNC	0	3	1>>	0	3	1>>	0	0	0	0	0	0	0.0	0.0	A	A
6	Indian Canyon Dr. / I-10 EB On-Ramp	UNC	0	3	1>>	0	3	0	0	0	0	0	0	0	0.0	0.0	A	A
7	Indian Canyon Dr. / Garnet Av.	TS	1	3	0	1	2	1	2	1	1>	1	1	0	30.5	28.2	C	C
8	I-10 EB Ramps / Garnet Av.	TS	0	0	0	2	0	1	1	1	0	0	1	1>	32.9	35.1	C	D
9	I-10 WB Ramps / 20th Av.	TS	2	0	1	0	0	0	0	1	0	1	2	0	23.4	23.1	C	C
10	Newhall St. - Dwy. 4 / 19th Av.	CSS	1	0	d	0	0	0	0	1	0	0.5	0.5	0	8.8	8.9	A	A
11	Indian Canyon Dr. / Coachillin	TS	0	3	0	1	2	0	0	0	0	1	0	d	5.6	14.0	A	B
12	Indian Canyon Dr. / Dwy. 1		Future Intersection															
13	Indian Canyon Dr. / Dwy. 2		Future Intersection															
14	Indian Canyon Dr. / Dwy. 3		Future Intersection															

[1] TS = Traffic Signal; CSS = Cross-street Stop; UNC = Uncontrolled

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; > = Right-Turn Overlap Phasing; >> = Free-Right Turn; * = Turn lane accommodated within two-way left-turn lane (TWLTL) median; **1** = Improvement

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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7 EAPC (2024) TRAFFIC CONDITIONS

This section discusses the methods used to develop Existing plus Ambient plus Project plus Cumulative (EAPC) (2024) traffic forecasts, and the resulting intersection operations and traffic signal warrant analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAPC (2024) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- If applicable, driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAPC conditions (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).

7.2 EAPC (2024) TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 4.04% plus traffic from pending and approved but not yet constructed known development projects in the area. The weekday ADT and weekday peak hour volumes which can be expected for EAPC (2024) traffic conditions are shown on Exhibit 7-1.

7.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC (2024) traffic conditions with roadway and intersection geometrics consistent with Section 7.1 *Roadway Improvements*. The intersection analysis results are summarized in Table 6-1, which indicates that Indian Canyon Drive / 19th Avenue (#2) operates at an unacceptable LOS (LOS "E" or worse) under EAPC conditions without installation of a traffic signal. The intersection operations analysis worksheets for EAPC traffic conditions is included in Appendix 7.1 of this TA.

7.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for EAPC (2024) traffic conditions provided in Appendix 3.3. As noted previously, the intersection of Indian Canyon Drive / 19th Avenue (#2) meets volume warrants for a traffic signal. The remaining unsignalized intersections are not anticipated to meet peak hour volume-based warrants and daily volume-based warrants with the addition of Project traffic (see Appendix 3.3).

7.5 QUEUEING ANALYSIS AT PROJECT ACCESS POINTS

A queuing analysis was performed for EAPC (2024) traffic conditions to assess the adequacy of turn bay lengths to accommodate vehicle queues at the Project entries. Queuing analysis findings are presented in Table 7-2 for EAPC (2024) traffic conditions. As shown in Table 7-2, the proposed Project turn bay lengths provide adequate storage to accommodate the anticipated 95th percentile queues. Queueing analysis worksheets are provided in Appendix 7.1.

7.6 RECOMMENDED IMPROVEMENTS

Installation of traffic signal at the off-site deficient location of Indian Canyon Drive / 19th Avenue (#2) address intersection operational deficiencies for opening year (2024) conditions, with or without the addition of Project traffic. The effectiveness of the traffic signal at this location is presented in Table 7-1 for EAPC (2024) traffic conditions. The intersection operations analysis worksheets for EAPC (2024) traffic conditions, with traffic signal improvements, are included in Appendix 7.1 of this TA.

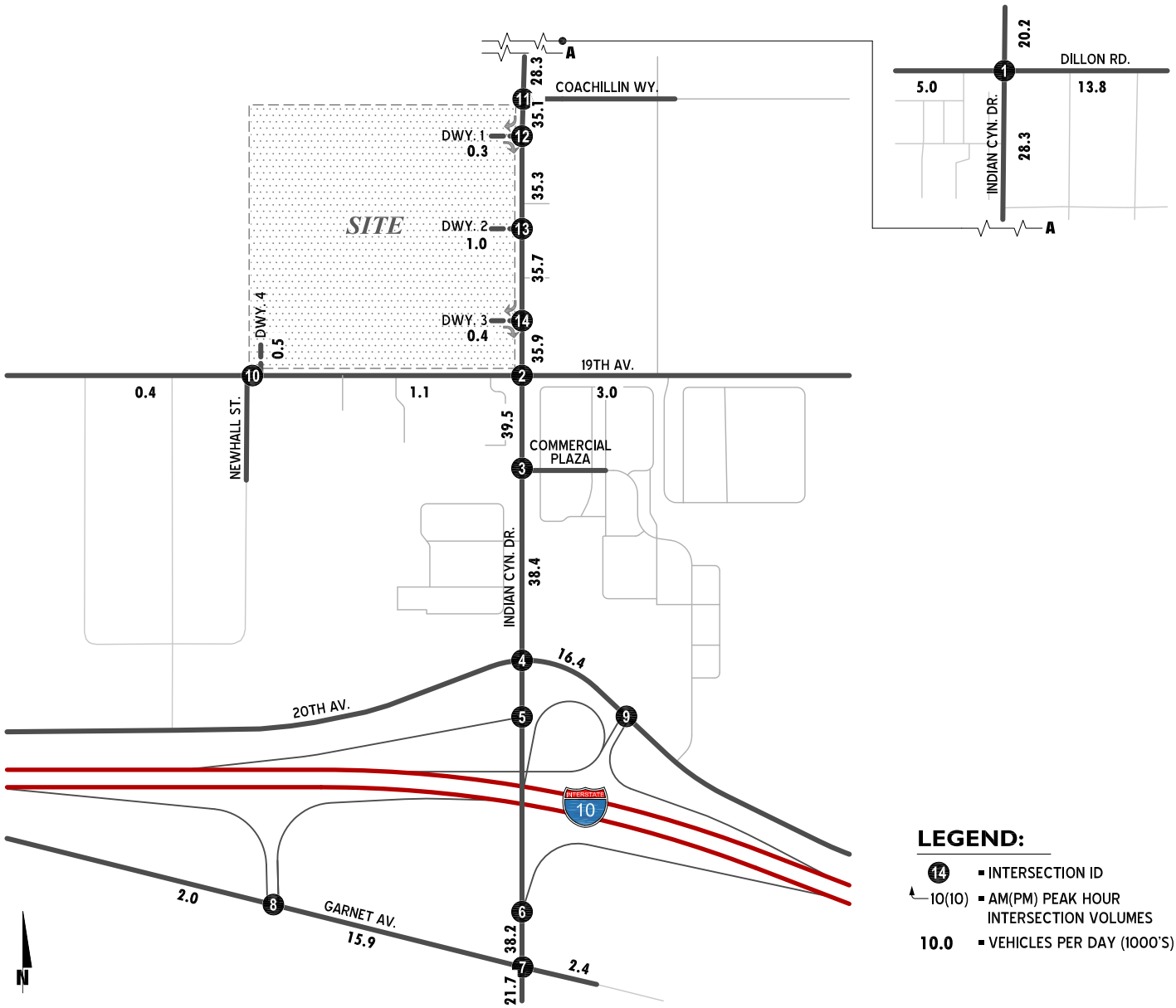
Fair share financial contribution based on the Project's estimated peak hour volumes (as shown previously in Table 1-2) at this location may be imposed at the discretion of the City of Palm Springs:

Indian Canyon Drive / 19th Avenue (#2)

- Improvement: Install traffic signal
- Provide separate eastbound and westbound left turn lanes.
- Fair Share: 7.9%.

The study area intersections are anticipated to operate at an acceptable LOS with the addition of Project traffic. As such, no additional improvements aside from those that are needed to facilitate site access have been recommended.

EXHIBIT 6-1: EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2024) TRAFFIC VOLUMES



LEGEND:

- 14 = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)

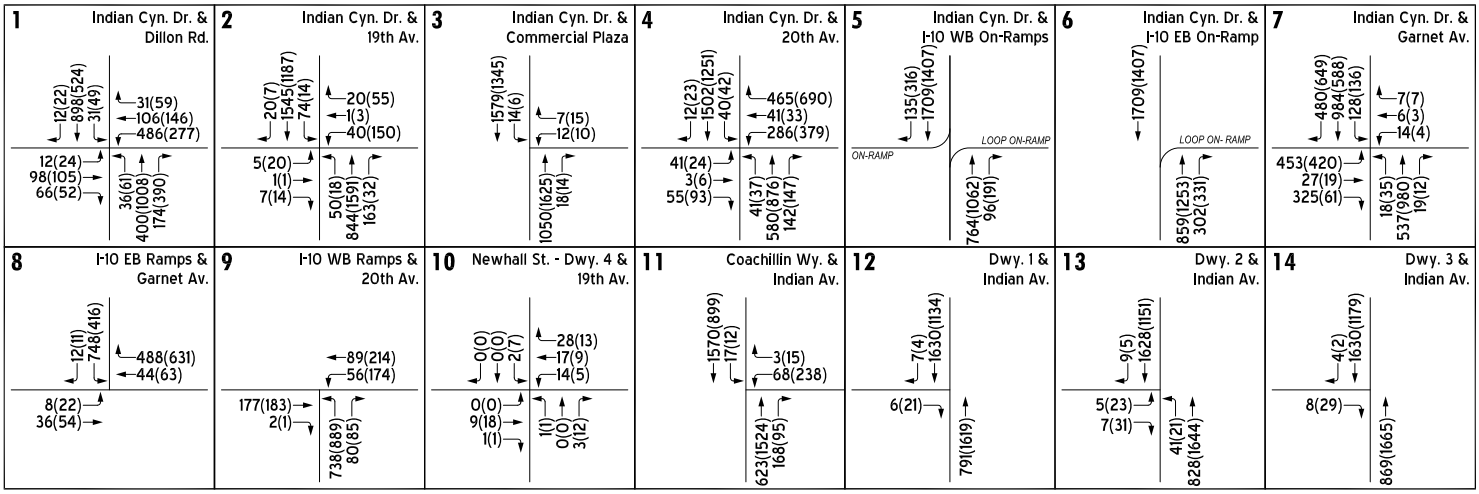


TABLE 7-1: INTERSECTION ANALYSIS FOR EAPC (2024) CONDITIONS

#	Intersection	Traffic Control[1]	Intersection Approach Lanes[2] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Delay[3] (secs.) AM	Delay[3] (secs.) PM	Level of Service AM	Level of Service PM
1	Indian Canyon Dr. / Dillon Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	1	38.0	34.5	D	C
2	Indian Canyon Dr. / 19th Av.	CSS	1	2	1	1	2	0	0	1!	0	0	1!	0	>80	>80	F	F
	- With Improvements	**TS**	1	2	1	1	2	0	**1**	1	0	**1**	1	0	11.0	19.0	B	B
3	Indian Canyon Dr. / Commercial Plaza	CSS	0	2	d	1*	2	0	0	0	0	1	0	d	23.2	31.2	C	D
4	Indian Canyon Dr. / 20th Av.	TS	1	2	1	1	3	0	1	1	1	2	0.5	1.5	27.2	33.0	C	C
5	Indian Canyon Dr. / I-10 WB On-Ramp	UNC	0	3	1>>	0	3	1>>	0	0	0	0	0	0	0.0	0.0	A	A
6	Indian Canyon Dr. / I-10 EB On-Ramp	UNC	0	3	1>>	0	3	0	0	0	0	0	0	0	0.0	0.0	A	A
7	Indian Canyon Dr. / Garnet Av.	TS	1	3	0	1	2	1	2	1	1>	1	1	0	30.7	28.9	C	C
8	I-10 EB Ramps / Garnet Av.	TS	0	0	0	2	0	1	1	1	0	0	1	1>	33.0	40.6	C	D
9	I-10 WB Ramps / 20th Av.	TS	2	0	1	0	0	0	0	1	0	1	2	0	23.8	23.4	C	C
10	Newhall St. - Dwy. 4 / 19th Av.	CSS	0.5	0.5	d	0	**1!**	0	0	1!	0	0.5	0.5	**1**	9.0	9.1	A	A
11	Indian Canyon Dr. / Coachillin	TS	0	3	0	1	2	0	0	0	0	1	0	d	5.8	14.5	A	B
12	Indian Canyon Dr. / Dwy. 1	**CSS**	0	3	0	0	2	0	0	0	**1**	0	0	0	17.7	13.7	C	B
13	Indian Canyon Dr. / Dwy. 2	**CSS**	**1**	3	0	0	2	0	0	**1!**	0	0	0	0	30.7	24.0	D	C
14	Indian Canyon Dr. / Dwy. 3	**CSS**	0	3	0	0	2	0	0	0	**1**	0	0	0	17.8	14.2	C	B

[1] TS = Traffic Signal; CSS = Cross-street Stop; UNC = Uncontrolled

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; > = Right-Turn Overlap Phasing; >> = Free-Right Turn; * = Turn lane accommodated within two-way left-turn lane (TWLTL) median; **1** = Improvement

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

TABLE 7-2: PROJECT ACCESS QUEUEING ANALYSIS FOR EAPC (2024) CONDITIONS

ID	Intersection	Movement	# of Lanes	EAPC (2024) AM	EAPC (2024) PM	EAPC (2024) Peak	EAPC (2024) Volume	Storage Length[2] (ft.)	95th Percentile Queue Length (ft.)[1] AM	95th Percentile Queue Length (ft.)[1] PM
10	Newhall St. - Dwy. 4 / 19th Av.									
		SBL/R	1	2	7	PM	7	>100	NOM [3]	NOM [3]
		WBR	1	28	13	AM	28	780	NOM [3]	NOM [3]
12	Indian Canyon Dr. / Dwy. 1									
		EBR	1	6	21	PM	21	>30	28	41
13	Indian Canyon Dr. / Dwy. 2									
		NBL	1	41	21	AM	41	150	56	33
		EBL/R	1	12	54	PM	54	>30	36	87
14	Indian Canyon Dr. / Dwy. 3									
		EBR	1	8	29	PM	29	>30	31	50

[1] Queue length calculated using SimTraffic.

[2] Proposed/Existing length of storage.

[3] NOM = Nominal, less than 5 feet.

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8 SITE ACCESS AND OFF-SITE ROADWAY IMPROVEMENTS

The Project is proposed to be served by two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive. In addition, a proposed full access driveway along 19th Avenue will be utilized by truck traffic only. The following improvements are assumed to be constructed in conjunction with site development. The following improvements should be in place prior to occupancy, as shown on Exhibit 8-1.

19th Avenue – 19th Avenue is an east-west oriented roadway located along the Project's southern boundary. Construct 19th Avenue from the Project's western boundary to Indian Canyon Drive at its ultimate half-section width as a Secondary Thoroughfare (64 feet of pavement width) in compliance with the applicable City of Palm Springs standards.

Indian Canyon Drive – Indian Canyon Drive is a north-south oriented roadway located along the Project's eastern boundary. Construct Indian Canyon Drive from the Project's northern boundary to 19th Avenue at its ultimate half-section width plus a lane as a Major Thoroughfare (76 feet of pavement width) in compliance with the applicable City of Palm Springs standards.

Along the Project frontage, sidewalks shall be provided adjacent to 19th Avenue and Indian Canyon Drive.

Exhibit 8-1 also depicts the lane geometrics recommended at the Project access points and off-site intersections.

Indian Canyon Drive / 19th Avenue (#2)

- Install a traffic signal.
- Provide separate eastbound left turn lane.
- Modify westbound striping to provide a dedicated left turn lane.

Driveway 4 / 19th Avenue (#10)

- Install a cross-street stop control on the southbound approach.
- Provide one southbound shared left-through-right lane.
- Proposed site plan incorporates an extended westbound right turn storage area for the staging of entering trucks.

Indian Canyon Drive / Driveway 1 (#12)

- Restrict left turn movements to/from Indian Canyon Drive by providing double solid yellow line median striping from the Coachillin Way intersection to 300' south of Driveway 1.
- Provide single eastbound right turn lane within driveway with cross-street stop control.

Indian Canyon Drive / Driveway 2 (#13)

- Provide 150' northbound left turn lane within striped median of Indian Canyon Drive.
- Provide one eastbound shared left-right turn lane with cross-street stop control.

Indian Canyon Drive / Driveway 3 (#14)

- Restrict left turn movements to/from Indian Canyon Drive by providing double solid yellow line median striping from the 19th Avenue intersection to north of Driveway 3 as indicated on Exhibit 8-1.
- Provide single eastbound right turn lane within driveway with cross-street stop control.

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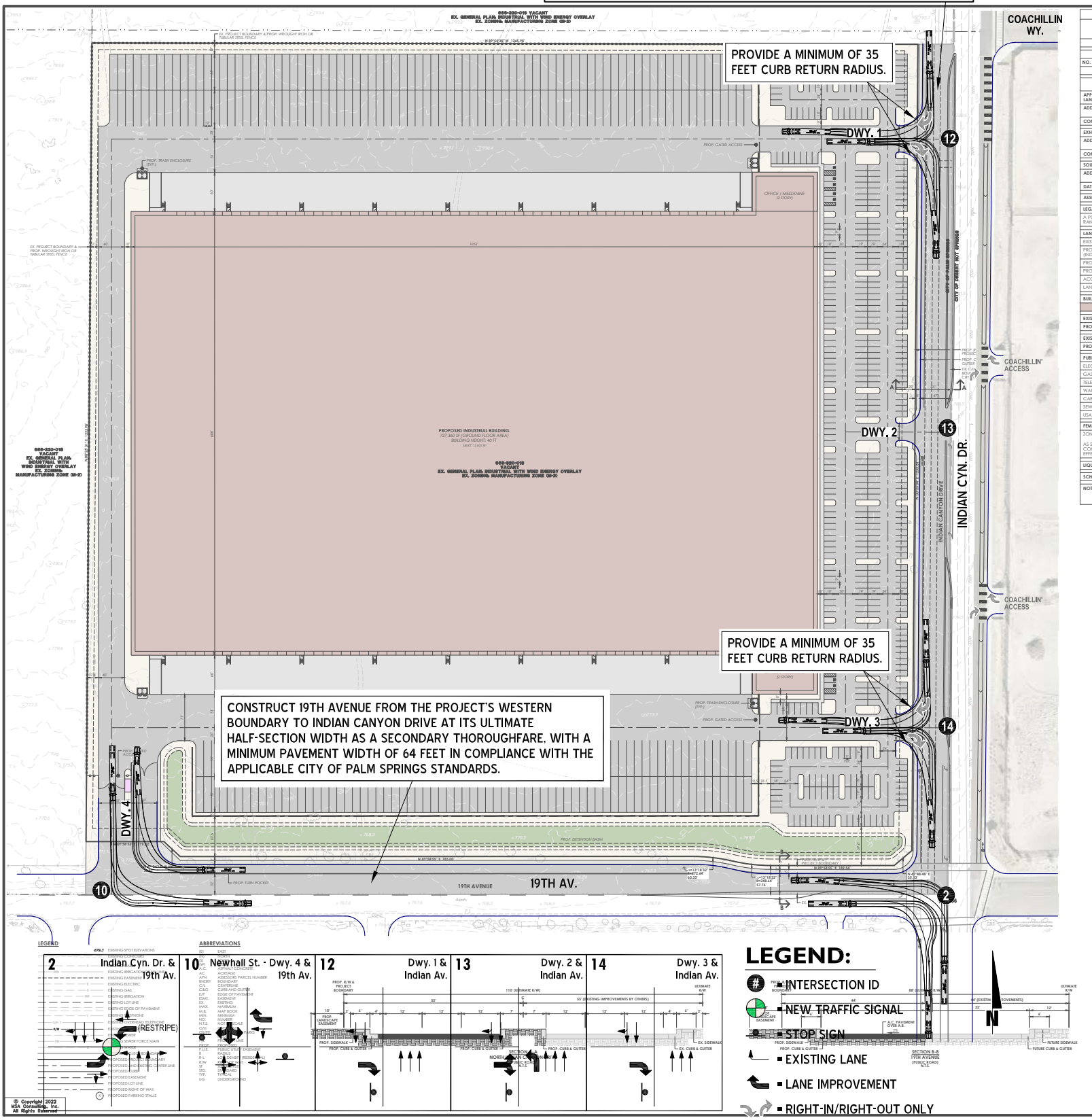
EXHIBIT 8-1: SITE ACCESS RECOMMENDATIONS AND OFF-SITE IMPROVEMENTS

CONSTRUCT INDIAN CANYON DRIVE FROM THE PROJECT'S NORTHERN BOUNDARY TO 19TH AVENUE AT ITS ULTIMATE HALF-SECTION WIDTH AS A MAJOR THOROUGHFARE, WITH A MINIMUM PAVEMENT WIDTH OF 76 FEET IN COMPLIANCE WITH THE APPLICABLE CITY OF PALM SPRINGS STANDARDS.



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9 REFERENCES

1. **Fehr & Peers.** *City of Palm Springs Traffic Impact Analysis Guideines.* City of Palm Springs : s.n., July 2020.
2. **Transportation Research Board.** *Highway Capacity Manual (HCM), 6th Edition.* s.l. : National Academy of Sciences, 2016.
3. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014, Updated March 30, 2021 (Revision 6).
4. **Institute of Transportation Engineers.** Trip Generation Manual. 11th Edition, 2021.

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APPENDIX 1.1: TRAFFIC STUDY SCOPING AGREEMENT

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Project Scoping Form

This scoping form shall be submitted to the City of Palm Springs to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	N Indian Canyon/19th Ave Warehouse
Project Address:	Northwest corner of Indian Canyon Drive and 19th Avenue
Project Opening Year:	
Project Description:	739, 360 square feet of high-cube warehouse

	Consultant:	Developer:
Name:	Urban Crossroads, Inc. - Marlie Whiteman, P.E.	Snider Interests, LLC - David Snider
Address:	1133 Camelback St., #8329	730 Arcady Rd.
	Newport Beach, CA 92658	Montecito, CA 93108
Telephone:	(714) 585-0574	
Fax/Email:	mwhiteman@urbanxroads.com	dsnider@sniderinterests.com

Trip Generation Information:

Trip Generation Data Source: TUMF High-Cube Warehouse Trip Generation Study. Prepared by WSP, 2019.

Current General Plan Land Use: Industrial

Proposed General Plan Land Use: Industrial

Current Zoning: M2 (Manufacturing Zone)

Proposed Zoning: M2 (Manufacturing Zone)

	Existing Trip Generation			Proposed Trip Generation (PCE)		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	89	29	118
PM Trips	0	0	0	44	111	155

Trip Internalization: ☐ Yes ☑ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☑ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses (see Page 11 of the guidelines related to LOS assessment and Pages 24-26).

Is the project screened from LOS assessment? ☐ Yes ☑ No

LOS screening justification (see Page 11 of the guidelines): _____

Is the project screened from VMT assessment? ☐ Yes ☑ No

VMT screening justification (see Pages 24-26 of the guidelines): _____

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution): See attached traffic scoping letter, dated November 23, 2022

North	South	East	West
%	%	%	%

- Attach list of Approved and Pending Projects that need to be considered (provided by the City of Palm Springs and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach site plan
- Not other specific items to be addressed:
  - ☑ Site access
  - ☑ On-site circulation
  - ☐ Parking
  - ☑ Consistency with Plans supporting Bikes/Peds/Transit
  - ☑ Other Driveway intersection queues, truck turns, signal warrants
- Date of Traffic Counts March & May 2022 (with 1 adjacent local intersection count in January 2023)
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used RIVCOM
- Attach Screening VMT Assessment output or describe why it is not appropriate for use - See #2
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach) - See #3

#2 - The Project is not in a TPA, a low VMT area, and is not a local serving small project.

#3 - Based on 1,030 square feet per employee, 718 employees will represent the Project

Detailed VMT Forecasting Information

Most trip-based models generate daily person trip-ends for each TAZ across various trip purposes (HBW, HBO, and NHB, for example) based on population, household, and employment variables. This may create challenges for complying with the VMT guidance because trip generation is not directly tied to specific land use categories. The following methodology addresses this particular challenge among others.

Production and attraction trip-ends are separately calculated for each zone, and generally: production trip-ends are generated by residential land uses and attraction trip-ends are generated by non-residential land uses. OPR's guidance addresses residential, office, and retail land uses. Focusing on residential and office land uses, the first step to forecasting VMT requires translating the land use into model terms, the closest approximations are:

- Residential: home-based production trips
- Office: home-based work attraction trips

Note that this excludes all non-home-based trips including work-based other and other-based other trips.

The challenges with computing VMT for these two types of trips in a trip-based model are 1) production and attraction trip-ends are not distinguishable after the PA to OD conversion process and 2) trip purposes are not maintained after the mode choice step. For these reasons, it not possible to use the VMT results from the standard vehicle assignment (even using a select zone re-assignment). A separate post-process must be developed to re-estimate VMT for each zone that includes trip-end types and trip purposes.

The procedure for extracting VMT from the model is described below:

- Re-skim final loaded congested networks for each mode and time period
- Run a custom PA to OD process that replicates actual model steps, but:
    - Keeps departure and return trips separate
    - Keeps trip purpose and mode separate
    - Converts person trips to vehicle trips based on auto occupancy rates and isolates automobile trips
    - Factors vehicle trips into assignment time periods
- Multiply appropriate distance skim matrices by custom OD matrices to estimate VMT
- Sum matrices by time period, mode, and trip purpose to calculate daily automobile VMT
- Calculate automobile VMT for individual TAZs using marginal totals:
    - Residential (home-based) - row of departure matrix plus column of return matrix
    - Office (home-based work) - column of departure matrix plus row of return matrix

Appropriateness Checks

Regardless of which method is used, the number of vehicle trips from the custom PA to OD process and the total VMT should match as closely as possible with the results from the traditional model process. The estimated results should be checked against the results from a full model run to understand the degree of accuracy. Note that depending on how each model is setup, these custom processes may or may not include IX/XI trips, truck trips, or special generator trips (airport, seaport, stadium, etc.).

When calculating VMT for comparison at the study area, citywide, or regional geography, the same methodology that was used to estimate project-specific VMT should be used. The VMT for these comparisons can be easily calculated by aggregating the row or column totals for all zones that are within the desired geography.

ATTACHMENT: TRAFFIC SCOPING LETTER

January 6, 2023

Mike Rowe
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

N INDIAN CANYON/19TH AVE WAREHOUSE LOS ANALYSIS AND VMT ANALYSIS SCOPING AGREEMENT

Dear Mike Rowe:

Urban Crossroads, Inc. is pleased to submit this scoping letter to City of Palm Springs regarding the Level of Service (LOS) Analysis and VMT Screening for the proposed N Indian Canyon/19th Ave warehouse development ("Project"), which is located the northwest corner of Indian Canyon Drive and 19th Avenue in the City of Palm Springs. It is our understanding that the project consists of a high-cube warehouse with approximately 739,360 square feet.

The remainder of this letter describes the proposed analysis methodology, Project trip generation, trip distribution, and Project traffic assignment/project trips on the surrounding roadway network. The following scoping assumptions have been prepared in accordance with the City of Palm Springs TIA Guidelines (July 2020).

A preliminary site plan for the proposed Project is shown on Exhibit 1. Exhibit 2 depicts the location of the proposed project in relation to the existing roadway network. It is anticipated that the Project would be fully developed by year 2024. Access to the Project will be provided along Indian Canyon Drive and 19th Avenue. There are two right-in/right-out access driveways and one full access driveway along Indian Canyon Drive. The proposed full access driveway along 19th Avenue will be utilized by truck traffic only.

TRIP GENERATION

In order to develop the traffic characteristics of distribution center, trip-generation statistics published in the *TUMF High-Cube Warehouse Trip Generation Study* (WSP, January 29, 2019) are used. The purpose of WSP 2019 study was to gather enough data to develop reliable trip generation rates for centers for use in traffic impact studies in the Inland Empire.

Table 1 shows the vehicle trip generation rates (actual) for the Project, as well as the vehicle trip generation summary with daily and peak hour trip generation estimates.

Table 2 presents the passenger-car-equivalent (PCE) trip generation rates for the Project with the resulting PCE daily and peak hour trip generation estimates.

EXHIBIT 1: PRELIMINARY SITE PLAN

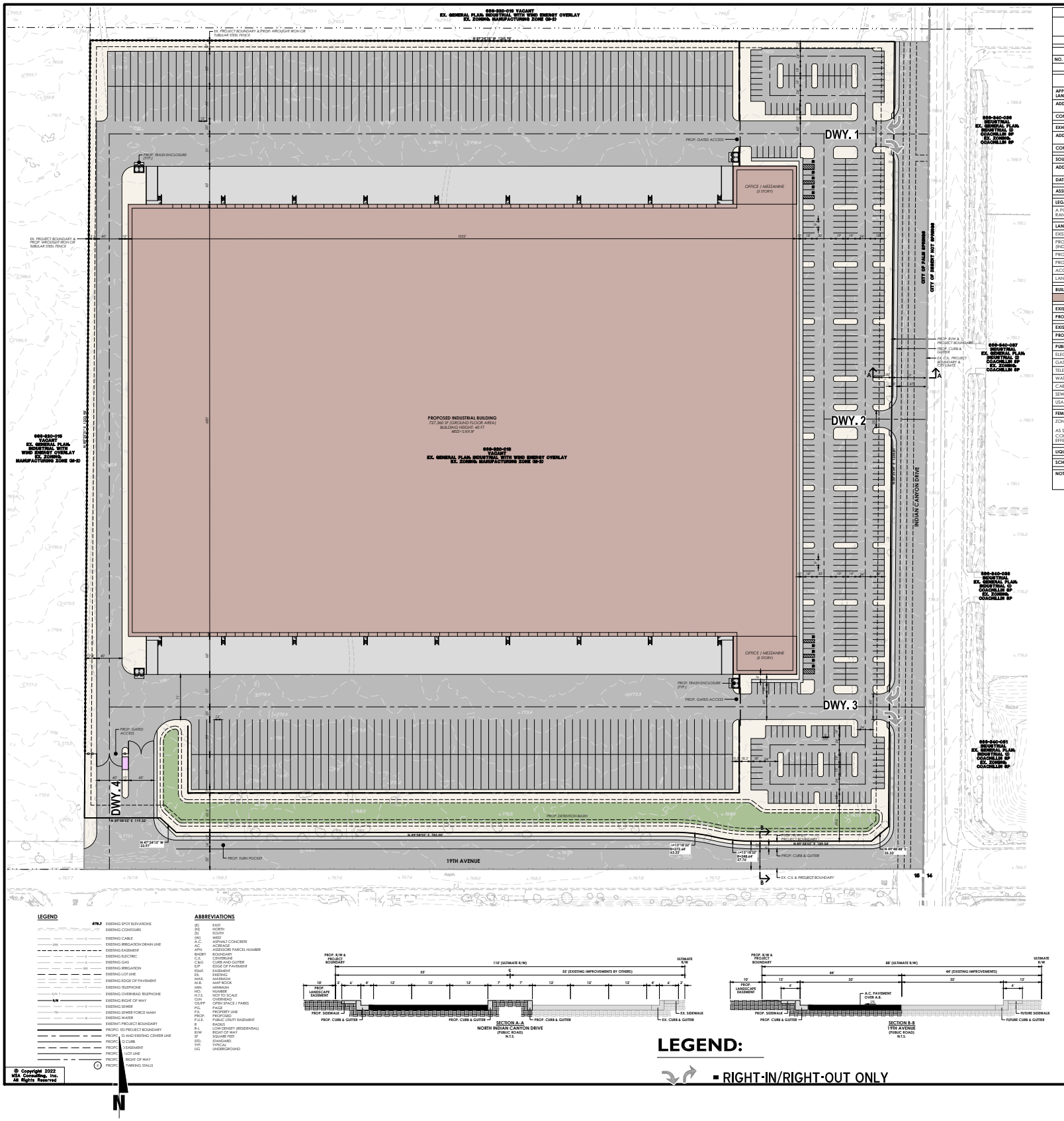

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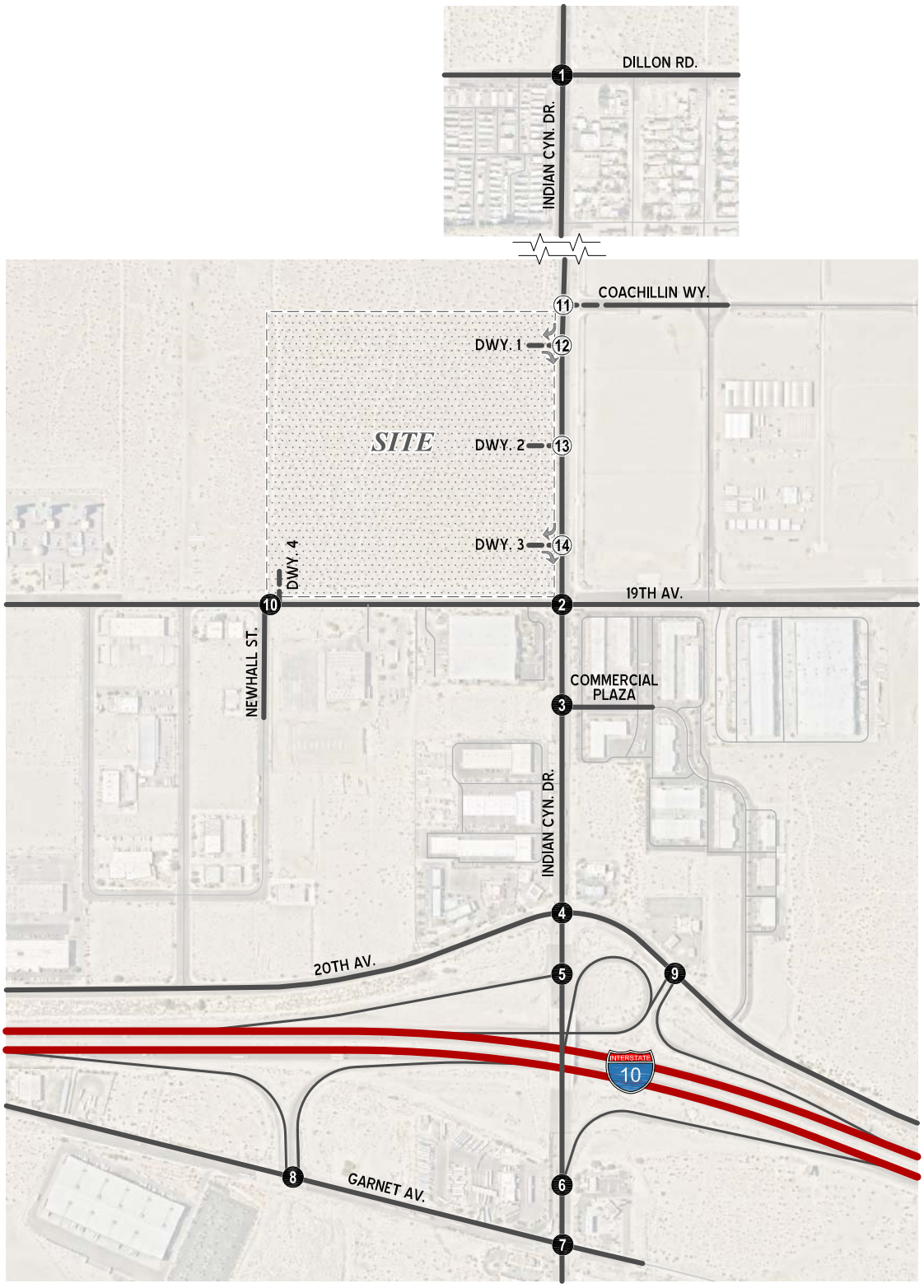
EXHIBIT 2: TRAFFIC ANALYSIS STUDY AREA



LEGEND:

(10) = EXISTING ANALYSIS LOCATION
(4) = FUTURE ANALYSIS LOCATION
= RIGHT-IN/RIGHT-OUT ONLY
= FUTURE ROADWAY

N

TABLE 1: PROJECT TRIP GENERATION SUMMARY - ACTUAL VEHICLES

Project Trip Generation Rates

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	--	739.360 TSF	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4-Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217

Project Trip Generation Results

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4-Axle Trucks			*4*	*1*	*5*	*2*	*6*	*8*	*120*
5+-Axle Trucks			*6*	*2*	*8*	*2*	*5*	*7*	*160*
- Net Truck Trips (Actual Vehicles)			10	3	13	4	11	15	280
TOTAL TRIPS (ACTUAL VEHICLES)[3]			68	21	89	34	88	122	1,574

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] High-Cube Warehouse Subtotal (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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TABLE 2: PROJECT TRIP GENERATION SUMMARY - PASSENGER CAR EQUIVALENTS (PCE)

Project Trip Generation Rates

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	-	739.360 TSF	0.121	0.039	0.160	0.058	0.149	0.207	2.887
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4 Axle Trucks (PCE = 3.0)[3]			0.018	0.006	0.024	0.009	0.024	0.033	0.486
5+-Axle Trucks (PCE = 3.0)[3]			0.024	0.009	0.033	0.009	0.021	0.030	0.651

Project Trip Generation Results

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4 Axle Trucks (PCE = 3.0)			*13*	*4*	*17*	*7*	*18*	*25*	*359*
5+-Axle Trucks (PCE = 3.0)			*18*	*7*	*25*	*7*	*16*	*23*	*481*
- Net Truck Trips (PCE)[3]			31	11	42	14	34	48	840
TOTAL TRIPS (PCE)[4]			89	29	118	44	111	155	2,134

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] PCE = Passenger Car Equivalent
The County of Riverside TIA & VMT Guidelines (December 2020) provide the following PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+ axle = 3.0.
Since the WSP study does not provide a breakdown between the 2 to 4-axle trucks, the highest PCE factor of 3 has been utilized.

[4] High-Cube Warehouse Subtotal (PCE) = Passenger Cars + Net Truck Trips (PCE).

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As shown on Table 1, the Project is anticipated to generate a total of 1,574 (actual) vehicle trip-ends per day with 89 AM (actual) peak vehicle hour trips and 122 PM (actual) peak hour vehicle trips.

Refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further subdivided by truck type (or number of axles). Passenger Car Equivalent (PCE) factors were then applied to the trip generation rates for heavy trucks.

PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses.

As shown on Table 2, the Project is anticipated to generate a total of 2,134 PCE trip-ends per day, 118 PCE AM peak hour trips and 155 PCE PM peak hour trips.

TRIP DISTRIBUTION AND TRIP ASSIGNMENT

The trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. Exhibits 3A and 3B show the heavy truck trip distribution patterns for inbound and outbound conditions, respectively. As shown on Exhibit 3A, truck inbound traffic from the I-10 freeway is oriented to the 19th Avenue entrance located at the southwest corner of the site.

Exhibits 4A and 4B show the passenger car trip distribution patterns for inbound and outbound conditions, respectively. As shown on Exhibit 4A, passenger car inbound traffic from the I-10 freeway is oriented to the Project central driveway on Indian Canyon Drive

Based on the identified Project traffic generation and trip distribution patterns for heavy trucks and passenger cars, Project peak hour intersection turning movement PCE volumes and daily PCE volumes are shown on Exhibit 5.

GENERAL PLAN CIRCULATION ELEMENT

The City of Palm Springs General Plan Circulation Element is depicted on Exhibit 6, while the accompanying roadway cross-sections are presented on Exhibit 7.

The City of Desert Hot Springs General Plan Circulation Element is also provided on Exhibit 8, with the accompanying roadway cross-sections presented on Exhibit 9.

ANALYSIS SCENARIOS

Consistent with the City's TA guidelines, intersection analysis will be provided for the following analysis scenarios:

- Existing (2022) Conditions
- Existing Plus Project Conditions
- Background Conditions: Existing plus Ambient plus Cumulative (EAC) (2024)
- Background Plus Project Conditions: Existing plus Ambient plus Project plus Cumulative (EAPC) (2024)

EXHIBIT 3A: PROJECT TRUCK (INBOUND) TRIP DISTRIBUTION

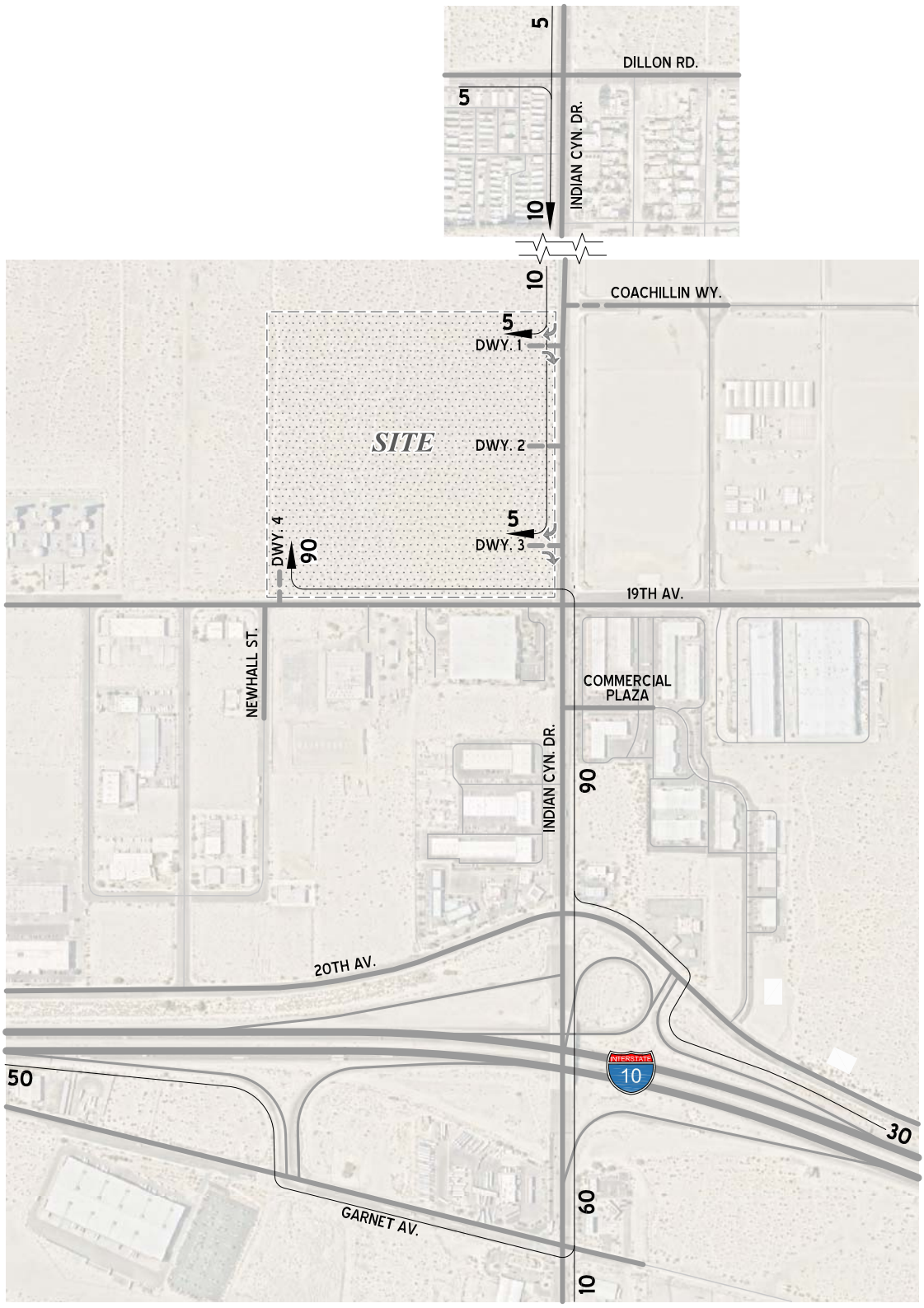


EXHIBIT 3B: PROJECT TRUCK (OUTBOUND) TRIP DISTRIBUTION

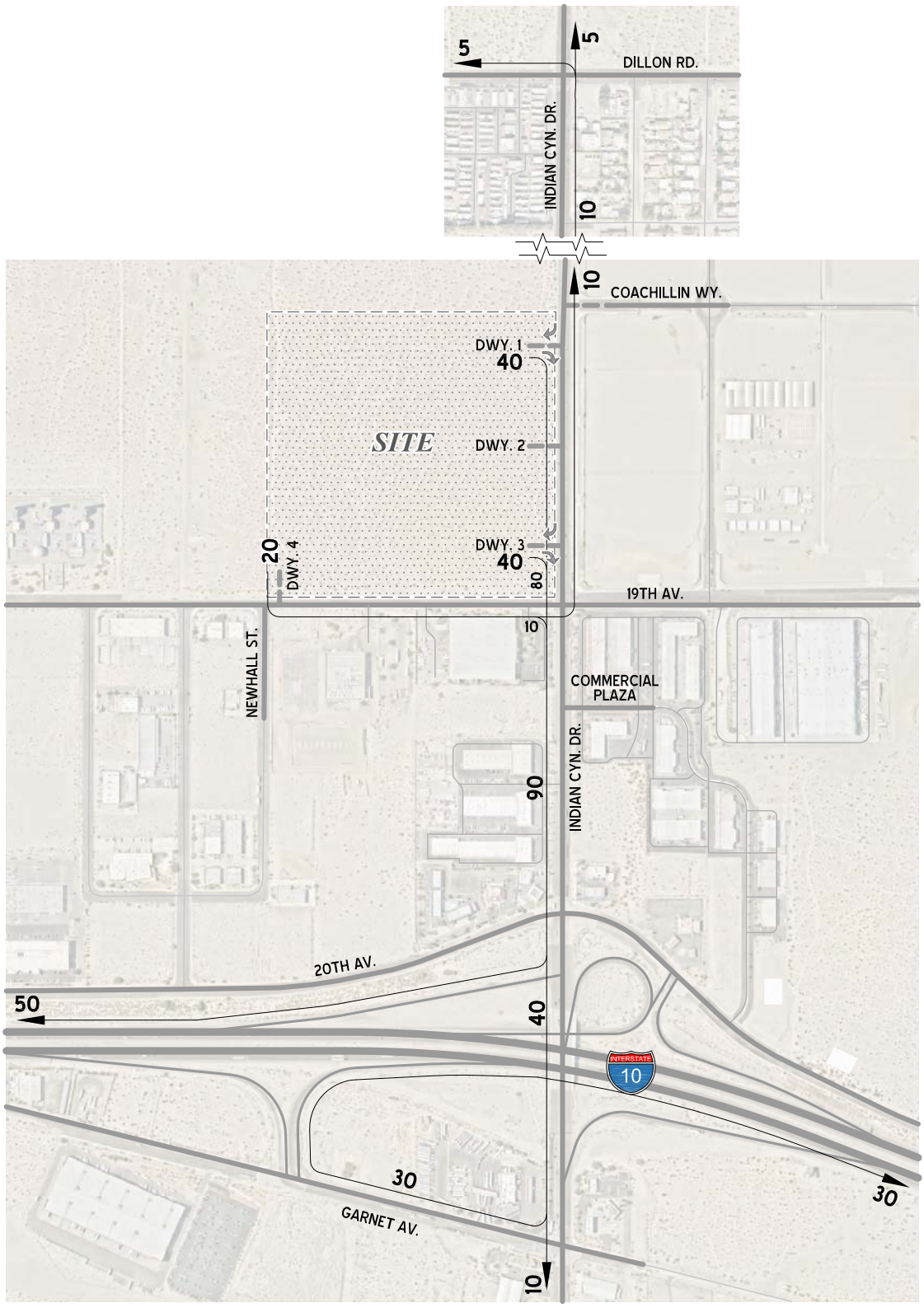


EXHIBIT 4A: PROJECT PASSENGER CAR (INBOUND) TRIP DISTRIBUTION

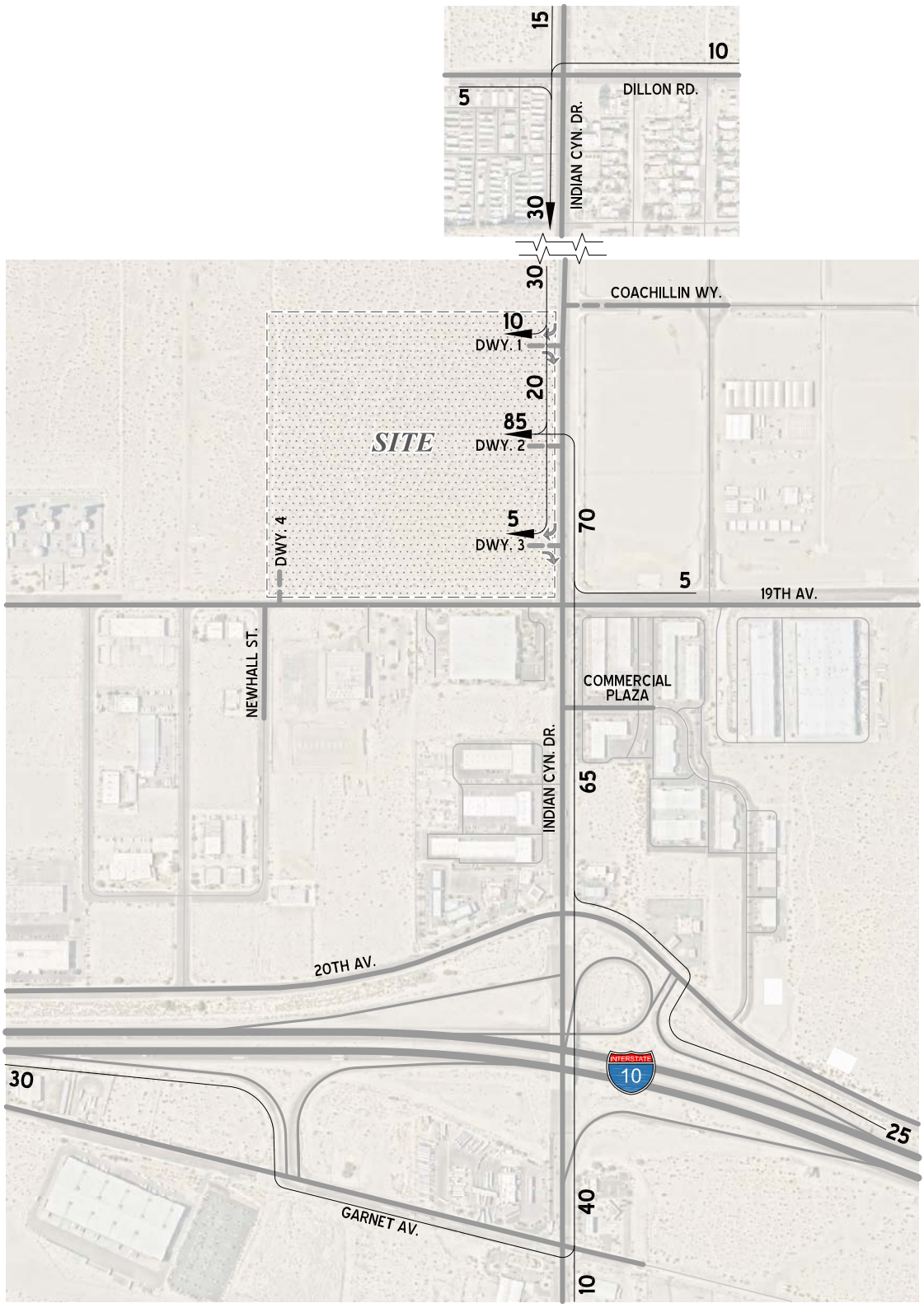


EXHIBIT 4B: PROJECT PASSENGER CAR (OUTBOUND) TRIP DISTRIBUTION

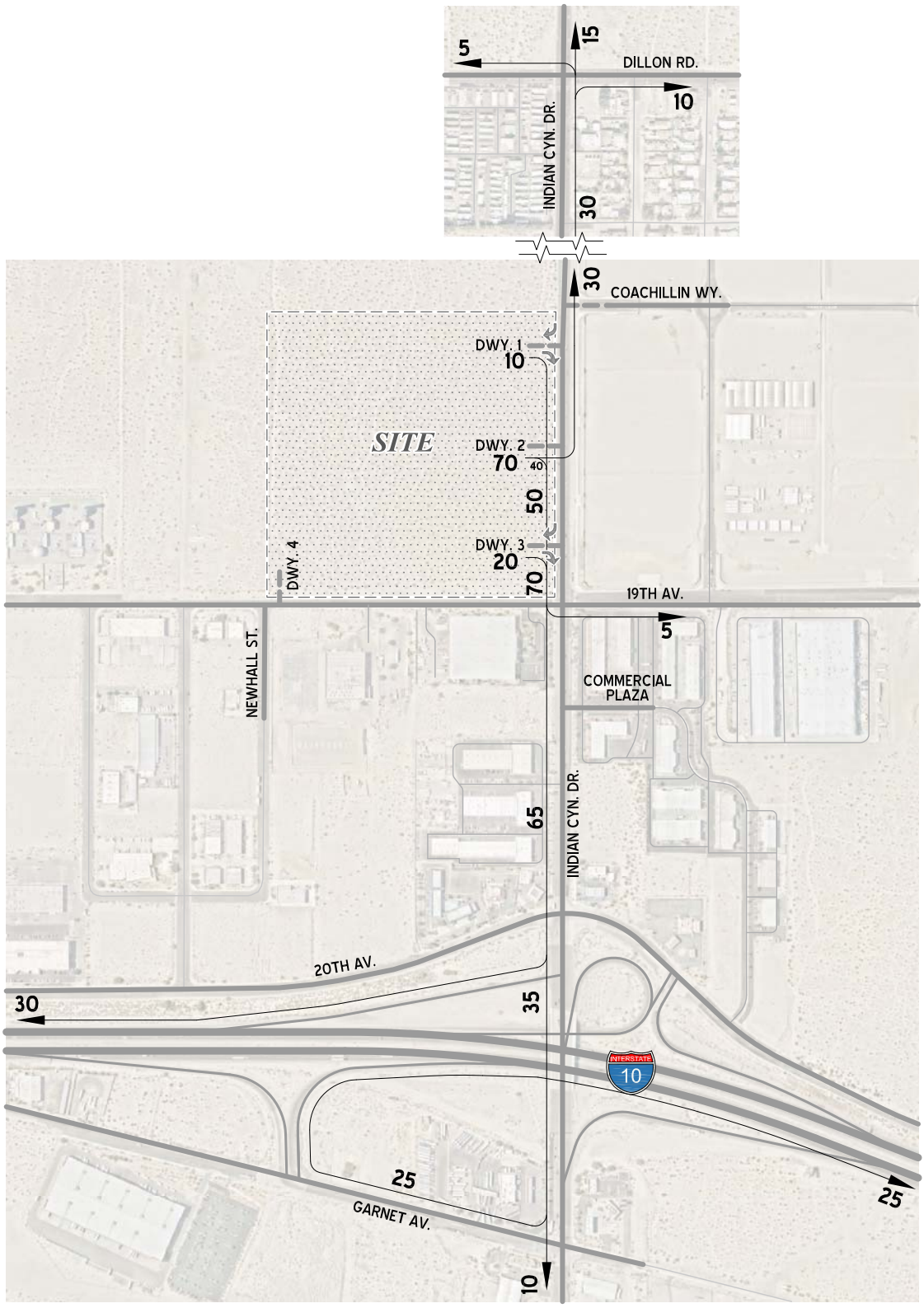
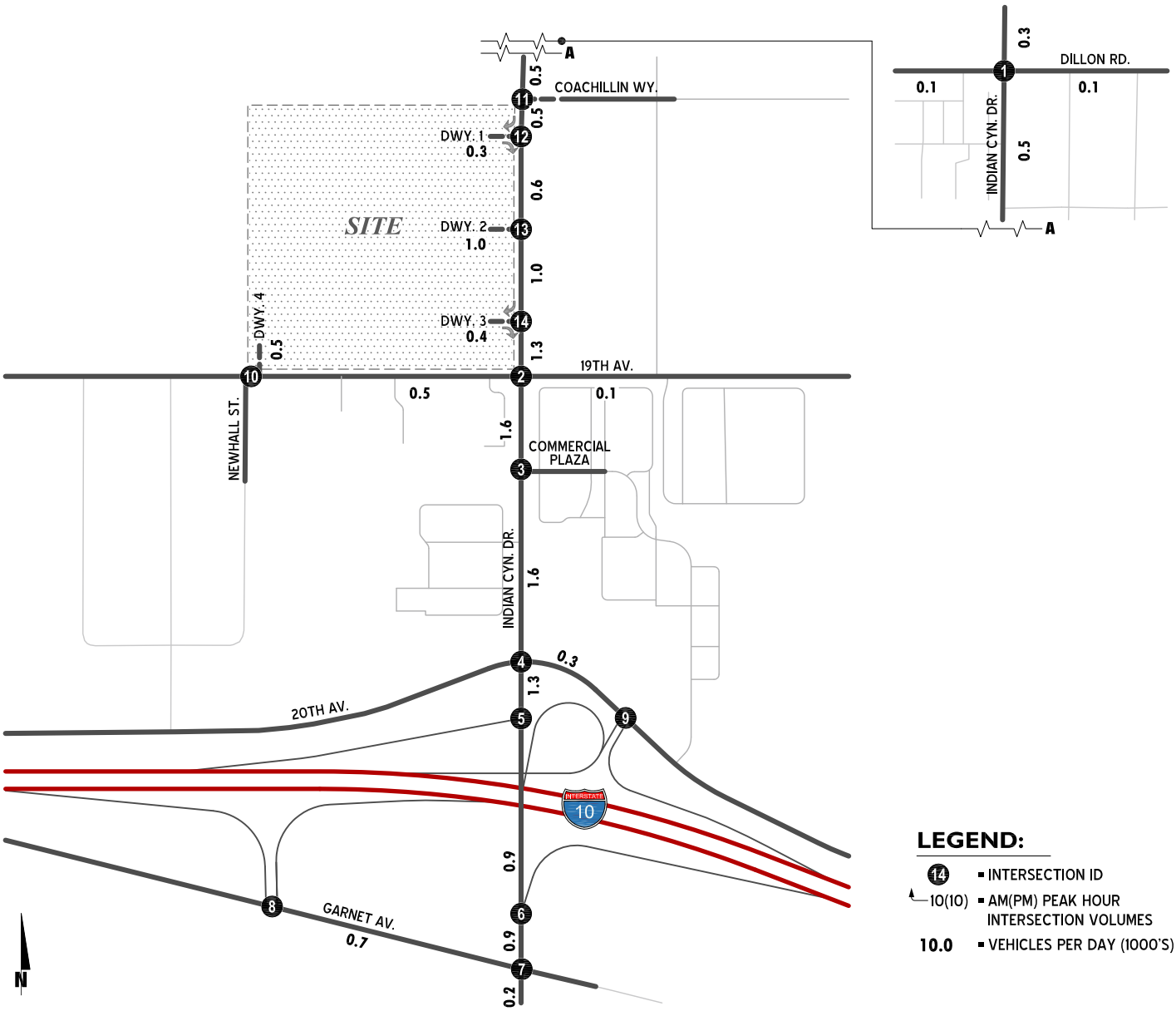
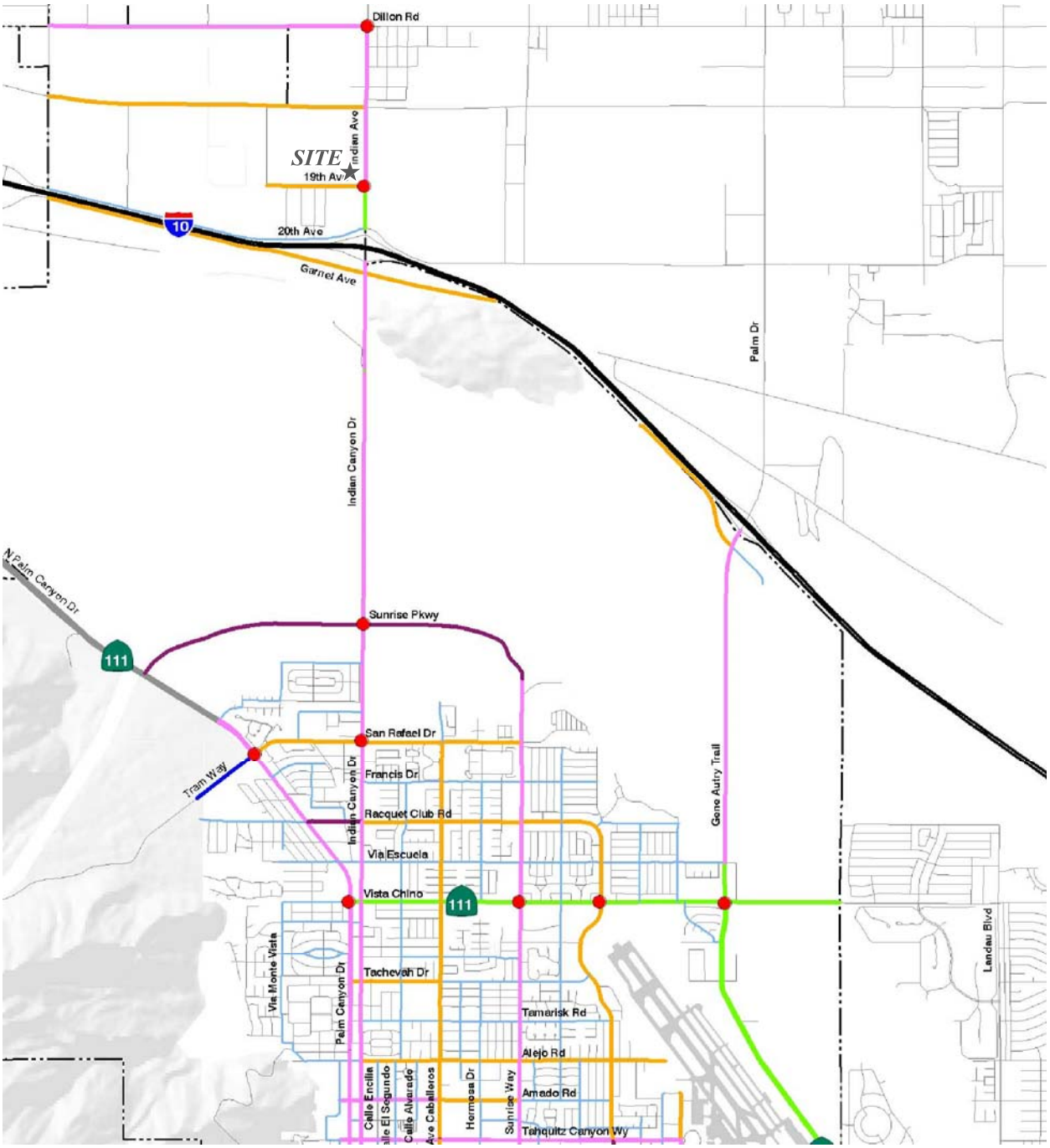


EXHIBIT 5: PROJECT ONLY TRAFFIC VOLUMES (PCE)



1 Indian Cyn. Dr. & Dillon Rd. 12(6) 6(3) 3(2) 1(6) 3(13) 2(8)	2 Indian Cyn. Dr. & 19th Av. 21(77) 1(4) 3(2) 1(3) 1(3) 28(13) 38(20)	3 Indian Cyn. Dr. & Commercial Plaza 22(81) 66(32)	4 Indian Cyn. Dr. & 20th Av. 22(81) 24(12) 42(20)	5 Indian Cyn. Dr. & I-10 WB On-Ramps 11(40) 11(41) ON-RAMP LOOP ON-RAMP 42(20)	6 Indian Cyn. Dr. & I-10 EB On-Ramp 11(41) LOOP ON- RAMP 42(20)	7 Indian Cyn. Dr. & Garnet Av. 8(29) 3(11) 33(16) 9(4)
8 I-10 EB Ramps & Garnet Av. 33(16) 8(29)	9 I-10 WB Ramps & 20th Av. 24(12)	10 Newhall St. - Dwy. 4 & 19th Av. 2(7) 28(13)	11 Coachillin Wy. & Indian Av. 21(10) 7(27)	12 Dwy. 1 & Indian Av. 7(4) 13(7) 6(21) 7(27)	13 Dwy. 2 & Indian Av. 4(2) 13(52) 8(29) 42(24)	14 Dwy. 3 & Indian Av. 4(2) 13(52) 8(29) 42(24)

EXHIBIT 6: CITY OF PALM SPRINGS CIRCULATION PLAN



SOURCE: CITY OF PALM SPRINGS GENERAL PLAN (2007)

LEGEND:

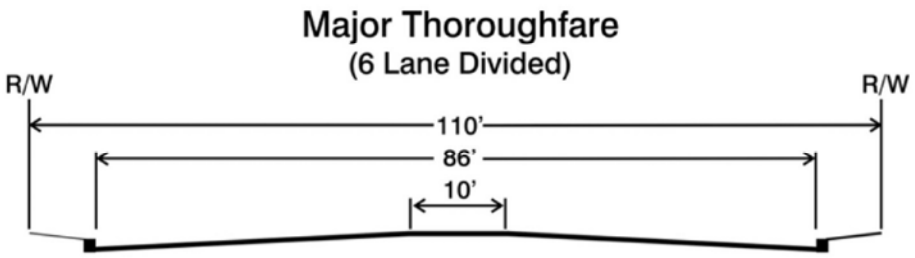
- Freeway
- Expressway
- Major Thoroughfare (6 - lane divided)
- Major Thoroughfare (4 - lane divided)
- Secondary Thoroughfare (4 - lane divided)
- Secondary Thoroughfare (4 - lane undivided)
- Collector (2 - lane divided)
- Collector (2 - lane undivided)
- Local

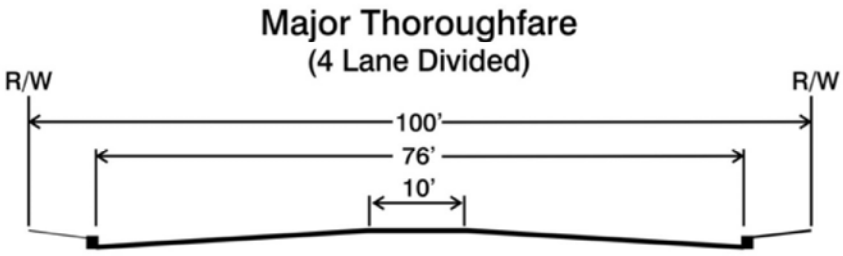
- City Boundary
- Sphere of Influence
- Critical Intersection*

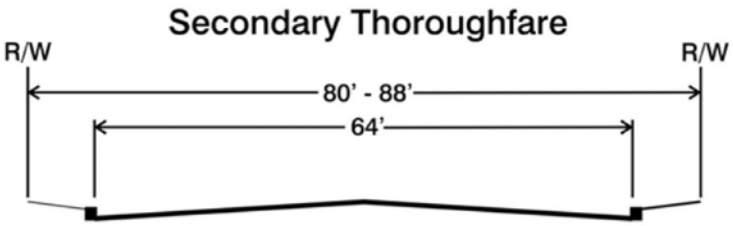
*Intersection improvements required to maintain acceptable LOS.

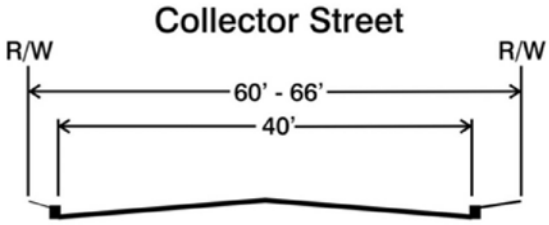
N

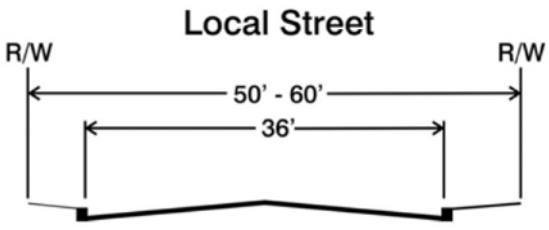
EXHIBIT 7: CITY OF PALM SPRINGS TYPICAL STREET CROSS-SECTIONS





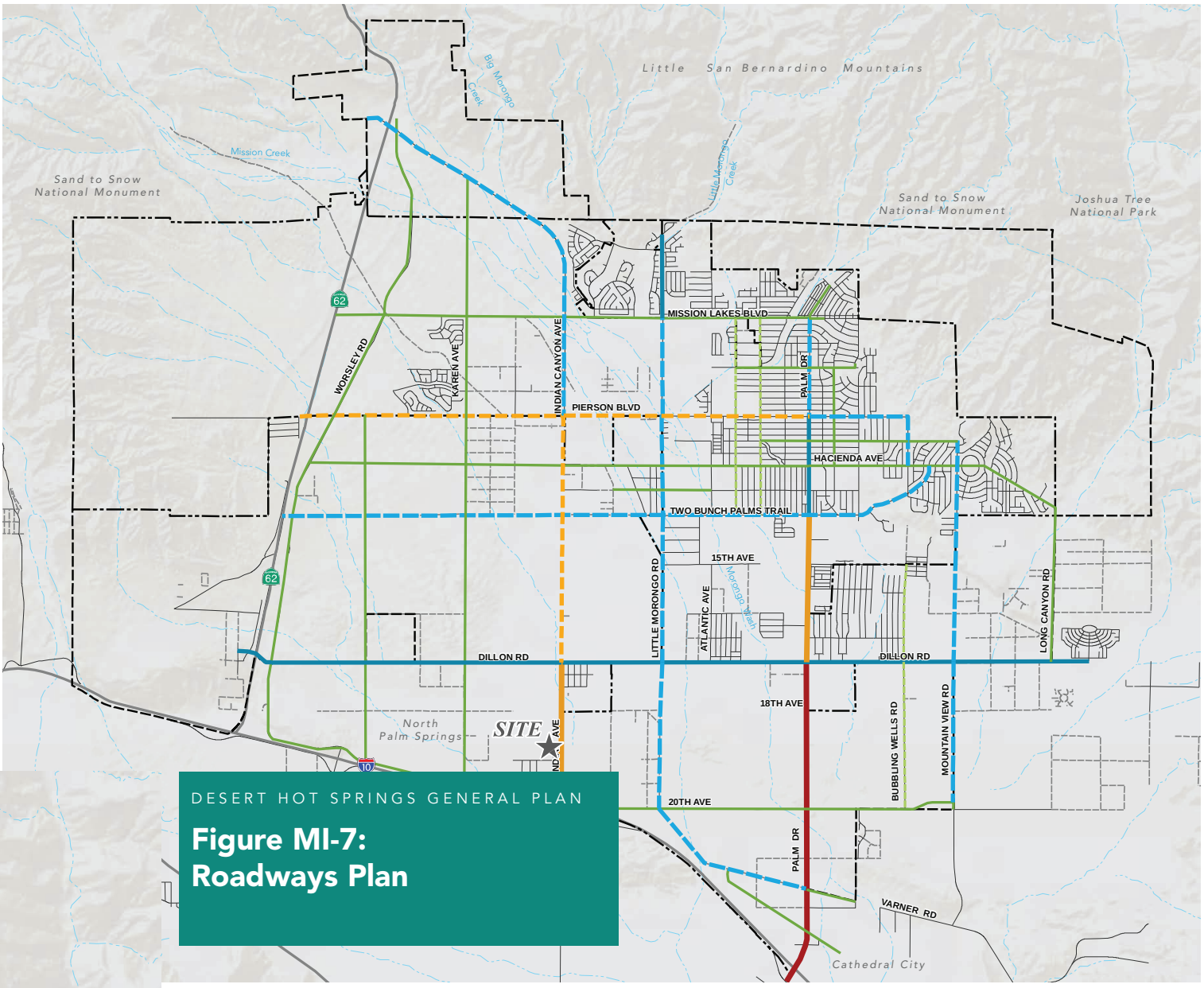






SOURCE: CITY OF PALM SPRINGS GENERAL PLAN (2007)

EXHIBIT 8: CITY OF DESERT HOT SPRINGS ROADWAYS PLAN



SOURCE: CITY OF DESERT HOT SPRINGS GENERAL PLAN (MAY 2020)

Road Classifications

- Urban Arterial
- Primary I
- Primary II
- Secondary I
- Secondary II
- Collector
- Local Collector

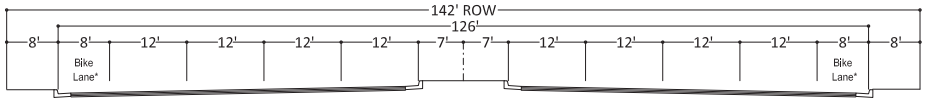
Base Map Features

- City Boundary
- Sphere of Influence
- Water Courses

EXHIBIT 9: CITY OF DESERT HOT SPRINGS GENERAL PLAN ROADWAY CROSS-SECTIONS

Figure MI-8: Cross Sections

Urban Arterial
8-Lanes Divided
No Parking
With Protected Bike Lane

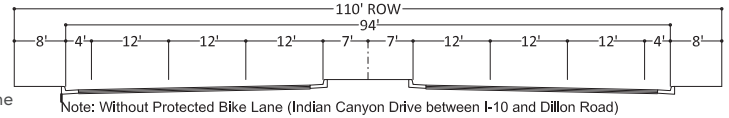


*See Enhanced Bike Lane Detail

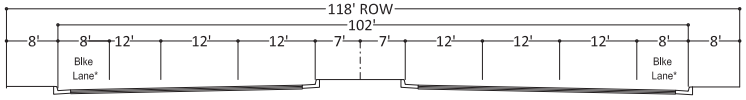
ENHANCED BIKE LANE DETAIL:

* Buffered bike lanes include painted buffer.
Protected bike lanes may include safety bollards or a landscaped median.

Primary I
6-Lanes Divided
No Parking
With or Without Protected Bike Lane

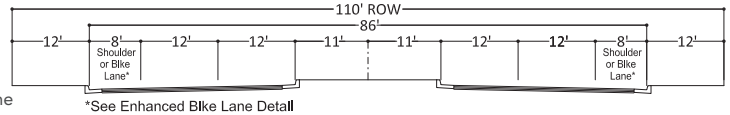


Note: Without Protected Bike Lane (Indian Canyon Drive between I-10 and Dillon Road)



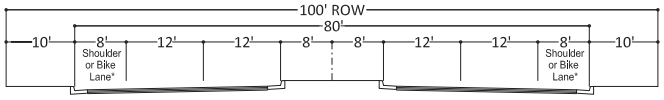
Note: With Protected Bike Lane (Palm Drive between Dillon Road and Two Bunch Palms Trail)
*See Enhanced Bike Lane Detail

Primary II
4-Lanes Divided
No Parking
With or Without Protected Bike Lane



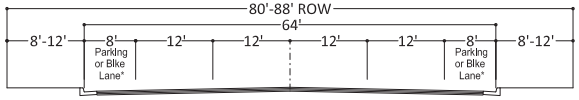
*See Enhanced Bike Lane Detail

Secondary I
4-Lanes Divided
No Parking
With Protected Bike Lane

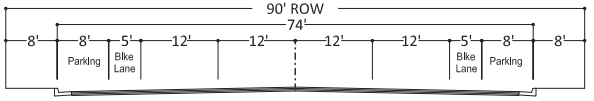


*See Enhanced Bike Lane Detail

Secondary II
4-Lanes Undivided
On-Street Parking
With or Without Dedicated Bike Lane

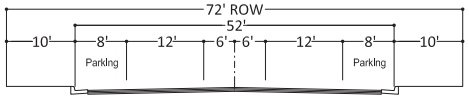


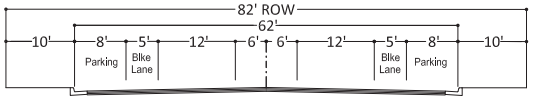
Note: With Parking or Bike Lane
*See Enhanced Bike Lane Detail



Note: With Parking and Bike Lane

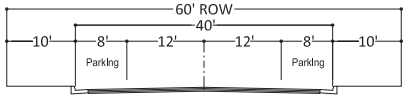
Collector
2-Lanes Undivided
On-Street Parking
With or Without Dedicated Bike Lane

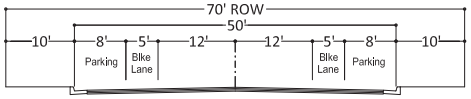




Note: With Parking and Bike Lane

Local Collector
2-Lanes Undivided
On-Street Parking
With or Without Dedicated Bike Lane





Note: With Parking and Bike Lane

SOURCE: CITY OF DESERT HOT SPRINGS GENERAL PLAN (MAY 2020)

STUDY AREA

The traffic impact study area was defined in conformance with the requirements of City of Palm Springs TIA Guidelines. Consistent with the City's TIA guidelines, study area intersections have been identified for the Project based on the contribution of 50 or more peak hour trips. Based on this criterion, anticipated trip generation and trip distribution, the following intersections will be evaluated:

#	Intersection	#	Intersection
1	Indian Cyn. Dr. / Dillon Rd.	8	I-10 Eastbound Ramps / Garnet Av.
2	Indian Cyn. Dr. / 19th Avenue	9	I-10 Westbound Ramps / 20th Av.
3	Indian Cyn. Dr. / Commercial Plaza	10	Newhall St. - Dwy. 4 / 19th Av.
4	Indian Cyn. Dr. / 20th Avenue	11	Indian Cyn. Dr. / Coachillin Wy.
5	Indian Cyn. Dr. / I-10 Westbound On-Ramp	12	Indian Cyn. Dr. / Dwy. 1
6	Indian Cyn. Dr. / I-10 Eastbound On-Ramp	13	Indian Cyn. Dr. / Dwy. 2
7	Indian Cyn. Dr. / Garnet Avenue	14	Indian Cyn. Dr. / Dwy. 3

Exhibit 2 identifies the proposed study area intersection analysis locations.

LEVEL OF SERVICE (LOS) CRITERIA

Per the City of Palm Springs's General Plan, LOS D as the threshold for acceptable traffic conditions on the circulation network.

PREFERRED ANALYSIS METHODOLOGY

For the purposes of this analysis, signalized intersection operations analysis will be based on the methodology described in the Highway Capacity Manual (6th Edition). Intersection LOS operations are based on an intersection's average control delay. Unsignalized intersections will be evaluated using the methodology described in the HCM 6th Edition. At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane.

TRAFFIC COUNTS

For the intersection of Newhall Street/19th Avenue, traffic count data will be collected in January 2023 during the AM peak period of 7:00 AM to 9:00 AM and PM peak period of 4:00 PM to 6:00 PM. For the remaining existing study intersections, traffic count data collected in March and May 2022 will be utilized.

The City of Palm Springs experiences seasonal population variations over the course of the year, with relatively higher populations during the winter months from January to the end of

March. To compensate for the discrepancy, counts not taken during this peak winter period (January 2 to March 31) require seasonal adjustments. Counts taken in May will be adjusted to estimate peak season.

CUMULATIVE DEVELOPMENT TRAFFIC

It is requested that City staff review the list of cumulative development projects (shown on Exhibit 10 and listed on Table 3) for inclusion in the traffic study. Consistent with other studies performed in the area, an ambient growth rate of 2% per year will be utilized as a minimum if necessary. The rate will be compounded over a 2-year period (i.e., 1.022years = 1.0404 or 4.04%) for Interim Year (2024) conditions.

SPECIAL ISSUES

The following issues will also be addressed as part of the Traffic Analysis (TA):

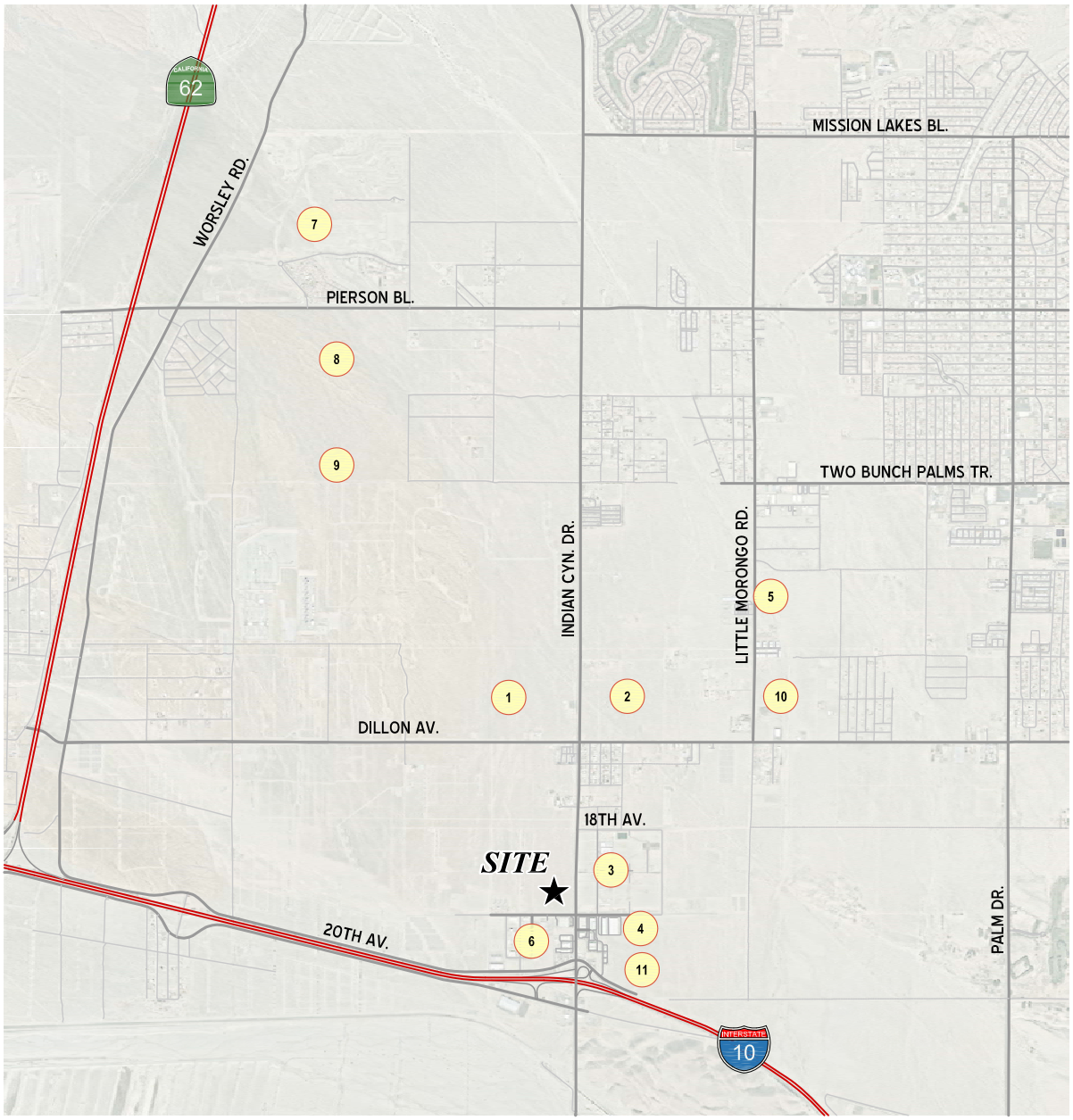
- *Traffic Signal Warrant Analysis:* Signal warrant analysis will be prepared for all unsignalized study area intersections that allow for full access (no traffic signal warrants to be performed for restricted access locations due to infeasibility of installing a signal at these types of locations).
- *Improvements:* Based on the traffic analysis results, the TA will indicate new improvement requirements and fair share contribution for the proposed Project.
- *Queuing Analysis:* The analysis will identify the necessary lengths of turn pockets with storage and appropriate turn pocket transitions which adheres to the General Plan roadway classifications for the site adjacent roadways.
- *Truck Turns:* Evaluation of how project truck traffic (e.g., large trucks) would enter and exit the Project site will be provided. Potential impacts resulting from turning maneuvers by large trucks entering and exiting the site, along with diagrams demonstrating the feasibility of such maneuvers at site access driveways if necessary, will be identified.
- *Vehicle Miles Traveled (VMT):* VMT analysis will be conducted in accordance with City guidelines.
- *Site Access and Circulation*

VEHICLE MILES TRAVELED (VMT) ANALYSIS

Urban Crossroads will evaluate the Project in terms of City of Palm Springs screening criteria for vehicle miles traveled (VMT). The Project is not anticipated to "screen out", so full VMT analysis is likely to be necessary.

Baseline and Cumulative scenarios will evaluate two types of VMT using RIVCOM: (1) project generated VMT per service population and comparing it back to the appropriate benchmark noted in the City's thresholds of significance, and (2) the project effect on VMT, comparing how the project changes VMT on the network looking at a sub-regional VMT per service population and comparing it to the no project condition.

EXHIBIT 10: CUMULATIVE DEVELOPMENT LOCATION MAP



LEGEND:

(#) = CUMULATIVE DEVELOPMENT ID

N

TABLE 3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use[1]	Quantity	Units[2]
1	Angel View Salvage & Recycling Facility	Gen. Light Industrial	13.650	TSF
		Factory Outlet Center	9.000	TSF
		General Office	3.600	TSF
2	Cultivation Center	Nursery (Wholesale)	38.00	AC
3	Coachillin	Marijuana Cultivation and Processing Facility	2,772.487	TSF
		Commercial/Dispensary/Restaurant	27.513	TSF
		Coachillin Subtotal	2,800.000	TSF
4	Blackstar Industrial Properties	Business Park	621.920	TSF
5	DHS Light Industrial w/ Cannabis Overlay	Marijuana Cultivation and Processing Facility	116.00	TSF
6	Palm Springs Business Park	Business Park	37.874	TSF
7	Skyborne Active Adult Community at Stoneridge	Senior Adult Housing - Detached	1,141	DU
		SFDR	801	DU
		Clubhouse	5.000	TSF
8	Vista Rosa Residential (Phase 1)	Senior Adult Housing - Detached	702	DU
		Passive Parks	21.78	AC
9	PM32692	SFDR	3	DU
10	Oxford Properties Cultivation Center	Nursery (Wholesale)	70.26	AC
11	Desert Gateway	High-Cube Warehouse	1059.240	TSF
		Hotel	150	OCC RM
		Commercial Retail	42.00	TSF

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Unit; RM = Room; TSF = Thousand Square Feet; AC = Acre; OCC RM = Occupied Room

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Project-generated VMT will be extracted from the travel demand model using the origin-destination trip matrix and will multiply that matrix by the final assignment skims, then divided by Service Population. The project-effect on VMT will be estimated using a sub-regional boundary and extracting the total link-level VMT for both the no project and plus project condition.

Daily vehicle trips are specifically related to on-road passenger vehicles (cars and light trucks) in accordance with OPR guidelines. The topics of goods movement and heavy truck activity are not the emphasis of VMT impact assessments.

Please review this scoping agreement let us know if it is acceptable, or if the City requests any changes to this proposed scope of work. If you have any questions, please contact John Kain at (949) 375-2435 or Marlie Whiteman (714) 585-0574.

Respectfully submitted,

URBAN CROSSROADS, INC.

John Kain

John Kain, AICP
Principal

Marlie Whiteman

Marlie Whiteman, PE
Senior Associate

APPENDIX 3.1: TRAFFIC COUNTS – MARCH & MAY 2022, AND JANUARY 2023

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Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Desert Hot Springs
N/S: Indian Canyon Drive
E/W: Dillon Road
Weather: Clear

File Name : 04_DHS_IC_Dillon AM
Site Code : 05122266
Start Date : 3/29/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				Dillon Road Westbound				Indian Canyon Drive Northbound				Dillon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	107	1	114	85	33	13	131	4	48	24	76	1	14	7	22	343
07:15 AM	6	151	0	157	111	18	4	133	2	56	21	79	0	19	7	26	395
07:30 AM	9	168	1	178	104	23	4	131	3	74	28	105	1	26	10	37	451
07:45 AM	3	115	1	119	108	23	3	134	6	57	35	98	1	24	4	29	380
Total	24	541	3	568	408	97	24	529	15	235	108	358	3	83	28	114	1569
08:00 AM	4	108	2	114	60	25	5	90	1	50	34	85	1	32	11	44	333
08:15 AM	7	135	0	142	72	28	8	108	2	67	41	110	0	26	4	30	390
08:30 AM	6	104	1	111	82	31	7	120	3	62	41	106	0	32	7	39	376
08:45 AM	6	76	1	83	67	19	3	89	0	66	33	99	1	23	2	26	297
Total	23	423	4	450	281	103	23	407	6	245	149	400	2	113	24	139	1396
Grand Total	47	964	7	1018	689	200	47	936	21	480	257	758	5	196	52	253	2965
Apprch %	4.6	94.7	0.7		73.6	21.4	5		2.8	63.3	33.9		2	77.5	20.6		
Total %	1.6	32.5	0.2	34.3	23.2	6.7	1.6	31.6	0.7	16.2	8.7	25.6	0.2	6.6	1.8	8.5	

	Indian Canyon Drive Southbound				Dillon Road Westbound				Indian Canyon Drive Northbound				Dillon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	6	107	**1**	114	85	**33**	**13**	131	4	48	24	76	**1**	14	7	22	343
07:15 AM	6	151	0	157	**111**	18	4	133	2	56	21	79	0	19	7	26	395
07:30 AM	**9**	**168**	1	**178**	104	23	4	131	3	**74**	28	**105**	1	**26**	**10**	**37**	**451**
07:45 AM	3	115	1	119	108	23	3	**134**	**6**	57	**35**	98	1	24	4	29	380
Total Volume	24	541	3	568	408	97	24	529	15	235	108	358	3	83	28	114	1569
% App. Total	4.2	95.2	0.5		77.1	18.3	4.5		4.2	65.6	30.2		2.6	72.8	24.6		
PHF	.667	.805	.750	.798	.919	.735	.462	.987	.625	.794	.771	.852	.750	.798	.700	.770	.870

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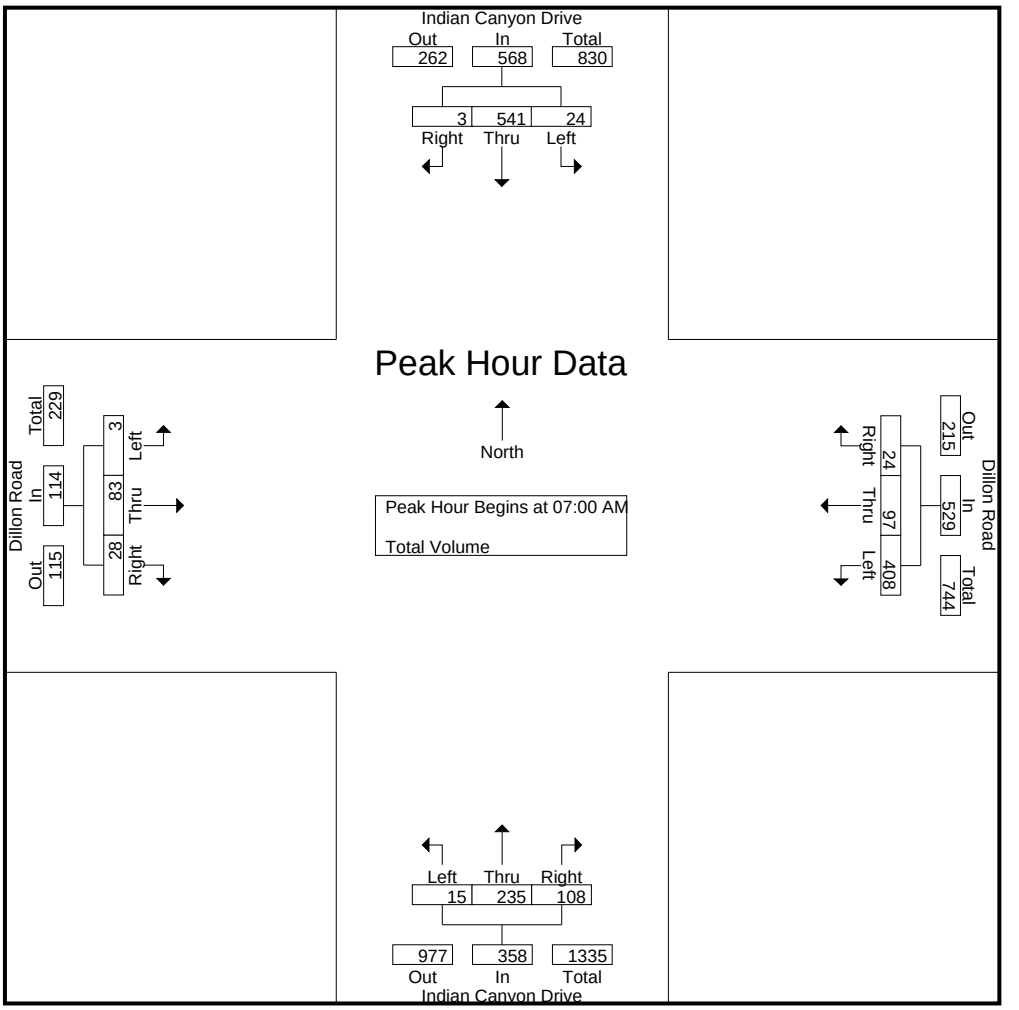
City of Desert Hot Springs
N/S: Indian Canyon Drive
E/W: Dillon Road
Weather: Clear

File Name : 04_DHS_IC_Dillon AM
Site Code : 05122266
Start Date : 3/29/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				08:00 AM				07:45 AM			
+0 mins.	6	107	**1**	114	85	**33**	**13**	131	1	50	34	85	**1**	24	4	29
+15 mins.	6	151	0	157	**111**	18	4	133	2	**67**	**41**	**110**	1	**32**	**11**	**44**
+30 mins.	**9**	**168**	1	**178**	104	23	4	131	**3**	62	41	106	0	26	4	30
+45 mins.	3	115	1	119	108	23	3	**134**	0	66	33	99	0	32	7	39
Total Volume	24	541	3	568	408	97	24	529	6	245	149	400	2	114	26	142
% App. Total	4.2	95.2	0.5		77.1	18.3	4.5		1.5	61.2	37.2		1.4	80.3	18.3	
PHF	.667	.805	.750	.798	.919	.735	.462	.987	.500	.914	.909	.909	.500	.891	.591	.807

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E/W: Dillon Road
Weather: Clear

File Name : 04_DHS_IC_Dillon PM
Site Code : 05122266
Start Date : 3/29/2022

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				Dillon Road Westbound				Indian Canyon Drive Northbound				Dillon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	67	1	77	62	36	13	111	5	151	81	237	1	22	3	26	451
04:15 PM	12	46	1	59	43	33	9	85	1	147	73	221	0	22	2	24	389
04:30 PM	7	60	0	67	55	26	8	89	2	111	76	189	2	23	7	32	377
04:45 PM	6	53	0	59	46	36	13	95	3	156	72	231	1	26	3	30	415
Total	34	226	2	262	206	131	43	380	11	565	302	878	4	93	15	112	1632
05:00 PM	10	71	0	81	51	29	14	94	4	120	77	201	0	18	5	23	399
05:15 PM	10	45	2	57	35	33	6	74	1	122	63	186	3	32	2	37	354
05:30 PM	9	55	1	65	31	20	8	59	0	123	64	187	3	37	2	42	353
05:45 PM	10	35	0	45	41	20	3	64	2	87	52	141	3	29	3	35	285
Total	39	206	3	248	158	102	31	291	7	452	256	715	9	116	12	137	1391
Grand Total	73	432	5	510	364	233	74	671	18	1017	558	1593	13	209	27	249	3023
Apprch %	14.3	84.7	1		54.2	34.7	11		1.1	63.8	35		5.2	83.9	10.8		
Total %	2.4	14.3	0.2	16.9	12	7.7	2.4	22.2	0.6	33.6	18.5	52.7	0.4	6.9	0.9	8.2	

	Indian Canyon Drive Southbound				Dillon Road Westbound				Indian Canyon Drive Northbound				Dillon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	9	**67**	**1**	**77**	**62**	**36**	**13**	**111**	**5**	151	**81**	**237**	1	22	3	26	**451**
04:15 PM	**12**	46	1	59	43	33	9	85	1	147	73	221	0	22	2	24	389
04:30 PM	7	60	0	67	55	26	8	89	2	111	76	189	**2**	23	**7**	**32**	377
04:45 PM	6	53	0	59	46	36	13	95	3	**156**	72	231	1	**26**	3	30	415
Total Volume	34	226	2	262	206	131	43	380	11	565	302	878	4	93	15	112	1632
% App. Total	13	86.3	0.8		54.2	34.5	11.3		1.3	64.4	34.4		3.6	83	13.4		
PHF	.708	.843	.500	.851	.831	.910	.827	.856	.550	.905	.932	.926	.500	.894	.536	.875	.905

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File Name : 04_DHS_IC_Dillon PM
Site Code : 05122266
Start Date : 3/29/2022
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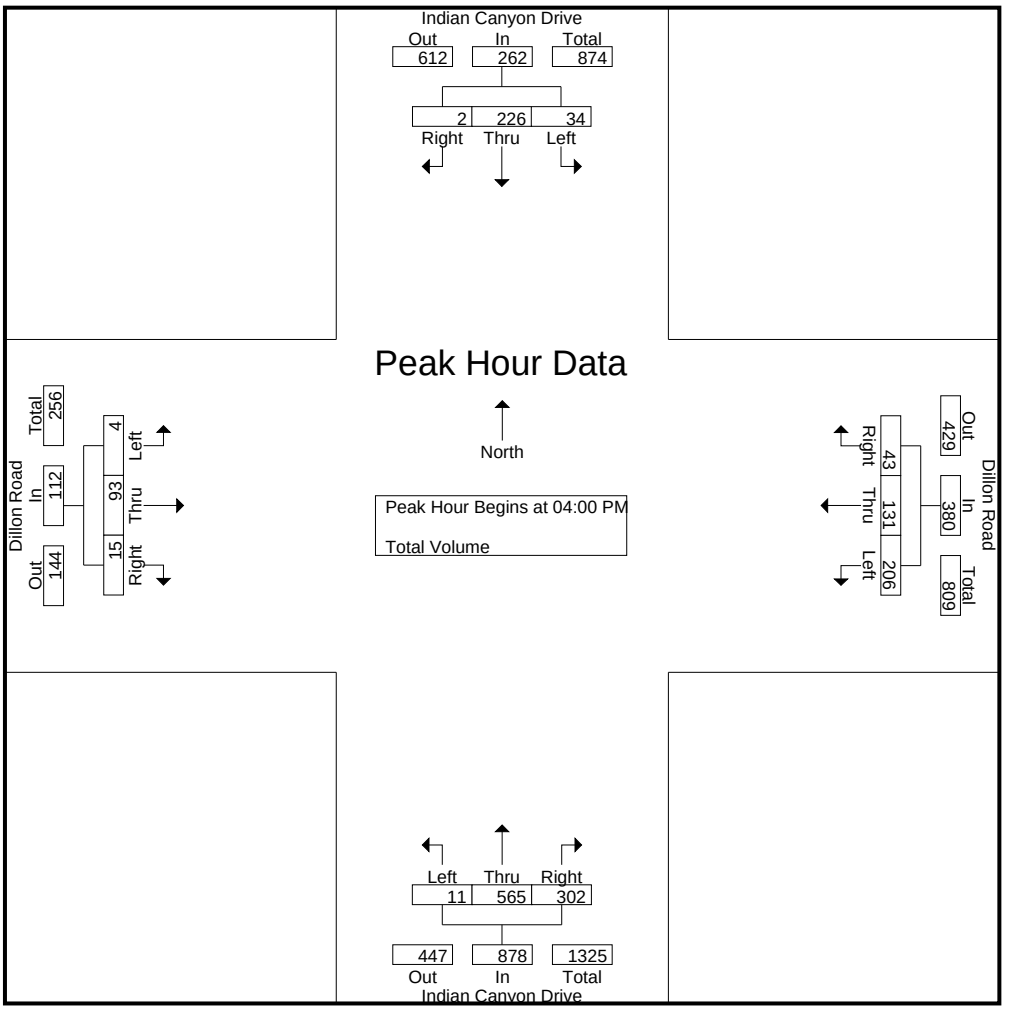

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	**12**	46	**1**	59	**62**	**36**	**13**	**111**	**5**	151	**81**	**237**	0	18	**5**	23
+15 mins.	7	60	0	67	43	33	9	85	1	147	73	221	**3**	32	2	37
+30 mins.	6	53	0	59	55	26	8	89	2	111	76	189	3	**37**	2	**42**
+45 mins.	10	**71**	0	**81**	46	36	13	95	3	**156**	72	231	3	29	3	35
Total Volume	35	230	1	266	206	131	43	380	11	565	302	878	9	116	12	137
% App. Total	13.2	86.5	0.4		54.2	34.5	11.3		1.3	64.4	34.4		6.6	84.7	8.8	
PHF	.729	.810	.250	.821	.831	.910	.827	.856	.550	.905	.932	.926	.750	.784	.600	.815

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City of Desert Hot Springs
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E/W: 19th Avenue
Weather: Clear

File Name : 07_DHS_IC_19th AM
Site Code : 05122266
Start Date : 3/29/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				19th Avenue Westbound				Indian Canyon Drive Northbound				19th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	15	200	1	216	3	0	1	4	5	77	21	103	0	0	1	1	324
07:15 AM	10	268	3	281	8	0	1	9	7	80	13	100	1	0	2	3	393
07:30 AM	7	282	1	290	0	0	3	3	2	102	11	115	0	0	2	2	410
07:45 AM	4	245	2	251	2	0	1	3	5	97	9	111	1	0	1	2	367
Total	36	995	7	1038	13	0	6	19	19	356	54	429	2	0	6	8	1494
08:00 AM	1	199	0	200	1	0	0	1	3	98	11	112	2	0	1	3	316
08:15 AM	3	204	3	210	6	0	0	6	2	102	10	114	2	0	2	4	334
08:30 AM	1	186	1	188	2	0	1	3	3	111	17	131	0	0	2	2	324
08:45 AM	0	159	5	164	2	0	0	2	7	102	7	116	0	0	0	0	282
Total	5	748	9	762	11	0	1	12	15	413	45	473	4	0	5	9	1256
Grand Total	41	1743	16	1800	24	0	7	31	34	769	99	902	6	0	11	17	2750
Apprch %	2.3	96.8	0.9		77.4	0	22.6		3.8	85.3	11		35.3	0	64.7		
Total %	1.5	63.4	0.6	65.5	0.9	0	0.3	1.1	1.2	28	3.6	32.8	0.2	0	0.4	0.6	

	Indian Canyon Drive Southbound				19th Avenue Westbound				Indian Canyon Drive Northbound				19th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**15**	200	1	216	3	0	1	4	5	77	**21**	103	0	0	1	1	324
07:15 AM	10	268	**3**	281	**8**	0	1	**9**	**7**	80	13	100	**1**	0	**2**	**3**	393
07:30 AM	7	**282**	1	**290**	0	0	**3**	3	2	**102**	11	**115**	0	0	2	2	**410**
07:45 AM	4	245	2	251	2	0	1	3	5	97	9	111	1	0	1	2	367
Total Volume	36	995	7	1038	13	0	6	19	19	356	54	429	2	0	6	8	1494
% App. Total	3.5	95.9	0.7		68.4	0	31.6		4.4	83	12.6		25	0	75		
PHF	.600	.882	.583	.895	.406	.000	.500	.528	.679	.873	.643	.933	.500	.000	.750	.667	.911

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City of Desert Hot Springs
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Weather: Clear

File Name : 07_DHS_IC_19th AM
Site Code : 05122266
Start Date : 3/29/2022
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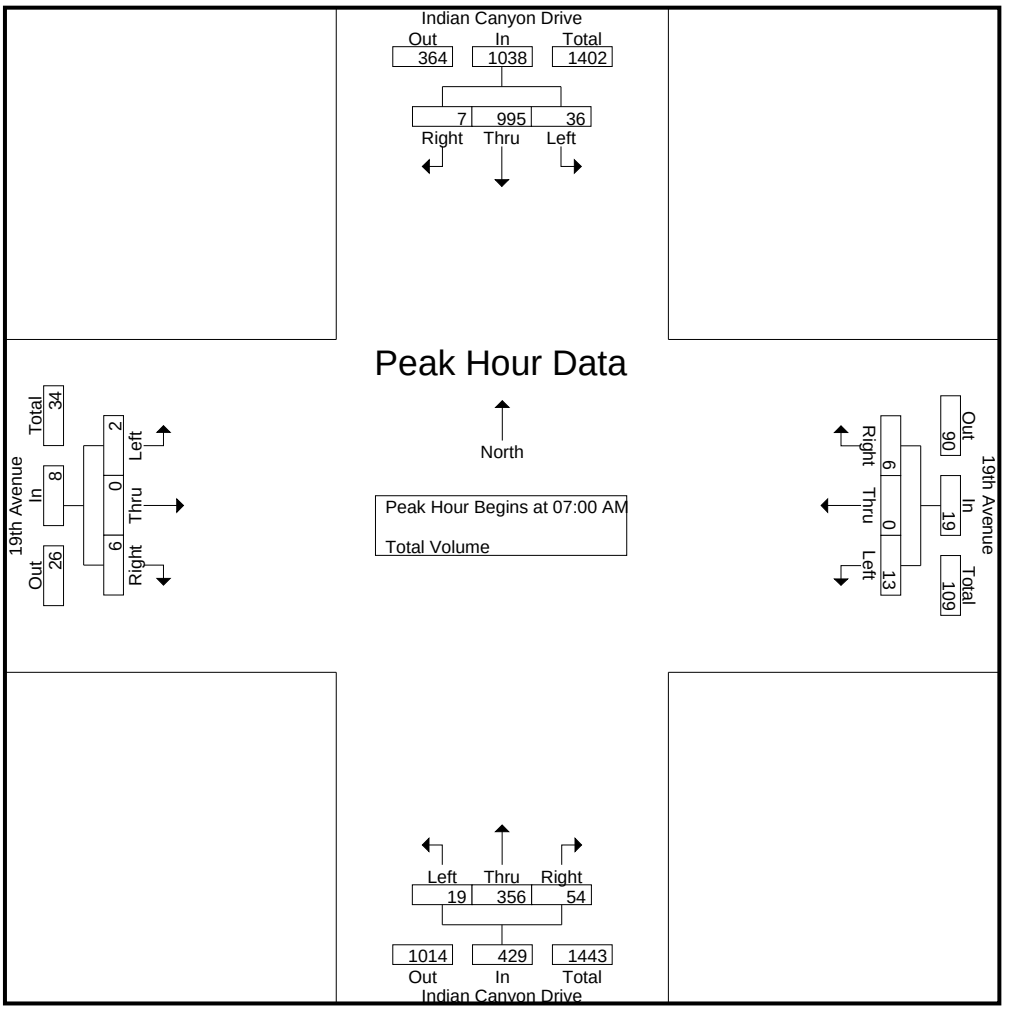

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	**15**	200	1	216	3	0	1	4	3	98	11	112	0	0	**2**	2
+15 mins.	10	268	**3**	281	**8**	0	1	**9**	2	102	10	114	1	0	1	2
+30 mins.	7	**282**	1	**290**	0	0	**3**	3	3	**111**	**17**	**131**	**2**	0	1	3
+45 mins.	4	245	2	251	2	0	1	3	**7**	102	7	116	2	0	2	**4**
Total Volume	36	995	7	1038	13	0	6	19	15	413	45	473	5	0	6	11
% App. Total	3.5	95.9	0.7		68.4	0	31.6		3.2	87.3	9.5		45.5	0	54.5	
PHF	.600	.882	.583	.895	.406	.000	.500	.528	.536	.930	.662	.903	.625	.000	.750	.688

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City of Desert Hot Springs
N/S: Indian Canyon Drive
E/W: 19th Avenue
Weather: Clear

File Name : 07_DHS_IC_19th PM
Site Code : 05122266
Start Date : 3/29/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				19th Avenue Westbound				Indian Canyon Drive Northbound				19th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	123	0	123	17	0	9	26	1	254	2	257	1	0	2	3	409
04:15 PM	0	98	1	99	11	0	5	16	1	219	2	222	1	0	0	1	338
04:30 PM	0	114	0	114	8	0	1	9	1	229	2	232	3	0	4	7	362
04:45 PM	0	105	2	107	15	0	0	15	0	232	0	232	2	0	3	5	359
Total	0	440	3	443	51	0	15	66	3	934	6	943	7	0	9	16	1468
05:00 PM	0	124	0	124	7	0	2	9	1	227	2	230	2	0	5	7	370
05:15 PM	0	88	0	88	5	0	1	6	0	201	2	203	0	0	3	3	300
05:30 PM	1	87	0	88	4	1	1	6	0	202	2	204	4	0	1	5	303
05:45 PM	0	90	3	93	5	0	0	5	1	156	4	161	2	0	2	4	263
Total	1	389	3	393	21	1	4	26	2	786	10	798	8	0	11	19	1236
Grand Total	1	829	6	836	72	1	19	92	5	1720	16	1741	15	0	20	35	2704
Apprch %	0.1	99.2	0.7		78.3	1.1	20.7		0.3	98.8	0.9		42.9	0	57.1		
Total %	0	30.7	0.2	30.9	2.7	0	0.7	3.4	0.2	63.6	0.6	64.4	0.6	0	0.7	1.3	

	Indian Canyon Drive Southbound				19th Avenue Westbound				Indian Canyon Drive Northbound				19th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**123**	0	**123**	**17**	0	**9**	**26**	**1**	**254**	**2**	**257**	1	0	2	3	**409**
04:15 PM	0	98	1	99	11	0	5	16	1	219	2	222	1	0	0	1	338
04:30 PM	0	114	0	114	8	0	1	9	1	229	2	232	**3**	0	**4**	**7**	362
04:45 PM	0	105	**2**	107	15	0	0	15	0	232	0	232	2	0	3	5	359
Total Volume	0	440	3	443	51	0	15	66	3	934	6	943	7	0	9	16	1468
% App. Total	0	99.3	0.7		77.3	0	22.7		0.3	99	0.6		43.8	0	56.2		
PHF	.000	.894	.375	.900	.750	.000	.417	.635	.750	.919	.750	.917	.583	.000	.563	.571	.897

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File Name : 07_DHS_IC_19th PM
Site Code : 05122266
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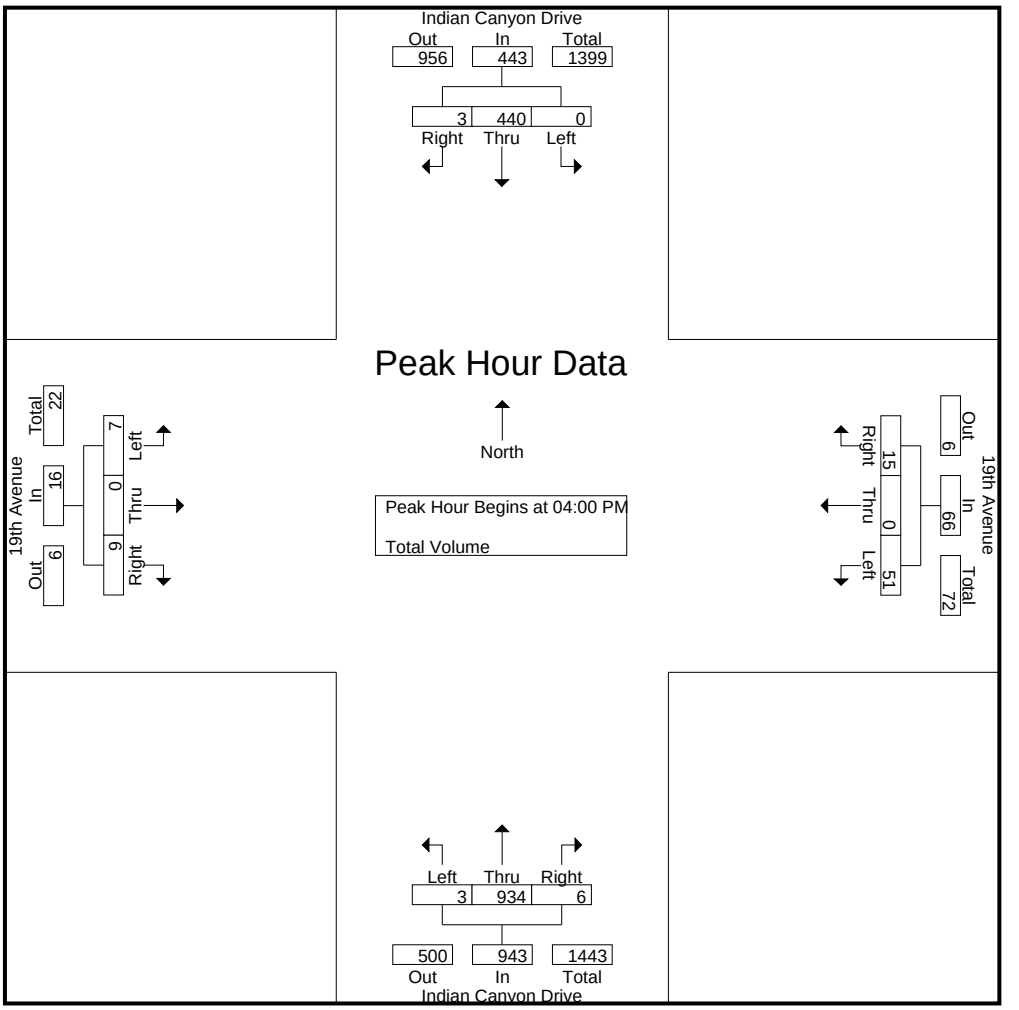

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	0	98	1	99	**17**	0	**9**	**26**	**1**	**254**	**2**	**257**	**3**	0	4	**7**
+15 mins.	0	114	0	114	11	0	5	16	1	219	2	222	2	0	3	5
+30 mins.	0	105	**2**	107	8	0	1	9	1	229	2	232	2	0	**5**	7
+45 mins.	0	**124**	0	**124**	15	0	0	15	0	232	0	232	0	0	3	3
Total Volume	0	441	3	444	51	0	15	66	3	934	6	943	7	0	15	22
% App. Total	0	99.3	0.7		77.3	0	22.7		0.3	99	0.6		31.8	0	68.2	
PHF	.000	.889	.375	.895	.750	.000	.417	.635	.750	.919	.750	.917	.583	.000	.750	.786

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: Commercial Plaza
Weather: Clear

File Name : 03_DHS_IP_CP AM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound			Commercial Plaza Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	4	206	210	7	3	10	95	3	98	318
07:15 AM	3	273	276	1	1	2	87	3	90	368
07:30 AM	4	270	274	4	4	8	100	3	103	385
07:45 AM	2	222	224	0	0	0	120	4	124	348
Total	13	971	984	12	8	20	402	13	415	1419
08:00 AM	3	216	219	6	1	7	102	5	107	333
08:15 AM	2	161	163	1	1	2	108	3	111	276
08:30 AM	6	178	184	1	1	2	126	4	130	316
08:45 AM	2	124	126	3	1	4	90	1	91	221
Total	13	679	692	11	4	15	426	13	439	1146
Grand Total	26	1650	1676	23	12	35	828	26	854	2565
Apprch %	1.6	98.4		65.7	34.3		97	3		
Total %	1	64.3	65.3	0.9	0.5	1.4	32.3	1	33.3	

	Indian Canyon Drive Southbound			Commercial Plaza Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	3	**273**	**276**	1	1	2	87	3	90	368
07:30 AM	**4**	270	274	4	**4**	**8**	100	3	103	**385**
07:45 AM	2	222	224	0	0	0	**120**	4	**124**	348
08:00 AM	3	216	219	**6**	1	7	102	**5**	107	333
Total Volume	12	981	993	11	6	17	409	15	424	1434
% App. Total	1.2	98.8		64.7	35.3		96.5	3.5		
PHF	.750	.898	.899	.458	.375	.531	.852	.750	.855	.931

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File Name : 03_DHS_IP_CP AM
Site Code : 05122491
Start Date : 5/17/2022
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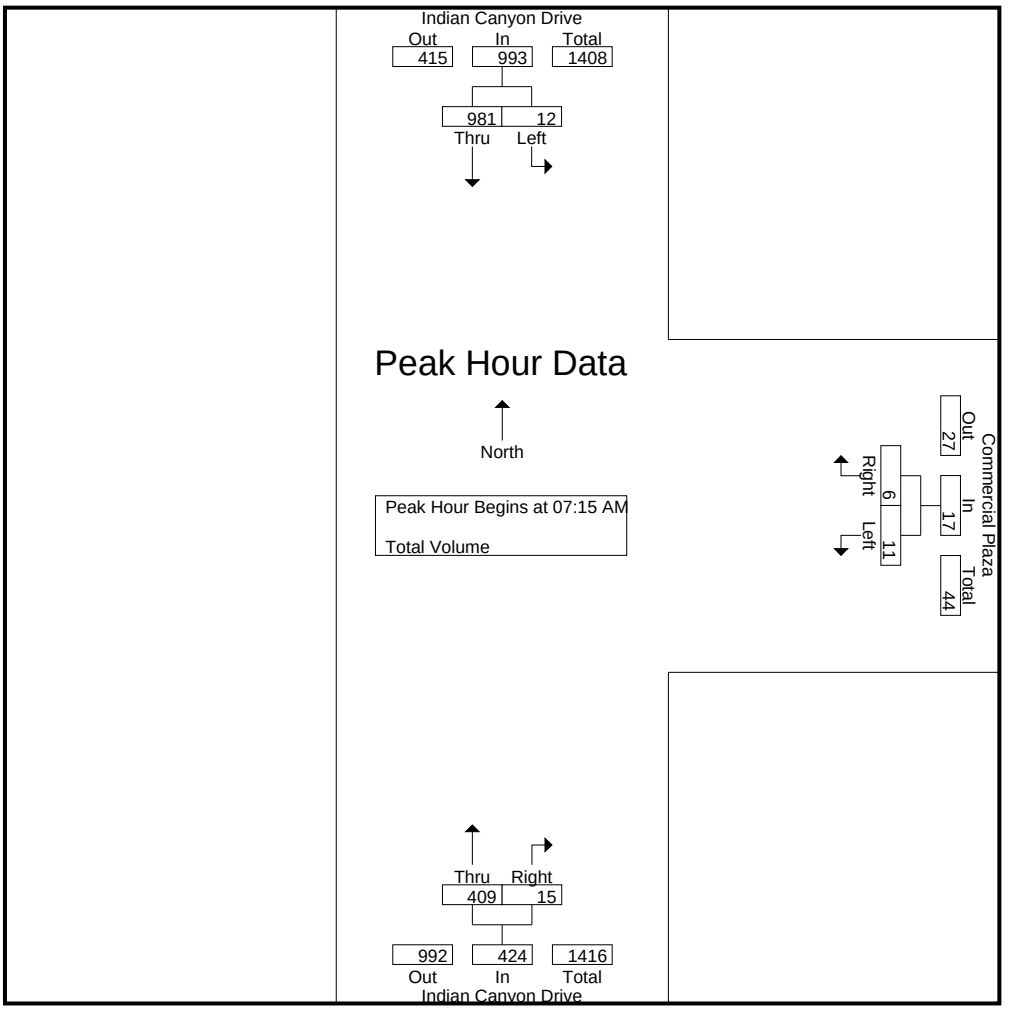

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			07:45 AM		
+0 mins.	3	**273**	**276**	**7**	3	**10**	120	4	124
+15 mins.	**4**	270	274	1	1	2	102	**5**	107
+30 mins.	2	222	224	4	**4**	8	108	3	111
+45 mins.	3	216	219	0	0	0	**126**	4	**130**
Total Volume	12	981	993	12	8	20	456	16	472
% App. Total	1.2	98.8		60	40		96.6	3.4	
PHF	.750	.898	.899	.429	.500	.500	.905	.800	.908

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File Name : 03_DHS_IP_CP PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound			Commercial Plaza Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	132	134	1	3	4	217	5	222	360
04:15 PM	1	107	108	3	1	4	200	6	206	318
04:30 PM	2	116	118	3	6	9	205	0	205	332
04:45 PM	0	103	103	2	3	5	213	1	214	322
Total	5	458	463	9	13	22	835	12	847	1332
05:00 PM	1	112	113	3	3	6	208	1	209	328
05:15 PM	2	106	108	2	2	4	231	0	231	343
05:30 PM	1	100	101	1	1	2	213	1	214	317
05:45 PM	2	82	84	1	3	4	161	2	163	251
Total	6	400	406	7	9	16	813	4	817	1239
Grand Total	11	858	869	16	22	38	1648	16	1664	2571
Apprch %	1.3	98.7		42.1	57.9		99	1		
Total %	0.4	33.4	33.8	0.6	0.9	1.5	64.1	0.6	64.7	

	Indian Canyon Drive Southbound			Commercial Plaza Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**2**	**132**	**134**	1	3	4	**217**	5	**222**	**360**
04:15 PM	1	107	108	**3**	1	4	200	**6**	206	318
04:30 PM	2	116	118	3	**6**	**9**	205	0	205	332
04:45 PM	0	103	103	2	3	5	213	1	214	322
Total Volume	5	458	463	9	13	22	835	12	847	1332
% App. Total	1.1	98.9		40.9	59.1		98.6	1.4		
PHF	.625	.867	.864	.750	.542	.611	.962	.500	.954	.925

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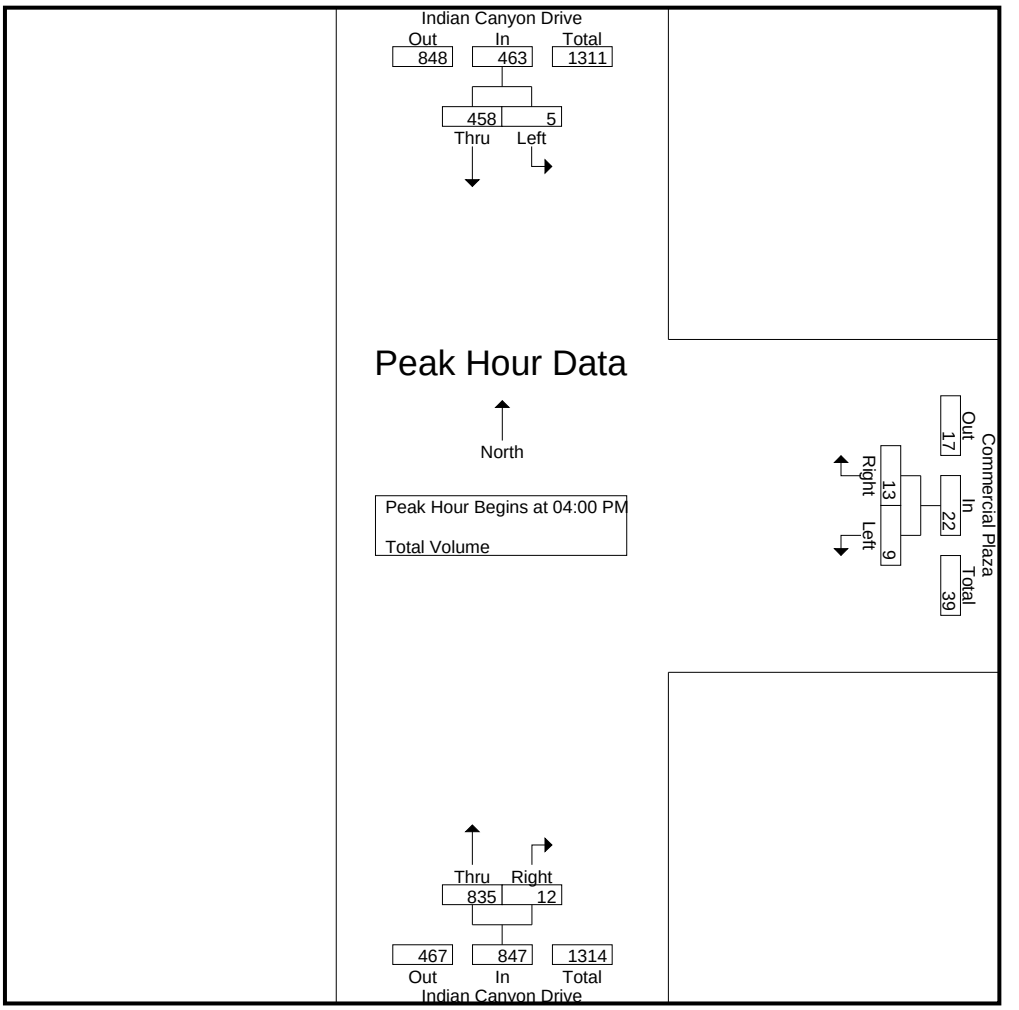
City of Palm Springs
N/S: Indian Canyon Drive
E/W: Commercial Plaza
Weather: Clear

File Name : 03_DHS_IP_CP PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:45 PM		
+0 mins.	**2**	**132**	**134**	**3**	1	4	213	**1**	214
+15 mins.	1	107	108	3	**6**	**9**	208	1	209
+30 mins.	2	116	118	2	3	5	**231**	0	**231**
+45 mins.	0	103	103	3	3	6	213	1	214
Total Volume	5	458	463	11	13	24	865	3	868
% App. Total	1.1	98.9		45.8	54.2		99.7	0.3	
PHF	.625	.867	.864	.917	.542	.667	.936	.750	.939

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: 20th Avenue
Weather: Clear

File Name : 04_DHS_IC_20th AM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				20th Avenue Westbound				Indian Canyon Drive Northbound				20th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	191	4	196	48	16	28	92	7	63	1	71	4	1	12	17	376
07:15 AM	1	260	6	267	23	9	22	54	8	64	1	73	8	1	13	22	416
07:30 AM	1	261	1	263	54	5	30	89	4	53	1	58	9	0	12	21	431
07:45 AM	1	211	1	213	72	11	26	109	2	91	3	96	8	2	7	17	435
Total	4	923	12	939	197	41	106	344	21	271	6	298	29	4	44	77	1658
08:00 AM	1	201	3	205	59	3	21	83	4	73	3	80	10	0	12	22	390
08:15 AM	0	151	2	153	57	4	22	83	4	79	1	84	4	0	12	16	336
08:30 AM	0	178	5	183	54	6	34	94	4	87	0	91	3	0	15	18	386
08:45 AM	3	111	0	114	52	2	16	70	13	78	0	91	3	0	10	13	288
Total	4	641	10	655	222	15	93	330	25	317	4	346	20	0	49	69	1400
Grand Total	8	1564	22	1594	419	56	199	674	46	588	10	644	49	4	93	146	3058
Apprch %	0.5	98.1	1.4		62.2	8.3	29.5		7.1	91.3	1.6		33.6	2.7	63.7		
Total %	0.3	51.1	0.7	52.1	13.7	1.8	6.5	22	1.5	19.2	0.3	21.1	1.6	0.1	3	4.8	

	Indian Canyon Drive Southbound				20th Avenue Westbound				Indian Canyon Drive Northbound				20th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	260	**6**	**267**	23	9	22	54	**8**	64	1	73	8	1	**13**	**22**	416
07:30 AM	1	**261**	1	263	54	5	**30**	89	4	53	1	58	9	0	12	21	431
07:45 AM	1	211	1	213	**72**	**11**	26	**109**	2	**91**	**3**	**96**	8	**2**	7	17	**435**
08:00 AM	1	201	3	205	59	3	21	83	4	73	3	80	**10**	0	12	22	390
Total Volume	4	933	11	948	208	28	99	335	18	281	8	307	35	3	44	82	1672
% App. Total	0.4	98.4	1.2		62.1	8.4	29.6		5.9	91.5	2.6		42.7	3.7	53.7		
PHF	1.00	.894	.458	.888	.722	.636	.825	.768	.563	.772	.667	.799	.875	.375	.846	.932	.961

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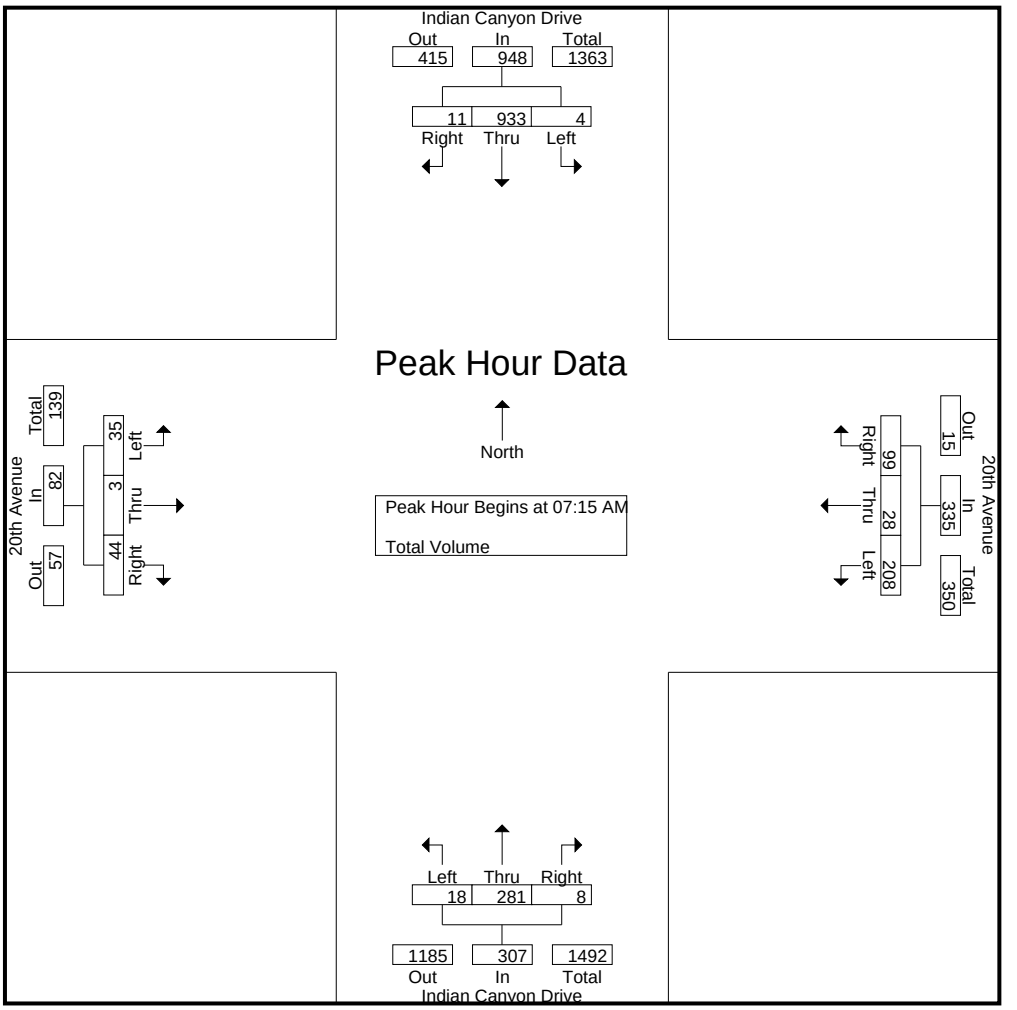
City of Palm Springs
N/S: Indian Canyon Drive
E/W: 20th Avenue
Weather: Clear

File Name : 04_DHS_IC_20th AM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:45 AM				07:45 AM				07:15 AM			
+0 mins.	**1**	260	**6**	**267**	**72**	**11**	26	**109**	2	**91**	**3**	**96**	8	1	**13**	**22**
+15 mins.	1	**261**	1	263	59	3	21	83	**4**	73	3	80	9	0	12	21
+30 mins.	1	211	1	213	57	4	22	83	4	79	1	84	8	**2**	7	17
+45 mins.	1	201	3	205	54	6	**34**	94	4	87	0	91	**10**	0	12	22
Total Volume	4	933	11	948	242	24	103	369	14	330	7	351	35	3	44	82
% App. Total	0.4	98.4	1.2		65.6	6.5	27.9		4	94	2		42.7	3.7	53.7	
PHF	1.000	.894	.458	.888	.840	.545	.757	.846	.875	.907	.583	.914	.875	.375	.846	.932

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: 20th Avenue
Weather: Clear

File Name : 04_DHS_IC_20th PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				20th Avenue Westbound				Indian Canyon Drive Northbound				20th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	125	5	132	53	3	61	117	12	150	2	164	3	1	10	14	427
04:15 PM	2	98	6	106	44	9	52	105	10	145	2	157	9	3	14	26	394
04:30 PM	0	116	7	123	59	8	63	130	2	136	1	139	6	1	22	29	421
04:45 PM	0	101	2	103	53	7	57	117	4	137	1	142	3	0	16	19	381
Total	4	440	20	464	209	27	233	469	28	568	6	602	21	5	62	88	1623
05:00 PM	0	114	1	115	45	3	56	104	6	145	1	152	2	1	19	22	393
05:15 PM	1	95	2	98	50	5	66	121	10	153	1	164	6	0	10	16	399
05:30 PM	2	100	2	104	42	10	71	123	7	130	0	137	6	0	15	21	385
05:45 PM	1	72	6	79	39	7	35	81	2	112	1	115	0	0	10	10	285
Total	4	381	11	396	176	25	228	429	25	540	3	568	14	1	54	69	1462
Grand Total	8	821	31	860	385	52	461	898	53	1108	9	1170	35	6	116	157	3085
Apprch %	0.9	95.5	3.6		42.9	5.8	51.3		4.5	94.7	0.8		22.3	3.8	73.9		
Total %	0.3	26.6	1	27.9	12.5	1.7	14.9	29.1	1.7	35.9	0.3	37.9	1.1	0.2	3.8	5.1	

	Indian Canyon Drive Southbound				20th Avenue Westbound				Indian Canyon Drive Northbound				20th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**2**	**125**	5	**132**	53	3	61	117	**12**	**150**	**2**	**164**	3	1	10	14	**427**
04:15 PM	2	98	6	106	44	**9**	52	105	10	145	2	157	**9**	**3**	14	26	394
04:30 PM	0	116	**7**	123	**59**	8	**63**	**130**	2	136	1	139	6	1	**22**	**29**	421
04:45 PM	0	101	2	103	53	7	57	117	4	137	1	142	3	0	16	19	381
Total Volume	4	440	20	464	209	27	233	469	28	568	6	602	21	5	62	88	1623
% App. Total	0.9	94.8	4.3		44.6	5.8	49.7		4.7	94.4	1		23.9	5.7	70.5		
PHF	.500	.880	.714	.879	.886	.750	.925	.902	.583	.947	.750	.918	.583	.417	.705	.759	.950

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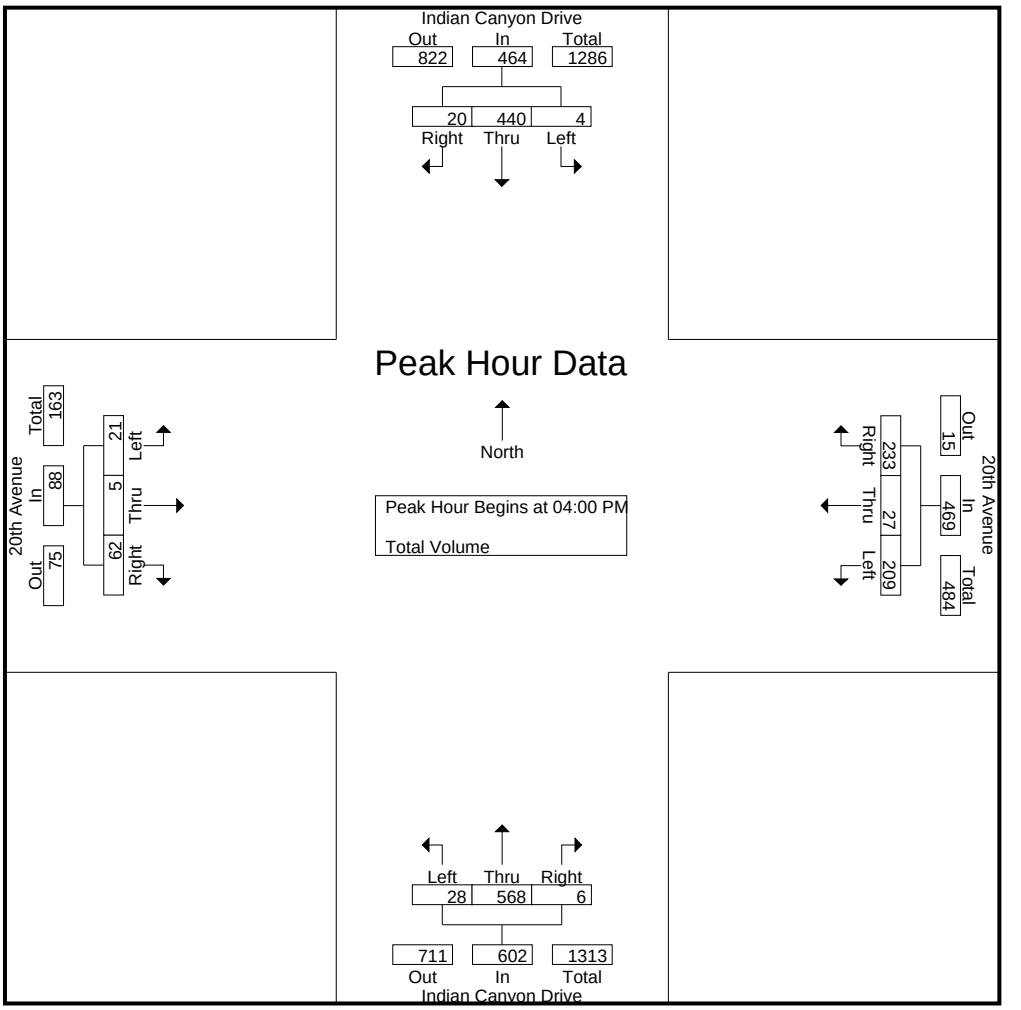
Weather: Clear

File Name : 04_DHS_IC_20th PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	**2**	**125**	5	**132**	**59**	**8**	63	**130**	**12**	**150**	**2**	**164**	**9**	**3**	14	26
+15 mins.	2	98	6	106	53	7	57	117	10	145	2	157	6	1	**22**	**29**
+30 mins.	0	116	**7**	123	45	3	56	104	2	136	1	139	3	0	16	19
+45 mins.	0	101	2	103	50	5	**66**	121	4	137	1	142	2	1	19	22
Total Volume	4	440	20	464	207	23	242	472	28	568	6	602	20	5	71	96
% App. Total	0.9	94.8	4.3		43.9	4.9	51.3		4.7	94.4	1		20.8	5.2	74	
PHF	.500	.880	.714	.879	.877	.719	.917	.908	.583	.947	.750	.918	.556	.417	.807	.828

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: I-10 Westbound On Ramps
Weather: Clear

File Name : 05_DHS_IC_10W AM
Site Code : 05122491
Start Date : 5/17/2022

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				I-10 Westbound On Ramp Westbound				Indian Canyon Drive Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	239	11	250	0	0	0	0	0	67	15	82	0	0	0	0	332
07:15 AM	0	279	11	290	0	0	0	0	0	73	12	85	0	0	0	0	375
07:30 AM	0	301	19	320	0	0	0	0	0	57	25	82	0	0	0	0	402
07:45 AM	0	290	11	301	0	0	0	0	0	94	22	116	0	0	0	0	417
Total	0	1109	52	1161	0	0	0	0	0	291	74	365	0	0	0	0	1526
08:00 AM	0	248	17	265	0	0	0	0	0	83	25	108	0	0	0	0	373
08:15 AM	0	216	13	229	0	0	0	0	0	91	21	112	0	0	0	0	341
08:30 AM	0	234	15	249	0	0	0	0	0	85	17	102	0	0	0	0	351
08:45 AM	0	168	9	177	0	0	0	0	0	91	19	110	0	0	0	0	287
Total	0	866	54	920	0	0	0	0	0	350	82	432	0	0	0	0	1352
Grand Total	0	1975	106	2081	0	0	0	0	0	641	156	797	0	0	0	0	2878
Apprch %	0	94.9	5.1		0	0	0		0	80.4	19.6		0	0	0		
Total %	0	68.6	3.7	72.3	0	0	0	0	0	22.3	5.4	27.7	0	0	0	0	

	Indian Canyon Drive Southbound				I-10 Westbound On Ramp Westbound				Indian Canyon Drive Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	279	11	290	0	0	0	0	0	73	12	85	0	0	0	0	375
07:30 AM	0	**301**	**19**	**320**	0	0	0	0	0	57	**25**	82	0	0	0	0	402
07:45 AM	0	290	11	301	0	0	0	0	0	**94**	22	**116**	0	0	0	0	**417**
08:00 AM	0	248	17	265	0	0	0	0	0	83	25	108	0	0	0	0	373
Total Volume	0	1118	58	1176	0	0	0	0	0	307	84	391	0	0	0	0	1567
% App. Total	0	95.1	4.9		0	0	0		0	78.5	21.5		0	0	0		
PHF	.000	.929	.763	.919	.000	.000	.000	.000	.000	.816	.840	.843	.000	.000	.000	.000	.939

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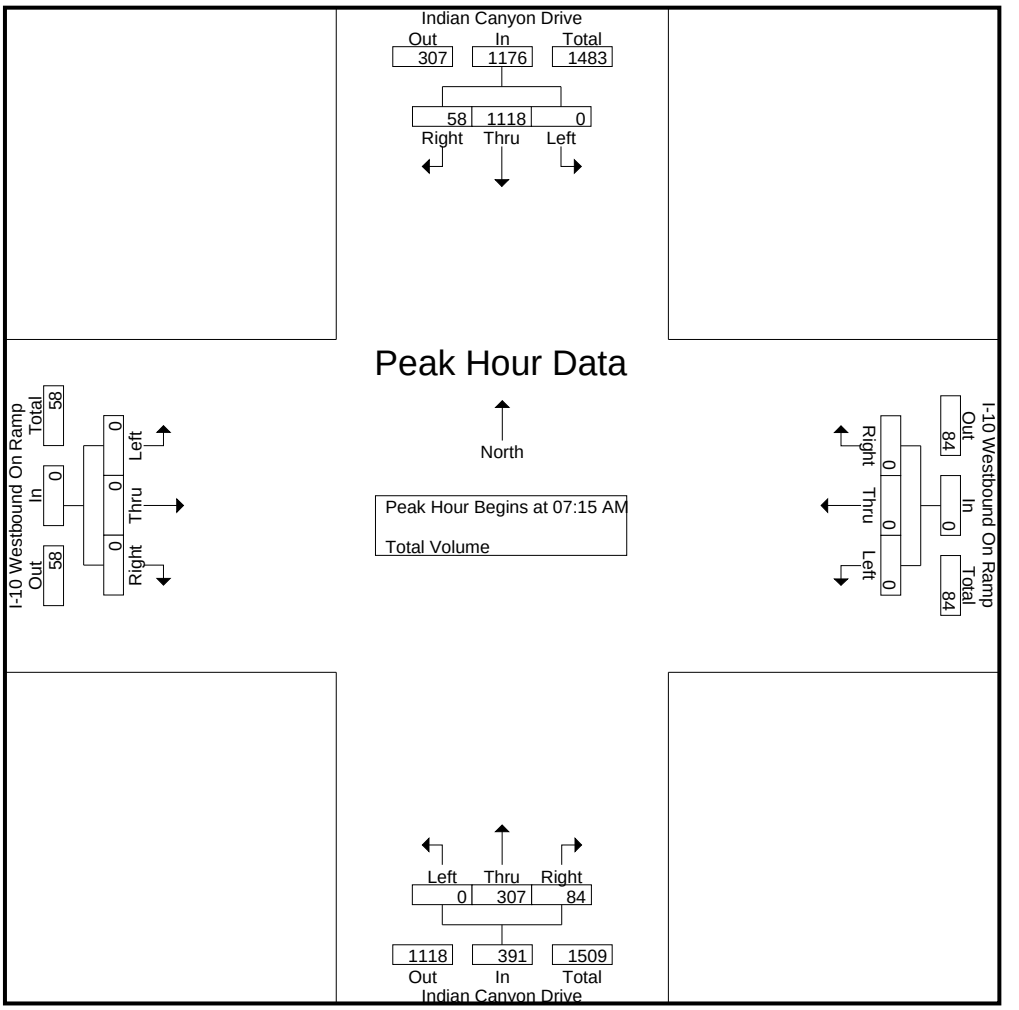
City of Palm Springs
N/S: Indian Canyon Drive
E/W: I-10 Westbound On Ramps
Weather: Clear

File Name : 05_DHS_IC_10W AM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:45 AM				07:00 AM			
+0 mins.	0	279	11	290	0	0	0	0	0	**94**	22	**116**	0	0	0	0
+15 mins.	0	**301**	**19**	**320**	0	0	0	0	0	83	**25**	108	0	0	0	0
+30 mins.	0	290	11	301	0	0	0	0	0	91	21	112	0	0	0	0
+45 mins.	0	248	17	265	0	0	0	0	0	85	17	102	0	0	0	0
Total Volume	0	1118	58	1176	0	0	0	0	0	353	85	438	0	0	0	0
% App. Total	0	95.1	4.9		0	0	0		0	80.6	19.4		0	0	0	
PHF	.000	.929	.763	.919	.000	.000	.000	.000	.000	.939	.850	.944	.000	.000	.000	.000

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: I-10 Westbound On Ramps
Weather: Clear

File Name : 05_DHS_IC_10W PM
Site Code : 05122491
Start Date : 5/17/2022

Groups Printed- Total Volume

	Indian Canyon Drive Southbound				I-10 Westbound On Ramp Westbound				Indian Canyon Drive Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	165	24	189	0	0	0	0	0	163	44	207	0	0	0	0	396
04:15 PM	0	132	25	157	0	0	0	0	0	151	40	191	0	0	0	0	348
04:30 PM	0	167	26	193	0	0	0	0	0	138	36	174	0	0	0	0	367
04:45 PM	0	151	19	170	0	0	0	0	0	136	47	183	0	0	0	0	353
Total	0	615	94	709	0	0	0	0	0	588	167	755	0	0	0	0	1464
05:00 PM	0	149	30	179	0	0	0	0	0	156	37	193	0	0	0	0	372
05:15 PM	0	135	20	155	0	0	0	0	0	161	36	197	0	0	0	0	352
05:30 PM	0	129	27	156	0	0	0	0	0	137	27	164	0	0	0	0	320
05:45 PM	0	106	16	122	0	0	0	0	0	112	23	135	0	0	0	0	257
Total	0	519	93	612	0	0	0	0	0	566	123	689	0	0	0	0	1301
Grand Total	0	1134	187	1321	0	0	0	0	0	1154	290	1444	0	0	0	0	2765
Apprch %	0	85.8	14.2		0	0	0		0	79.9	20.1		0	0	0		
Total %	0	41	6.8	47.8	0	0	0	0	0	41.7	10.5	52.2	0	0	0	0	

	Indian Canyon Drive Southbound				I-10 Westbound On Ramp Westbound				Indian Canyon Drive Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	165	24	189	0	0	0	0	0	**163**	44	**207**	0	0	0	0	**396**
04:15 PM	0	132	25	157	0	0	0	0	0	151	40	191	0	0	0	0	348
04:30 PM	0	**167**	**26**	**193**	0	0	0	0	0	138	36	174	0	0	0	0	367
04:45 PM	0	151	19	170	0	0	0	0	0	136	**47**	183	0	0	0	0	353
Total Volume	0	615	94	709	0	0	0	0	0	588	167	755	0	0	0	0	1464
% App. Total	0	86.7	13.3		0	0	0		0	77.9	22.1		0	0	0		
PHF	.000	.921	.904	.918	.000	.000	.000	.000	.000	.902	.888	.912	.000	.000	.000	.000	.924

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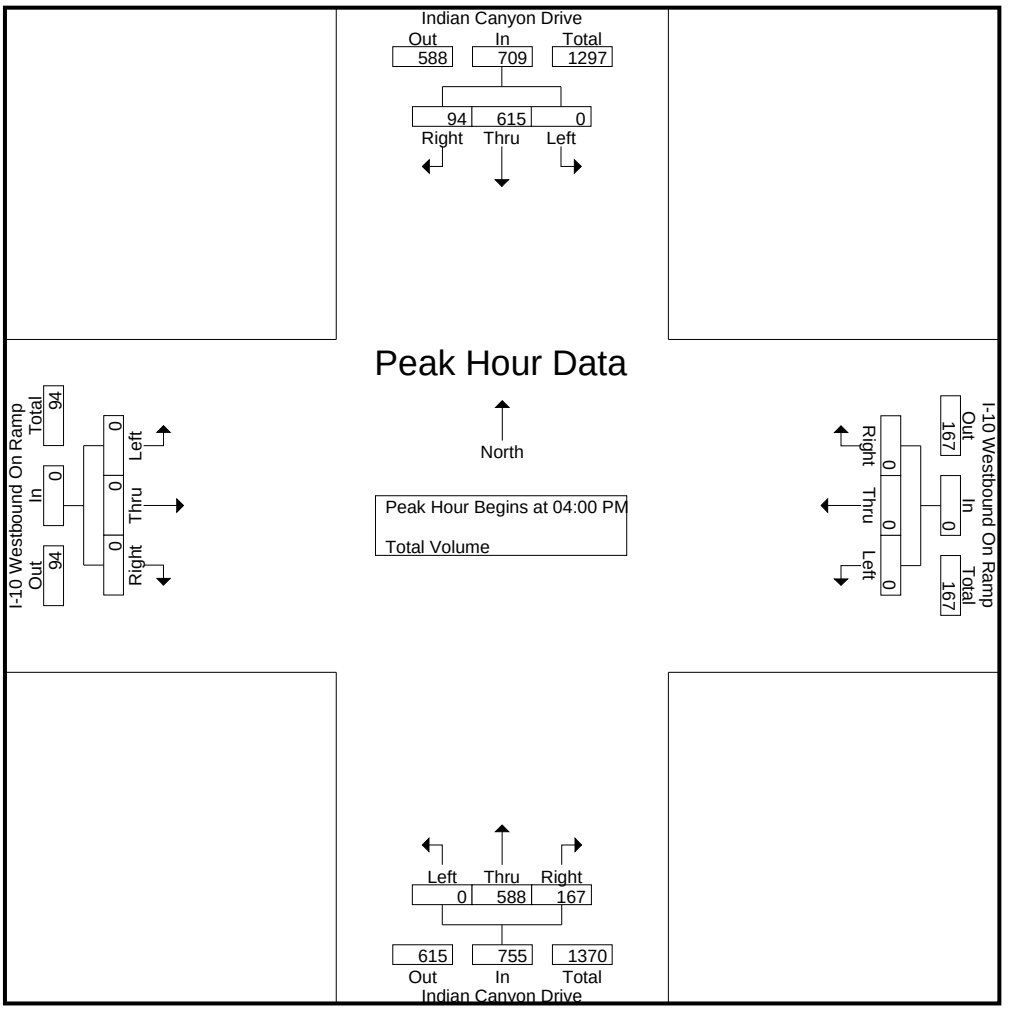
City of Palm Springs
N/S: Indian Canyon Drive
E/W: I-10 Westbound On Ramps
Weather: Clear

File Name : 05_DHS_IC_10W PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	165	24	189	0	0	0	0	0	**163**	44	**207**	0	0	0	0
+15 mins.	0	132	25	157	0	0	0	0	0	151	40	191	0	0	0	0
+30 mins.	0	**167**	**26**	**193**	0	0	0	0	0	138	36	174	0	0	0	0
+45 mins.	0	151	19	170	0	0	0	0	0	136	**47**	183	0	0	0	0
Total Volume	0	615	94	709	0	0	0	0	0	588	167	755	0	0	0	0
% App. Total	0	86.7	13.3		0	0	0		0	77.9	22.1		0	0	0	
PHF	.000	.921	.904	.918	.000	.000	.000	.000	.000	.902	.888	.912	.000	.000	.000	.000

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: I-10 Eastbound On Ramp
Weather: Clear

File Name : 06_DHS_IC_10E AM
Site Code : 05122491
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Groups Printed- Total Volume

	Indian Canyon Drive Southbound			I-10 Eastbound On Ramp Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	246	246	0	0	0	83	62	145	391
07:15 AM	0	285	285	0	0	0	84	75	159	444
07:30 AM	0	308	308	0	0	0	82	71	153	461
07:45 AM	0	297	297	0	0	0	115	69	184	481
Total	0	1136	1136	0	0	0	364	277	641	1777
08:00 AM	0	256	256	0	0	0	107	49	156	412
08:15 AM	0	218	218	0	0	0	110	54	164	382
08:30 AM	0	241	241	0	0	0	100	65	165	406
08:45 AM	0	170	170	0	0	0	110	61	171	341
Total	0	885	885	0	0	0	427	229	656	1541
Grand Total	0	2021	2021	0	0	0	791	506	1297	3318
Apprch %	0	100		0	0		61	39		
Total %	0	60.9	60.9	0	0	0	23.8	15.3	39.1	

	Indian Canyon Drive Southbound			I-10 Eastbound On Ramp Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	285	285	0	0	0	84	**75**	159	444
07:30 AM	0	**308**	**308**	0	0	0	82	71	153	461
07:45 AM	0	297	297	0	0	0	**115**	69	**184**	**481**
08:00 AM	0	256	256	0	0	0	107	49	156	412
Total Volume	0	1146	1146	0	0	0	388	264	652	1798
% App. Total	0	100		0	0		59.5	40.5		
PHF	.000	.930	.930	.000	.000	.000	.843	.880	.886	.935

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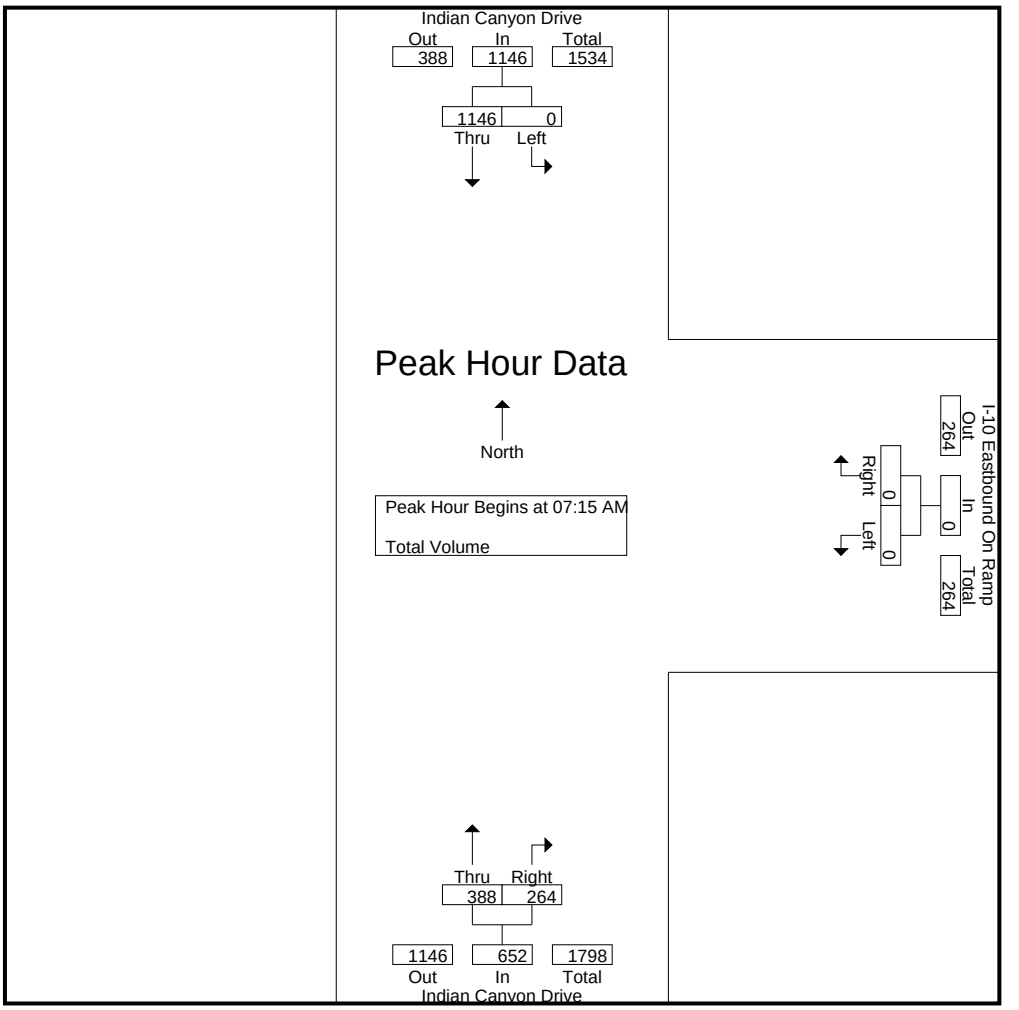

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			07:45 AM		
+0 mins.	0	285	285	0	0	0	**115**	**69**	**184**
+15 mins.	0	**308**	**308**	0	0	0	107	49	156
+30 mins.	0	297	297	0	0	0	110	54	164
+45 mins.	0	256	256	0	0	0	100	65	165
Total Volume	0	1146	1146	0	0	0	432	237	669
% App. Total	0	100		0	0		64.6	35.4	
PHF	.000	.930	.930	.000	.000	.000	.939	.859	.909

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City of Palm Springs
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Weather: Clear

File Name : 06_DHS_IC_10E PM
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Groups Printed- Total Volume

	Indian Canyon Drive Southbound			I-10 Eastbound On Ramp Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	176	176	0	0	0	212	70	282	458
04:15 PM	0	141	141	0	0	0	187	91	278	419
04:30 PM	0	176	176	0	0	0	172	65	237	413
04:45 PM	0	149	149	0	0	0	185	63	248	397
Total	0	642	642	0	0	0	756	289	1045	1687
05:00 PM	0	157	157	0	0	0	191	79	270	427
05:15 PM	0	144	144	0	0	0	197	49	246	390
05:30 PM	0	139	139	0	0	0	162	54	216	355
05:45 PM	0	108	108	0	0	0	136	41	177	285
Total	0	548	548	0	0	0	686	223	909	1457
Grand Total	0	1190	1190	0	0	0	1442	512	1954	3144
Apprch %	0	100		0	0		73.8	26.2		
Total %	0	37.8	37.8	0	0	0	45.9	16.3	62.2	

	Indian Canyon Drive Southbound			I-10 Eastbound On Ramp Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	**176**	**176**	0	0	0	**212**	70	**282**	**458**
04:15 PM	0	141	141	0	0	0	187	**91**	278	419
04:30 PM	0	176	176	0	0	0	172	65	237	413
04:45 PM	0	149	149	0	0	0	185	63	248	397
Total Volume	0	642	642	0	0	0	756	289	1045	1687
% App. Total	0	100		0	0		72.3	27.7		
PHF	.000	.912	.912	.000	.000	.000	.892	.794	.926	.921

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N/S: Indian Canyon Drive
E/W: I-10 Eastbound On Ramp
Weather: Clear

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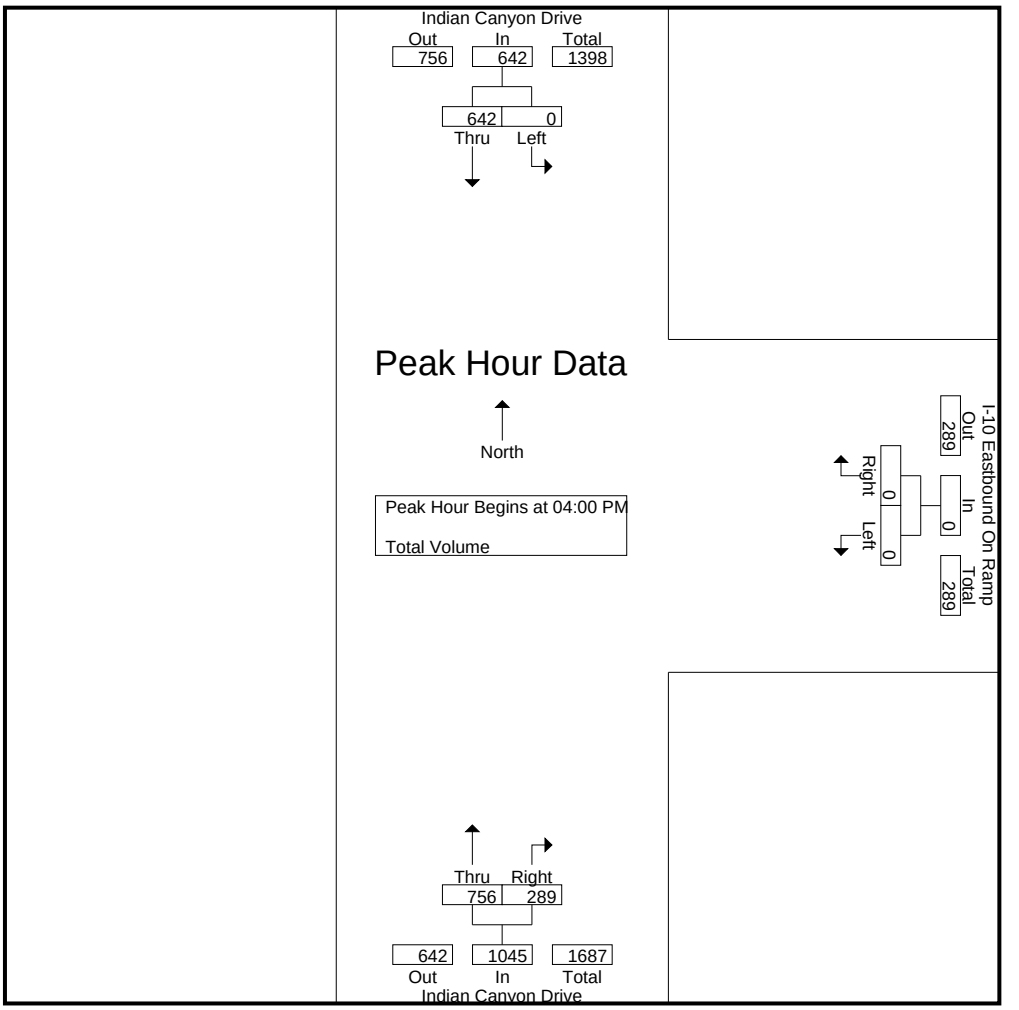

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	**176**	**176**	0	0	0	**212**	70	**282**
+15 mins.	0	141	141	0	0	0	187	**91**	278
+30 mins.	0	176	176	0	0	0	172	65	237
+45 mins.	0	149	149	0	0	0	185	63	248
Total Volume	0	642	642	0	0	0	756	289	1045
% App. Total	0	100		0	0		72.3	27.7	
PHF	.000	.912	.912	.000	.000	.000	.892	.794	.926

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: Garnet Avenue
Weather: Clear

File Name : 07_PLS_IC_Garnet AM
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Groups Printed- Total Volume

	Indian Canyon Drive Southbound				Garnet Avenue Westbound				Indian Canyon Drive Northbound				Garnet Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	28	157	44	229	4	2	5	11	0	81	5	86	25	10	110	145	471
07:15 AM	27	191	42	260	1	0	0	1	6	90	4	100	32	5	74	111	472
07:30 AM	34	190	41	265	2	1	0	3	3	82	4	89	32	4	55	91	448
07:45 AM	23	235	32	290	5	2	1	8	6	122	3	131	41	5	45	91	520
Total	112	773	159	1044	12	5	6	23	15	375	16	406	130	24	284	438	1911
08:00 AM	31	200	27	258	2	1	2	5	6	106	2	114	19	5	36	60	437
08:15 AM	21	158	24	203	3	1	3	7	9	108	1	118	27	2	28	57	385
08:30 AM	28	172	18	218	3	3	2	8	5	103	3	111	32	7	30	69	406
08:45 AM	22	113	40	175	4	4	2	10	4	112	4	120	34	6	20	60	365
Total	102	643	109	854	12	9	9	30	24	429	10	463	112	20	114	246	1593
Grand Total	214	1416	268	1898	24	14	15	53	39	804	26	869	242	44	398	684	3504
Apprch %	11.3	74.6	14.1		45.3	26.4	28.3		4.5	92.5	3		35.4	6.4	58.2		
Total %	6.1	40.4	7.6	54.2	0.7	0.4	0.4	1.5	1.1	22.9	0.7	24.8	6.9	1.3	11.4	19.5	

	Indian Canyon Drive Southbound				Garnet Avenue Westbound				Indian Canyon Drive Northbound				Garnet Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	28	157	**44**	229	4	**2**	**5**	**11**	0	81	**5**	86	25	**10**	**110**	**145**	471
07:15 AM	27	191	42	260	1	0	0	1	**6**	90	4	100	32	5	74	111	472
07:30 AM	**34**	190	41	265	2	1	0	3	3	82	4	89	32	4	55	91	448
07:45 AM	23	**235**	32	**290**	**5**	2	1	8	6	**122**	3	**131**	**41**	5	45	91	**520**
Total Volume	112	773	159	1044	12	5	6	23	15	375	16	406	130	24	284	438	1911
% App. Total	10.7	74	15.2		52.2	21.7	26.1		3.7	92.4	3.9		29.7	5.5	64.8		
PHF	.824	.822	.903	.900	.600	.625	.300	.523	.625	.768	.800	.775	.793	.600	.645	.755	.919

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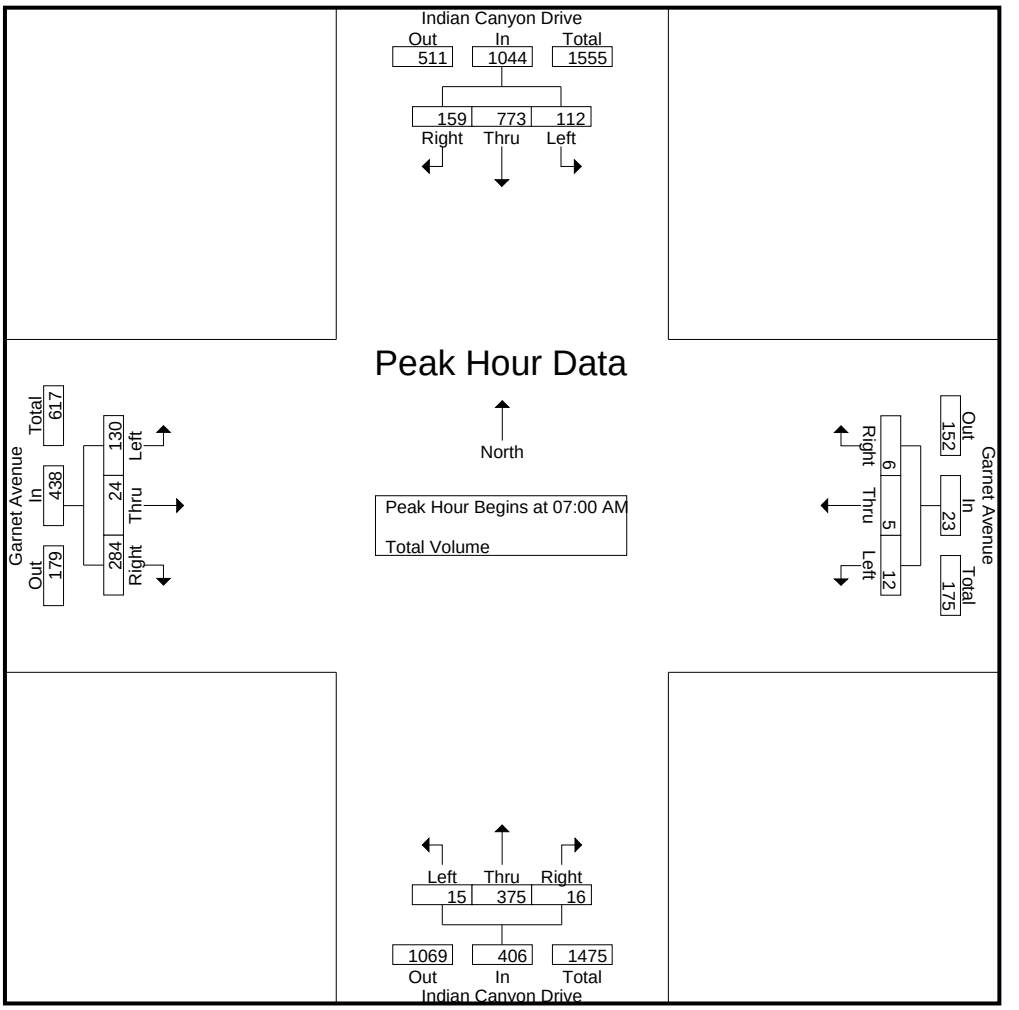

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:45 AM				07:00 AM			
+0 mins.	27	191	**42**	260	2	1	2	5	6	**122**	**3**	**131**	25	**10**	**110**	**145**
+15 mins.	**34**	190	41	265	3	1	**3**	7	6	106	2	114	32	5	74	111
+30 mins.	23	**235**	32	**290**	3	3	2	8	**9**	108	1	118	32	4	55	91
+45 mins.	31	200	27	258	**4**	**4**	2	**10**	5	103	3	111	**41**	5	45	91
Total Volume	115	816	142	1073	12	9	9	30	26	439	9	474	130	24	284	438
% App. Total	10.7	76	13.2		40	30	30		5.5	92.6	1.9		29.7	5.5	64.8	
PHF	.846	.868	.845	.925	.750	.563	.750	.750	.722	.900	.750	.905	.793	.600	.645	.755

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N/S: Indian Canyon Drive
E/W: Garnet Avenue
Weather: Clear

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Site Code : 05122491
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Groups Printed- Total Volume

	Indian Canyon Drive Southbound				Garnet Avenue Westbound				Indian Canyon Drive Northbound				Garnet Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	28	103	24	155	1	1	3	5	9	199	0	208	49	4	13	66	434
04:15 PM	37	76	24	137	2	1	2	5	6	193	4	203	45	3	12	60	405
04:30 PM	21	99	34	154	1	1	0	2	9	168	3	180	38	3	17	58	394
04:45 PM	33	109	25	167	0	0	1	1	7	175	4	186	30	6	12	48	402
Total	119	387	107	613	4	3	6	13	31	735	11	777	162	16	54	232	1635
05:00 PM	33	84	29	146	3	0	4	7	7	198	4	209	33	2	12	47	409
05:15 PM	20	80	24	124	1	0	0	1	7	180	5	192	31	1	23	55	372
05:30 PM	27	88	22	137	0	1	4	5	6	150	4	160	33	3	21	57	359
05:45 PM	12	78	11	101	2	0	2	4	7	120	3	130	35	0	14	49	284
Total	92	330	86	508	6	1	10	17	27	648	16	691	132	6	70	208	1424
Grand Total	211	717	193	1121	10	4	16	30	58	1383	27	1468	294	22	124	440	3059
Apprch %	18.8	64	17.2		33.3	13.3	53.3		4	94.2	1.8		66.8	5	28.2		
Total %	6.9	23.4	6.3	36.6	0.3	0.1	0.5	1	1.9	45.2	0.9	48	9.6	0.7	4.1	14.4	

	Indian Canyon Drive Southbound				Garnet Avenue Westbound				Indian Canyon Drive Northbound				Garnet Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	28	103	24	155	1	**1**	**3**	**5**	**9**	**199**	0	**208**	**49**	4	13	**66**	**434**
04:15 PM	**37**	76	24	137	**2**	1	2	5	6	193	**4**	203	45	3	12	60	405
04:30 PM	21	99	**34**	154	1	1	0	2	9	168	3	180	38	3	**17**	58	394
04:45 PM	33	**109**	25	**167**	0	0	1	1	7	175	4	186	30	**6**	12	48	402
Total Volume	119	387	107	613	4	3	6	13	31	735	11	777	162	16	54	232	1635
% App. Total	19.4	63.1	17.5		30.8	23.1	46.2		4	94.6	1.4		69.8	6.9	23.3		
PHF	.804	.888	.787	.918	.500	.750	.500	.650	.861	.923	.688	.934	.827	.667	.794	.879	.942

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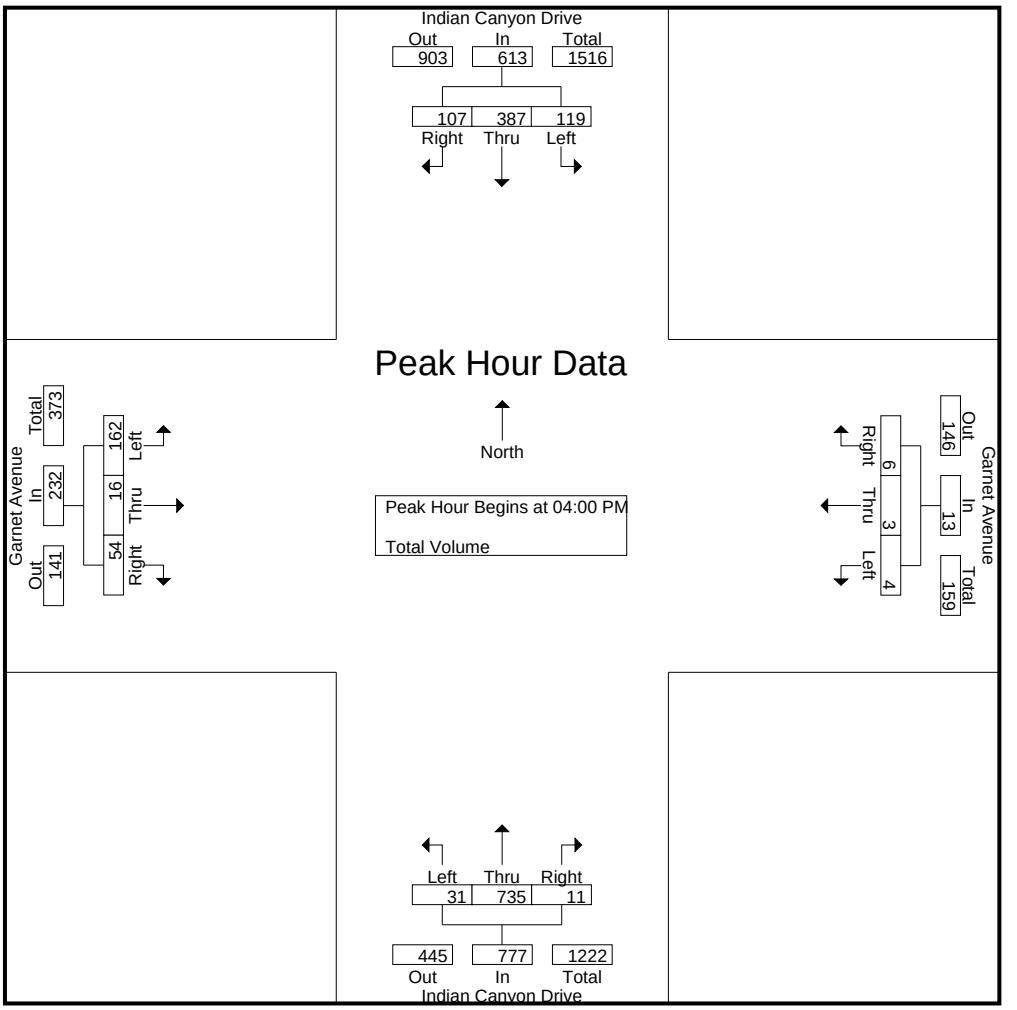

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:15 PM				04:00 PM			
+0 mins.	28	103	24	155	**3**	0	**4**	**7**	6	193	**4**	203	**49**	4	13	**66**
+15 mins.	**37**	76	24	137	1	0	0	1	**9**	168	3	180	45	3	12	60
+30 mins.	21	99	**34**	154	0	**1**	4	5	7	175	4	186	38	3	**17**	58
+45 mins.	33	**109**	25	**167**	2	0	2	4	7	**198**	4	**209**	30	**6**	12	48
Total Volume	119	387	107	613	6	1	10	17	29	734	15	778	162	16	54	232
% App. Total	19.4	63.1	17.5		35.3	5.9	58.8		3.7	94.3	1.9		69.8	6.9	23.3	
PHF	.804	.888	.787	.918	.500	.250	.625	.607	.806	.927	.938	.931	.827	.667	.794	.879

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City of Palm Springs
N/S: I-10 Eastbound Ramps
E/W: Garnet Avenue
Weather: Clear

File Name : 08_PLS_10E_Garnet AM
Site Code : 05122491
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Groups Printed- Total Volume

	I-10 Eastbound Ramps Southbound			Garnet Avenue Westbound			Garnet Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	162	2	164	5	49	54	3	8	11	229
07:15 AM	81	2	83	15	47	62	2	7	9	154
07:30 AM	70	5	75	8	46	54	1	12	13	142
07:45 AM	75	2	77	10	24	34	1	5	6	117
Total	388	11	399	38	166	204	7	32	39	642
08:00 AM	58	5	63	10	32	42	5	10	15	120
08:15 AM	42	0	42	12	28	40	3	10	13	95
08:30 AM	55	2	57	12	11	23	1	5	6	86
08:45 AM	49	2	51	21	34	55	2	14	16	122
Total	204	9	213	55	105	160	11	39	50	423
Grand Total	592	20	612	93	271	364	18	71	89	1065
Apprch %	96.7	3.3		25.5	74.5		20.2	79.8		
Total %	55.6	1.9	57.5	8.7	25.4	34.2	1.7	6.7	8.4	

	I-10 Eastbound Ramps Southbound			Garnet Avenue Westbound			Garnet Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**162**	2	**164**	5	**49**	54	**3**	8	11	**229**
07:15 AM	81	2	83	**15**	47	**62**	2	7	9	154
07:30 AM	70	**5**	75	8	46	54	1	**12**	**13**	142
07:45 AM	75	2	77	10	24	34	1	5	6	117
Total Volume	388	11	399	38	166	204	7	32	39	642
% App. Total	97.2	2.8		18.6	81.4		17.9	82.1		
PHF	.599	.550	.608	.633	.847	.823	.583	.667	.750	.701

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City of Palm Springs
N/S: I-10 Eastbound Ramps
E/W: Garnet Avenue
Weather: Clear

File Name : 08_PLS_10E_Garnet AM
Site Code : 05122491
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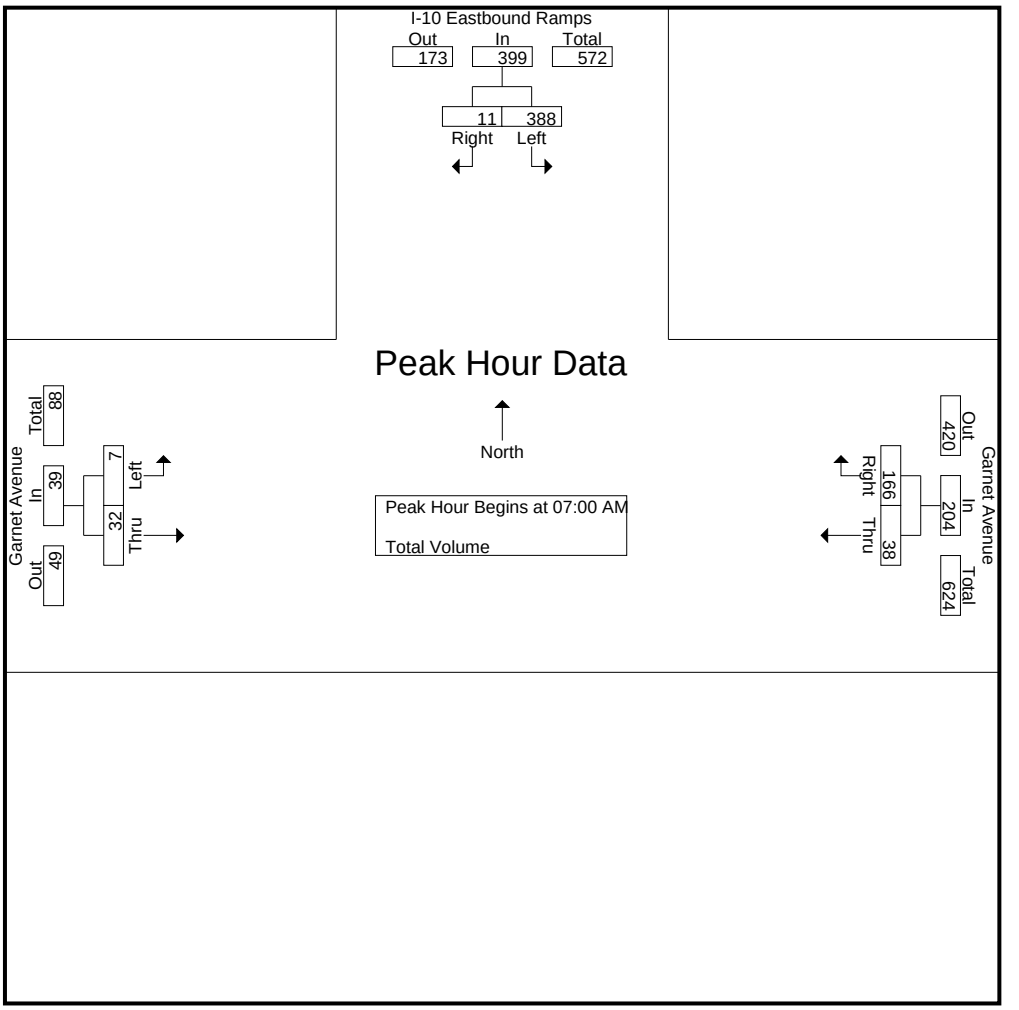

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			08:00 AM		
+0 mins.	**162**	2	**164**	5	**49**	54	**5**	10	15
+15 mins.	81	2	83	**15**	47	**62**	3	10	13
+30 mins.	70	**5**	75	8	46	54	1	5	6
+45 mins.	75	2	77	10	24	34	2	**14**	**16**
Total Volume	388	11	399	38	166	204	11	39	50
% App. Total	97.2	2.8		18.6	81.4		22	78	
PHF	.599	.550	.608	.633	.847	.823	.550	.696	.781

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City of Palm Springs
N/S: I-10 Eastbound Ramps
E/W: Garnet Avenue
Weather: Clear

File Name : 08_PLS_10E_Garnet PM
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Groups Printed- Total Volume

	I-10 Eastbound Ramps Southbound			Garnet Avenue Westbound			Garnet Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	52	5	57	17	17	34	7	12	19	110
04:15 PM	38	2	40	13	23	36	3	11	14	90
04:30 PM	41	1	42	15	23	38	9	13	22	102
04:45 PM	27	2	29	10	29	39	0	11	11	79
Total	158	10	168	55	92	147	19	47	66	381
05:00 PM	33	3	36	12	22	34	11	10	21	91
05:15 PM	40	1	41	13	15	28	2	9	11	80
05:30 PM	36	2	38	8	23	31	6	10	16	85
05:45 PM	21	0	21	5	13	18	3	5	8	47
Total	130	6	136	38	73	111	22	34	56	303
Grand Total	288	16	304	93	165	258	41	81	122	684
Apprch %	94.7	5.3		36	64		33.6	66.4		
Total %	42.1	2.3	44.4	13.6	24.1	37.7	6	11.8	17.8	

	I-10 Eastbound Ramps Southbound			Garnet Avenue Westbound			Garnet Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**52**	**5**	**57**	**17**	17	34	7	12	19	**110**
04:15 PM	38	2	40	13	23	36	3	11	14	90
04:30 PM	41	1	42	15	23	38	**9**	**13**	**22**	102
04:45 PM	27	2	29	10	**29**	**39**	0	11	11	79
Total Volume	158	10	168	55	92	147	19	47	66	381
% App. Total	94	6		37.4	62.6		28.8	71.2		
PHF	.760	.500	.737	.809	.793	.942	.528	.904	.750	.866

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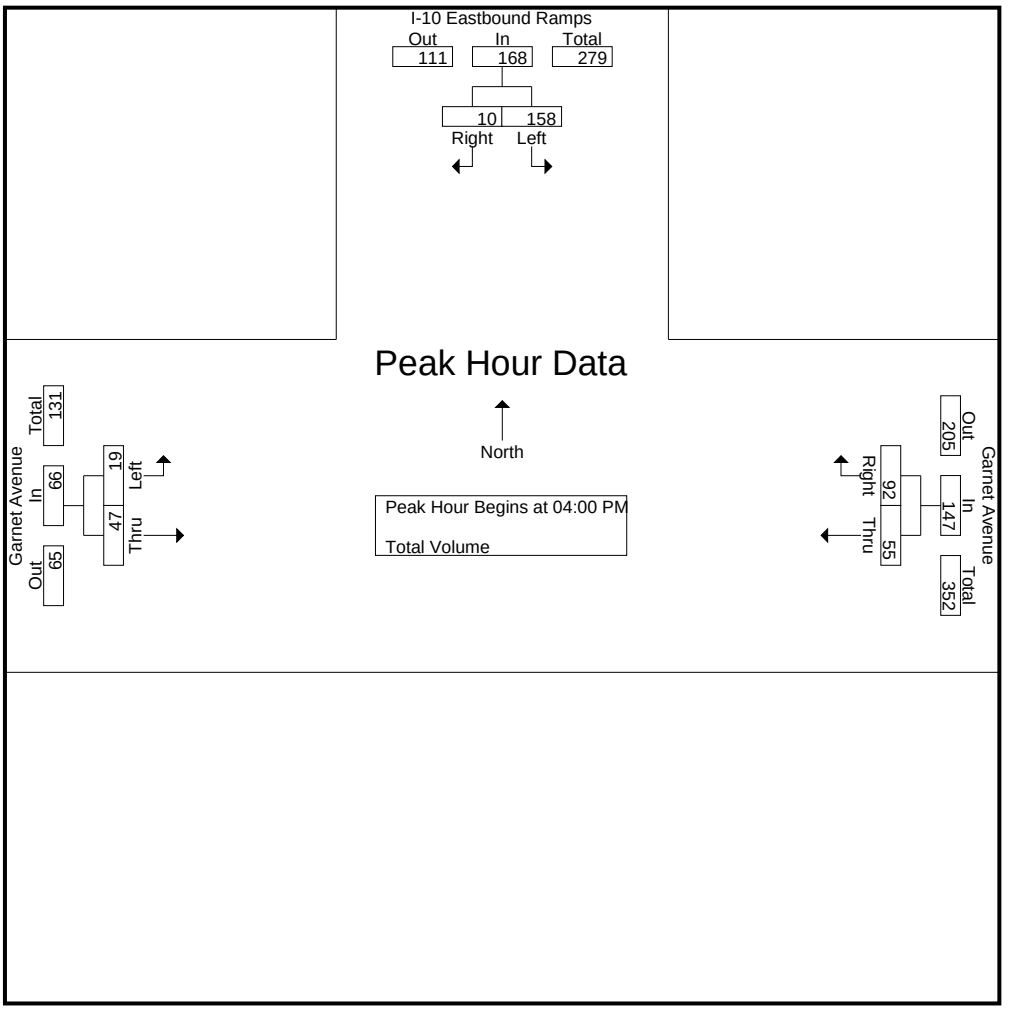
City of Palm Springs
N/S: I-10 Eastbound Ramps
E/W: Garnet Avenue
Weather: Clear

File Name : 08_PLS_10E_Garnet PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:15 PM		
+0 mins.	**52**	**5**	**57**	**17**	17	34	3	11	14
+15 mins.	38	2	40	13	23	36	9	**13**	**22**
+30 mins.	41	1	42	15	23	38	0	11	11
+45 mins.	27	2	29	10	**29**	**39**	**11**	10	21
Total Volume	158	10	168	55	92	147	23	45	68
% App. Total	94	6		37.4	62.6		33.8	66.2	
PHF	.760	.500	.737	.809	.793	.942	.523	.865	.773

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City of Palm Springs
N/S: I-10 Westbound Ramps
E/W: 20th Avenue
Weather: Clear

File Name : 09_DHS_10W_20th AM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

	20th Avenue Westbound			I-10 Westbound Ramps Northbound			20th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	6	72	1	73	0	0	0	79
07:15 AM	2	0	2	50	4	54	2	0	2	58
07:30 AM	2	8	10	70	2	72	1	0	1	83
07:45 AM	1	1	2	108	2	110	4	0	4	116
Total	5	15	20	300	9	309	7	0	7	336
08:00 AM	0	3	3	75	0	75	3	0	3	81
08:15 AM	0	3	3	68	3	71	0	0	0	74
08:30 AM	1	4	5	94	2	96	0	0	0	101
08:45 AM	0	1	1	60	0	60	2	0	2	63
Total	1	11	12	297	5	302	5	0	5	319
Grand Total	6	26	32	597	14	611	12	0	12	655
Apprch %	18.8	81.2		97.7	2.3		100	0		
Total %	0.9	4	4.9	91.1	2.1	93.3	1.8	0	1.8	

	20th Avenue Westbound			I-10 Westbound Ramps Northbound			20th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**1**	1	2	**108**	2	**110**	**4**	0	**4**	**116**
08:00 AM	0	3	3	75	0	75	3	0	3	81
08:15 AM	0	3	3	68	**3**	71	0	0	0	74
08:30 AM	1	**4**	**5**	94	2	96	0	0	0	101
Total Volume	2	11	13	345	7	352	7	0	7	372
% App. Total	15.4	84.6		98	2		100	0		
PHF	.500	.688	.650	.799	.583	.800	.438	.000	.438	.802

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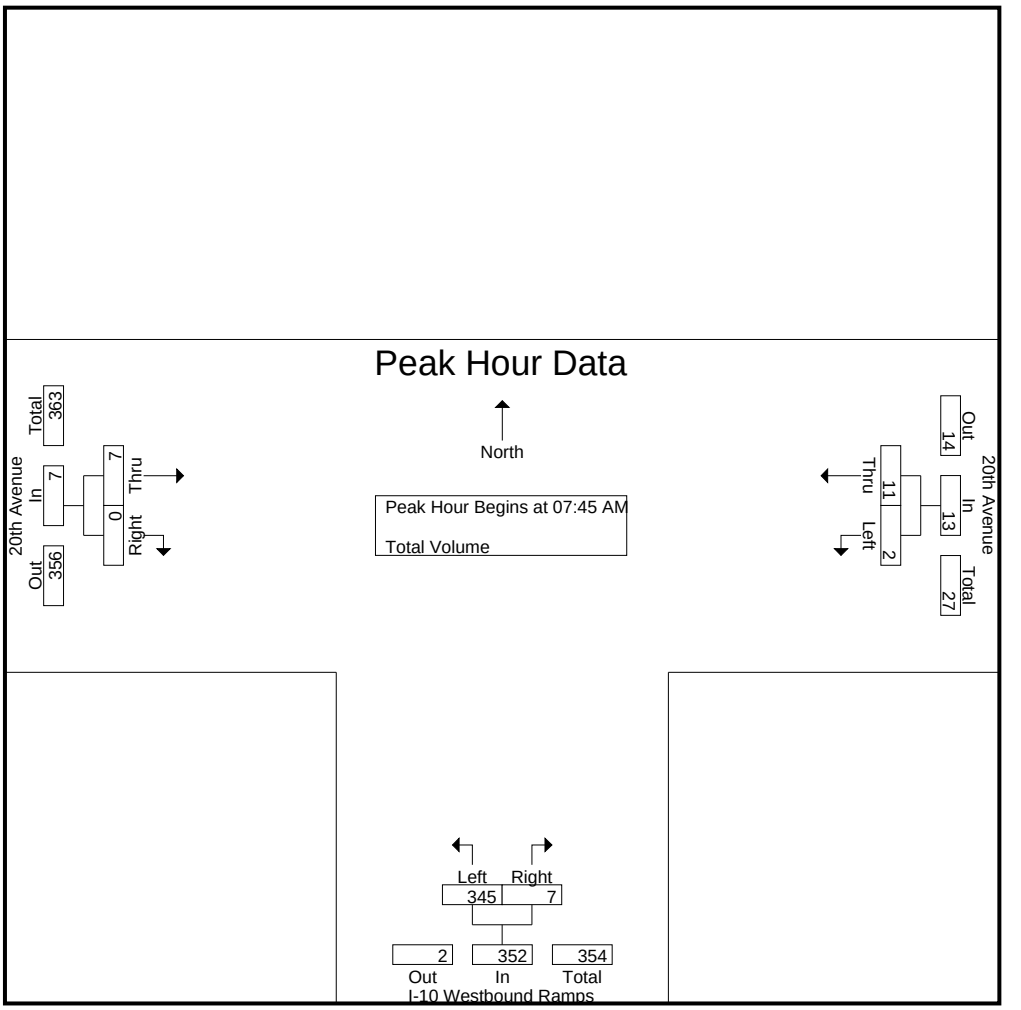
City of Palm Springs
N/S: I-10 Westbound Ramps
E/W: 20th Avenue
Weather: Clear

File Name : 09_DHS_10W_20th AM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:45 AM			07:15 AM		
+0 mins.	0	6	6	**108**	2	**110**	2	0	2
+15 mins.	**2**	0	2	75	0	75	1	0	1
+30 mins.	2	**8**	**10**	68	**3**	71	**4**	0	**4**
+45 mins.	1	1	2	94	2	96	3	0	3
Total Volume	5	15	20	345	7	352	10	0	10
% App. Total	25	75		98	2		100	0	
PHF	.625	.469	.500	.799	.583	.800	.625	.000	.625

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City of Palm Springs
N/S: I-10 Westbound Ramps
E/W: 20th Avenue
Weather: Clear

File Name : 09_DHS_10W_20th PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

	20th Avenue Westbound			I-10 Westbound Ramps Northbound			20th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	4	115	0	115	1	0	1	120
04:15 PM	2	3	5	87	2	89	2	0	2	96
04:30 PM	6	4	10	119	0	119	1	0	1	130
04:45 PM	5	6	11	113	3	116	1	0	1	128
Total	13	17	30	434	5	439	5	0	5	474
05:00 PM	2	4	6	88	2	90	1	0	1	97
05:15 PM	1	4	5	131	2	133	0	0	0	138
05:30 PM	1	2	3	115	0	115	0	0	0	118
05:45 PM	0	1	1	79	1	80	0	0	0	81
Total	4	11	15	413	5	418	1	0	1	434
Grand Total	17	28	45	847	10	857	6	0	6	908
Apprch %	37.8	62.2		98.8	1.2		100	0		
Total %	1.9	3.1	5	93.3	1.1	94.4	0.7	0	0.7	

	20th Avenue Westbound			I-10 Westbound Ramps Northbound			20th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	**6**	4	10	119	0	119	**1**	0	**1**	130
04:45 PM	5	**6**	**11**	113	**3**	116	1	0	1	128
05:00 PM	2	4	6	88	2	90	1	0	1	97
05:15 PM	1	4	5	**131**	2	**133**	0	0	0	**138**
Total Volume	14	18	32	451	7	458	3	0	3	493
% App. Total	43.8	56.2		98.5	1.5		100	0		
PHF	.583	.750	.727	.861	.583	.861	.750	.000	.750	.893

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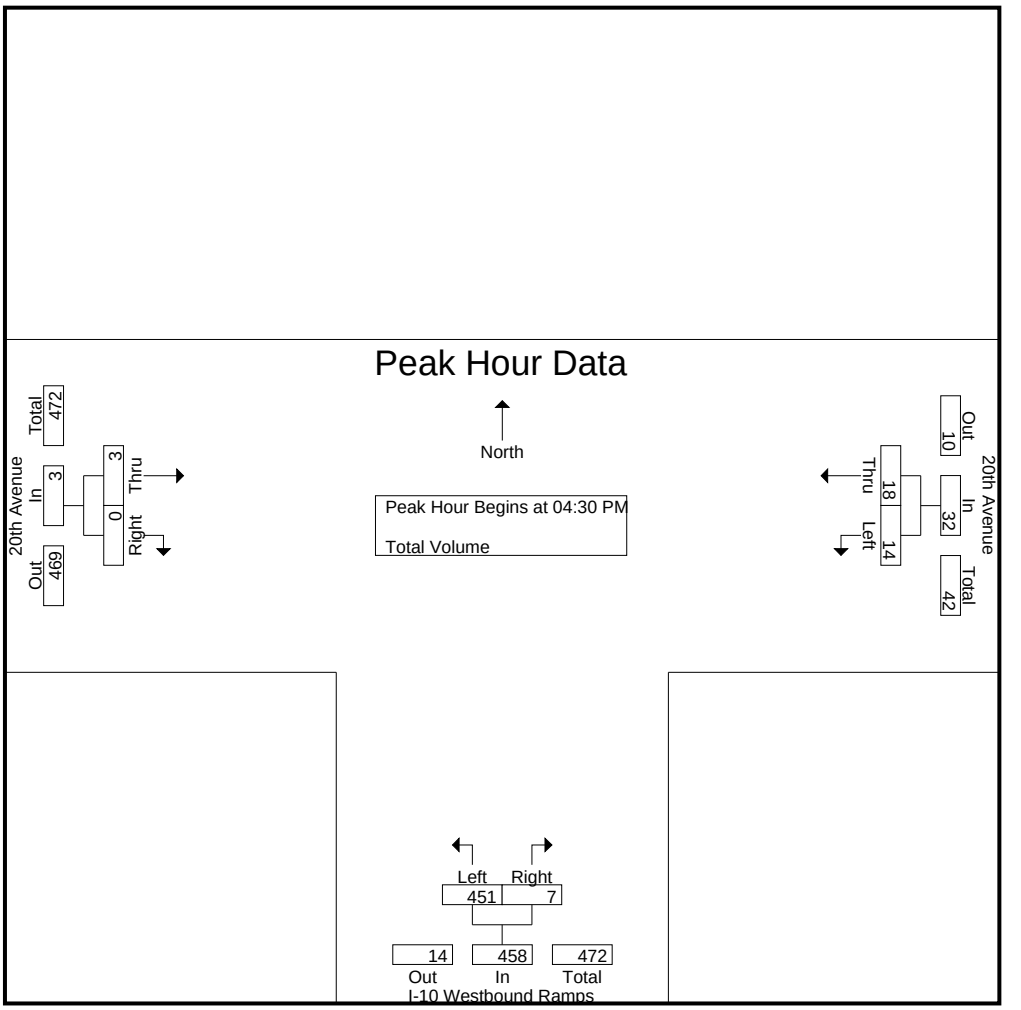
City of Palm Springs
N/S: I-10 Westbound Ramps
E/W: 20th Avenue
Weather: Clear

File Name : 09_DHS_10W_20th PM
Site Code : 05122491
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:30 PM			04:00 PM		
+0 mins.	2	3	5	119	0	119	1	0	1
+15 mins.	**6**	4	10	113	**3**	116	**2**	0	**2**
+30 mins.	5	**6**	**11**	88	2	90	1	0	1
+45 mins.	2	4	6	**131**	2	**133**	1	0	1
Total Volume	15	17	32	451	7	458	5	0	5
% App. Total	46.9	53.1		98.5	1.5		100	0	
PHF	.625	.708	.727	.861	.583	.861	.625	.000	.625

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City of Palm Springs
N/S: Newhall Street
E/W: 19th Avenue
Weather: Clear

File Name : 01_PLS_New_19th AM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 1

Groups Printed- Total Volume

	19th Avenue Westbound			Newhall Street Northbound			19th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	2	0	1	1	0	0	0	3
07:15 AM	2	3	5	0	0	0	0	0	0	5
07:30 AM	2	0	2	0	0	0	1	0	1	3
07:45 AM	1	3	4	0	0	0	0	0	0	4
Total	5	8	13	0	1	1	1	0	1	15
08:00 AM	1	3	4	0	0	0	1	0	1	5
08:15 AM	1	3	4	0	1	1	1	0	1	6
08:30 AM	0	3	3	0	0	0	3	0	3	6
08:45 AM	0	4	4	0	0	0	3	0	3	7
Total	2	13	15	0	1	1	8	0	8	24
Grand Total	7	21	28	0	2	2	9	0	9	39
Apprch %	25	75		0	100		100	0		
Total %	17.9	53.8	71.8	0	5.1	5.1	23.1	0	23.1	

	19th Avenue Westbound			Newhall Street Northbound			19th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	**1**	3	**4**	0	0	0	1	0	1	5
08:15 AM	1	3	4	0	**1**	**1**	1	0	1	6
08:30 AM	0	3	3	0	0	0	**3**	0	**3**	6
08:45 AM	0	**4**	4	0	0	0	3	0	3	**7**
Total Volume	2	13	15	0	1	1	8	0	8	24
% App. Total	13.3	86.7		0	100		100	0		
PHF	.500	.813	.938	.000	.250	.250	.667	.000	.667	.857

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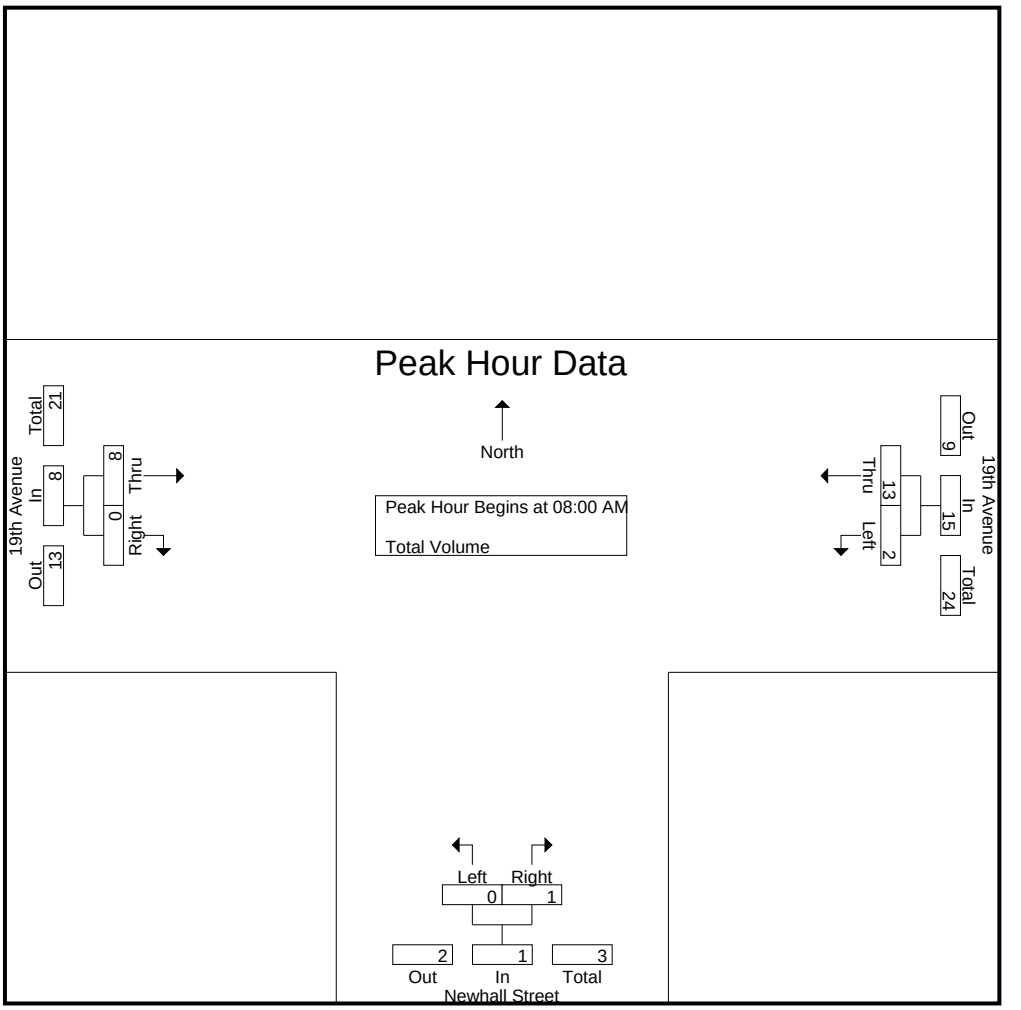
City of Palm Springs
N/S: Newhall Street
E/W: 19th Avenue
Weather: Clear

File Name : 01_PLS_New_19th AM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			08:00 AM		
+0 mins.	**2**	**3**	**5**	0	**1**	**1**	1	0	1
+15 mins.	2	0	2	0	0	0	1	0	1
+30 mins.	1	3	4	0	0	0	**3**	0	**3**
+45 mins.	1	3	4	0	0	0	3	0	3
Total Volume	6	9	15	0	1	1	8	0	8
% App. Total	40	60		0	100		100	0	
PHF	.750	.750	.750	.000	.250	.250	.667	.000	.667

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City of Palm Springs
N/S: Newhall Street
E/W: 19th Avenue
Weather: Clear

File Name : 01_PLS_New_19th PM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 1

Groups Printed- Total Volume

	19th Avenue Westbound			Newhall Street Northbound			19th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	3	4	0	0	0	6	0	6	10
04:15 PM	0	3	3	0	0	0	3	0	3	6
04:30 PM	1	1	2	0	2	2	3	0	3	7
04:45 PM	0	1	1	0	0	0	3	0	3	4
Total	2	8	10	0	2	2	15	0	15	27
05:00 PM	1	0	1	0	2	2	2	0	2	5
05:15 PM	0	1	1	0	0	0	2	0	2	3
05:30 PM	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	1	2	3	0	2	2	5	1	6	11
Grand Total	3	10	13	0	4	4	20	1	21	38
Apprch %	23.1	76.9		0	100		95.2	4.8		
Total %	7.9	26.3	34.2	0	10.5	10.5	52.6	2.6	55.3	

	19th Avenue Westbound			Newhall Street Northbound			19th Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**1**	**3**	**4**	0	0	0	**6**	0	**6**	**10**
04:15 PM	0	3	3	0	0	0	3	0	3	6
04:30 PM	1	1	2	0	**2**	**2**	3	0	3	7
04:45 PM	0	1	1	0	0	0	3	0	3	4
Total Volume	2	8	10	0	2	2	15	0	15	27
% App. Total	20	80		0	100		100	0		
PHF	.500	.667	.625	.000	.250	.250	.625	.000	.625	.675

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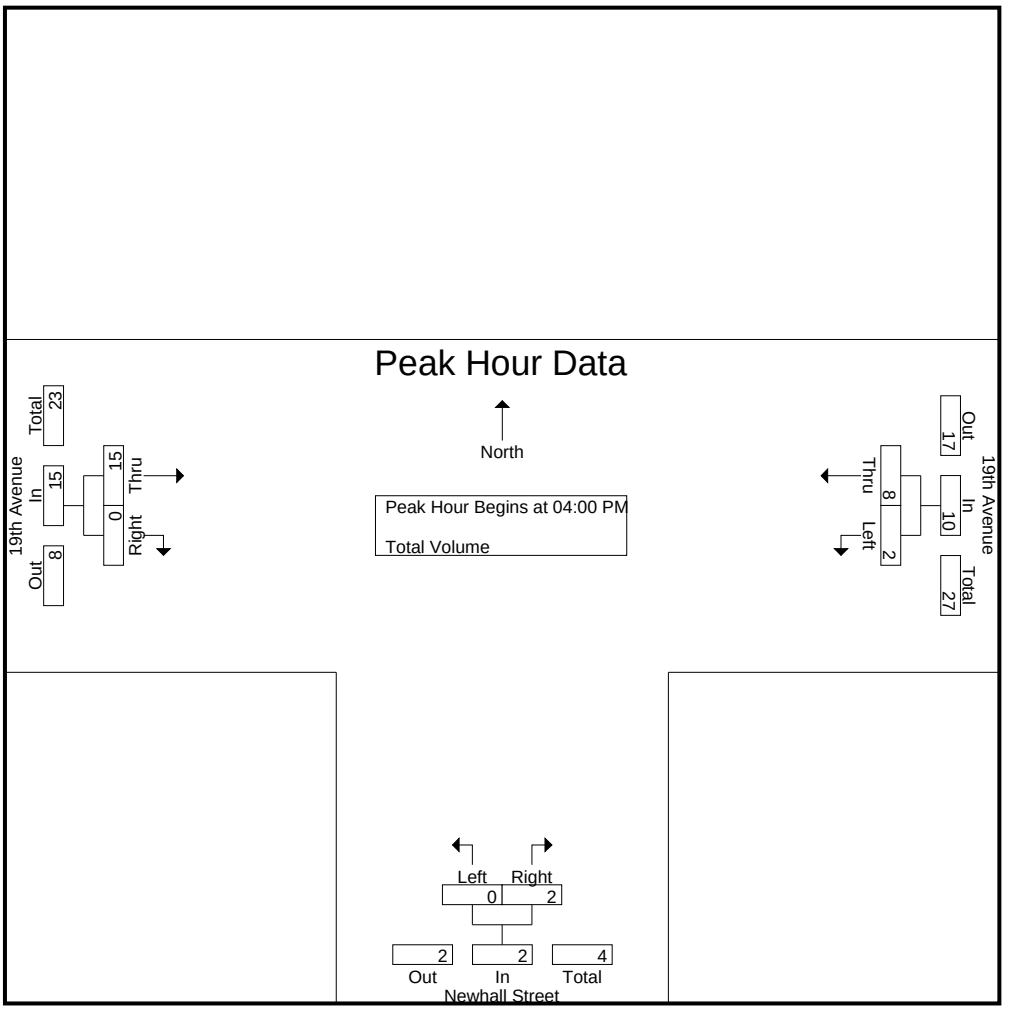
City of Palm Springs
N/S: Newhall Street
E/W: 19th Avenue
Weather: Clear

File Name : 01_PLS_New_19th PM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:00 PM		
+0 mins.	**1**	**3**	**4**	0	0	0	**6**	0	**6**
+15 mins.	0	3	3	0	**2**	**2**	3	0	3
+30 mins.	1	1	2	0	0	0	3	0	3
+45 mins.	0	1	1	0	2	2	3	0	3
Total Volume	2	8	10	0	4	4	15	0	15
% App. Total	20	80		0	100		100	0	
PHF	.500	.667	.625	.000	.500	.500	.625	.000	.625

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: Coachillin Way
Weather: Clear

File Name : 02_PLS_IC_CW AM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound			Coachillin Way Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	242	242	0	0	0	62	0	62	304
07:15 AM	0	296	296	0	0	0	74	0	74	370
07:30 AM	0	319	319	0	0	0	109	0	109	428
07:45 AM	1	267	268	0	0	0	108	0	108	376
Total	1	1124	1125	0	0	0	353	0	353	1478
08:00 AM	0	206	206	0	0	0	97	0	97	303
08:15 AM	1	203	204	0	0	0	87	0	87	291
08:30 AM	0	182	182	0	0	0	113	0	113	295
08:45 AM	0	160	160	0	0	0	89	0	89	249
Total	1	751	752	0	0	0	386	0	386	1138
Grand Total	2	1875	1877	0	0	0	739	0	739	2616
Apprch %	0.1	99.9		0	0		100	0		
Total %	0.1	71.7	71.8	0	0	0	28.2	0	28.2	

	Indian Canyon Drive Southbound			Coachillin Way Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	242	242	0	0	0	62	0	62	304
07:15 AM	0	296	296	0	0	0	74	0	74	370
07:30 AM	0	**319**	**319**	0	0	0	**109**	0	**109**	**428**
07:45 AM	**1**	267	268	0	0	0	108	0	108	376
Total Volume	1	1124	1125	0	0	0	353	0	353	1478
% App. Total	0.1	99.9		0	0		100	0		
PHF	.250	.881	.882	.000	.000	.000	.810	.000	.810	.863

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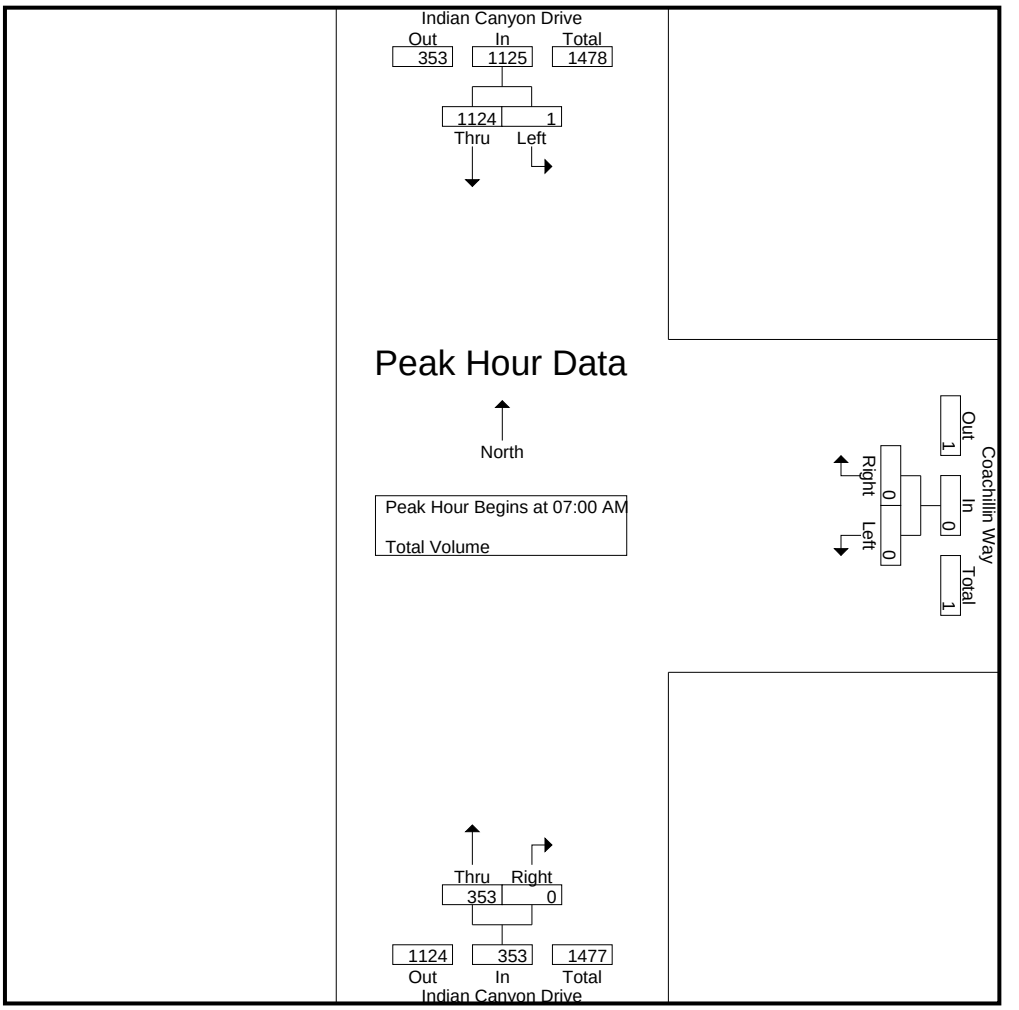
City of Palm Springs
N/S: Indian Canyon Drive
E/W: Coachillin Way
Weather: Clear

File Name : 02_PLS_IC_CW AM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	242	242	0	0	0	108	0	108
+15 mins.	0	296	296	0	0	0	97	0	97
+30 mins.	0	**319**	**319**	0	0	0	87	0	87
+45 mins.	**1**	267	268	0	0	0	**113**	0	**113**
Total Volume	1	1124	1125	0	0	0	405	0	405
% App. Total	0.1	99.9		0	0		100	0	
PHF	.250	.881	.882	.000	.000	.000	.896	.000	.896

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City of Palm Springs
N/S: Indian Canyon Drive
E/W: Coachillin Way
Weather: Clear

File Name : 02_PLS_IC_CW PM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 1

Groups Printed- Total Volume

	Indian Canyon Drive Southbound			Coachillin Way Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	125	125	0	0	0	240	0	240	365
04:15 PM	0	134	134	0	0	0	253	0	253	387
04:30 PM	0	114	114	0	0	0	243	0	243	357
04:45 PM	0	140	140	0	0	0	233	0	233	373
Total	0	513	513	0	0	0	969	0	969	1482
05:00 PM	0	119	119	0	1	1	219	1	220	340
05:15 PM	0	108	108	0	0	0	267	0	267	375
05:30 PM	0	102	102	0	0	0	240	0	240	342
05:45 PM	0	94	94	0	0	0	174	0	174	268
Total	0	423	423	0	1	1	900	1	901	1325
Grand Total	0	936	936	0	1	1	1869	1	1870	2807
Apprch %	0	100		0	100		99.9	0.1		
Total %	0	33.3	33.3	0	0	0	66.6	0	66.6	

	Indian Canyon Drive Southbound			Coachillin Way Westbound			Indian Canyon Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	125	125	0	0	0	240	0	240	365
04:15 PM	0	134	134	0	0	0	**253**	0	**253**	**387**
04:30 PM	0	114	114	0	0	0	243	0	243	357
04:45 PM	0	**140**	**140**	0	0	0	233	0	233	373
Total Volume	0	513	513	0	0	0	969	0	969	1482
% App. Total	0	100		0	0		100	0		
PHF	.000	.916	.916	.000	.000	.000	.958	.000	.958	.957

Counts Unlimited, Inc.
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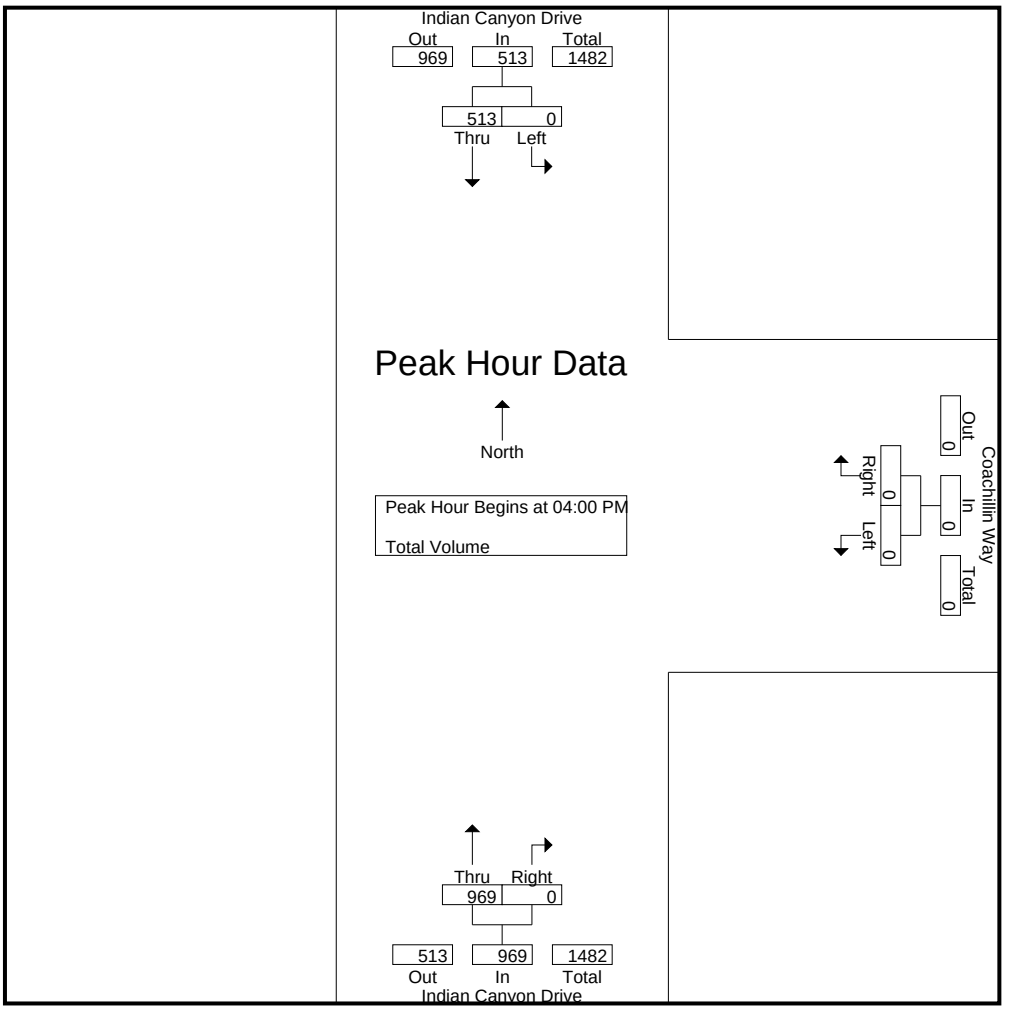
City of Palm Springs
N/S: Indian Canyon Drive
E/W: Coachillin Way
Weather: Clear

File Name : 02_PLS_IC_CW PM
Site Code : 05123097
Start Date : 1/31/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:00 PM		
+0 mins.	0	125	125	0	0	0	240	0	240
+15 mins.	0	134	134	0	0	0	**253**	0	**253**
+30 mins.	0	114	114	0	0	0	243	0	243
+45 mins.	0	**140**	**140**	0	**1**	**1**	233	0	233
Total Volume	0	513	513	0	1	1	969	0	969
% App. Total	0	100		0	100		100	0	
PHF	.000	.916	.916	.000	.250	.250	.958	.000	.958

Counts Unlimited, Inc.

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City of Desert Hot Springs
Indian Canyon Drive
S/ Dillon Road
24 Hour Directional Volume Count

DHS003
Site Code: 051-22266

Start Time	29-Mar-22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		24	112			11	107				
12:15		26	112			10	105				
12:30		15	119			6	105				
12:45		17	132	82	475	6	112	33	429	115	904
01:00		10	115			7	91				
01:15		17	120			4	98				
01:30		17	134			12	120				
01:45		16	140	60	509	7	107	30	416	90	925
02:00		14	154			4	108				
02:15		17	159			3	129				
02:30		17	172			7	132				
02:45		11	195	59	680	6	116	20	485	79	1165
03:00		13	209			8	115				
03:15		11	231			9	**111**				
03:30		8	**248**			18	**121**				
03:45		13	**214**	45	902	24	**138**	59	485	104	1387
04:00		13	**252**			28	**135**				
04:15		12	**237**			12	83				
04:30		15	212			34	120				
04:45		9	235	49	936	29	98	103	436	152	1372
05:00		22	238			35	120				
05:15		20	191			49	86				
05:30		28	202			81	87				
05:45		43	153	113	784	96	87	261	380	374	1164
06:00		41	165			84	93				
06:15		56	147			98	89				
06:30		53	120			180	96				
06:45		84	136	234	568	213	69	575	347	809	915
07:00		75	98			**211**	70				
07:15		86	103			**277**	72				
07:30		100	104			**281**	62				
07:45		106	84	367	389	**231**	61	1000	265	1367	654
08:00		97	89			195	49				
08:15		100	81			199	41				
08:30		114	78			187	55				
08:45		102	89	413	337	140	40	721	185	1134	522
09:00		98	72			154	42				
09:15		92	77			122	33				
09:30		111	75			143	37				
09:45		94	83	395	307	127	34	546	146	941	453
10:00		111	68			115	19				
10:15		**138**	63			116	25				
10:30		**127**	60			126	44				
10:45		**104**	67	480	258	132	27	489	115	969	373
11:00		**115**	49			99	26				
11:15		105	58			122	15				
11:30		113	42			123	9				
11:45		127	28	460	177	94	13	438	63	898	240
Total		2757	6322	2757	6322	4275	3752	4275	3752	7032	10074
Combined Total		9079		9079		8027		8027		17106	
AM Peak	-	10:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	484	-	-	-	1000	-	-	-	-	-
P.H.F.		0.877				0.890					
PM Peak	-	-	03:30	-	-	-	03:15	-	-	-	-
Vol.	-	-	951	-	-	-	505	-	-	-	-
P.H.F.			0.943				0.915				
Percentage		30.4%	69.6%			53.3%	46.7%				
ADT/AADT		ADT 17,106		AADT 17,106							

Counts Unlimited, Inc.

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City of Palm Springs
Indian Canyon Drive
N/ 19th Avenue
24 Hour Directional Volume Count

PLS001
Site Code: 051-23097

Start Time	1/31/23 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		20	122			8	103				
12:15		15	113			4	114				
12:30		9	102			10	108				
12:45		21	124	65	461	8	98	30	423	95	884
01:00		14	127			7	115				
01:15		18	128			6	107				
01:30		12	144			6	116				
01:45		15	118	59	517	8	123	27	461	86	978
02:00		12	140			8	137				
02:15		13	175			7	118				
02:30		14	160			7	134				
02:45		8	211	47	686	11	108	33	497	80	1183
03:00		7	216			6	118				
03:15		10	199			16	128				
03:30		9	**262**			12	**147**				
03:45		4	**233**	30	910	24	**142**	58	535	88	1445
04:00		6	**243**			14	**131**				
04:15		14	**255**			21	**135**				
04:30		8	252			35	117				
04:45		13	242	41	992	47	149	117	532	158	1524
05:00		21	223			40	123				
05:15		28	272			47	109				
05:30		36	235			83	100				
05:45		53	179	138	909	107	97	277	429	415	1338
06:00		77	145			88	85				
06:15		66	150			112	81				
06:30		65	131			168	64				
06:45		94	102	302	528	228	55	596	285	898	813
07:00		62	98			**251**	40				
07:15		80	100			**323**	42				
07:30		113	84			**327**	52				
07:45		110	90	365	372	**274**	43	1175	177	1540	549
08:00		96	82			215	31				
08:15		88	81			200	42				
08:30		116	74			184	28				
08:45		94	61	394	298	169	35	768	136	1162	434
09:00		110	69			132	24				
09:15		94	80			127	27				
09:30		86	70			177	27				
09:45		82	72	372	291	127	37	563	115	935	406
10:00		101	67			118	32				
10:15		92	63			132	27				
10:30		**113**	59			117	19				
10:45		**123**	59	429	248	135	20	502	98	931	346
11:00		**99**	51			121	20				
11:15		**108**	50			120	21				
11:30		102	41			128	18				
11:45		108	27	417	169	111	17	480	76	897	245
Total		2659	6381	2659	6381	4626	3764	4626	3764	7285	10145
Combined Total		9040		9040		8390		8390		17430	
AM Peak	-	10:30	-	-	-	07:00	-	-	-	-	-
Vol.	-	443	-	-	-	1175	-	-	-	-	-
P.H.F.		0.900				0.898					
PM Peak	-	-	03:30	-	-	-	03:30	-	-	-	-
Vol.	-	-	993	-	-	-	555	-	-	-	-
P.H.F.			0.948				0.944				
Percentage		29.4%	70.6%			55.1%	44.9%				
ADT/AADT		ADT 17,430		AADT 17,430							

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City of Desert Hot Springs
Indian Canyon Drive
N/ 20th Avenue
24 Hour Directional Volume Count

DHS001
Site Code: 051-22491

Start Time	17-May-22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		41	125			15	103				
12:15		32	118			16	104				
12:30		19	139			8	114				
12:45		26	130	118	512	8	111	47	432	165	944
01:00		21	102			9	98				
01:15		13	133			5	100				
01:30		10	126			2	127				
01:45		10	143	54	504	11	89	27	414	81	918
02:00		12	166			3	111				
02:15		22	143			6	113				
02:30		14	185			6	**157**				
02:45		12	156	60	650	12	**137**	27	518	87	1168
03:00		16	183			8	**135**				
03:15		5	**230**			12	**124**				
03:30		12	**225**			18	151				
03:45		5	**225**	38	863	13	103	51	513	89	1376
04:00		14	**214**			19	132				
04:15		27	206			30	106				
04:30		15	205			26	123				
04:45		7	197	63	822	38	103	113	464	176	1286
05:00		30	203			26	115				
05:15		31	225			50	98				
05:30		55	207			65	104				
05:45		89	147	205	782	78	79	219	396	424	1178
06:00		66	144			87	87				
06:15		76	153			109	64				
06:30		82	115			153	79				
06:45		122	113	346	525	205	74	554	304	900	829
07:00		95	115			196	39				
07:15		94	99			**267**	43				
07:30		92	99			**263**	56				
07:45		125	79	406	392	**213**	63	939	201	1345	593
08:00		104	103			**205**	50				
08:15		105	94			153	33				
08:30		124	78			183	41				
08:45		97	79	430	354	114	43	655	167	1085	521
09:00		104	74			128	39				
09:15		101	82			112	33				
09:30		115	70			139	41				
09:45		96	73	416	299	130	36	509	149	925	448
10:00		105	63			124	36				
10:15		81	53			128	25				
10:30		**116**	64			127	26				
10:45		**133**	65	435	245	116	21	495	108	930	353
11:00		**111**	50			114	22				
11:15		**130**	31			119	21				
11:30		108	38			118	20				
11:45		124	31	473	150	129	23	480	86	953	236
Total		3044	6098	3044	6098	4116	3752	4116	3752	7160	9850
Combined Total		9142		9142		7868		7868		17010	
AM Peak	-	10:30	-	-	-	07:15	-	-	-	-	-
Vol.	-	490	-	-	-	948	-	-	-	-	-
P.H.F.		0.921				0.888					
PM Peak	-	-	03:15	-	-	-	02:30	-	-	-	-
Vol.	-	-	894	-	-	-	553	-	-	-	-
P.H.F.			0.972				0.881				
Percentage		33.3%	66.7%			52.3%	47.7%				
ADT/AADT		ADT 17,010		AADT 17,010							

Counts Unlimited, Inc.

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City of Desert Hot Springs
Indian Canyon Drive
N/ Garnet Avenue
24 Hour Directional Volume Count

DHS004
Site Code: 051-22491

Start Time	17-May-22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		45	157			28	122				
12:15		32	133			18	126				
12:30		33	163			8	146				
12:45		29	131	139	584	13	121	67	515	206	1099
01:00		15	156			13	126				
01:15		18	171			10	140				
01:30		13	166			9	146				
01:45		16	162	62	655	11	127	43	539	105	1194
02:00		22	183			11	136				
02:15		22	171			10	143				
02:30		21	243			6	179				
02:45		13	192	78	789	11	**187**	38	645	116	1434
03:00		15	226			8	**189**				
03:15		16	**243**			11	**166**				
03:30		22	**242**			21	**209**				
03:45		16	**259**	69	970	17	149	57	713	126	1683
04:00		22	**251**			27	155				
04:15		25	240			36	137				
04:30		28	206			27	154				
04:45		24	206	99	903	36	167	126	613	225	1516
05:00		37	235			33	146				
05:15		41	211			54	124				
05:30		63	187			56	137				
05:45		70	157	211	790	82	101	225	508	436	1298
06:00		72	140			105	99				
06:15		98	133			122	96				
06:30		95	118			184	99				
06:45		117	117	382	508	225	90	636	384	1018	892
07:00		111	111			229	69				
07:15		122	89			**260**	60				
07:30		114	105			**265**	73				
07:45		164	89	511	394	**290**	87	1044	289	1555	683
08:00		127	102			**258**	51				
08:15		138	91			203	53				
08:30		137	82			218	48				
08:45		**148**	90	550	365	175	46	854	198	1404	563
09:00		**144**	92			162	53				
09:15		**156**	82			135	43				
09:30		**147**	77			168	51				
09:45		131	73	578	324	173	49	638	196	1216	520
10:00		145	62			166	41				
10:15		123	64			147	39				
10:30		126	58			143	41				
10:45		145	64	539	248	136	31	592	152	1131	400
11:00		132	52			142	26				
11:15		158	36			130	30				
11:30		151	34			146	27				
11:45		148	34	589	156	133	22	551	105	1140	261
Total		3807	6686	3807	6686	4871	4857	4871	4857	8678	11543
Combined Total		10493		10493		9728		9728		20221	
AM Peak	-	08:45	-	-	-	07:15	-	-	-	-	-
Vol.	-	595	-	-	-	1073	-	-	-	-	-
P.H.F.		0.954				0.925					
PM Peak	-	-	03:15	-	-	-	02:45	-	-	-	-
Vol.	-	-	995	-	-	-	751	-	-	-	-
P.H.F.			0.960				0.898				
Percentage		36.3%	63.7%			50.1%	49.9%				
ADT/AADT		ADT 20,221		AADT 20,221							

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City of Desert Hot Springs
Dillon Road
E/ Indian Canyon Drive
24 Hour Directional Volume Count

DHS002
Site Code: 051-22266

Start Time	29-Mar-22 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		16	64			6	87				
12:15		17	70			11	80				
12:30		12	69			7	70				
12:45		17	83	62	286	6	83	30	320	92	606
01:00		17	67			2	72				
01:15		10	77			3	82				
01:30		6	81			9	72				
01:45		10	101	43	326	6	74	20	300	63	626
02:00		6	107			3	94				
02:15		6	100			4	72				
02:30		13	116			5	85				
02:45		12	106	37	429	8	93	20	344	57	773
03:00		15	**138**			5	79				
03:15		12	**132**			7	**92**				
03:30		7	**159**			8	**97**				
03:45		8	**139**	42	568	17	**110**	37	378	79	946
04:00		7	134			17	**125**				
04:15		6	125			14	91				
04:30		8	121			27	91				
04:45		6	130	27	510	26	99	84	406	111	916
05:00		8	120			36	97				
05:15		16	124			35	82				
05:30		21	116			57	72				
05:45		43	105	88	465	70	70	198	321	286	786
06:00		47	92			74	67				
06:15		48	87			81	60				
06:30		55	80			109	64				
06:45		63	90	213	349	110	49	374	240	587	589
07:00		52	78			**136**	57				
07:15		51	75			**133**	50				
07:30		64	55			**157**	39				
07:45		78	45	245	253	**130**	47	556	193	801	446
08:00		70	45			97	35				
08:15		**81**	58			112	37				
08:30		**89**	56			126	36				
08:45		**74**	43	314	202	83	32	418	140	732	342
09:00		**83**	42			98	25				
09:15		47	43			89	28				
09:30		60	36			98	32				
09:45		66	53	256	174	78	26	363	111	619	285
10:00		74	39			81	12				
10:15		85	35			73	17				
10:30		56	30			98	14				
10:45		80	36	295	140	80	24	332	67	627	207
11:00		77	32			65	24				
11:15		83	28			82	13				
11:30		71	19			84	7				
11:45		82	20	313	99	77	8	308	52	621	151
Total		1935	3801	1935	3801	2740	2872	2740	2872	4675	6673
Combined Total		5736		5736		5612		5612		11348	
AM Peak	-	08:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	327	-	-	-	556	-	-	-	-	-
P.H.F.		0.919				0.885					
PM Peak	-	-	03:00	-	-	-	03:15	-	-	-	-
Vol.	-	-	568	-	-	-	424	-	-	-	-
P.H.F.			0.893				0.848				
Percentage		33.7%	66.3%			48.8%	51.2%				
ADT/AADT		ADT 11,348		AADT 11,348							

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City of Palm Springs
19th Avenue
W/ Indian Canyon Drive
24 Hour Directional Volume Count

PLS002
Site Code: 051-23097

Start Time	1/31/23 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	4			3	7				
12:15		0	5			0	4				
12:30		0	5			0	2				
12:45		0	4	0	18	0	4	3	17	3	35
01:00		1	4			0	1				
01:15		0	4			0	3				
01:30		0	4			0	5				
01:45		0	7	1	19	2	**6**	2	15	3	34
02:00		0	7			0	**5**				
02:15		0	5			0	**7**				
02:30		1	4			1	**6**				
02:45		0	**11**	1	27	1	5	2	23	3	50
03:00		0	**6**			0	1				
03:15		0	**5**			0	0				
03:30		0	**13**			1	3				
03:45		1	8	1	32	1	6	2	10	3	42
04:00		0	6			0	4				
04:15		0	2			1	3				
04:30		2	5			1	2				
04:45		1	5	3	18	8	1	10	10	13	28
05:00		3	2			1	2				
05:15		0	5			2	1				
05:30		2	0			7	1				
05:45		2	1	7	8	4	0	14	4	21	12
06:00		2	1			3	2				
06:15		1	1			1	1				
06:30		1	1			**5**	0				
06:45		0	0	4	3	**7**	1	16	4	20	7
07:00		1	1			**3**	0				
07:15		0	0			**4**	0				
07:30		2	0			3	0				
07:45		0	0	3	1	5	1	15	1	18	2
08:00		0	0			4	0				
08:15		3	1			5	0				
08:30		5	0			4	3				
08:45		4	0	12	1	3	0	16	3	28	4
09:00		4	0			4	1				
09:15		0	0			3	0				
09:30		0	0			3	0				
09:45		4	1	8	1	4	0	14	1	22	2
10:00		1	2			0	0				
10:15		2	2			2	0				
10:30		1	0			4	0				
10:45		**10**	1	14	5	7	1	13	1	27	6
11:00		**1**	1			1	1				
11:15		**6**	1			2	0				
11:30		**2**	1			4	0				
11:45		5	1	14	4	3	0	10	1	24	5
Total		68	137	68	137	117	90	117	90	185	227
Combined Total		205		205		207		207		412	
AM Peak	-	10:45	-	-	-	06:30	-	-	-	-	-
Vol.	-	19	-	-	-	19	-	-	-	-	-
P.H.F.		0.475				0.679					
PM Peak	-	-	02:45	-	-	-	01:45	-	-	-	-
Vol.	-	-	35	-	-	-	24	-	-	-	-
P.H.F.			0.673				0.857				
Percentage		33.2%	66.8%			56.5%	43.5%				
ADT/AADT		ADT 412		AADT 412							

Counts Unlimited, Inc.

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email: counts@countsunlimited.com

City of Desert Hot Springs
20th Avenue
E/ Indian Canyon Drive
24 Hour Directional Volume Count

DHS002
Site Code: 051-22491

Start Time	17-May-22 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	4			18	86				
12:15		2	1			14	57				
12:30		1	5			7	91				
12:45		1	3	5	13	14	91	53	325	58	338
01:00		0	2			16	52				
01:15		1	3			10	76				
01:30		0	6			11	82				
01:45		2	3	3	14	7	95	44	305	47	319
02:00		1	4			7	89				
02:15		1	6			9	95				
02:30		0	6			6	92				
02:45		0	1	2	17	9	107	31	383	33	400
03:00		0	7			7	93				
03:15		1	3			8	**132**				
03:30		0	**4**			11	**126**				
03:45		1	**5**	2	19	6	**120**	32	471	34	490
04:00		0	**5**			14	**117**				
04:15		0	**7**			30	105				
04:30		2	2			19	130				
04:45		1	1	3	15	15	117	78	469	81	484
05:00		**5**	2			18	104				
05:15		**4**	2			28	121				
05:30		**4**	2			54	123				
05:45		**11**	2	24	8	74	81	174	429	198	437
06:00		4	4			56	78				
06:15		5	0			55	97				
06:30		2	1			79	53				
06:45		4	3	15	8	115	60	305	288	320	296
07:00		3	2			92	52				
07:15		3	2			54	51				
07:30		2	3			89	47				
07:45		6	2	14	9	**109**	39	344	189	358	198
08:00		4	2			**83**	40				
08:15		1	0			**83**	42				
08:30		0	0			**94**	38				
08:45		3	4	8	6	70	41	330	161	338	167
09:00		2	1			75	33				
09:15		0	1			68	24				
09:30		3	1			66	28				
09:45		7	2	12	5	56	29	265	114	277	119
10:00		2	0			72	30				
10:15		2	2			62	25				
10:30		3	1			67	34				
10:45		3	2	10	5	78	26	279	115	289	120
11:00		4	0			60	22				
11:15		5	1			66	17				
11:30		3	1			72	10				
11:45		4	4	16	6	66	19	264	68	280	74
Total		114	125	114	125	2199	3317	2199	3317	2313	3442
Combined Total		239		239		5516		5516		5755	
AM Peak	-	05:00	-	-	-	07:45	-	-	-	-	-
Vol.	-	24	-	-	-	369	-	-	-	-	-
P.H.F.		0.545				0.846					
PM Peak	-	-	03:30	-	-	-	03:15	-	-	-	-
Vol.	-	-	21	-	-	-	495	-	-	-	-
P.H.F.			0.750				0.938				
Percentage		47.7%	52.3%			39.9%	60.1%				
ADT/AADT		ADT 5,755		AADT 5,755							

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City of Desert Hot Springs
20th Avenue
E/ Interstate 10 Westbound Ramps
24 Hour Directional Volume Count

DHS003
Site Code: 051-22491

Start Time	17-May-22 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	3			1	1				
12:15		3	1			1	5				
12:30		0	4			0	2				
12:45		0	4	3	12	0	2	2	10	5	22
01:00		1	1			1	2				
01:15		2	1			1	2				
01:30		0	**5**			3	4				
01:45		2	**3**	5	10	2	2	7	10	12	20
02:00		0	**4**			0	**6**				
02:15		2	**5**			0	**4**				
02:30		0	3			2	**8**				
02:45		0	3	2	15	0	**14**	2	32	4	47
03:00		0	1			0	3				
03:15		2	2			0	2				
03:30		0	3			0	0				
03:45		1	2	3	8	0	5	0	10	3	18
04:00		0	0			0	5				
04:15		0	4			0	5				
04:30		1	1			0	9				
04:45		2	4	3	9	0	10	0	29	3	38
05:00		**3**	3			1	6				
05:15		**6**	2			0	5				
05:30		**6**	0			1	4				
05:45		**15**	1	30	6	3	1	5	16	35	22
06:00		3	0			1	1				
06:15		5	1			6	1				
06:30		2	0			2	1				
06:45		4	0	14	1	**9**	1	18	4	32	5
07:00		1	1			**6**	1				
07:15		6	2			**2**	1				
07:30		3	1			**11**	0				
07:45		5	0	15	4	1	2	20	4	35	8
08:00		4	2			3	1				
08:15		3	0			2	1				
08:30		2	0			5	1				
08:45		2	1	11	3	1	1	11	4	22	7
09:00		2	0			3	1				
09:15		2	0			2	1				
09:30		3	0			1	0				
09:45		4	0	11	0	5	0	11	2	22	2
10:00		5	0			1	1				
10:15		1	1			1	0				
10:30		3	1			0	1				
10:45		3	2	12	4	4	1	6	3	18	7
11:00		1	0			5	0				
11:15		2	0			3	4				
11:30		1	0			5	1				
11:45		3	0	7	0	4	1	17	6	24	6
Total		116	72	116	72	99	130	99	130	215	202
Combined Total		188		188		229		229		417	
AM Peak	-	05:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	30	-	-	-	28	-	-	-	-	-
P.H.F.		0.500				0.636					
PM Peak	-	-	01:30	-	-	-	02:00	-	-	-	-
Vol.	-	-	17	-	-	-	32	-	-	-	-
P.H.F.			0.850				0.571				
Percentage		61.7%	38.3%			43.2%	56.8%				
ADT/AADT		ADT 417		AADT 417							

APPENDIX 3.2: EXISTING (2022) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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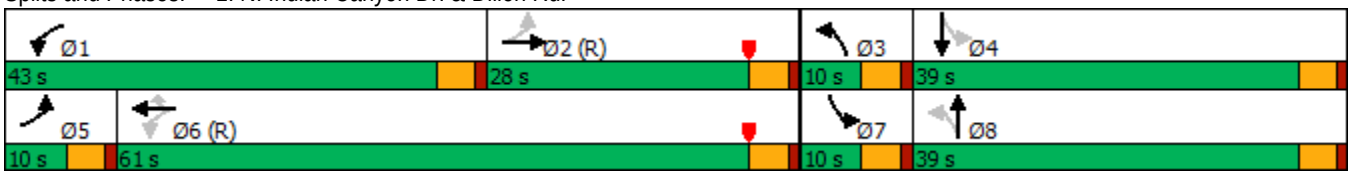
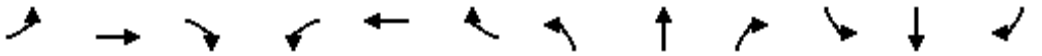
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	83	28	408	97	24	15	235	108	24	541	3
Future Volume (vph)	3	83	28	408	97	24	15	235	108	24	541	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	10.0	28.0		43.0	61.0	61.0	10.0	39.0		10.0	39.0	
Total Split (%)	8.3%	23.3%		35.8%	50.8%	50.8%	8.3%	32.5%		8.3%	32.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

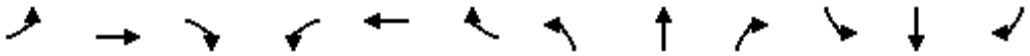




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	83	28	408	97	24	15	235	108	24	541	3
Future Volume (veh/h)	3	83	28	408	97	24	15	235	108	24	541	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	95	32	469	111	28	17	270	124	28	622	3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	948	306	814	1925	859	216	697	312	302	1086	5
Arrive On Green	0.00	0.35	0.35	0.18	0.53	0.53	0.02	0.29	0.29	0.03	0.29	0.29
Sat Flow, veh/h	1810	2683	866	1810	3610	1610	1810	2426	1084	1810	3684	18
Grp Volume(v), veh/h	3	63	64	469	111	28	17	199	195	28	305	320
Grp Sat Flow(s),veh/h/ln	1810	1805	1744	1810	1805	1610	1810	1805	1705	1810	1805	1897
Q Serve(g_s), s	0.1	2.8	3.0	18.7	1.8	1.0	0.8	10.6	11.0	1.3	17.2	17.2
Cycle Q Clear(g_c), s	0.1	2.8	3.0	18.7	1.8	1.0	0.8	10.6	11.0	1.3	17.2	17.2
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.64	1.00		0.01
Lane Grp Cap(c), veh/h	516	638	616	814	1925	859	216	519	490	302	532	559
V/C Ratio(X)	0.01	0.10	0.10	0.58	0.06	0.03	0.08	0.38	0.40	0.09	0.57	0.57
Avail Cap(c_a), veh/h	592	638	616	1062	1925	859	266	519	490	340	532	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	26.0	26.1	16.3	13.5	13.3	30.3	34.2	34.4	29.3	35.9	35.9
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.6	0.1	0.1	0.2	2.1	2.4	0.1	4.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	1.3	7.3	0.7	0.3	0.3	4.7	4.7	0.5	7.8	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	26.3	26.4	16.9	13.5	13.4	30.5	36.4	36.8	29.4	40.3	40.1
LnGrp LOS	C	C	C	B	B	B	C	D	D	C	D	D
Approach Vol, veh/h		130			608			411			653	
Approach Delay, s/veh		26.3			16.1			36.3			39.8	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.6	46.9	6.7	39.9	5.0	68.5	7.5	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	23.5	5.5	34.5	5.5	56.5	5.5	34.5
Max Q Clear Time (g_c+I1), s	20.7	5.0	2.8	19.2	2.1	3.8	3.3	13.0
Green Ext Time (p_c), s	1.3	0.5	0.0	2.8	0.0	0.7	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	6	13	1	7	19	356	54	36	1081	7
Future Volume (vph)	2	1	6	13	1	7	19	356	54	36	1081	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1	6	13	1	7	19	356	54	36	1081	7
Future Vol, veh/h	2	1	6	13	1	7	19	356	54	36	1081	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	1	7	14	1	8	21	391	59	40	1188	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1510	1764	598	1108	1709	196	1196	0	0	450	0	0
Stage 1	1272	1272	-	433	433	-	-	-	-	-	-	-
Stage 2	238	492	-	675	1276	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	84	85	450	167	92	819	591	-	-	1121	-	-
Stage 1	180	241	-	577	585	-	-	-	-	-	-	-
Stage 2	750	551	-	415	240	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	79	450	154	85	819	591	-	-	1121	-	-
Mov Cap-2 Maneuver	78	79	-	154	85	-	-	-	-	-	-	-
Stage 1	174	232	-	556	564	-	-	-	-	-	-	-
Stage 2	715	531	-	392	231	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.9	25.2	0.5	0.3
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	591	-	-	174	201	1121	-	-
HCM Lane V/C Ratio	0.035	-	-	0.057	0.115	0.035	-	-
HCM Control Delay (s)	11.3	-	-	26.9	25.2	8.3	-	-
HCM Lane LOS	B	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.4	0.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	7	422	17	13	1087
Future Volume (vph)	12	7	422	17	13	1087
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	7	422	17	13	1087
Future Vol, veh/h	12	7	422	17	13	1087
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	8	454	18	14	1169

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1067	227	0	0	472	0
Stage 1	454	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	220	782	-	-	1100	-
Stage 1	612	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	217	782	-	-	1100	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	612	-	-	-	-	-
Stage 2	502	-	-	-	-	-

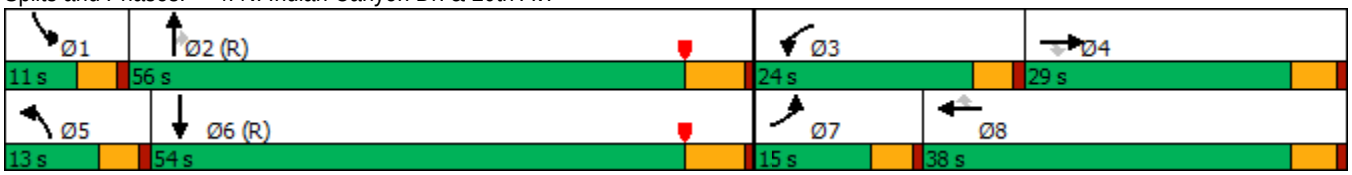
Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0.1
HCM LOS	B		

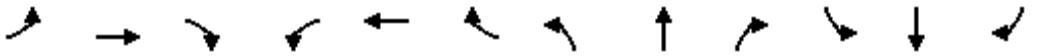
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	438	1100	-
HCM Lane V/C Ratio	-	-	0.047	0.013	-
HCM Control Delay (s)	-	-	13.6	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	3	48	229	31	109	20	309	9	4	1048	12
Future Volume (vph)	39	3	48	229	31	109	20	309	9	4	1048	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)						38%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	15.0	29.0	29.0	24.0	38.0	38.0	13.0	56.0	56.0	11.0	54.0	
Total Split (%)	12.5%	24.2%	24.2%	20.0%	31.7%	31.7%	10.8%	46.7%	46.7%	9.2%	45.0%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.





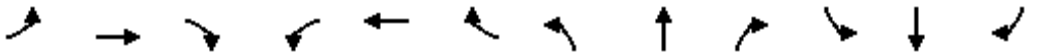
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	3	48	229	31	109	20	309	9	4	1048	12
Future Volume (veh/h)	39	3	48	229	31	109	20	309	9	4	1048	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	3	50	239	94	73	21	322	9	4	1092	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	158	132	304	259	215	38	2371	1057	9	3390	37
Arrive On Green	0.03	0.08	0.08	0.08	0.14	0.14	0.02	0.66	0.66	0.01	0.64	0.64
Sat Flow, veh/h	1810	1900	1582	3619	1900	1575	1810	3610	1610	1810	5289	58
Grp Volume(v), veh/h	41	3	50	239	94	73	21	322	9	4	714	390
Grp Sat Flow(s),veh/h/ln	1810	1900	1582	1810	1900	1575	1810	1805	1610	1810	1729	1889
Q Serve(g_s), s	2.7	0.2	3.6	7.8	5.4	5.0	1.4	4.0	0.2	0.3	11.2	11.2
Cycle Q Clear(g_c), s	2.7	0.2	3.6	7.8	5.4	5.0	1.4	4.0	0.2	0.3	11.2	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	56	158	132	304	259	215	38	2371	1057	9	2216	1211
V/C Ratio(X)	0.73	0.02	0.38	0.79	0.36	0.34	0.55	0.14	0.01	0.43	0.32	0.32
Avail Cap(c_a), veh/h	157	378	315	585	521	432	127	2371	1057	97	2216	1211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	50.5	52.1	53.9	47.1	46.9	58.2	7.8	7.1	59.5	9.7	9.7
Incr Delay (d2), s/veh	6.6	0.0	1.8	1.4	0.7	0.8	4.6	0.1	0.0	10.9	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	1.5	3.6	2.6	2.0	0.7	1.4	0.1	0.1	3.7	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	50.5	53.9	55.3	47.8	47.7	62.8	7.9	7.1	70.4	10.1	10.5
LnGrp LOS	E	D	D	E	D	D	E	A	A	E	B	B
Approach Vol, veh/h		94			406			352			1108	
Approach Delay, s/veh		58.3			52.2			11.1			10.5	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	85.0	14.7	15.1	7.1	83.1	8.3	21.4
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	6.4	49.8	19.4	23.9	8.4	47.8	10.4	32.9
Max Q Clear Time (g_c+I1), s	2.3	6.0	9.8	5.6	3.4	13.2	4.7	7.4
Green Ext Time (p_c), s	0.0	2.8	0.3	0.1	0.0	11.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	338	92	0	1261	64
Future Volume (vph)	0	0	0	0	0	0	0	338	92	0	1261	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	430	290	0	1261
Future Volume (vph)	0	0	430	290	0	1261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

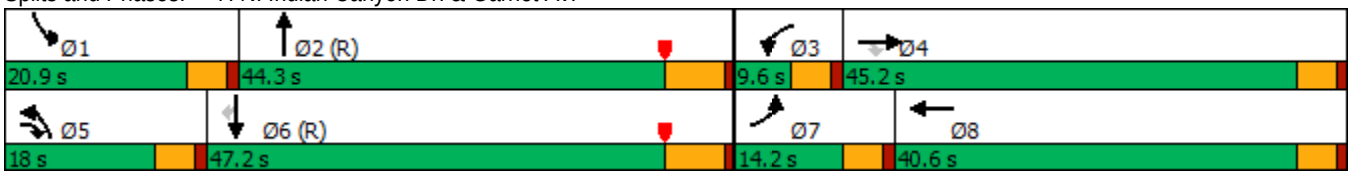
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

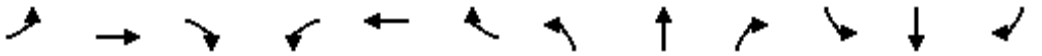
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	26	312	13	6	7	17	413	18	123	850	175
Future Volume (vph)	143	26	312	13	6	7	17	413	18	123	850	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	14.2	45.2	18.0	9.6	40.6		18.0	44.3		20.9	47.2	47.2
Total Split (%)	11.8%	37.7%	15.0%	8.0%	33.8%		15.0%	36.9%		17.4%	39.3%	39.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	26	312	13	6	7	17	413	18	123	850	175
Future Volume (veh/h)	143	26	312	13	6	7	17	413	18	123	850	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	155	28	339	14	7	8	18	449	20	134	924	190
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	211	438	396	28	149	170	34	2537	112	161	2053	915
Arrive On Green	0.06	0.23	0.23	0.02	0.19	0.19	0.02	0.50	0.50	0.09	0.57	0.57
Sat Flow, veh/h	3510	1900	1588	1810	801	916	1810	5092	225	1810	3610	1609
Grp Volume(v), veh/h	155	28	339	14	0	15	18	304	165	134	924	190
Grp Sat Flow(s),veh/h/ln	1755	1900	1588	1810	0	1717	1810	1729	1859	1810	1805	1609
Q Serve(g_s), s	5.2	1.4	24.5	0.9	0.0	0.9	1.2	5.8	5.9	8.7	17.8	6.9
Cycle Q Clear(g_c), s	5.2	1.4	24.5	0.9	0.0	0.9	1.2	5.8	5.9	8.7	17.8	6.9
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	211	438	396	28	0	319	34	1723	926	161	2053	915
V/C Ratio(X)	0.73	0.06	0.86	0.50	0.00	0.05	0.53	0.18	0.18	0.83	0.45	0.21
Avail Cap(c_a), veh/h	281	643	567	75	0	515	202	1723	926	246	2053	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	36.1	43.0	58.6	0.0	40.1	58.3	16.6	16.6	53.8	15.0	12.7
Incr Delay (d2), s/veh	2.8	0.0	6.3	5.0	0.0	0.1	4.7	0.2	0.4	8.1	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.7	10.3	0.5	0.0	0.4	0.6	2.2	2.4	4.2	6.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	36.1	49.3	63.6	0.0	40.2	63.0	16.8	17.0	61.9	15.7	13.2
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	B
Approach Vol, veh/h		522			29			487			1248	
Approach Delay, s/veh		51.3			51.5			18.6			20.3	
Approach LOS		D			D			B			C	

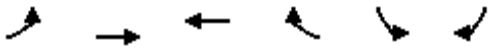
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	66.0	6.5	32.3	6.9	74.4	11.8	26.9
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	16.3	38.1	5.0	40.6	13.4	41.0	9.6	36.0
Max Q Clear Time (g_c+I1), s	10.7	7.9	2.9	26.5	3.2	19.8	7.2	2.9
Green Ext Time (p_c), s	0.1	3.8	0.0	1.2	0.0	9.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	35	42	183	427	12
Future Volume (vph)	8	35	42	183	427	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	12.0	72.0	60.0	48.0	48.0	48.0
Total Split (%)	10.0%	60.0%	50.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	35	42	183	427	12
Future Volume (veh/h)	8	35	42	183	427	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	50	60	261	610	17
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	23	1319	1224	1378	743	341
Arrive On Green	0.01	0.69	0.64	0.64	0.21	0.21
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	11	50	60	261	610	17
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	0.7	1.0	1.4	3.4	19.9	1.0
Cycle Q Clear(g_c), s	0.7	1.0	1.4	3.4	19.9	1.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	23	1319	1224	1378	743	341
V/C Ratio(X)	0.48	0.04	0.05	0.19	0.82	0.05
Avail Cap(c_a), veh/h	113	1319	1224	1378	1249	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	58.8	5.8	7.9	1.5	45.1	37.7
Incr Delay (d2), s/veh	5.5	0.1	0.1	0.3	3.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.6	3.0	8.7	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.4	5.8	7.9	1.8	48.4	37.8
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		61	321		627	
Approach Delay, s/veh		16.4	2.9		48.2	
Approach LOS		B	A		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		89.3		30.7	6.0	83.3
Change Period (Y+Rc), s		6.0		5.3	4.5	6.0
Max Green Setting (Gmax), s		66.0		42.7	7.5	54.0
Max Q Clear Time (g_c+I1), s		3.0		21.9	2.7	5.4
Green Ext Time (p_c), s		0.3		3.5	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

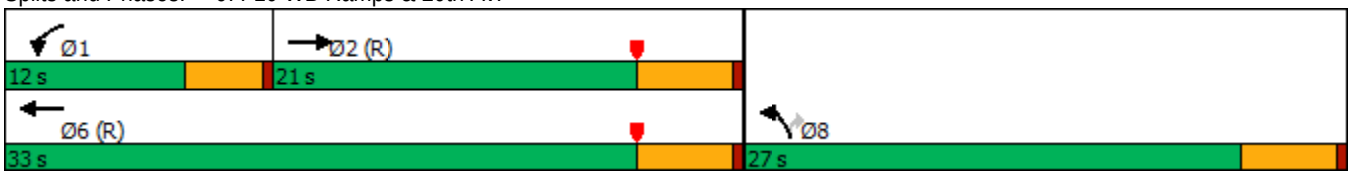
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	2	2	21	380	8
Future Volume (vph)	8	2	2	21	380	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	15.8	10.0	10.0
Total Split (s)	21.0		12.0	33.0	27.0	27.0
Total Split (%)	35.0%		20.0%	55.0%	45.0%	45.0%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 11 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: I-10 WB Ramps & 20th Av.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	8	2	2	21	380	8
Future Volume (veh/h)	8	2	2	21	380	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	2	2	26	475	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	885	177	5	2328	685	314
Arrive On Green	0.58	0.58	0.00	0.64	0.20	0.20
Sat Flow, veh/h	1537	307	1810	3705	3510	1610
Grp Volume(v), veh/h	0	12	2	26	475	10
Grp Sat Flow(s),veh/h/ln	0	1845	1810	1805	1755	1610
Q Serve(g_s), s	0.0	0.2	0.1	0.2	7.6	0.3
Cycle Q Clear(g_c), s	0.0	0.2	0.1	0.2	7.6	0.3
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1062	5	2328	685	314
V/C Ratio(X)	0.00	0.01	0.40	0.01	0.69	0.03
Avail Cap(c_a), veh/h	0	1062	241	2328	1299	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	5.4	29.9	3.8	22.5	19.6
Incr Delay (d2), s/veh	0.0	0.0	18.6	0.0	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	2.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	5.5	48.4	3.8	24.3	19.6
LnGrp LOS	A	A	D	A	C	B
Approach Vol, veh/h	12			28	485	
Approach Delay, s/veh	5.5			7.0	24.2	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	4.2	39.3				43.5	16.5
Change Period (Y+Rc), s	4.0	4.8				4.8	4.8
Max Green Setting (Gmax), s	8.0	16.2				28.2	22.2
Max Q Clear Time (g_c+I1), s	2.1	2.2				2.2	9.6
Green Ext Time (p_c), s	0.0	0.0				0.1	2.1

Intersection Summary		
HCM 6th Ctrl Delay		22.9
HCM 6th LOS		C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	1	2	13	1	1
Future Volume (vph)	8	1	2	13	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	50
Storage Lanes		0	0		1	1
Taper Length (ft)			60		60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	386			1342	570	
Travel Time (s)	8.8			30.5	13.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	1	2	13	1	1
Future Vol, veh/h	8	1	2	13	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	50
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	1	2	14	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	10	0	28	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1623	-	992	1077
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1623	-	991	1077
Mov Cap-2 Maneuver	-	-	-	-	991	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1009	-

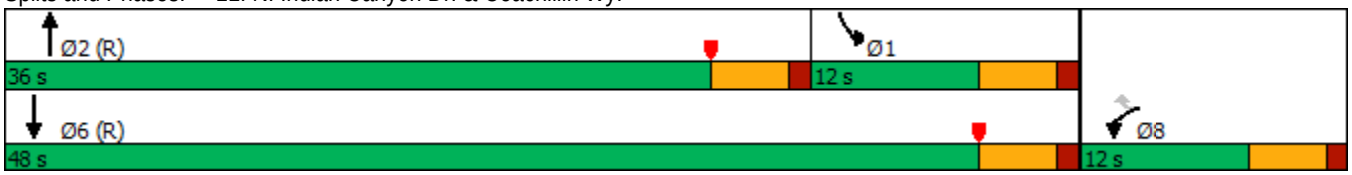
Approach	EB	WB	NB
HCM Control Delay, s	0	1	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	991	1077	-	-	1623	-
HCM Lane V/C Ratio	0.001	0.001	-	-	0.001	-
HCM Control Delay (s)	8.6	8.3	-	-	7.2	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	365	1	1	1124
Future Volume (vph)	1	1	365	1	1	1124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		210			361
Travel Time (s)	12.8		4.8			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	12.0	12.0	36.0		12.0	48.0
Total Split (%)	20.0%	20.0%	60.0%		20.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	365	1	1	1124
Future Volume (veh/h)	1	1	365	1	1	1124
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	1	397	1	1	1222
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	5	4	2805	7	447	3059
Arrive On Green	0.00	0.00	0.52	0.52	0.25	0.85
Sat Flow, veh/h	1810	1610	5513	13	1810	3705
Grp Volume(v), veh/h	1	1	257	141	1	1222
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1898	1810	1805
Q Serve(g_s), s	0.0	0.0	2.3	2.3	0.0	4.7
Cycle Q Clear(g_c), s	0.0	0.0	2.3	2.3	0.0	4.7
Prop In Lane	1.00	1.00		0.01	1.00	
Lane Grp Cap(c), veh/h	5	4	1815	996	447	3059
V/C Ratio(X)	0.20	0.23	0.14	0.14	0.00	0.40
Avail Cap(c_a), veh/h	226	201	1815	996	447	3059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	29.9	7.3	7.3	17.0	1.1
Incr Delay (d2), s/veh	18.9	24.3	0.2	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	0.8	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.8	54.2	7.5	7.6	17.0	1.4
LnGrp LOS	D	D	A	A	B	A
Approach Vol, veh/h	2		398			1223
Approach Delay, s/veh	51.5		7.5			1.5
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.3	36.0			55.3	4.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	31.5			43.5	7.5
Max Q Clear Time (g_c+I1), s	2.0	4.3			6.7	2.0
Green Ext Time (p_c), s	0.0	2.6			11.9	0.0

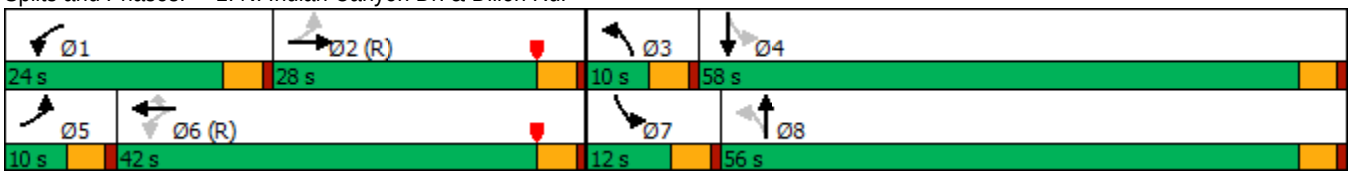
Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A

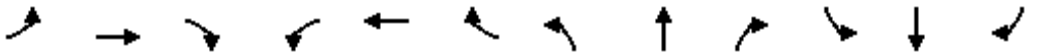
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	93	15	206	131	43	11	565	302	34	226	2
Future Volume (vph)	4	93	15	206	131	43	11	565	302	34	226	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	10.0	28.0		24.0	42.0	42.0	10.0	56.0		12.0	58.0	
Total Split (%)	8.3%	23.3%		20.0%	35.0%	35.0%	8.3%	46.7%		10.0%	48.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

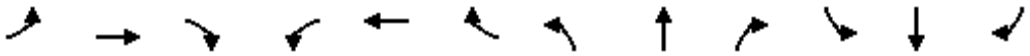




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	93	15	206	131	43	11	565	302	34	226	2
Future Volume (veh/h)	4	93	15	206	131	43	11	565	302	34	226	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	102	16	226	144	47	12	621	332	37	248	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	416	898	138	587	1391	620	550	977	522	242	1636	13
Arrive On Green	0.01	0.29	0.29	0.10	0.39	0.39	0.01	0.43	0.43	0.03	0.45	0.45
Sat Flow, veh/h	1810	3136	482	1810	3610	1610	1810	2272	1215	1810	3670	30
Grp Volume(v), veh/h	4	58	60	226	144	47	12	493	460	37	122	128
Grp Sat Flow(s),veh/h/ln	1810	1805	1813	1810	1805	1610	1810	1805	1681	1810	1805	1895
Q Serve(g_s), s	0.2	2.8	2.9	10.2	3.1	2.2	0.4	25.7	25.7	1.4	4.8	4.8
Cycle Q Clear(g_c), s	0.2	2.8	2.9	10.2	3.1	2.2	0.4	25.7	25.7	1.4	4.8	4.8
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.72	1.00		0.02
Lane Grp Cap(c), veh/h	416	517	519	587	1391	620	550	776	723	242	805	845
V/C Ratio(X)	0.01	0.11	0.12	0.38	0.10	0.08	0.02	0.64	0.64	0.15	0.15	0.15
Avail Cap(c_a), veh/h	490	517	519	693	1391	620	608	776	723	302	805	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	31.6	31.6	24.2	23.6	23.4	18.7	26.8	26.8	20.8	19.8	19.8
Incr Delay (d2), s/veh	0.0	0.4	0.5	0.4	0.1	0.2	0.0	3.9	4.2	0.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	1.3	4.2	1.3	0.8	0.2	11.0	10.3	0.5	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	32.0	32.1	24.6	23.8	23.6	18.7	30.8	31.1	21.1	20.2	20.1
LnGrp LOS	C	C	C	C	C	C	B	C	C	C	C	C
Approach Vol, veh/h		122			417			965			287	
Approach Delay, s/veh		32.0			24.2			30.8			20.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	38.9	6.1	58.0	5.1	50.7	8.0	56.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	23.5	5.5	53.5	5.5	37.5	7.5	51.5
Max Q Clear Time (g_c+I1), s	12.2	4.9	2.4	6.8	2.2	5.1	3.4	27.7
Green Ext Time (p_c), s	0.3	0.4	0.0	1.2	0.0	0.9	0.0	5.6

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1	9	53	3	20	3	942	6	1	509	3
Future Volume (vph)	7	1	9	53	3	20	3	942	6	1	509	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1	9	53	3	20	3	942	6	1	509	3
Future Vol, veh/h	7	1	9	53	3	20	3	942	6	1	509	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	1	10	59	3	22	3	1047	7	1	566	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1101	1630	285	1339	1624	524	569	0	0	1054	0	0
Stage 1	570	570	-	1053	1053	-	-	-	-	-	-	-
Stage 2	531	1060	-	286	571	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	169	103	718	113	104	503	1013	-	-	668	-	-
Stage 1	479	509	-	245	306	-	-	-	-	-	-	-
Stage 2	505	303	-	703	508	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	103	718	110	104	503	1013	-	-	668	-	-
Mov Cap-2 Maneuver	157	103	-	110	104	-	-	-	-	-	-	-
Stage 1	478	508	-	244	305	-	-	-	-	-	-	-
Stage 2	476	302	-	691	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.3	65.5	0	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1013	-	-	254	138	668	-	-
HCM Lane V/C Ratio	0.003	-	-	0.074	0.612	0.002	-	-
HCM Control Delay (s)	8.6	-	-	20.3	65.5	10.4	-	-
HCM Lane LOS	A	-	-	C	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	3.2	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	14	937	13	6	565
Future Volume (vph)	10	14	937	13	6	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	14	937	13	6	565
Future Vol, veh/h	10	14	937	13	6	565
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	15	1008	14	6	608

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1324	504	0	0	1022	0
Stage 1	1008	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	150	518	-	-	687	-
Stage 1	318	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	149	518	-	-	687	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	318	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	0.1
HCM LOS	C		

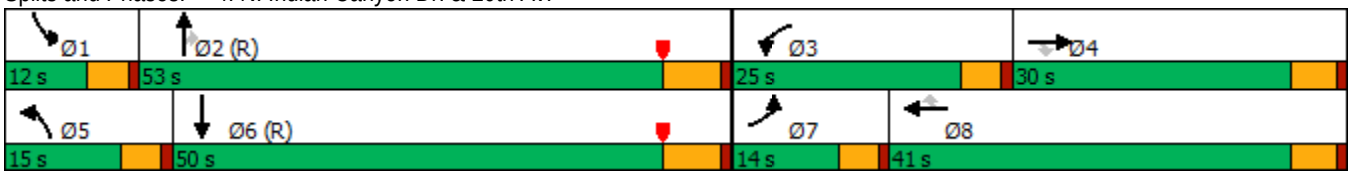
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	362	687	-
HCM Lane V/C Ratio	-	-	0.071	0.009	-
HCM Control Delay (s)	-	-	15.7	10.3	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

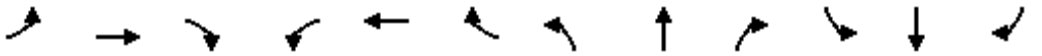
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	6	68	230	30	256	31	625	7	4	511	22
Future Volume (vph)	23	6	68	230	30	256	31	625	7	4	511	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						45%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	14.0	30.0	30.0	25.0	41.0	41.0	15.0	53.0	53.0	12.0	50.0	
Total Split (%)	11.7%	25.0%	25.0%	20.8%	34.2%	34.2%	12.5%	44.2%	44.2%	10.0%	41.7%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.





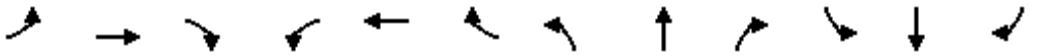
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	6	68	230	30	256	31	625	7	4	511	22
Future Volume (veh/h)	23	6	68	230	30	256	31	625	7	4	511	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	6	72	242	0	290	33	658	7	4	538	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	42	158	132	307	0	451	50	2367	1056	9	3230	137
Arrive On Green	0.02	0.08	0.08	0.08	0.00	0.15	0.03	0.66	0.66	0.01	0.63	0.63
Sat Flow, veh/h	1810	1900	1582	3619	0	3107	1810	3610	1610	1810	5102	217
Grp Volume(v), veh/h	24	6	72	242	0	290	33	658	7	4	364	197
Grp Sat Flow(s),veh/h/ln	1810	1900	1582	1810	0	1554	1810	1805	1610	1810	1729	1861
Q Serve(g_s), s	1.6	0.3	5.2	7.9	0.0	10.6	2.2	9.2	0.2	0.3	5.2	5.2
Cycle Q Clear(g_c), s	1.6	0.3	5.2	7.9	0.0	10.6	2.2	9.2	0.2	0.3	5.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	42	158	132	307	0	451	50	2367	1056	9	2189	1178
V/C Ratio(X)	0.58	0.04	0.55	0.79	0.00	0.64	0.66	0.28	0.01	0.43	0.17	0.17
Avail Cap(c_a), veh/h	142	394	328	615	0	930	157	2367	1056	112	2189	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	50.6	52.8	53.8	0.0	48.3	57.8	8.7	7.1	59.5	9.0	9.0
Incr Delay (d2), s/veh	4.7	0.1	3.5	1.4	0.0	1.2	5.3	0.3	0.0	10.9	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.2	3.6	0.0	4.1	1.0	3.1	0.1	0.1	1.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	50.7	56.3	55.2	0.0	49.6	63.1	9.0	7.2	70.4	9.2	9.3
LnGrp LOS	E	D	E	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		102			532			698			565	
Approach Delay, s/veh		57.5			52.1			11.5			9.7	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	84.9	14.8	15.1	7.9	82.2	7.4	22.5
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	7.4	46.8	20.4	24.9	10.4	43.8	9.4	35.9
Max Q Clear Time (g_c+I1), s	2.3	11.2	9.9	7.2	4.2	7.2	3.6	12.6
Green Ext Time (p_c), s	0.0	6.2	0.3	0.2	0.0	4.8	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	663	184	0	706	103
Future Volume (vph)	0	0	0	0	0	0	0	663	184	0	706	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	847	318	0	706
Future Volume (vph)	0	0	847	318	0	706
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

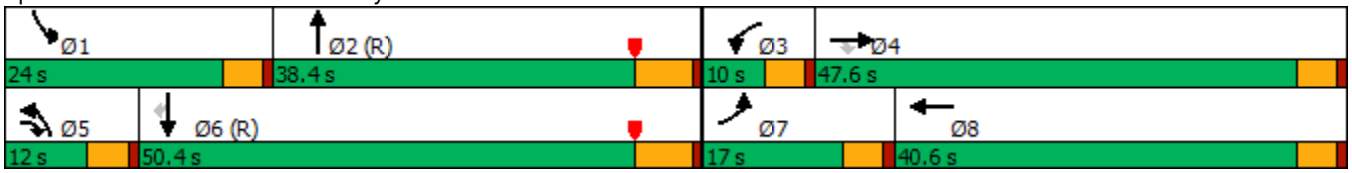
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

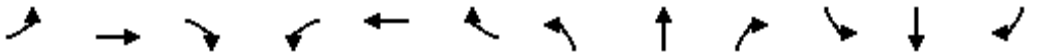
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	18	59	4	3	7	34	809	12	131	426	118
Future Volume (vph)	178	18	59	4	3	7	34	809	12	131	426	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	17.0	47.6	12.0	10.0	40.6		12.0	38.4		24.0	50.4	50.4
Total Split (%)	14.2%	39.7%	10.0%	8.3%	33.8%		10.0%	32.0%		20.0%	42.0%	42.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	18	59	4	3	7	34	809	12	131	426	118
Future Volume (veh/h)	178	18	59	4	3	7	34	809	12	131	426	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	189	19	63	4	3	7	36	861	13	139	453	126
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	247	290	289	9	43	101	53	3071	46	167	2334	1040
Arrive On Green	0.07	0.15	0.15	0.01	0.09	0.09	0.03	0.58	0.58	0.09	0.65	0.65
Sat Flow, veh/h	3510	1900	1586	1810	498	1163	1810	5264	79	1810	3610	1609
Grp Volume(v), veh/h	189	19	63	4	0	10	36	565	309	139	453	126
Grp Sat Flow(s),veh/h/ln	1755	1900	1586	1810	0	1661	1810	1729	1886	1810	1805	1609
Q Serve(g_s), s	6.3	1.0	4.1	0.3	0.0	0.7	2.4	9.8	9.8	9.1	6.1	3.6
Cycle Q Clear(g_c), s	6.3	1.0	4.1	0.3	0.0	0.7	2.4	9.8	9.8	9.1	6.1	3.6
Prop In Lane	1.00		1.00	1.00		0.70	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	247	290	289	9	0	145	53	2018	1100	167	2334	1040
V/C Ratio(X)	0.76	0.07	0.22	0.43	0.00	0.07	0.68	0.28	0.28	0.83	0.19	0.12
Avail Cap(c_a), veh/h	363	681	615	81	0	498	112	2018	1100	293	2334	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	43.5	41.8	59.5	0.0	50.3	57.7	12.4	12.4	53.6	8.6	8.1
Incr Delay (d2), s/veh	2.5	0.1	0.3	10.9	0.0	0.2	5.7	0.3	0.6	4.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.5	1.6	0.2	0.0	0.3	1.1	3.4	3.8	4.1	2.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	43.6	42.2	70.4	0.0	50.5	63.4	12.8	13.1	57.7	8.8	8.4
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	A	A
Approach Vol, veh/h		271			14			910			718	
Approach Delay, s/veh		52.8			56.2			14.9			18.2	
Approach LOS		D			E			B			B	

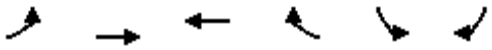
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	76.2	5.2	22.9	8.1	83.8	13.1	15.1
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	19.4	32.2	5.4	43.0	7.4	44.2	12.4	36.0
Max Q Clear Time (g_c+I1), s	11.1	11.8	2.3	6.1	4.4	8.1	8.3	2.7
Green Ext Time (p_c), s	0.1	6.8	0.0	0.3	0.0	4.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	52	61	101	174	11
Future Volume (vph)	21	52	61	101	174	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	21.0	83.0	62.0	37.0	37.0	37.0
Total Split (%)	17.5%	69.2%	51.7%	30.8%	30.8%	30.8%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	52	61	101	174	11
Future Volume (veh/h)	21	52	61	101	174	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	60	70	116	200	13
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	42	1568	1453	1361	284	130
Arrive On Green	0.02	0.83	0.76	0.76	0.08	0.08
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	24	60	70	116	200	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	1.6	0.7	1.1	1.4	6.7	0.9
Cycle Q Clear(g_c), s	1.6	0.7	1.1	1.4	6.7	0.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	42	1568	1453	1361	284	130
V/C Ratio(X)	0.58	0.04	0.05	0.09	0.71	0.10
Avail Cap(c_a), veh/h	249	1568	1453	1361	927	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	58.0	1.9	3.5	1.5	53.8	51.1
Incr Delay (d2), s/veh	4.7	0.0	0.1	0.1	4.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.4	0.7	3.1	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.7	1.9	3.5	1.7	58.3	51.6
LnGrp LOS	E	A	A	A	E	D
Approach Vol, veh/h		84	186		213	
Approach Delay, s/veh		19.3	2.4		57.9	
Approach LOS		B	A		E	

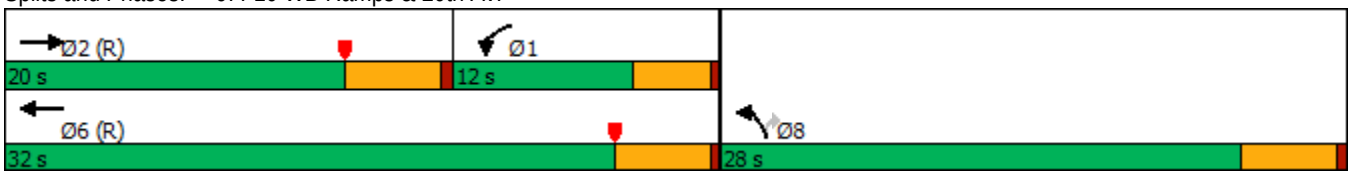
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		105.0		15.0	7.3	97.8
Change Period (Y+Rc), s		6.0		5.3	4.5	6.0
Max Green Setting (Gmax), s		77.0		31.7	16.5	56.0
Max Q Clear Time (g_c+I1), s		2.7		8.7	3.6	3.4
Green Ext Time (p_c), s		0.3		1.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	5	1	15	20	496	8
Future Volume (vph)	5	1	15	20	496	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	15.8	10.0	10.0
Total Split (s)	20.0		12.0	32.0	28.0	28.0
Total Split (%)	33.3%		20.0%	53.3%	46.7%	46.7%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: I-10 WB Ramps & 20th Av.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	5	1	15	20	496	8
Future Volume (veh/h)	5	1	15	20	496	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	1	17	22	557	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	318	53	611	2230	780	358
Arrive On Green	0.20	0.20	0.34	0.62	0.22	0.22
Sat Flow, veh/h	1588	265	1810	3705	3510	1610
Grp Volume(v), veh/h	0	7	17	22	557	9
Grp Sat Flow(s),veh/h/ln	0	1852	1810	1805	1755	1610
Q Serve(g_s), s	0.0	0.2	0.4	0.1	8.8	0.3
Cycle Q Clear(g_c), s	0.0	0.2	0.4	0.1	8.8	0.3
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	370	611	2230	780	358
V/C Ratio(X)	0.00	0.02	0.03	0.01	0.71	0.03
Avail Cap(c_a), veh/h	0	469	611	2230	1357	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.3	13.3	4.4	21.6	18.2
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	3.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	19.4	13.3	4.4	23.3	18.3
LnGrp LOS	A	B	B	A	C	B
Approach Vol, veh/h	7			39	566	
Approach Delay, s/veh	19.4			8.3	23.2	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	25.1	16.8				41.9	18.1
Change Period (Y+Rc), s	4.8	* 4.8				4.8	4.8
Max Green Setting (Gmax), s	8.0	* 15				27.2	23.2
Max Q Clear Time (g_c+I1), s	2.4	2.2				2.1	10.8
Green Ext Time (p_c), s	0.0	0.0				0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	15	1	2	8	1	2
Future Volume (vph)	15	1	2	8	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	50
Storage Lanes		0	0		1	1
Taper Length (ft)			60		60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	386			1342	570	
Travel Time (s)	8.8			30.5	13.0	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	1	2	8	1	2
Future Vol, veh/h	15	1	2	8	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	50
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	1	3	11	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	22	0	39	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	17	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1607	-	978	1061
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1607	-	976	1061
Mov Cap-2 Maneuver	-	-	-	-	976	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1009	-

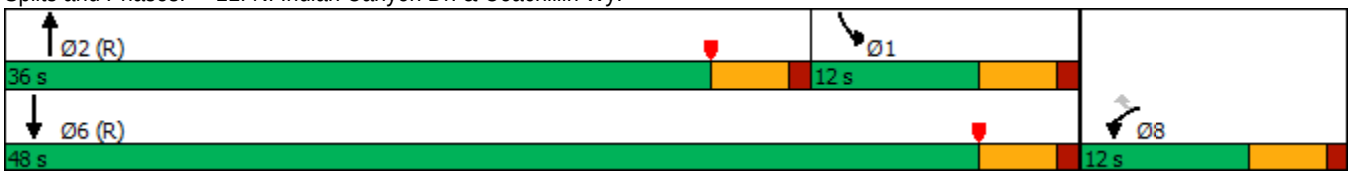
Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	1061	-	-	1607	-
HCM Lane V/C Ratio	0.001	0.003	-	-	0.002	-
HCM Control Delay (s)	8.7	8.4	-	-	7.2	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	969	1	1	513
Future Volume (vph)	1	1	969	1	1	513
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		210			361
Travel Time (s)	12.8		4.8			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	12.0	12.0	36.0		12.0	48.0
Total Split (%)	20.0%	20.0%	60.0%		20.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	969	1	1	513
Future Volume (veh/h)	1	1	969	1	1	513
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	1	1053	1	1	558
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	5	4	2810	3	447	3059
Arrive On Green	0.00	0.00	0.52	0.52	0.25	0.85
Sat Flow, veh/h	1810	1610	5523	5	1810	3705
Grp Volume(v), veh/h	1	1	680	374	1	558
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1899	1810	1805
Q Serve(g_s), s	0.0	0.0	7.0	7.0	0.0	1.7
Cycle Q Clear(g_c), s	0.0	0.0	7.0	7.0	0.0	1.7
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	5	4	1815	997	447	3059
V/C Ratio(X)	0.20	0.23	0.37	0.37	0.00	0.18
Avail Cap(c_a), veh/h	226	201	1815	997	447	3059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	29.9	8.4	8.4	17.0	0.8
Incr Delay (d2), s/veh	18.9	24.3	0.6	1.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.3	2.6	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.8	54.2	9.0	9.5	17.0	1.0
LnGrp LOS	D	D	A	A	B	A
Approach Vol, veh/h	2		1054			559
Approach Delay, s/veh	51.5		9.2			1.0
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.3	36.0			55.3	4.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	31.5			43.5	7.5
Max Q Clear Time (g_c+I1), s	2.0	9.0			3.7	2.0
Green Ext Time (p_c), s	0.0	7.5			4.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

APPENDIX 3.3: TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

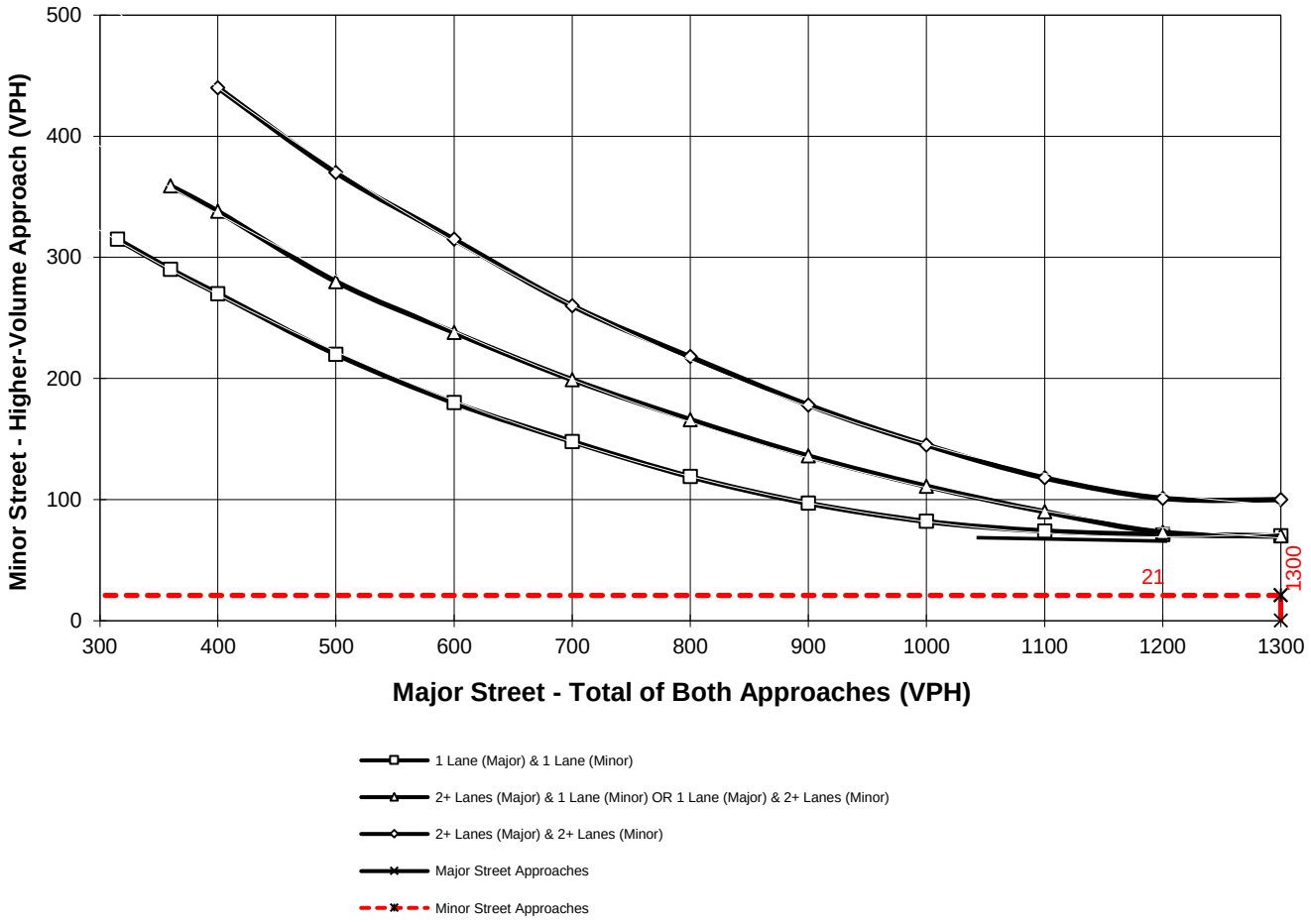
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,553**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **19th Av.**
High Volume Approach (VPH) = **21**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #2

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

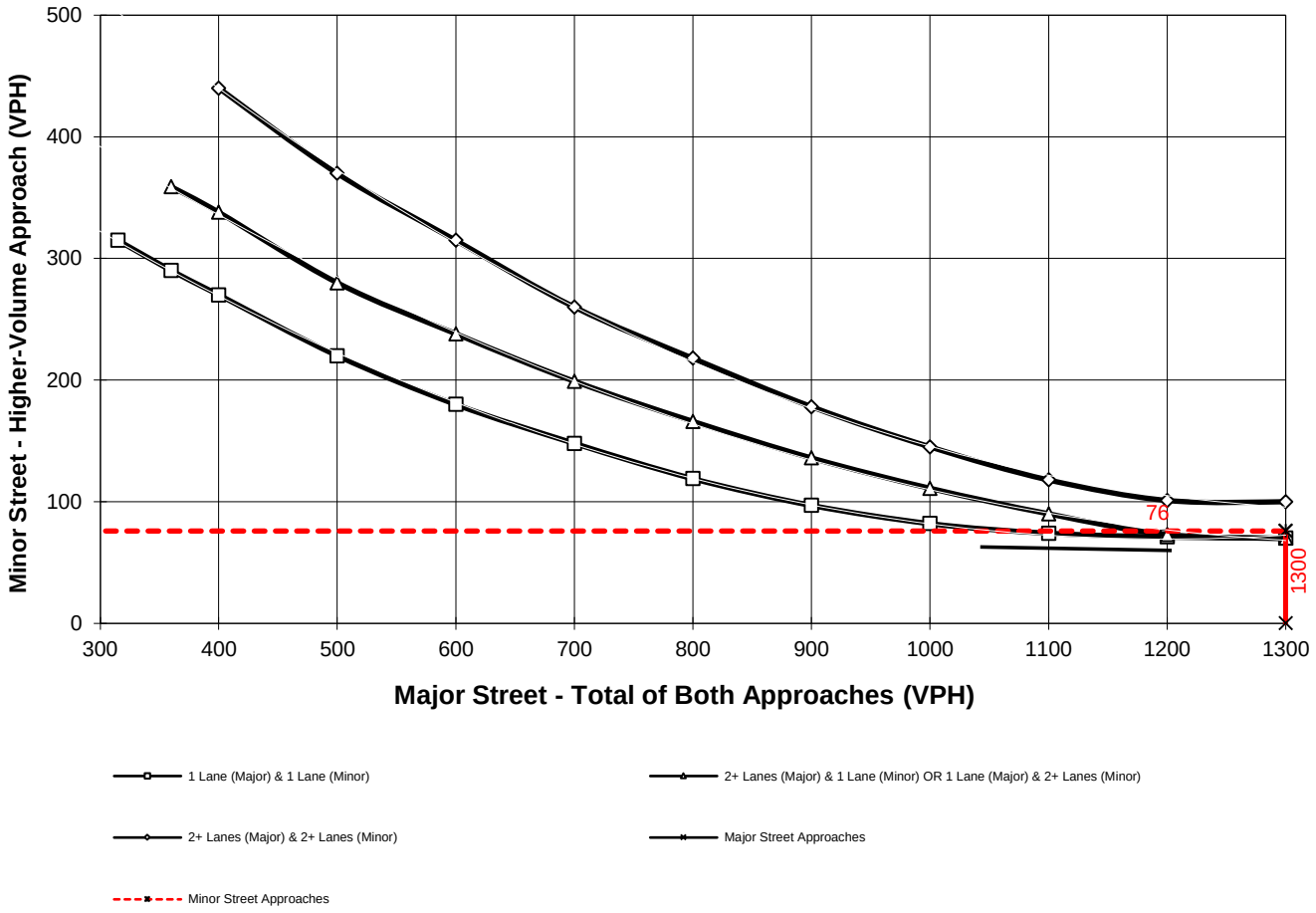
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,464**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **19th Av.**
High Volume Approach (VPH) = **76**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #2

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

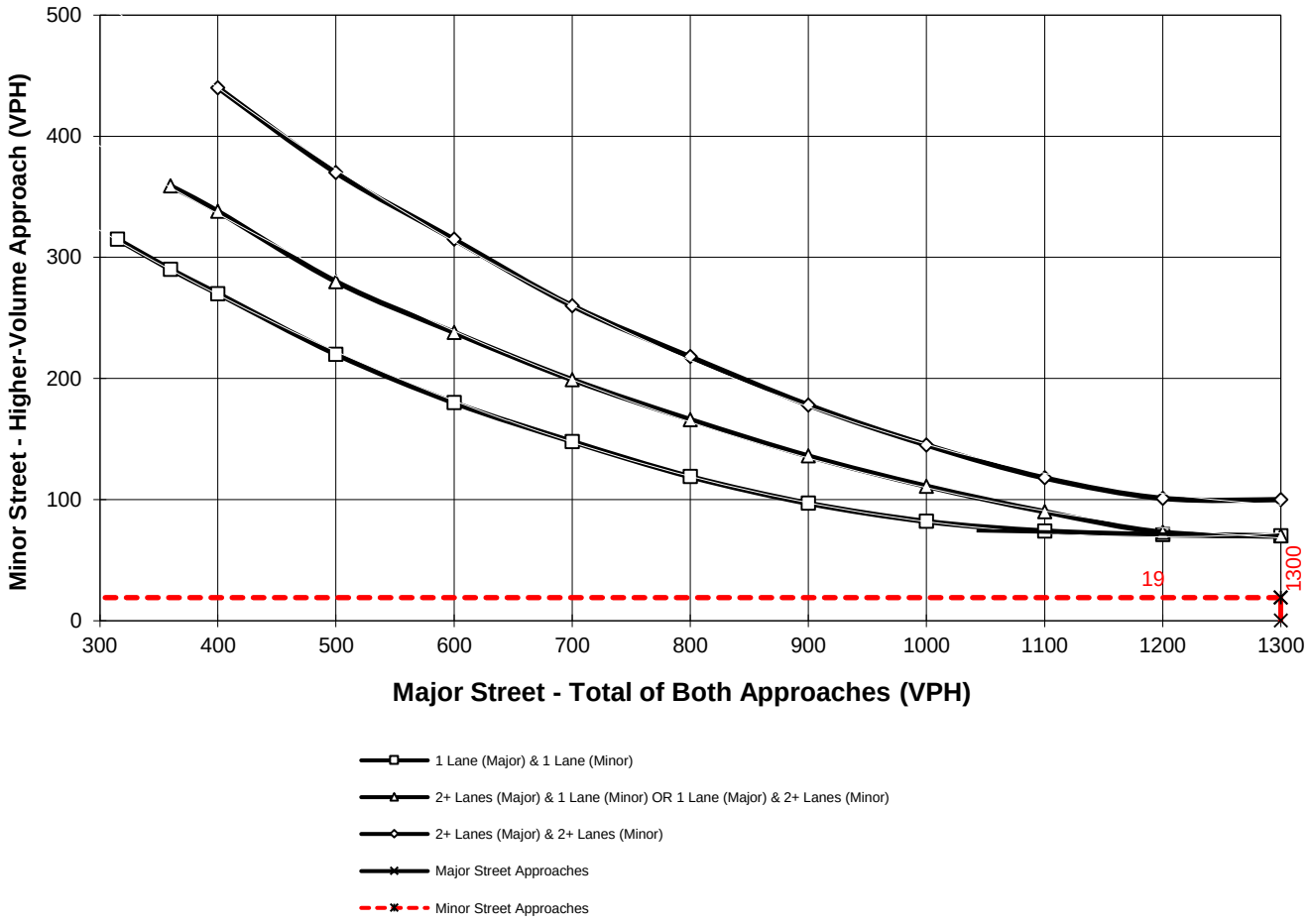
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,539**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza**
High Volume Approach (VPH) = **19**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

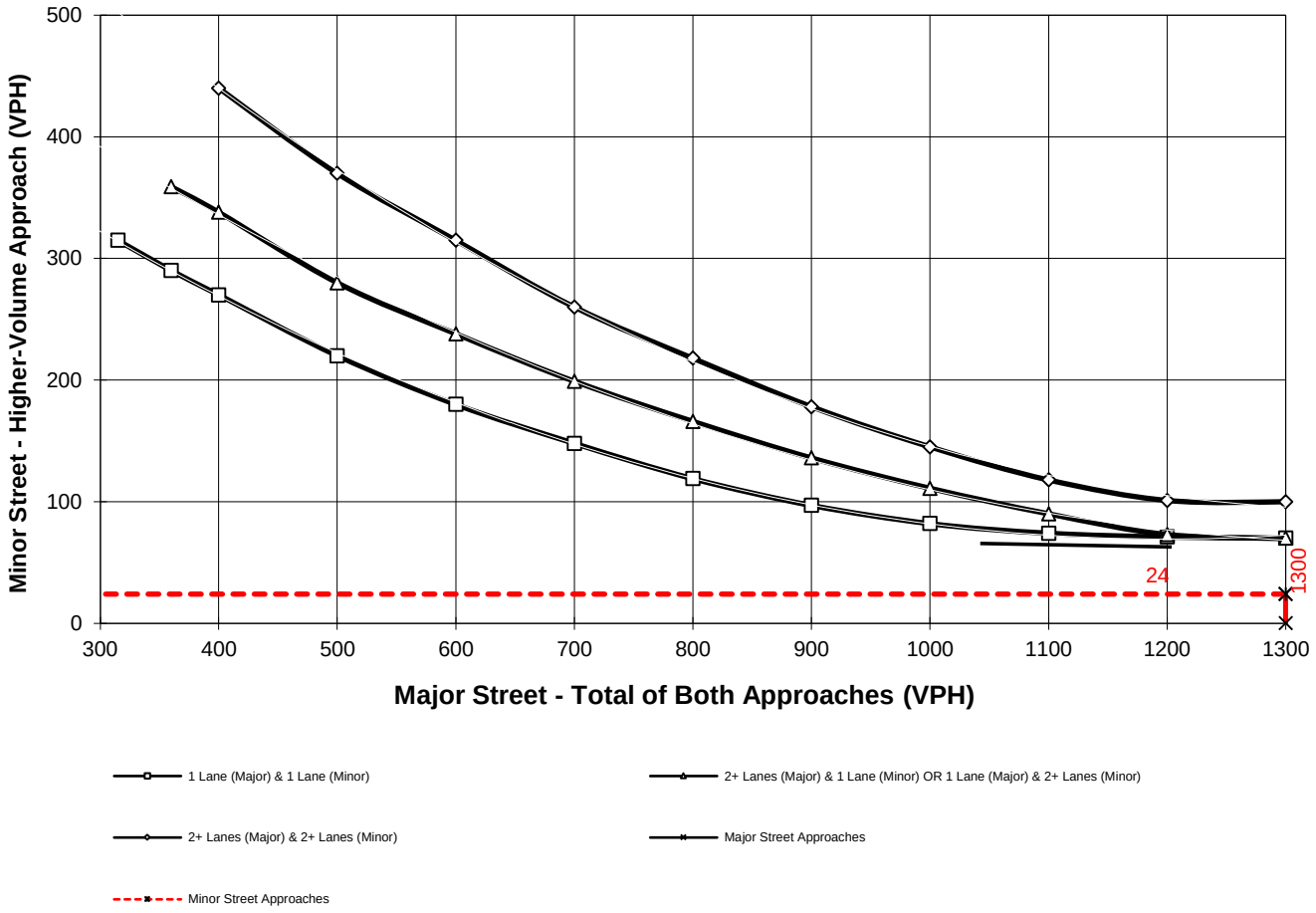
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,521**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza**
High Volume Approach (VPH) = **24**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

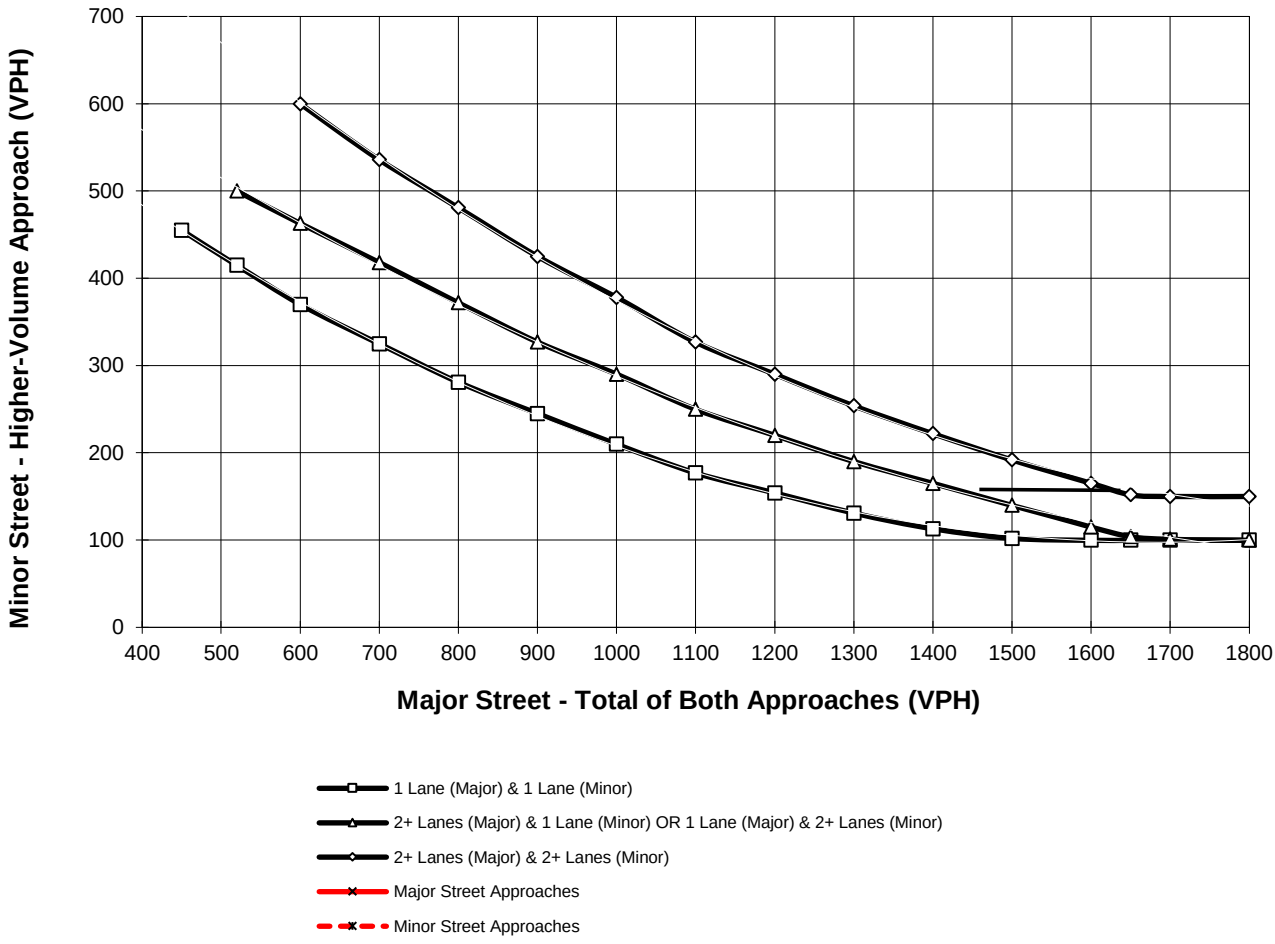
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **24**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

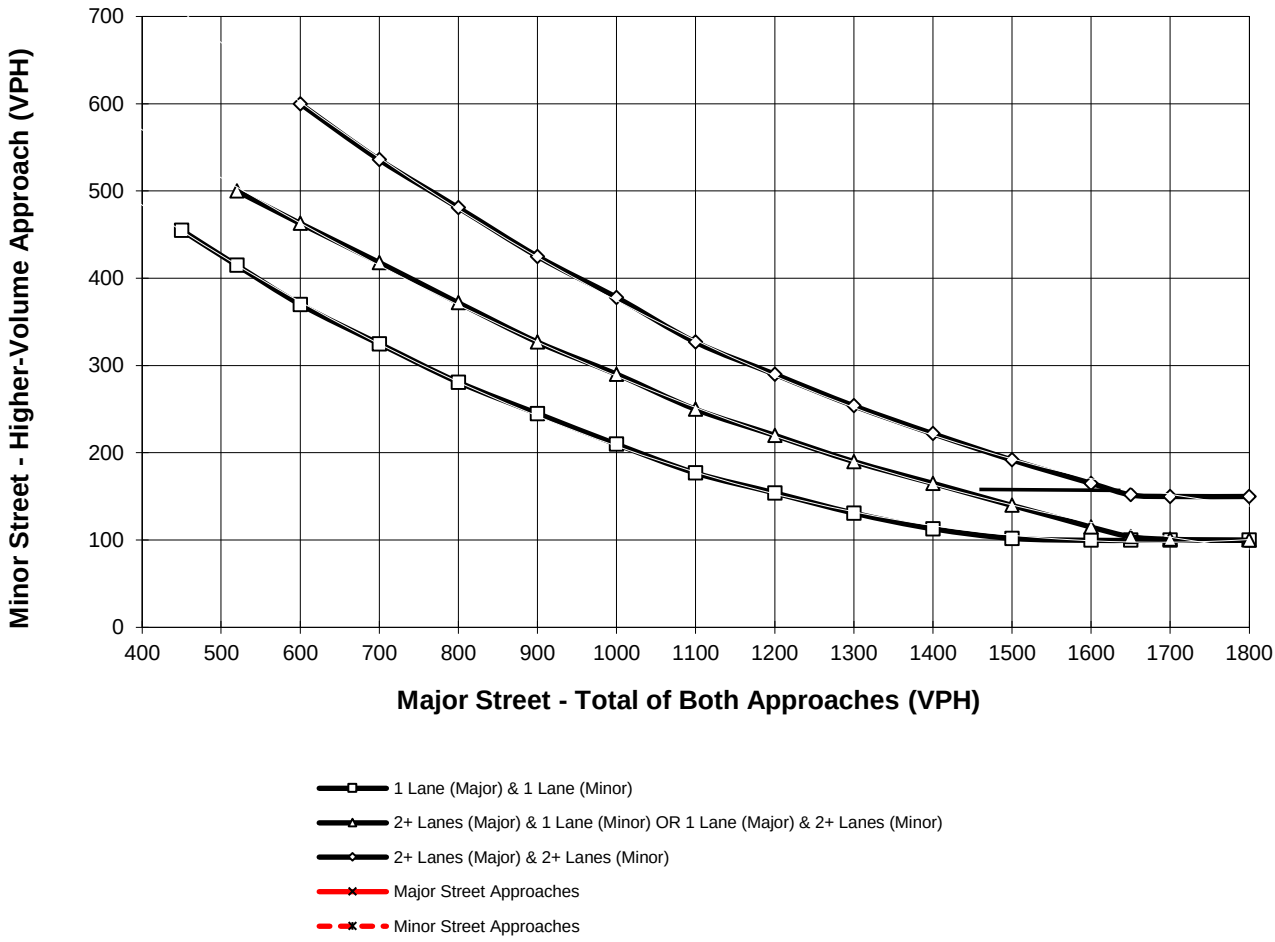
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **26**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **3**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

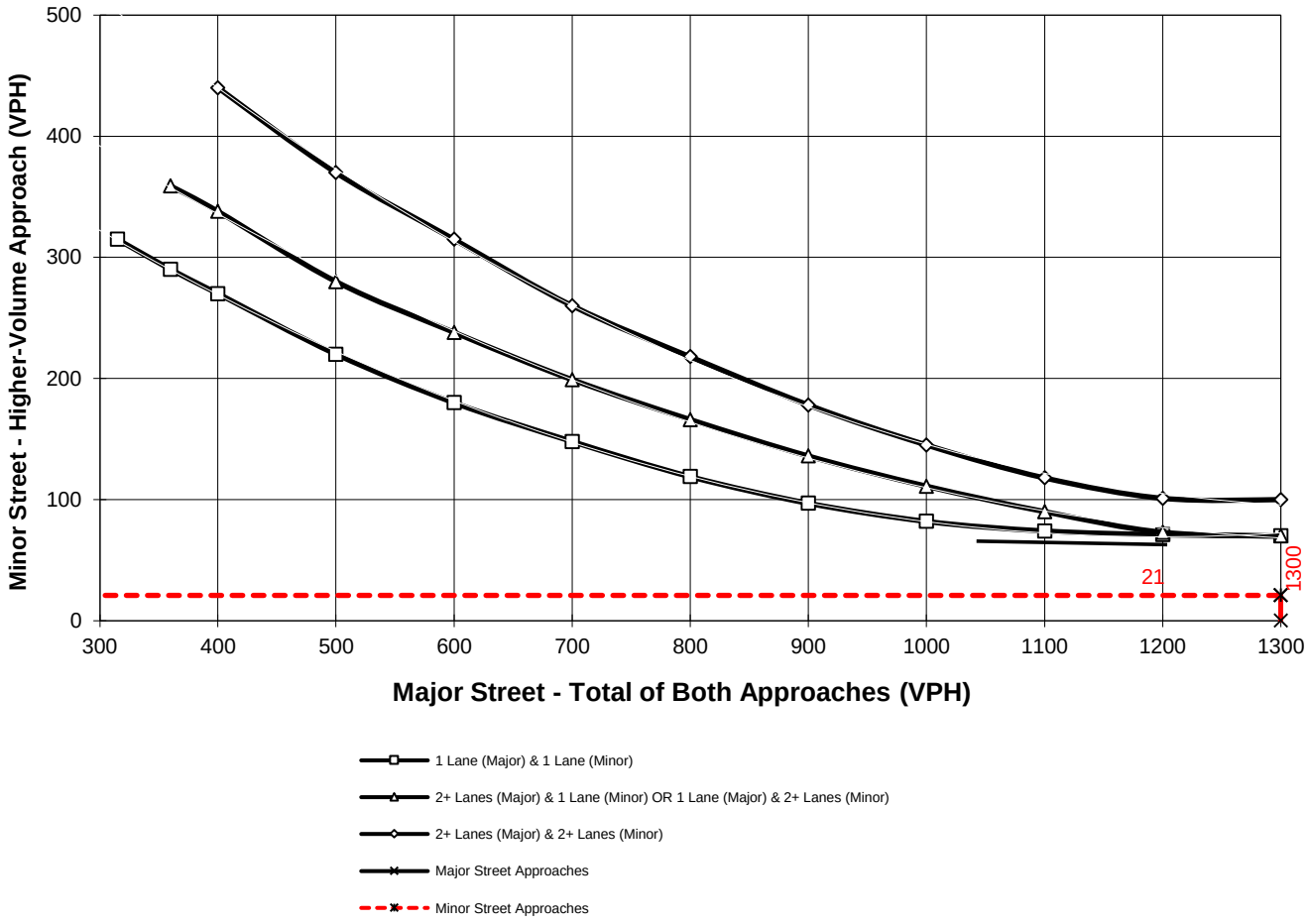
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,553**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **19th Av.**
High Volume Approach (VPH) = **21**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #2

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

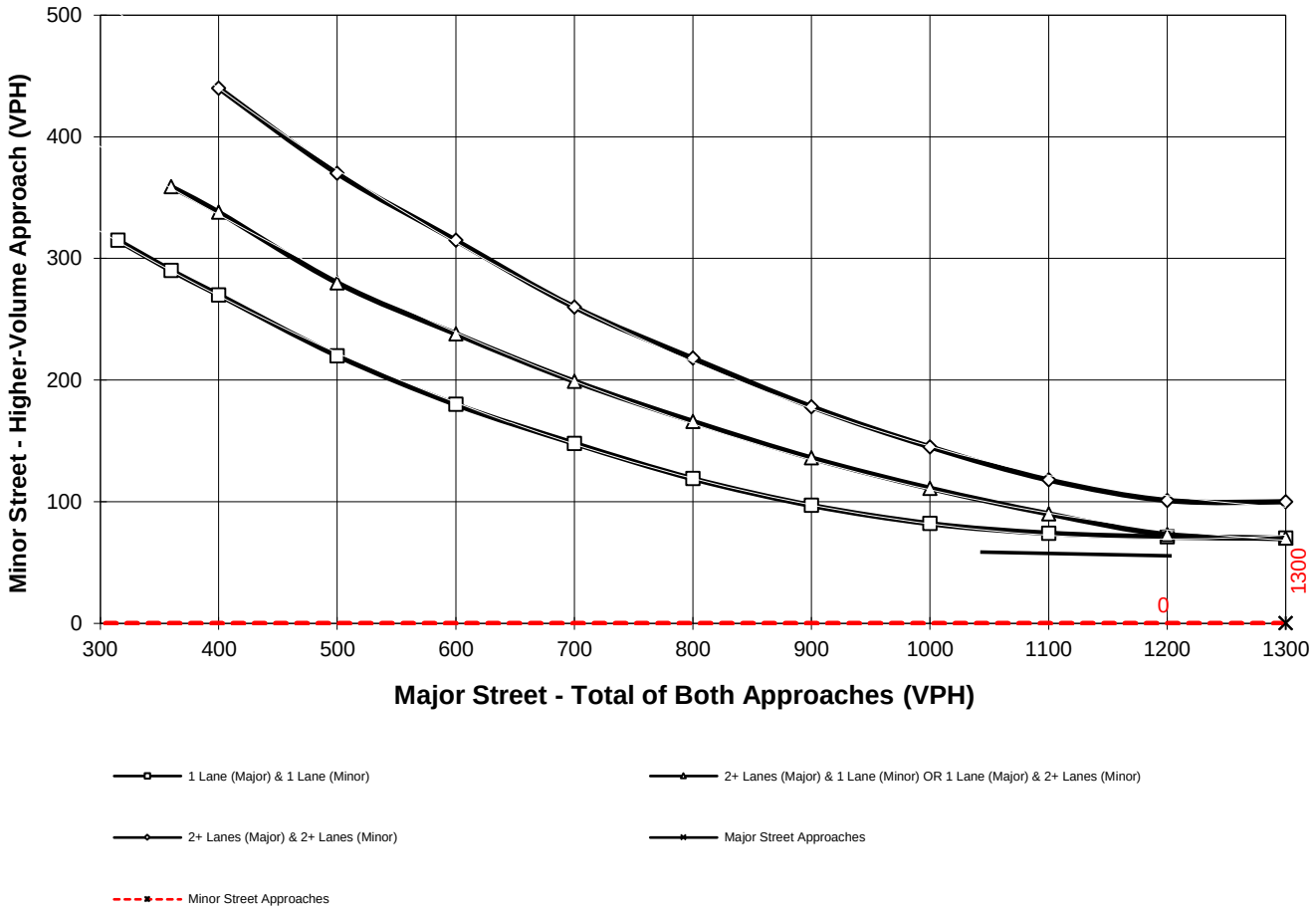
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,482**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **0**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

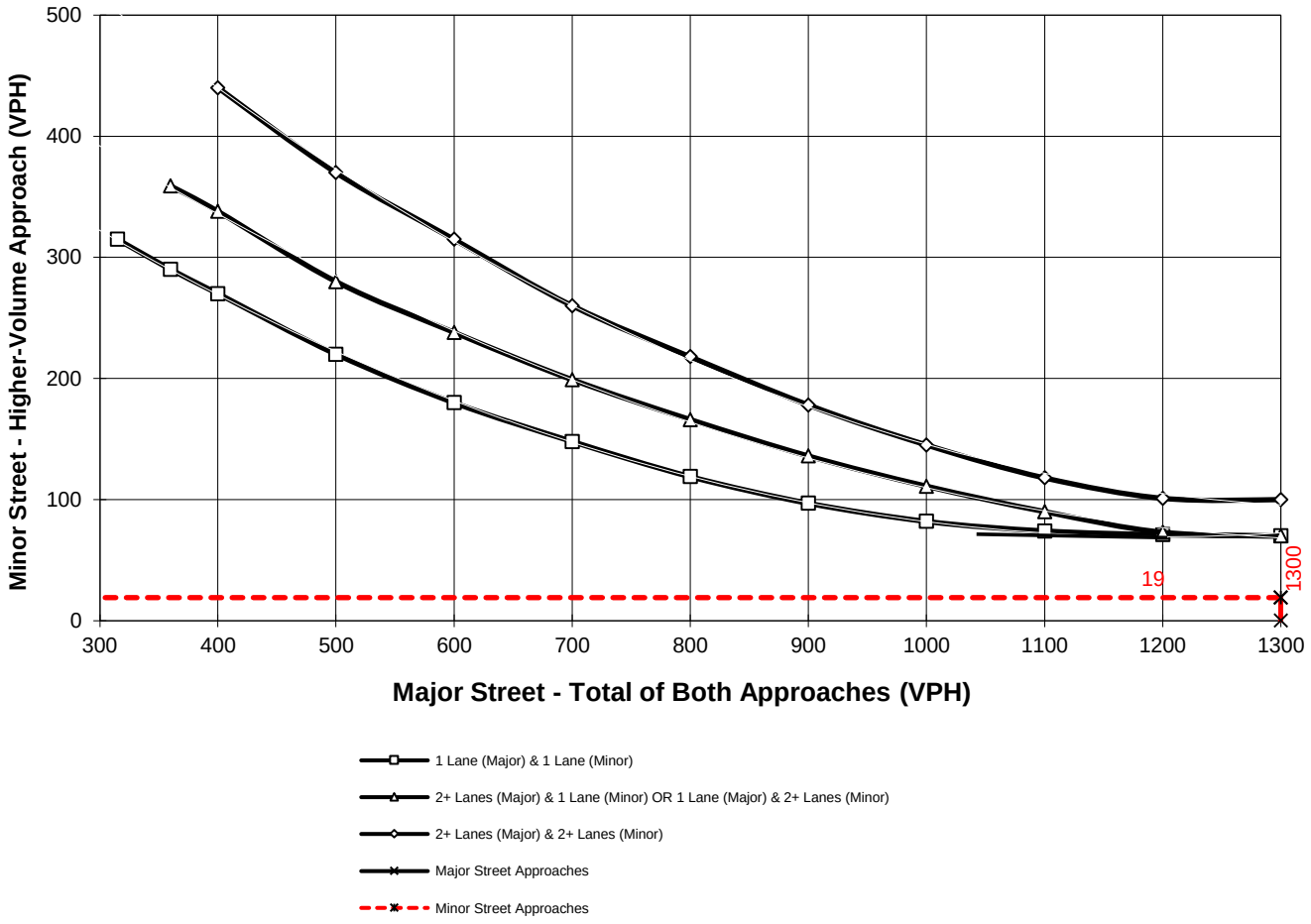
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.** Total of Both Approaches (VPH) = **1,627**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza** High Volume Approach (VPH) = **19**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

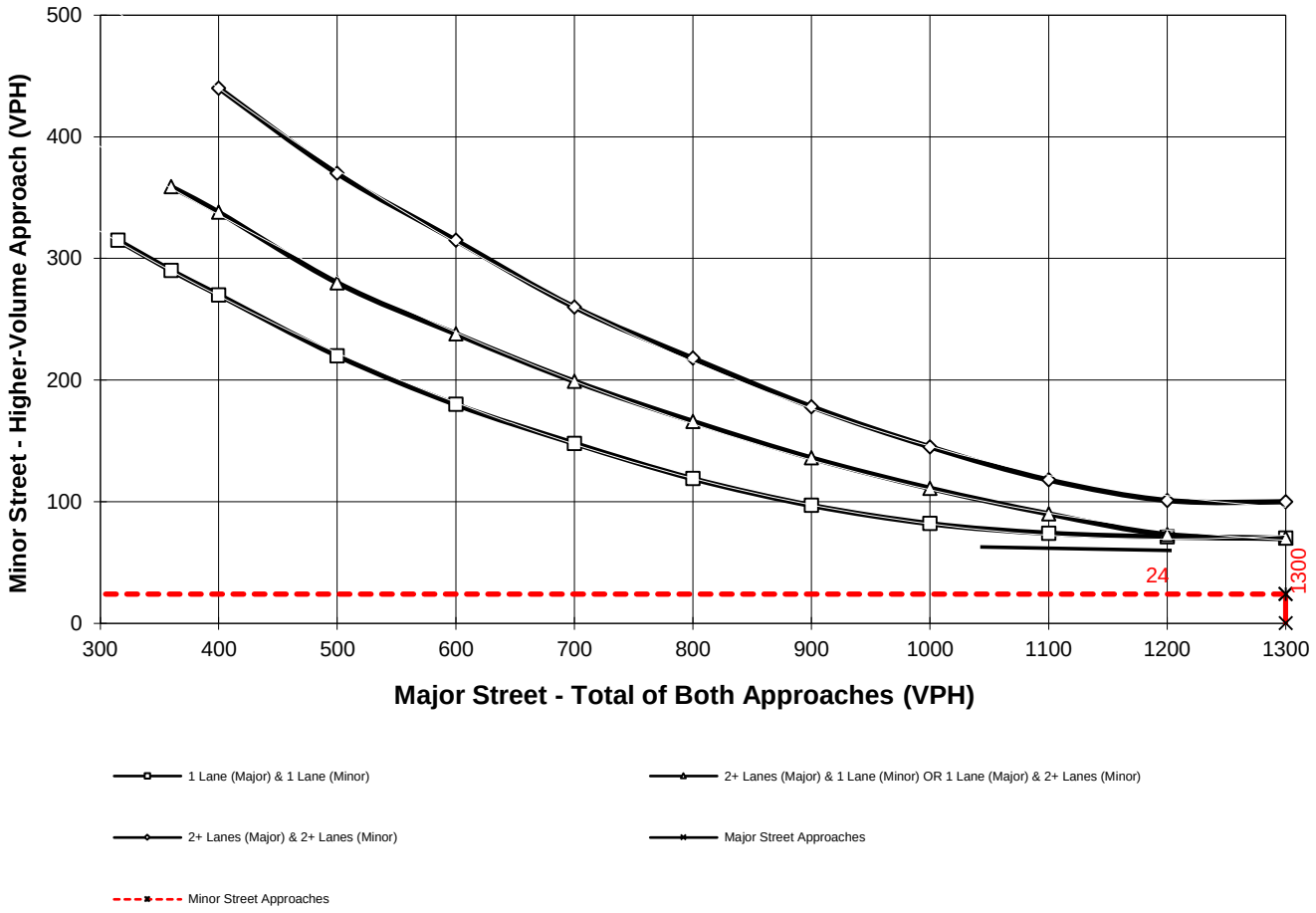
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,634**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza**
High Volume Approach (VPH) = **24**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

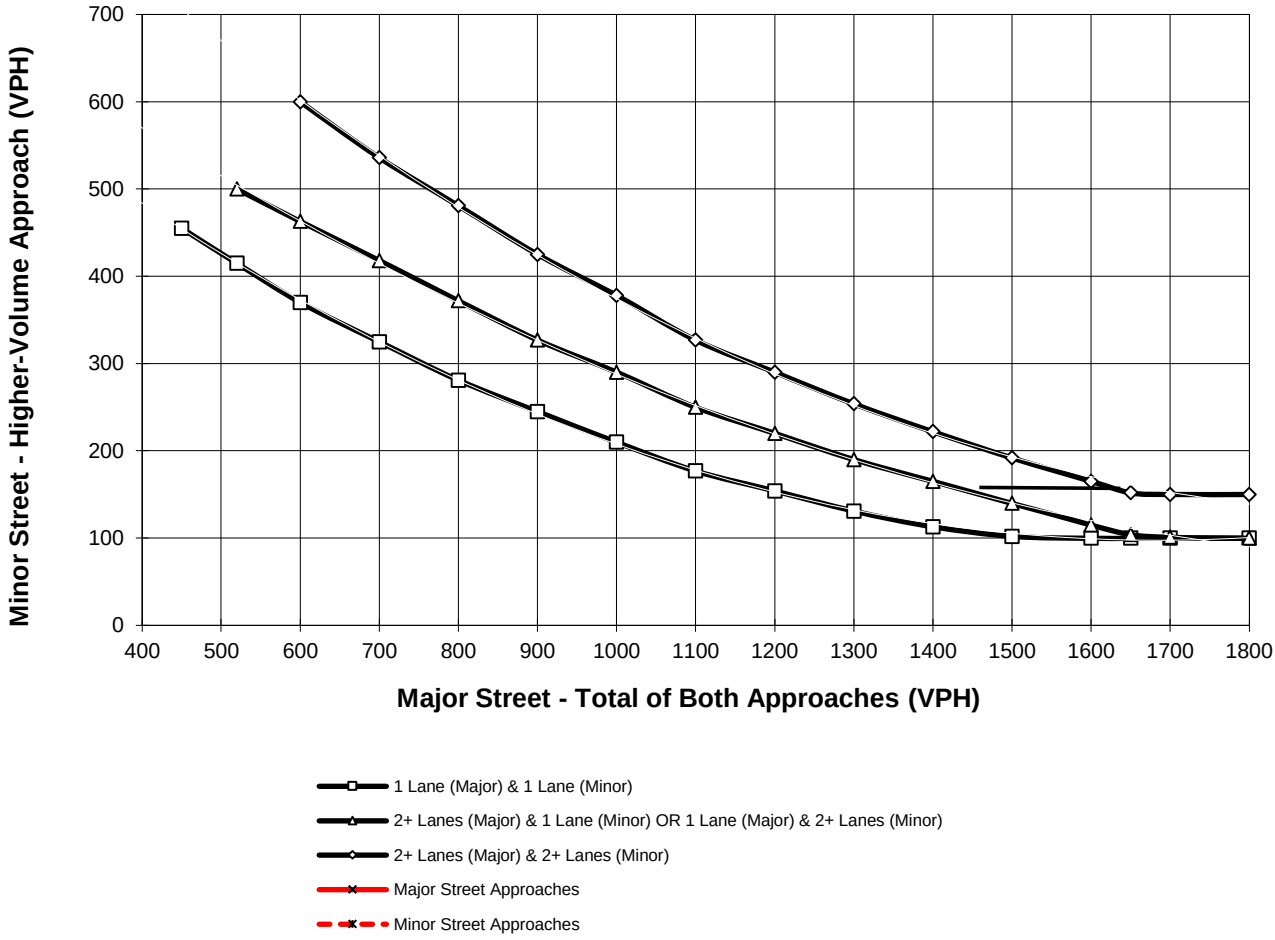
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing + Project AM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **52**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

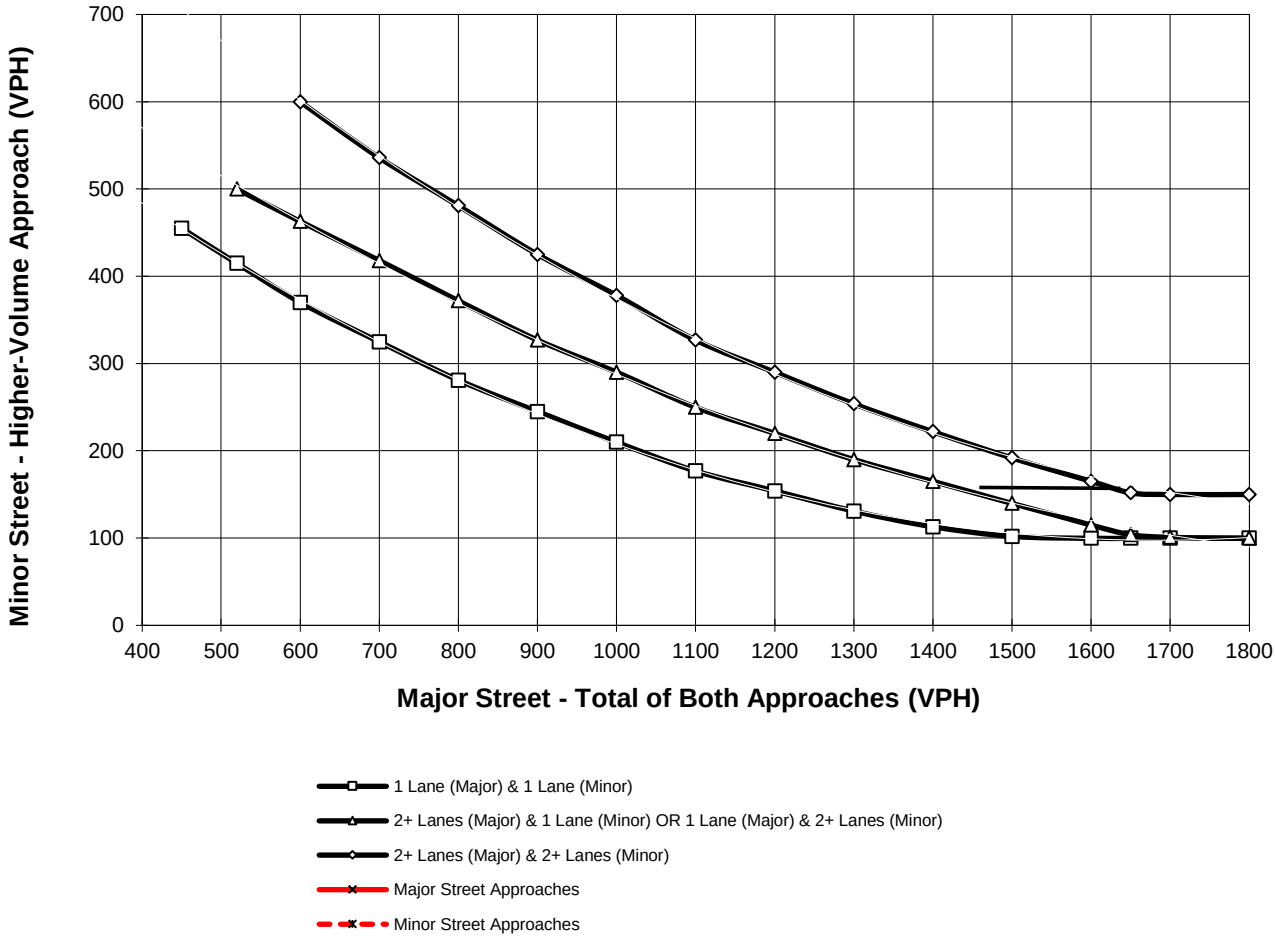
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing + Project PM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **39**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **7**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

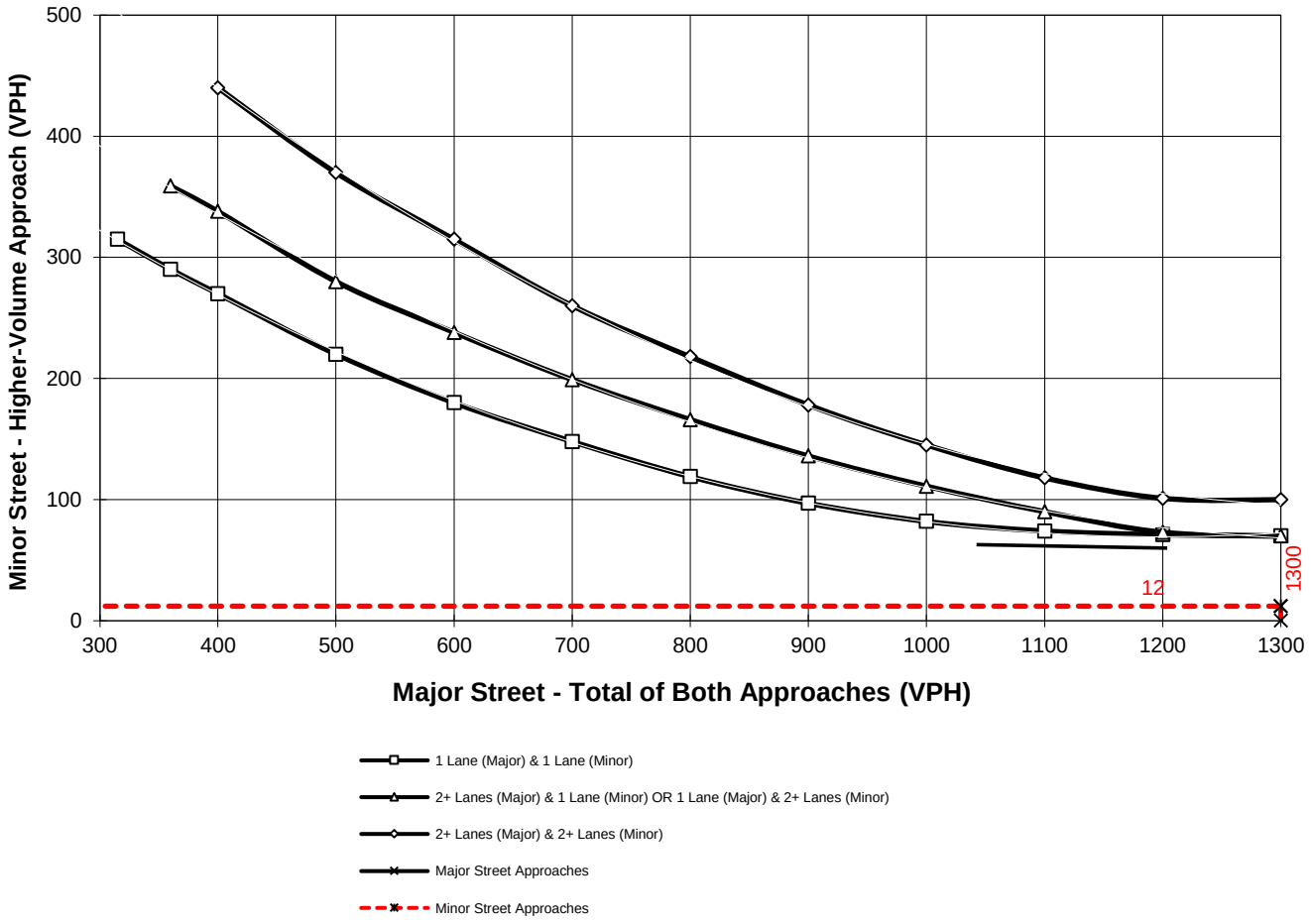
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,551**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **12**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

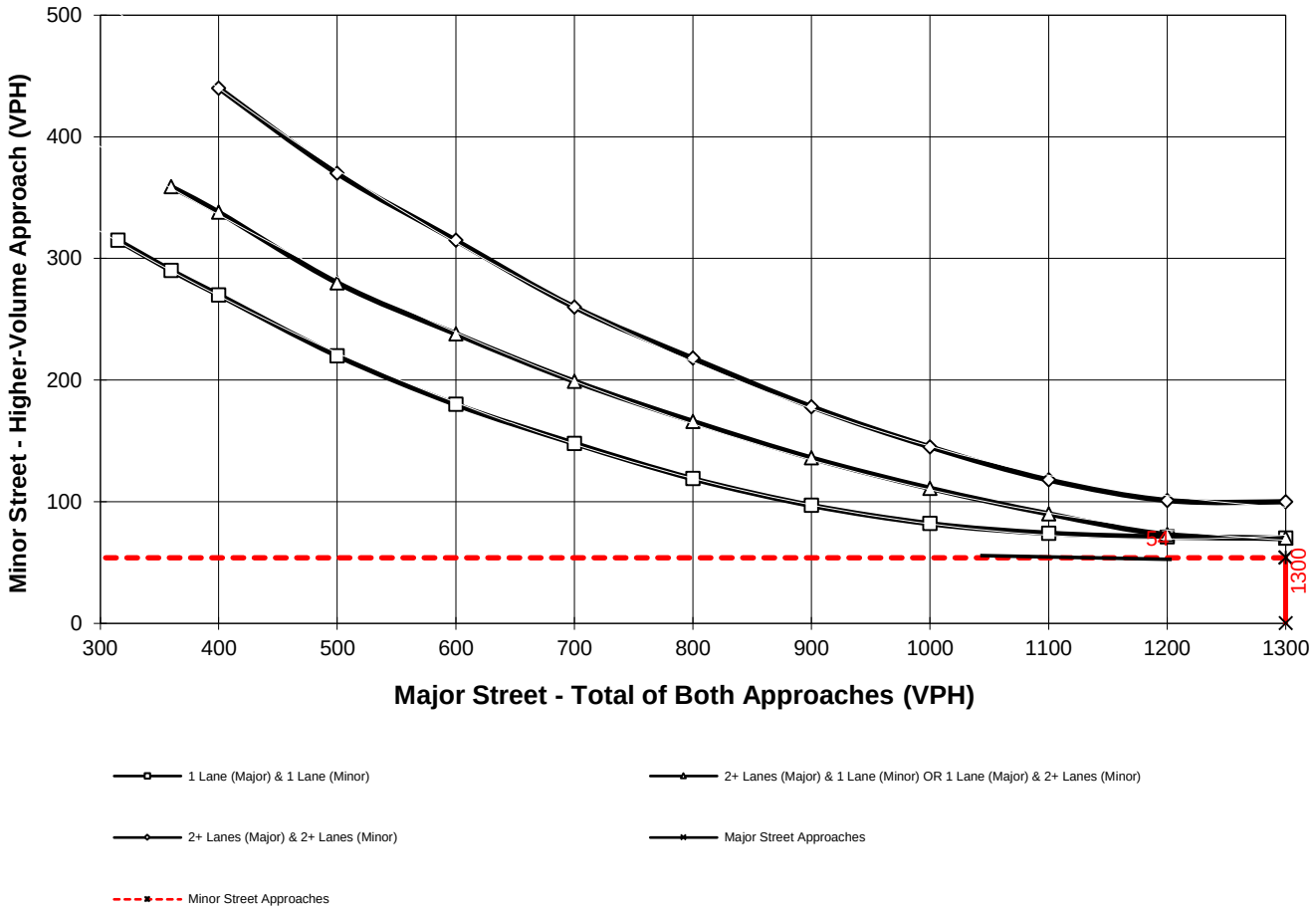
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **1,535**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **54**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

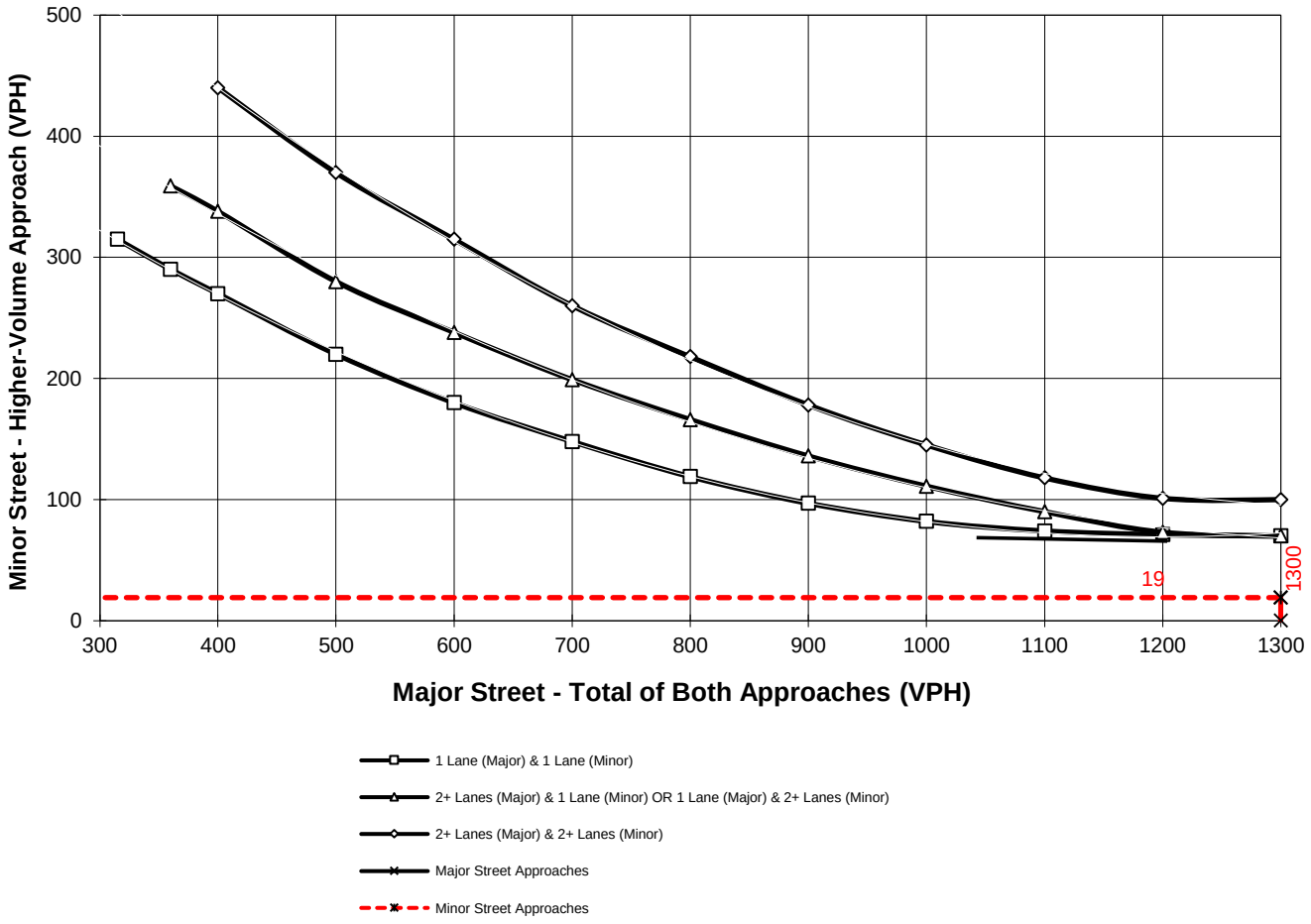
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,573**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza**
High Volume Approach (VPH) = **19**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

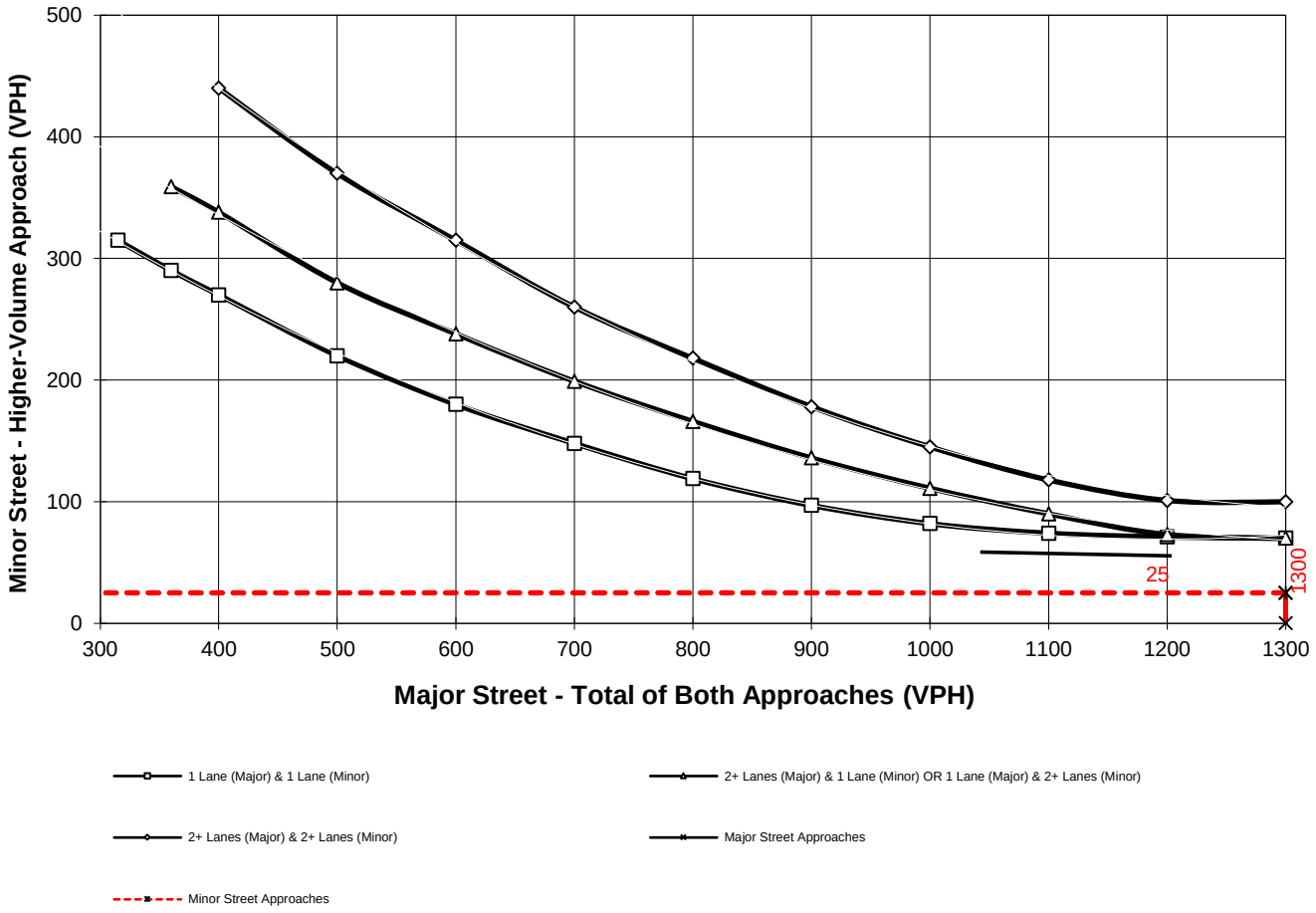
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,877**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza**
High Volume Approach (VPH) = **25**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

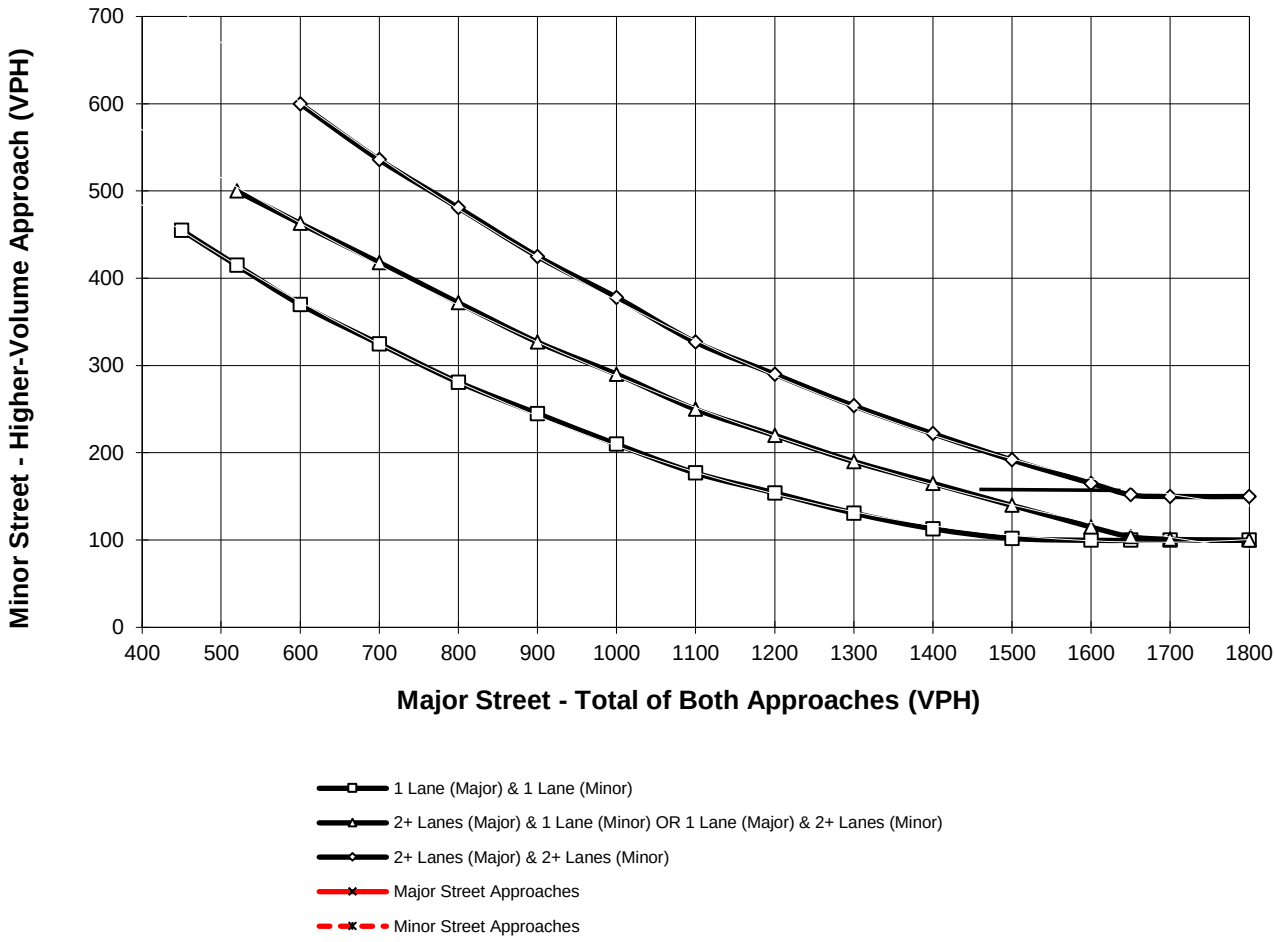
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing + Project AM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **52**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

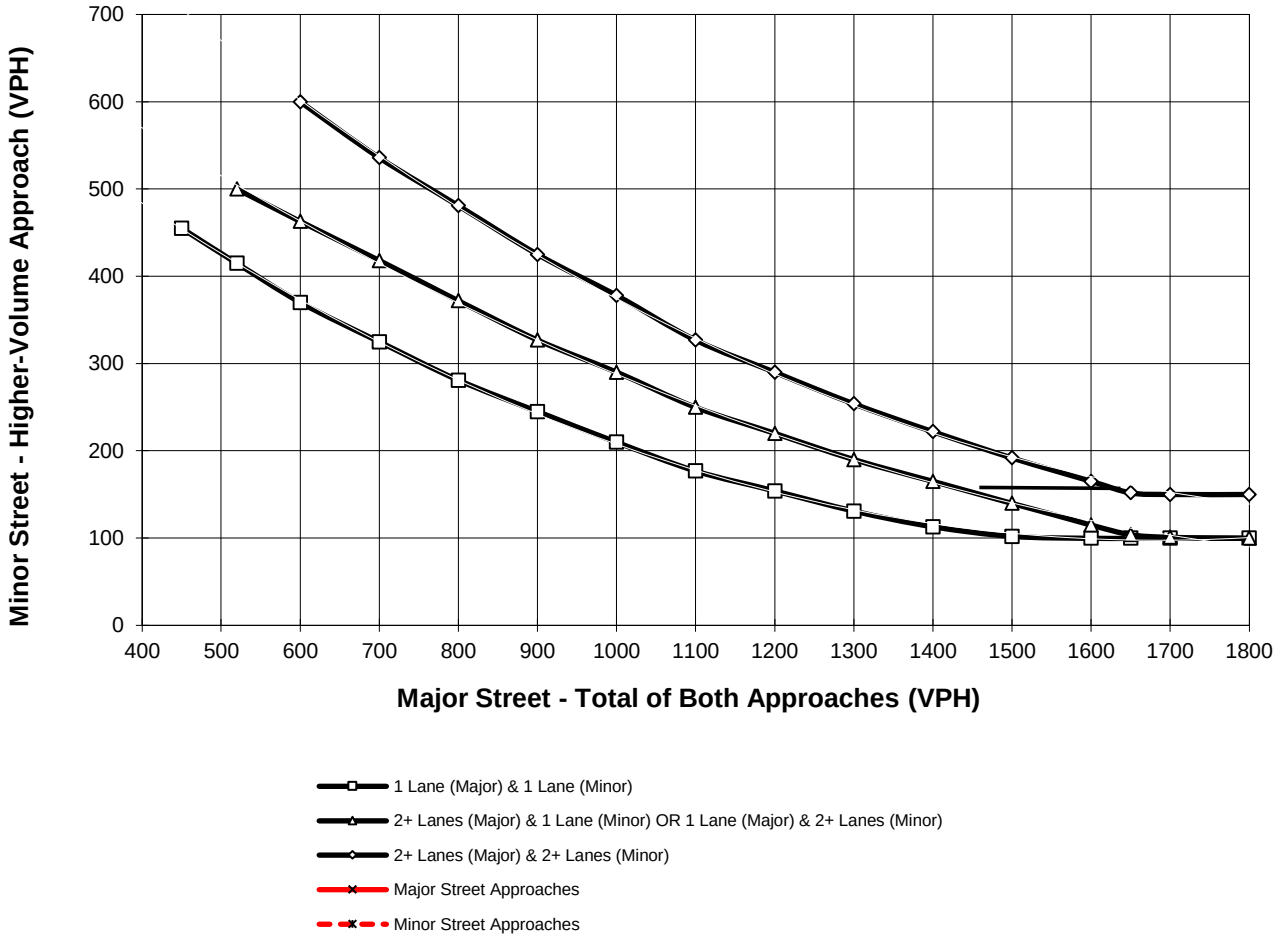
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC PM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **33**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **13**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

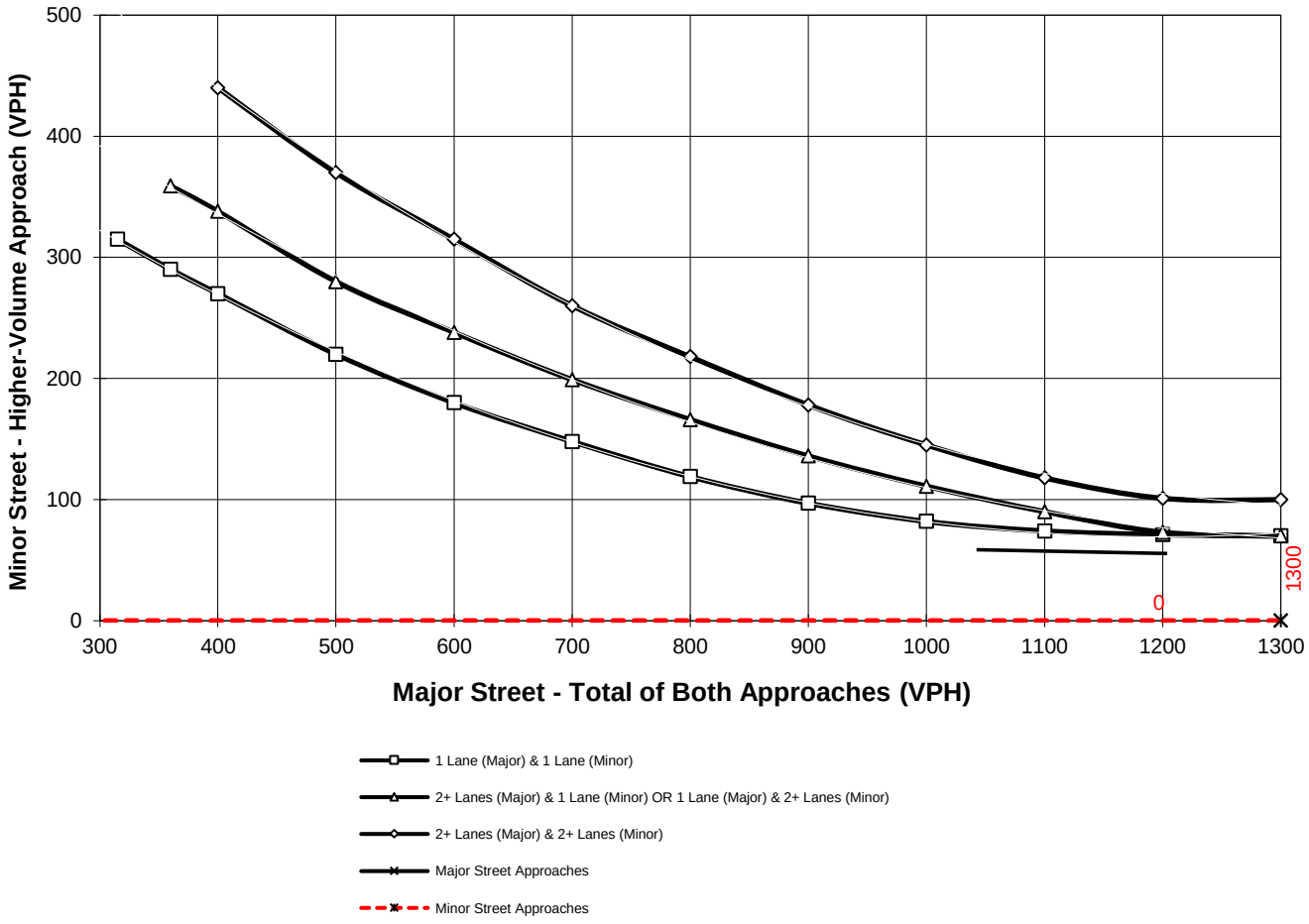
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,444**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **0**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

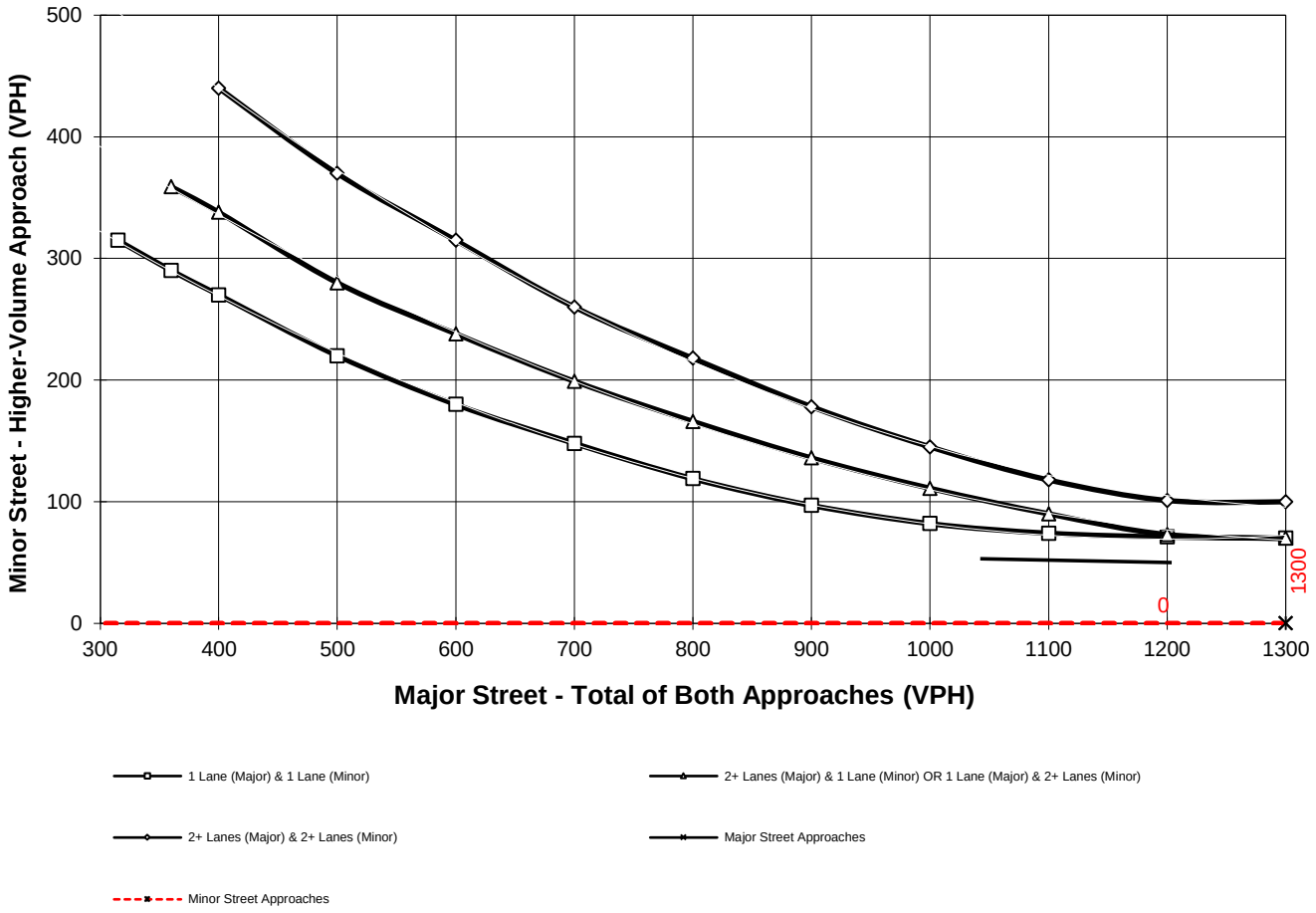
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,768**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **0**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

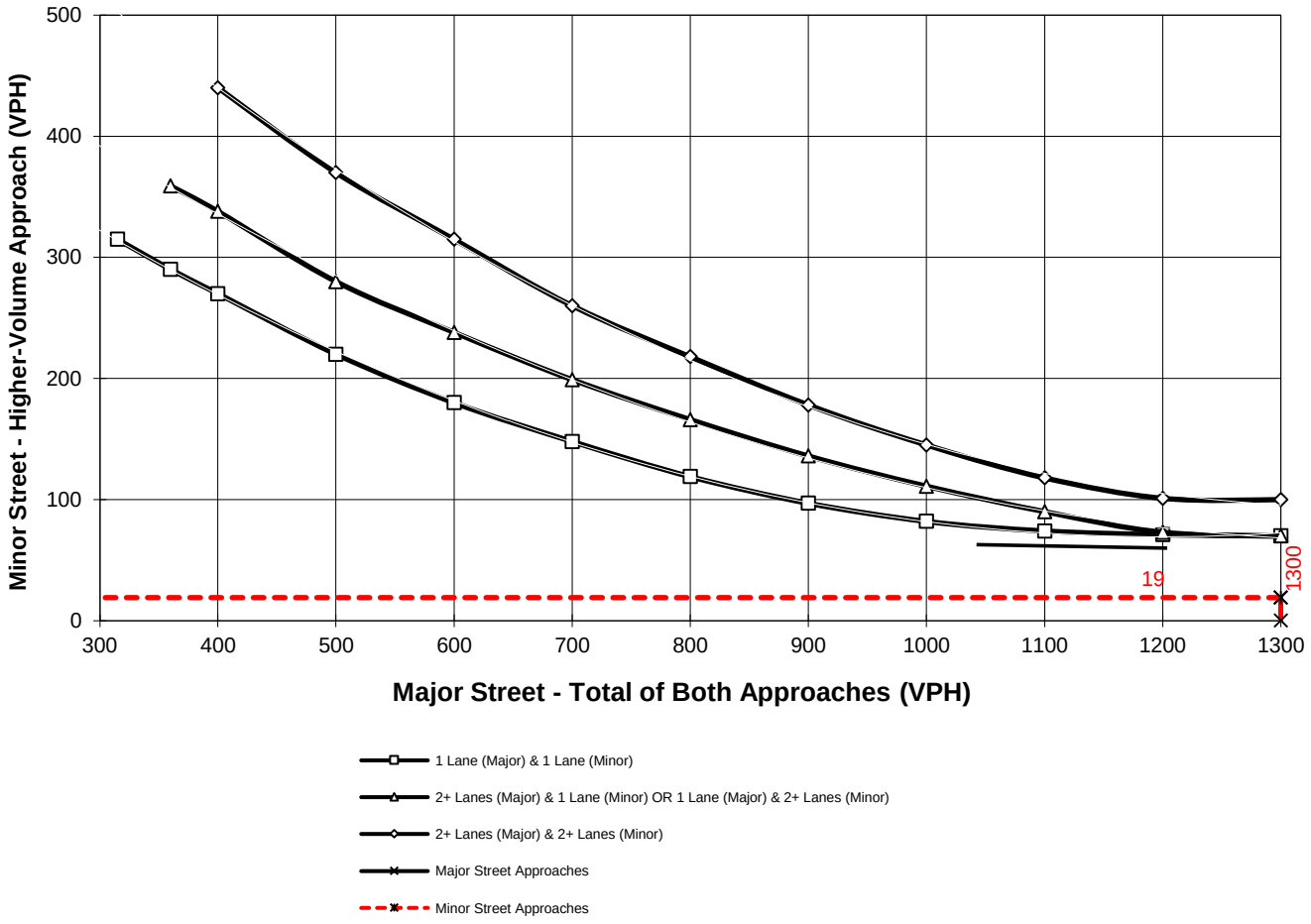
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2024) AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.** Total of Both Approaches (VPH) = **2,661**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza** High Volume Approach (VPH) = **19**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

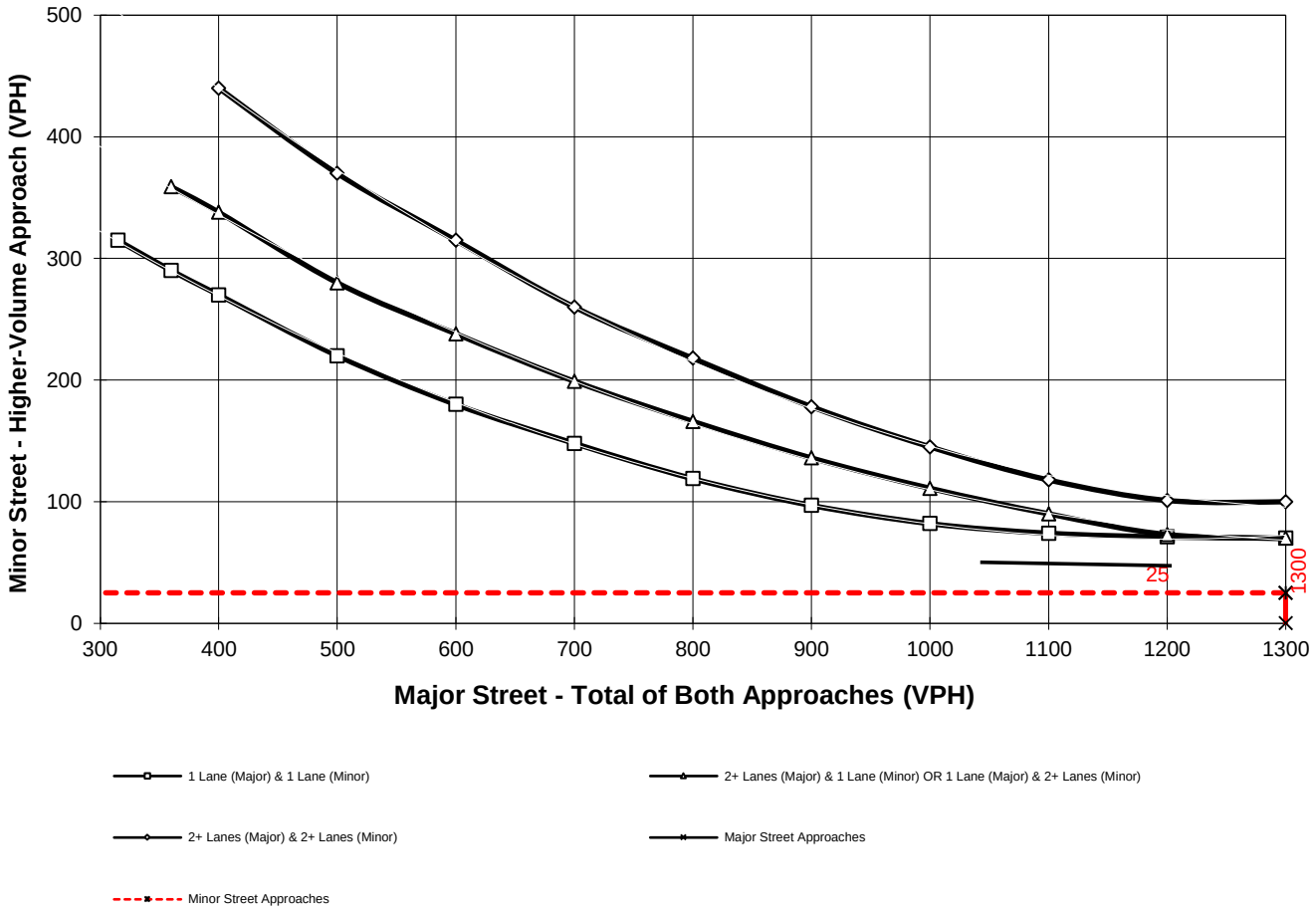
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2024) PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,990**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Commercial Plaza**
High Volume Approach (VPH) = **25**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

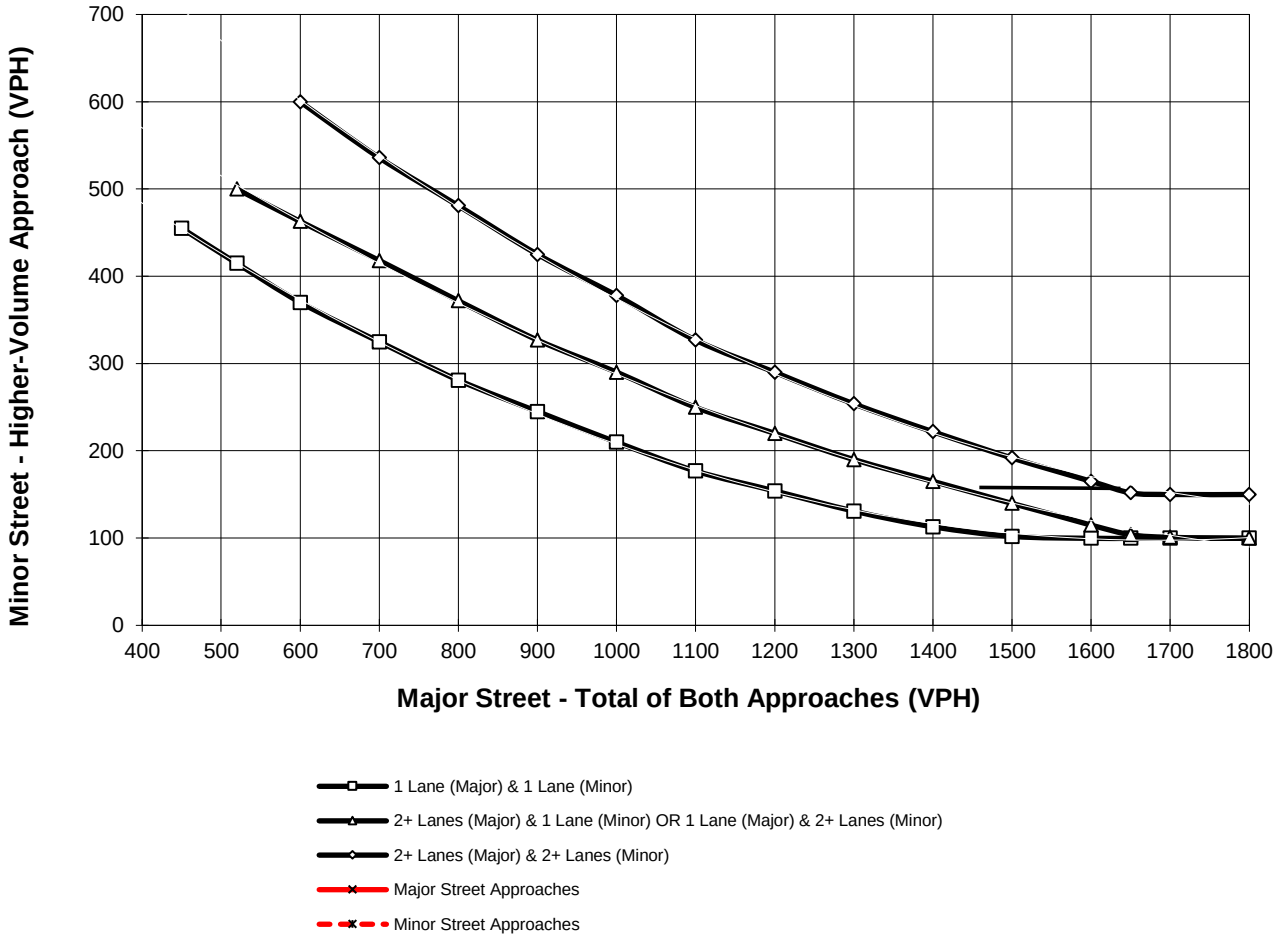
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC (2024) AM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **69**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **4**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

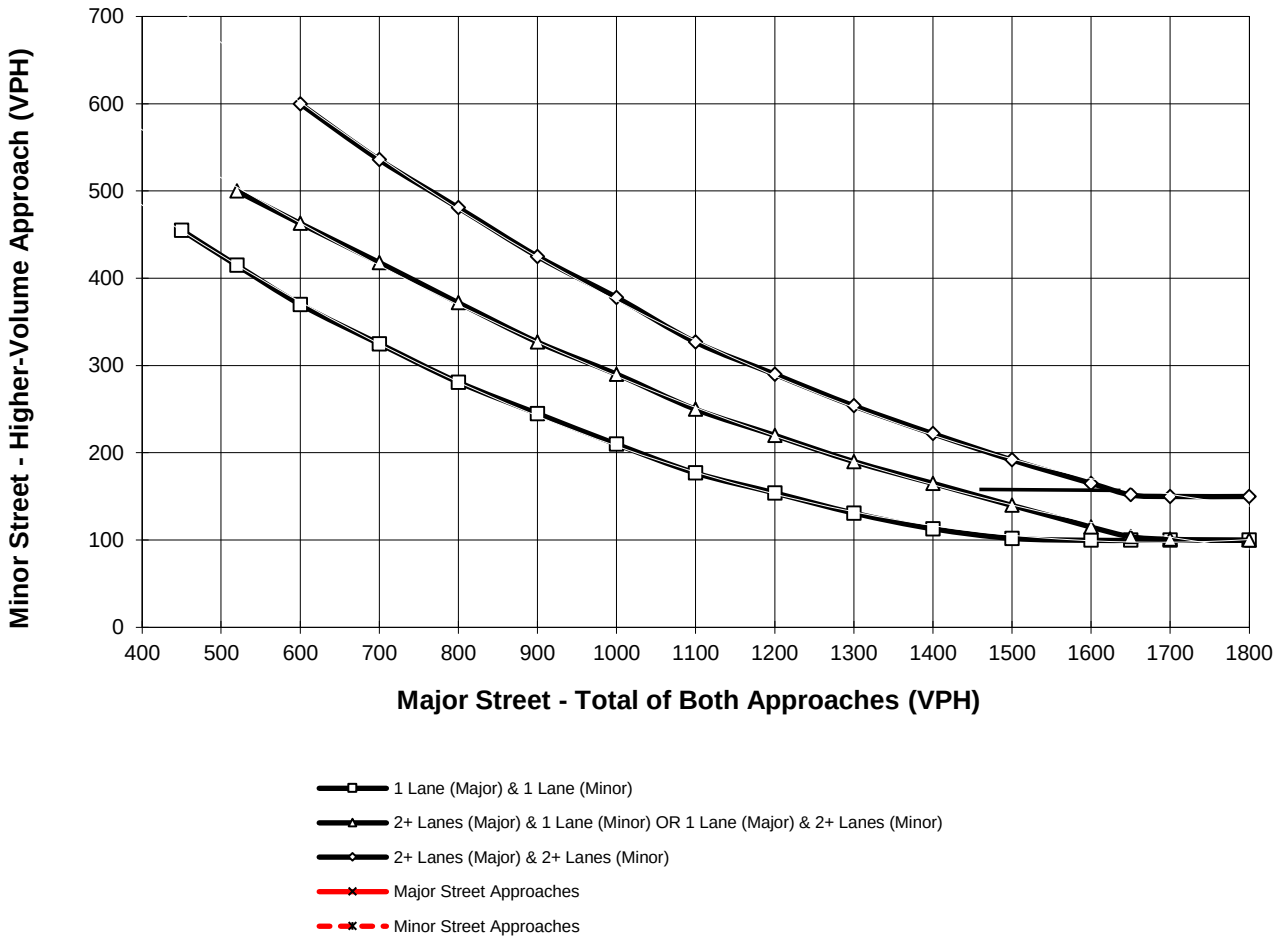
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC (2024) PM PEAK HOUR WARRANTS**

Major Street Name = **19th Av.**
Total of Both Approaches (VPH) = **46**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Newhall St. - Dwy. 4**
High Volume Approach (VPH) = **13**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

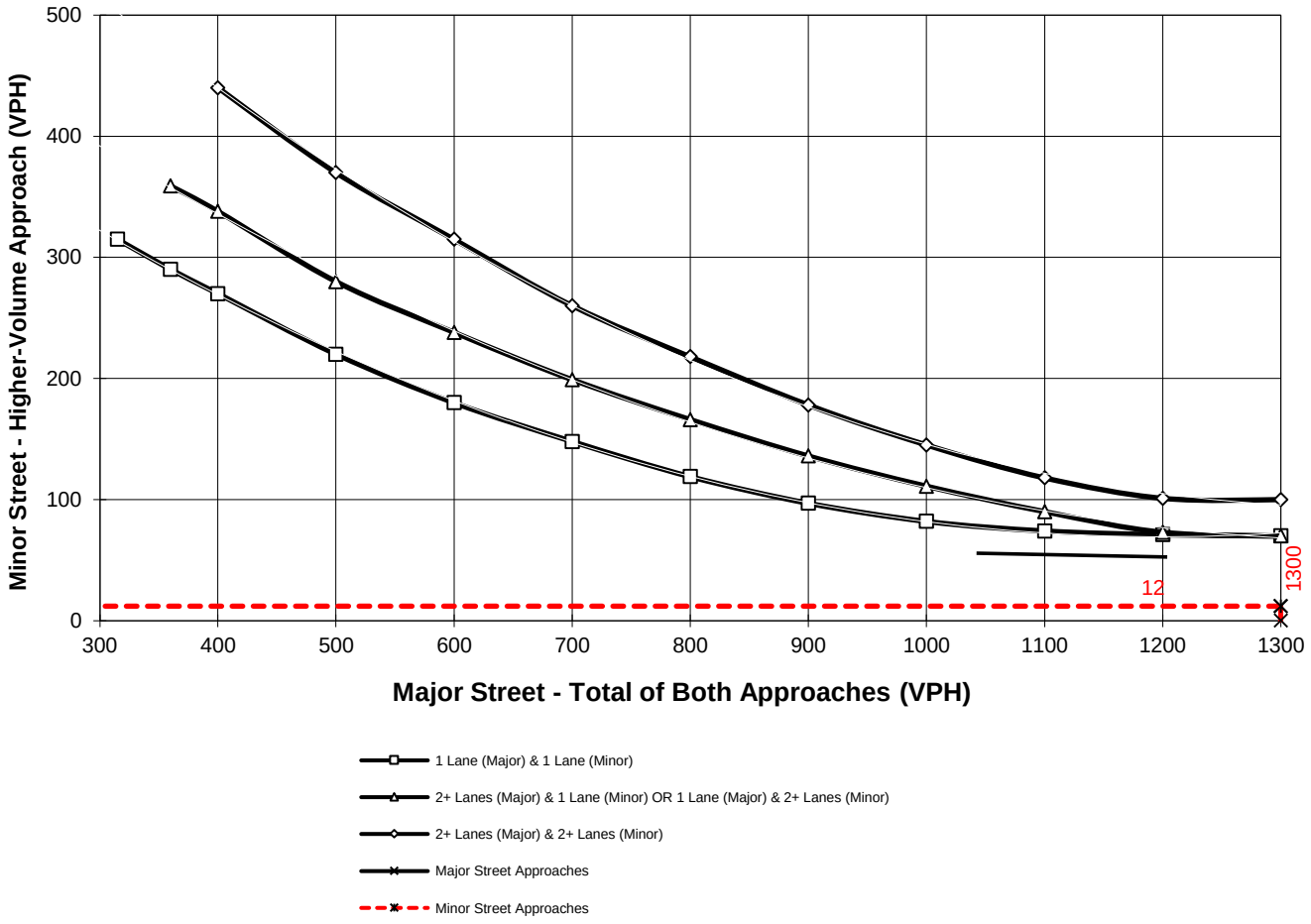
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2024) AM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,506**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **12**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

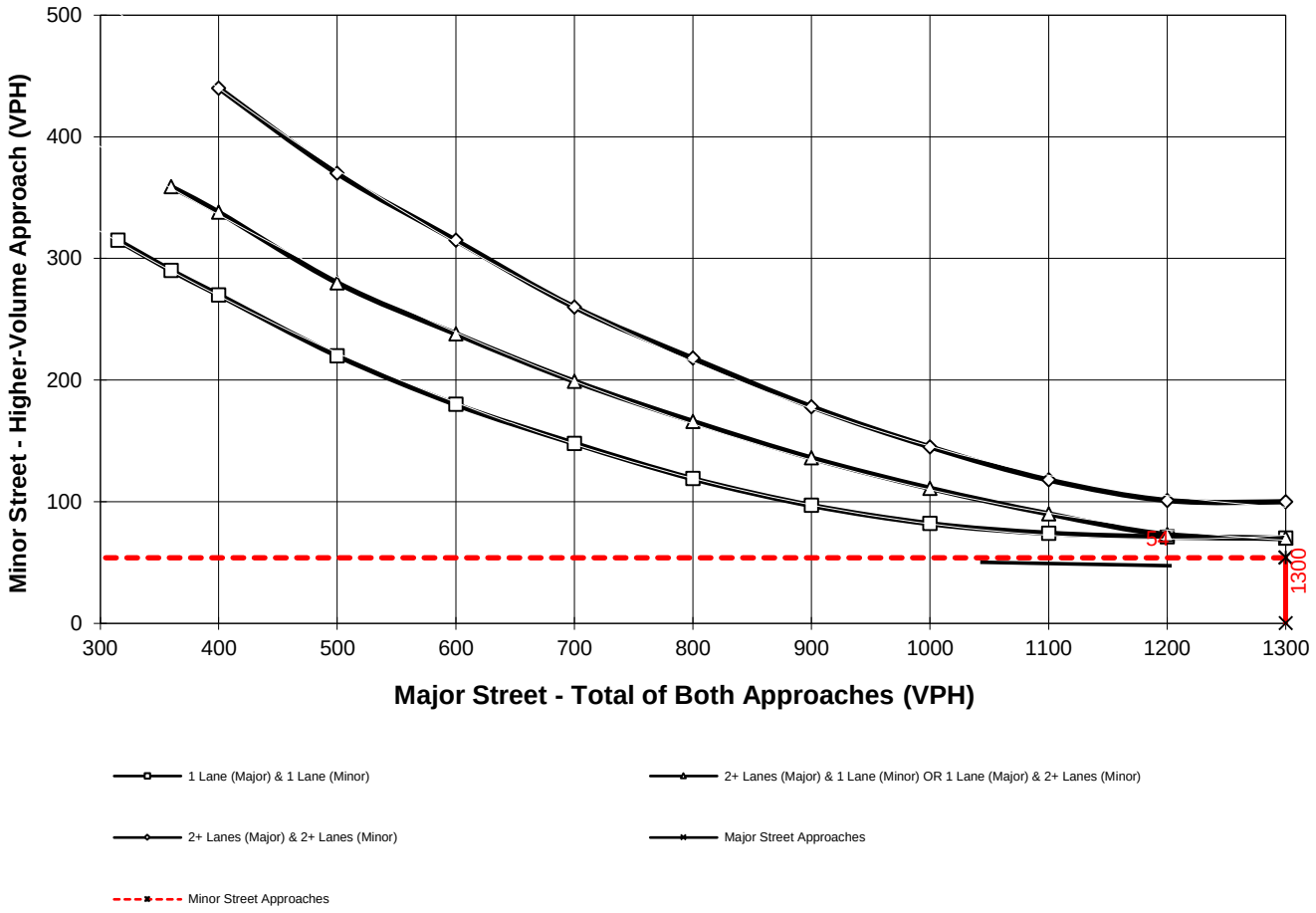
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2024) PM PEAK HOUR WARRANTS**

Major Street Name = **Indian Canyon Dr.**
Total of Both Approaches (VPH) = **2,821**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Dwy. 2**
High Volume Approach (VPH) = **54**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS		EP
				CALC	JC	DATE	02/24/23
Jurisdiction:	City of Palm Springs			CHK		DATE	
Major Street:	20th Av.				Critical Approach Speed (Major)		35 mph
Minor Street:	Newhall St. - Dwy. 4				Critical Approach Speed (Minor)		30 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **600** vpd Minor Street Future ADT = **231** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……..

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements ADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **600**	*1* **231**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **600**	*1* **231**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 7% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS		EP
				CALC	JC	DATE	#SPILL!
Jurisdiction:	**City of Palm Springs**			CHK		DATE	
Major Street:	**Indian Canyon Dr.**				Critical Approach Speed (Major)		35 mph
Minor Street:	**Dwy. 2**				Critical Approach Speed (Minor)		30 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **18,260** vpd Minor Street Future ADT = **502** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements ADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **18,260**	*1* **502**	8,000 *	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **18,260**	*1* **502**	12,000 *	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 21% **B** 42%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAPC
				CALC JC	DATE 02/24/23
Jurisdiction: **City of Palm Springs**				CHK	DATE
Major Street: **20th Av.**				Critical Approach Speed (Major)	35 mph
Minor Street: **Newhall St. - Dwy. 4**				Critical Approach Speed (Minor)	30 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **715** vpd Minor Street Future ADT = **231** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN XX RURAL

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements ADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **715**	*1* **231**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **715**	*1* **231**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 9% **B** 6%

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAPC
				CALC JC	DATE 02/24/23
Jurisdiction: **City of Palm Springs**				CHK	DATE
Major Street: **Indian Canyon Dr.**				Critical Approach Speed (Major)	35 mph
Minor Street: **Dwy. 2**				Critical Approach Speed (Minor)	30 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **35,488** vpd Minor Street Future ADT = **502** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements ADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements ADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **35,488**	*1* **502**	8,000 *	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **35,488**	*1* **502**	12,000 *	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 21% **B** 42%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX 5.1: E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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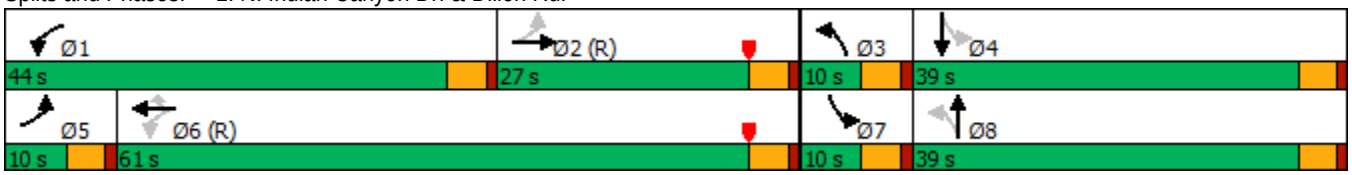
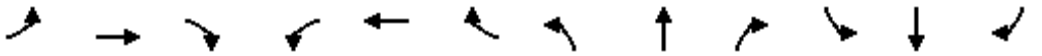
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	83	31	414	97	24	16	238	110	24	552	3
Future Volume (vph)	3	83	31	414	97	24	16	238	110	24	552	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	10.0	27.0		44.0	61.0	61.0	10.0	39.0		10.0	39.0	
Total Split (%)	8.3%	22.5%		36.7%	50.8%	50.8%	8.3%	32.5%		8.3%	32.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

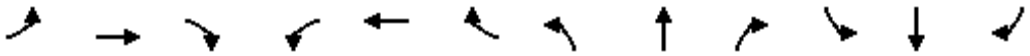




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	83	31	414	97	24	16	238	110	24	552	3
Future Volume (veh/h)	3	83	31	414	97	24	16	238	110	24	552	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	95	36	476	111	28	18	274	126	28	634	3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	511	909	328	813	1925	859	212	697	312	300	1083	5
Arrive On Green	0.00	0.35	0.35	0.19	0.53	0.53	0.02	0.29	0.29	0.03	0.29	0.29
Sat Flow, veh/h	1810	2597	939	1810	3610	1610	1810	2424	1085	1810	3684	17
Grp Volume(v), veh/h	3	65	66	476	111	28	18	202	198	28	311	326
Grp Sat Flow(s),veh/h/ln	1810	1805	1731	1810	1805	1610	1810	1805	1705	1810	1805	1897
Q Serve(g_s), s	0.1	2.9	3.1	19.1	1.8	1.0	0.8	10.8	11.2	1.3	17.6	17.6
Cycle Q Clear(g_c), s	0.1	2.9	3.1	19.1	1.8	1.0	0.8	10.8	11.2	1.3	17.6	17.6
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.64	1.00		0.01
Lane Grp Cap(c), veh/h	511	632	606	813	1925	859	212	519	490	300	531	558
V/C Ratio(X)	0.01	0.10	0.11	0.59	0.06	0.03	0.08	0.39	0.40	0.09	0.59	0.59
Avail Cap(c_a), veh/h	587	632	606	1070	1925	859	261	519	490	337	531	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	26.3	26.4	16.4	13.5	13.3	30.4	34.3	34.5	29.3	36.1	36.1
Incr Delay (d2), s/veh	0.0	0.3	0.4	0.7	0.1	0.1	0.2	2.2	2.5	0.1	4.7	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	1.3	7.5	0.7	0.3	0.4	4.8	4.8	0.5	8.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	26.6	26.7	17.0	13.5	13.4	30.5	36.5	36.9	29.5	40.8	40.6
LnGrp LOS	C	C	C	B	B	B	C	D	D	C	D	D
Approach Vol, veh/h		134			615			418			665	
Approach Delay, s/veh		26.6			16.2			36.4			40.2	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	46.5	6.8	39.8	5.0	68.5	7.5	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	39.5	22.5	5.5	34.5	5.5	56.5	5.5	34.5
Max Q Clear Time (g_c+I1), s	21.1	5.1	2.8	19.6	2.1	3.8	3.3	13.2
Green Ext Time (p_c), s	1.4	0.5	0.0	2.8	0.0	0.7	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	7	13	1	10	47	394	54	37	1102	7
Future Volume (vph)	3	1	7	13	1	10	47	394	54	37	1102	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1	7	13	1	10	47	394	54	37	1102	7
Future Vol, veh/h	3	1	7	13	1	10	47	394	54	37	1102	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	1	8	14	1	11	52	433	59	41	1211	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1618	1893	610	1225	1838	217	1219	0	0	492	0	0
Stage 1	1297	1297	-	537	537	-	-	-	-	-	-	-
Stage 2	321	596	-	688	1301	-	-	-	-	-	-	-
Critical Hdwy	10	6.5	6.9	10	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	6.5	4	3.3	6.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	75	114	*674	*267	129	794	914	-	-	1082	-	-
Stage 1	272	436	-	*328	526	-	-	-	-	-	-	-
Stage 2	409	495	-	*342	433	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	68	103	*674	*243	117	794	914	-	-	1082	-	-
Mov Cap-2 Maneuver	68	103	-	*243	117	-	-	-	-	-	-	-
Stage 1	256	420	-	*309	496	-	-	-	-	-	-	-
Stage 2	380	467	-	*325	417	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.6	17.2	0.9	0.3
HCM LOS	D	C		

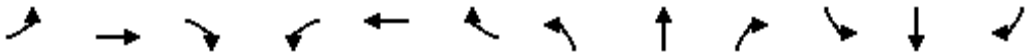
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	914	-	-	171	322	1082	-	-
HCM Lane V/C Ratio	0.057	-	-	0.071	0.082	0.038	-	-
HCM Control Delay (s)	9.2	-	-	27.6	17.2	8.5	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.3	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	7	13	1	10	47	394	54	37	1102	7
Future Volume (vph)	3	1	7	13	1	10	47	394	54	37	1102	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		50	210		145	225		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	60			60			120			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		17.0	82.0	82.0	15.0	80.0	
Total Split (%)	19.2%	19.2%		19.2%	19.2%		14.2%	68.3%	68.3%	12.5%	66.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: N. Indian Canyon Dr. & 19th Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	7	13	1	10	47	394	54	37	1102	7
Future Volume (veh/h)	3	1	7	13	1	10	47	394	54	37	1102	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	1	8	14	1	11	52	433	59	41	1211	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	5	44	95	4	45	68	2984	1331	56	3015	20
Arrive On Green	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.83	0.83	0.03	0.82	1.00
Sat Flow, veh/h	1424	182	1456	1428	136	1495	1810	3610	1610	1810	3676	24
Grp Volume(v), veh/h	3	0	9	14	0	12	52	433	59	41	595	624
Grp Sat Flow(s),veh/h/ln	1424	0	1638	1428	0	1631	1810	1805	1610	1810	1805	1896
Q Serve(g_s), s	0.2	0.0	0.6	1.2	0.0	0.9	3.4	2.8	0.8	2.7	10.6	10.5
Cycle Q Clear(g_c), s	1.1	0.0	0.6	1.8	0.0	0.9	3.4	2.8	0.8	2.7	10.6	10.5
Prop In Lane	1.00		0.89	1.00		0.92	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	92	0	49	95	0	49	68	2984	1331	56	1480	1555
V/C Ratio(X)	0.03	0.00	0.18	0.15	0.00	0.25	0.77	0.15	0.04	0.73	0.40	0.40
Avail Cap(c_a), veh/h	269	0	253	273	0	251	188	2984	1331	158	1480	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	0.0	56.8	57.7	0.0	56.9	57.2	2.1	1.9	57.6	2.9	2.8
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.7	0.0	2.6	16.4	0.1	0.1	16.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.4	0.0	0.4	1.8	0.5	0.1	1.4	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.0	58.6	58.4	0.0	59.5	73.7	2.2	1.9	74.1	3.7	3.6
LnGrp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		12			26			544			1260	
Approach Delay, s/veh		58.3			58.9			9.0			6.0	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	103.7		8.1	9.0	102.9		8.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	77.5		18.5	12.5	75.5		18.5				
Max Q Clear Time (g_c+I1), s	4.7	4.8		3.1	5.4	12.6		3.8				
Green Ext Time (p_c), s	0.0	2.8		0.0	0.0	8.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		7.9	
HCM 6th LOS		A	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	7	488	17	13	1109
Future Volume (vph)	12	7	488	17	13	1109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	7	488	17	13	1109
Future Vol, veh/h	12	7	488	17	13	1109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	8	525	18	14	1192

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1149	263	0	0	543	0
Stage 1	525	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	195	742	-	-	1036	-
Stage 1	564	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	192	742	-	-	1036	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	495	-	-	-	-	-

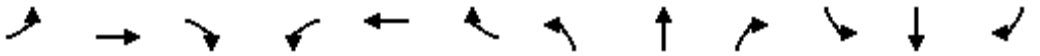
Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	413	1036	-
HCM Lane V/C Ratio	-	-	0.049	0.013	-
HCM Control Delay (s)	-	-	14.2	8.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	3	48	229	31	133	20	351	9	4	1070	12
Future Volume (vph)	39	3	48	229	31	133	20	351	9	4	1070	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)						40%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	14.0	29.0	29.0	23.0	38.0	38.0	13.0	57.0	57.0	11.0	55.0	
Total Split (%)	11.7%	24.2%	24.2%	19.2%	31.7%	31.7%	10.8%	47.5%	47.5%	9.2%	45.8%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.



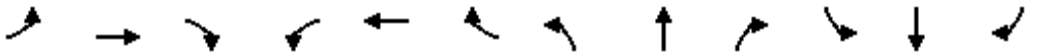
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	3	48	229	31	133	20	351	9	4	1070	12
Future Volume (veh/h)	39	3	48	229	31	133	20	351	9	4	1070	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	3	50	239	0	160	21	366	9	4	1115	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	158	132	303	0	422	38	2371	1058	9	3392	36
Arrive On Green	0.03	0.08	0.08	0.08	0.00	0.14	0.02	0.59	0.59	0.00	0.58	0.58
Sat Flow, veh/h	1810	1900	1582	3619	0	3104	1810	3610	1610	1810	5291	57
Grp Volume(v), veh/h	41	3	50	239	0	160	21	366	9	4	729	398
Grp Sat Flow(s),veh/h/ln	1810	1900	1582	1810	0	1552	1810	1805	1610	1810	1729	1890
Q Serve(g_s), s	2.7	0.2	3.6	7.8	0.0	5.6	1.4	5.5	0.3	0.3	13.2	13.2
Cycle Q Clear(g_c), s	2.7	0.2	3.6	7.8	0.0	5.6	1.4	5.5	0.3	0.3	13.2	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	56	158	132	303	0	422	38	2371	1058	9	2217	1211
V/C Ratio(X)	0.73	0.02	0.38	0.79	0.00	0.38	0.55	0.15	0.01	0.43	0.33	0.33
Avail Cap(c_a), veh/h	142	378	315	555	0	851	127	2371	1058	97	2217	1211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.90	0.90	0.90
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.00	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	50.5	52.1	53.9	0.0	47.2	58.3	9.5	8.5	59.5	11.9	11.9
Incr Delay (d2), s/veh	6.6	0.0	1.8	1.4	0.0	0.5	4.6	0.1	0.0	10.9	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	1.5	3.6	0.0	2.2	0.7	1.9	0.1	0.1	4.7	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	50.5	53.9	55.3	0.0	47.7	62.9	9.7	8.5	70.4	12.3	12.6
LnGrp LOS	E	D	D	E	A	D	E	A	A	E	B	B
Approach Vol, veh/h		94			399			396			1131	
Approach Delay, s/veh		58.3			52.3			12.5			12.6	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	85.0	14.7	15.1	7.1	83.1	8.3	21.4
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	6.4	50.8	18.4	23.9	8.4	48.8	9.4	32.9
Max Q Clear Time (g_c+I1), s	2.3	7.5	9.8	5.6	3.4	15.2	4.7	7.6
Green Ext Time (p_c), s	0.0	3.3	0.3	0.1	0.0	11.2	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	380	92	0	1272	75
Future Volume (vph)	0	0	0	0	0	0	0	380	92	0	1272	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	472	290	0	1272
Future Volume (vph)	0	0	472	290	0	1272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	26	312	13	6	7	17	422	18	123	853	183
Future Volume (vph)	176	26	312	13	6	7	17	422	18	123	853	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	15.0	46.0	16.5	9.6	40.6		16.5	43.5		20.9	47.9	47.9
Total Split (%)	12.5%	38.3%	13.8%	8.0%	33.8%		13.8%	36.3%		17.4%	39.9%	39.9%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

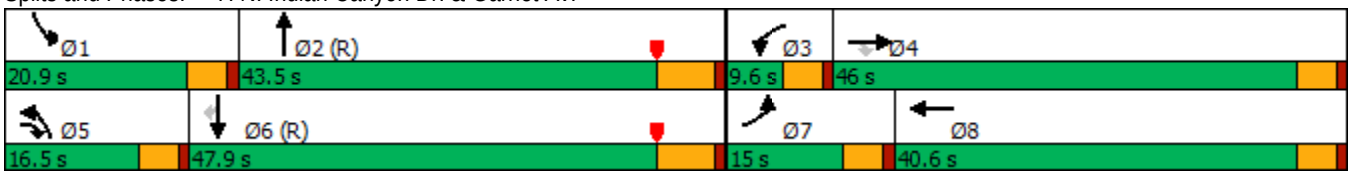
Actuated Cycle Length: 120

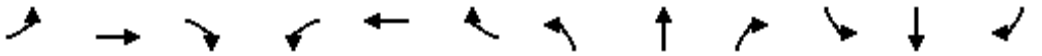
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	26	312	13	6	7	17	422	18	123	853	183
Future Volume (veh/h)	176	26	312	13	6	7	17	422	18	123	853	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	191	28	339	14	7	8	18	459	20	134	927	199
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	248	438	396	28	141	161	34	2539	110	161	2052	915
Arrive On Green	0.07	0.23	0.23	0.02	0.18	0.18	0.02	0.50	0.50	0.09	0.57	0.57
Sat Flow, veh/h	3510	1900	1588	1810	801	916	1810	5097	221	1810	3610	1609
Grp Volume(v), veh/h	191	28	339	14	0	15	18	310	169	134	927	199
Grp Sat Flow(s),veh/h/ln	1755	1900	1588	1810	0	1717	1810	1729	1860	1810	1805	1609
Q Serve(g_s), s	6.4	1.4	24.5	0.9	0.0	0.9	1.2	5.9	6.0	8.7	17.9	7.3
Cycle Q Clear(g_c), s	6.4	1.4	24.5	0.9	0.0	0.9	1.2	5.9	6.0	8.7	17.9	7.3
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	248	438	396	28	0	301	34	1723	926	161	2052	915
V/C Ratio(X)	0.77	0.06	0.86	0.50	0.00	0.05	0.53	0.18	0.18	0.83	0.45	0.22
Avail Cap(c_a), veh/h	304	656	578	75	0	515	179	1723	926	246	2052	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	36.0	43.0	58.6	0.0	41.1	58.3	16.6	16.6	53.8	15.0	12.8
Incr Delay (d2), s/veh	5.0	0.0	5.9	5.0	0.0	0.1	4.7	0.2	0.4	8.1	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.7	10.3	0.5	0.0	0.4	0.6	2.2	2.5	4.2	6.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	36.1	48.9	63.6	0.0	41.2	63.0	16.8	17.0	61.9	15.8	13.3
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	B
Approach Vol, veh/h		558			29			497			1260	
Approach Delay, s/veh		52.0			52.0			18.6			20.3	
Approach LOS		D			D			B			C	

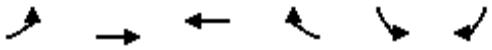
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	66.0	6.5	32.3	6.9	74.4	13.1	25.7
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	16.3	37.3	5.0	41.4	11.9	41.7	10.4	36.0
Max Q Clear Time (g_c+I1), s	10.7	8.0	2.9	26.5	3.2	19.9	8.4	2.9
Green Ext Time (p_c), s	0.1	3.9	0.0	1.2	0.0	9.2	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	35	42	191	460	12
Future Volume (vph)	8	35	42	191	460	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	12.0	72.0	60.0	48.0	48.0	48.0
Total Split (%)	10.0%	60.0%	50.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	35	42	191	460	12
Future Volume (veh/h)	8	35	42	191	460	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	50	60	273	657	17
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	23	1292	1196	1378	793	364
Arrive On Green	0.01	0.68	0.63	0.63	0.23	0.23
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	11	50	60	273	657	17
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	0.7	1.0	1.4	3.5	21.4	1.0
Cycle Q Clear(g_c), s	0.7	1.0	1.4	3.5	21.4	1.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	23	1292	1196	1378	793	364
V/C Ratio(X)	0.48	0.04	0.05	0.20	0.83	0.05
Avail Cap(c_a), veh/h	113	1292	1196	1378	1249	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	58.8	6.3	8.5	1.5	44.2	36.3
Incr Delay (d2), s/veh	5.5	0.1	0.1	0.3	3.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.6	3.3	9.4	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.4	6.4	8.6	1.8	47.9	36.4
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		61	333		674	
Approach Delay, s/veh		16.8	3.0		47.6	
Approach LOS		B	A		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		87.6		32.4	6.0	81.6
Change Period (Y+Rc), s		6.0		5.3	4.5	6.0
Max Green Setting (Gmax), s		66.0		42.7	7.5	54.0
Max Q Clear Time (g_c+I1), s		3.0		23.4	2.7	5.5
Green Ext Time (p_c), s		0.3		3.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

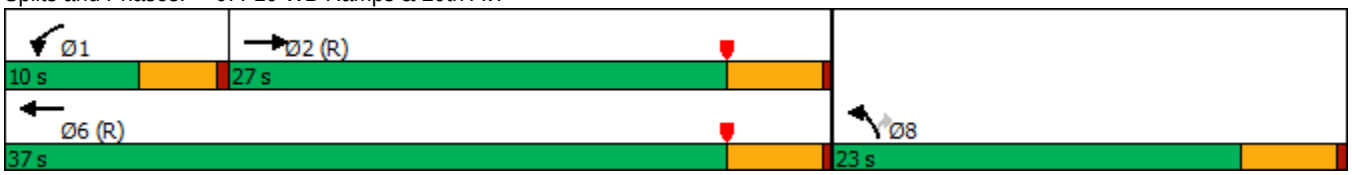
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	2	2	21	404	8
Future Volume (vph)	8	2	2	21	404	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	35.0	10.0	10.0
Total Split (s)	27.0		10.0	37.0	23.0	23.0
Total Split (%)	45.0%		16.7%	61.7%	38.3%	38.3%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

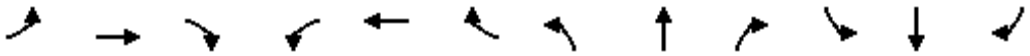
Splits and Phases: 9: I-10 WB Ramps & 20th Av.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	8	2	2	21	404	8
Future Volume (veh/h)	8	2	2	21	404	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	2	2	26	505	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	880	176	5	2318	695	319
Arrive On Green	0.57	0.57	0.00	0.64	0.20	0.20
Sat Flow, veh/h	1537	307	1810	3705	3510	1610
Grp Volume(v), veh/h	0	12	2	26	505	10
Grp Sat Flow(s),veh/h/ln	0	1845	1810	1805	1755	1610
Q Serve(g_s), s	0.0	0.2	0.1	0.2	8.1	0.3
Cycle Q Clear(g_c), s	0.0	0.2	0.1	0.2	8.1	0.3
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1056	5	2318	695	319
V/C Ratio(X)	0.00	0.01	0.40	0.01	0.73	0.03
Avail Cap(c_a), veh/h	0	1056	181	2318	1065	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	5.5	29.9	3.9	22.5	19.4
Incr Delay (d2), s/veh	0.0	0.0	18.6	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	3.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	5.5	48.4	3.9	24.6	19.5
LnGrp LOS	A	A	D	A	C	B
Approach Vol, veh/h	12			28	515	
Approach Delay, s/veh	5.5			7.1	24.5	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	4.2	39.2				43.3	16.7
Change Period (Y+Rc), s	4.0	4.8				4.8	4.8
Max Green Setting (Gmax), s	6.0	22.2				32.2	18.2
Max Q Clear Time (g_c+I1), s	2.1	2.2				2.2	10.1
Green Ext Time (p_c), s	0.0	0.0				0.1	1.8

Intersection Summary		
HCM 6th Ctrl Delay	23.2	
HCM 6th LOS	C	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	8	1	2	13	28	1	0	1	2	0	0
Future Volume (vph)	0	8	1	2	13	28	1	0	1	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		800	0		50	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			1342			570			295	
Travel Time (s)		8.8			30.5			13.0			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↰	↗		↰	↗		↕	
Traffic Vol, veh/h	0	8	1	2	13	28	1	0	1	2	0	0
Future Vol, veh/h	0	8	1	2	13	28	1	0	1	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	800	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	9	1	2	14	31	1	0	1	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	45	0	0	10	0	0	44	59	10	28	28	14
Stage 1	-	-	-	-	-	-	10	10	-	18	18	-
Stage 2	-	-	-	-	-	-	34	49	-	10	10	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1576	-	-	1623	-	-	963	836	1077	987	869	1072
Stage 1	-	-	-	-	-	-	1016	891	-	1006	884	-
Stage 2	-	-	-	-	-	-	987	858	-	1016	891	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1576	-	-	1623	-	-	962	835	1077	985	868	1072
Mov Cap-2 Maneuver	-	-	-	-	-	-	962	835	-	985	868	-
Stage 1	-	-	-	-	-	-	1016	891	-	1006	883	-
Stage 2	-	-	-	-	-	-	986	857	-	1015	891	-

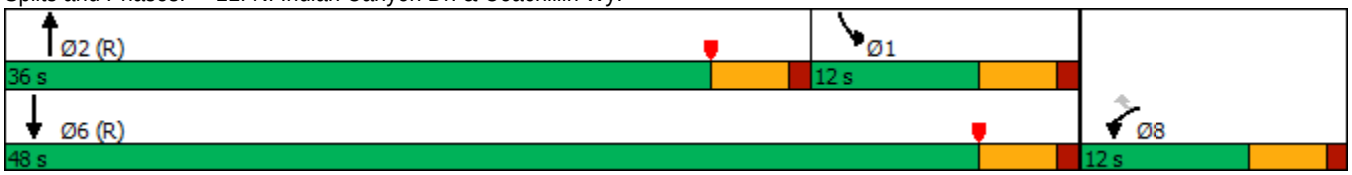
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	8.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	962	1077	1576	-	-	1623	-	-	985
HCM Lane V/C Ratio	0.001	0.001	-	-	-	0.001	-	-	0.002
HCM Control Delay (s)	8.7	8.3	0	-	-	7.2	0	-	8.7
HCM Lane LOS	A	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	372	1	1	1145
Future Volume (vph)	1	1	372	1	1	1145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		187			361
Travel Time (s)	12.8		4.3			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	12.0	12.0	36.0		12.0	48.0
Total Split (%)	20.0%	20.0%	60.0%		20.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

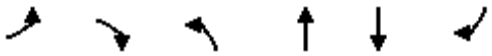
Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	372	1	1	1145
Future Volume (veh/h)	1	1	372	1	1	1145
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	1	404	1	1	1245
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	5	4	2805	7	447	3059
Arrive On Green	0.00	0.00	0.52	0.52	0.25	0.85
Sat Flow, veh/h	1810	1610	5513	13	1810	3705
Grp Volume(v), veh/h	1	1	261	144	1	1245
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1898	1810	1805
Q Serve(g_s), s	0.0	0.0	2.3	2.3	0.0	4.8
Cycle Q Clear(g_c), s	0.0	0.0	2.3	2.3	0.0	4.8
Prop In Lane	1.00	1.00		0.01	1.00	
Lane Grp Cap(c), veh/h	5	4	1815	996	447	3059
V/C Ratio(X)	0.20	0.23	0.14	0.14	0.00	0.41
Avail Cap(c_a), veh/h	226	201	1815	996	447	3059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	29.9	7.3	7.3	17.0	1.1
Incr Delay (d2), s/veh	18.9	24.3	0.2	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.8	0.9	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.8	54.2	7.5	7.6	17.0	1.5
LnGrp LOS	D	D	A	A	B	A
Approach Vol, veh/h	2		405			1246
Approach Delay, s/veh	51.5		7.5			1.5
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.3	36.0			55.3	4.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	31.5			43.5	7.5
Max Q Clear Time (g_c+I1), s	2.0	4.3			6.8	2.0
Green Ext Time (p_c), s	0.0	2.6			12.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	0	372	1137	7
Future Volume (vph)	0	6	0	372	1137	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	384			475	187	
Travel Time (s)	8.7			10.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

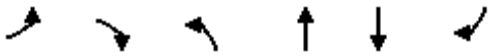
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	372	1137	7
Future Vol, veh/h	0	6	0	372	1137	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	0	404	1236	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	622	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	434	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	434	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	434	-	-
HCM Lane V/C Ratio	-	0.015	-	-
HCM Control Delay (s)	-	13.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	7	41	366	1135	9
Future Volume (vph)	5	7	41	366	1135	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		60			
Link Speed (mph)	30			30	30	
Link Distance (ft)	377			384	475	
Travel Time (s)	8.6			8.7	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

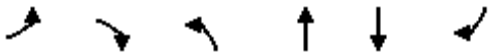
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	7	41	366	1135	9
Future Vol, veh/h	5	7	41	366	1135	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	8	45	398	1234	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1488	622	1244	0	-	0
Stage 1	1239	-	-	-	-	-
Stage 2	249	-	-	-	-	-
Critical Hdwy	6.25	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	144	434	567	-	-	-
Stage 1	235	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	133	434	567	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	567	-	281	-	-
HCM Lane V/C Ratio	0.079	-	0.046	-	-
HCM Control Delay (s)	11.9	-	18.4	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	8	0	407	1137	4
Future Volume (vph)	0	8	0	407	1137	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			285	384	
Travel Time (s)	8.5			6.5	8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	407	1137	4
Future Vol, veh/h	0	8	0	407	1137	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	9	0	442	1236	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	620	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	436	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	436	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

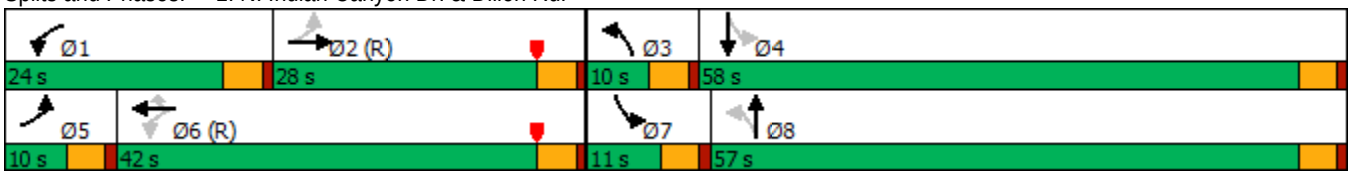
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	436	-	-
HCM Lane V/C Ratio	-	0.02	-	-
HCM Control Delay (s)	-	13.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

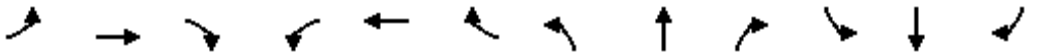
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	93	17	209	131	43	17	578	310	34	232	2
Future Volume (vph)	4	93	17	209	131	43	17	578	310	34	232	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	10.0	28.0		24.0	42.0	42.0	10.0	57.0		11.0	58.0	
Total Split (%)	8.3%	23.3%		20.0%	35.0%	35.0%	8.3%	47.5%		9.2%	48.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

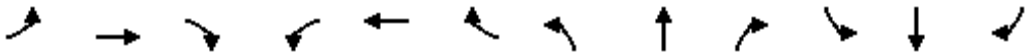




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	93	17	209	131	43	17	578	310	34	232	2
Future Volume (veh/h)	4	93	17	209	131	43	17	578	310	34	232	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	102	19	230	144	47	19	635	341	37	255	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	404	842	153	577	1364	608	559	992	533	241	1643	13
Arrive On Green	0.01	0.28	0.28	0.11	0.38	0.38	0.02	0.44	0.44	0.03	0.45	0.45
Sat Flow, veh/h	1810	3050	555	1810	3610	1610	1810	2268	1218	1810	3671	29
Grp Volume(v), veh/h	4	59	62	230	144	47	19	505	471	37	125	132
Grp Sat Flow(s),veh/h/ln	1810	1805	1800	1810	1805	1610	1810	1805	1681	1810	1805	1895
Q Serve(g_s), s	0.2	3.0	3.1	10.5	3.1	2.2	0.7	26.2	26.2	1.3	4.9	5.0
Cycle Q Clear(g_c), s	0.2	3.0	3.1	10.5	3.1	2.2	0.7	26.2	26.2	1.3	4.9	5.0
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.72	1.00		0.02
Lane Grp Cap(c), veh/h	404	498	497	577	1364	608	559	790	735	241	808	848
V/C Ratio(X)	0.01	0.12	0.12	0.40	0.11	0.08	0.03	0.64	0.64	0.15	0.16	0.16
Avail Cap(c_a), veh/h	477	498	497	677	1364	608	606	790	735	286	808	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	32.5	32.6	24.9	24.2	23.9	17.9	26.4	26.4	20.5	19.7	19.7
Incr Delay (d2), s/veh	0.0	0.5	0.5	0.4	0.2	0.2	0.0	4.0	4.2	0.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	1.4	4.4	1.3	0.9	0.3	11.2	10.5	0.5	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	33.0	33.1	25.4	24.4	24.2	18.0	30.3	30.6	20.8	20.1	20.1
LnGrp LOS	C	C	C	C	C	C	B	C	C	C	C	C
Approach Vol, veh/h		125			421			995			294	
Approach Delay, s/veh		33.0			24.9			30.2			20.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	37.6	6.8	58.2	5.1	49.8	8.0	57.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	23.5	5.5	53.5	5.5	37.5	6.5	52.5
Max Q Clear Time (g_c+I1), s	12.5	5.1	2.7	7.0	2.2	5.1	3.3	28.2
Green Ext Time (p_c), s	0.3	0.5	0.0	1.3	0.0	0.9	0.0	5.8

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1	12	53	3	22	16	962	6	5	586	3
Future Volume (vph)	10	1	12	53	3	22	16	962	6	5	586	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	1	12	53	3	22	16	962	6	5	586	3
Future Vol, veh/h	10	1	12	53	3	22	16	962	6	5	586	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	11	1	13	59	3	24	18	1069	7	6	651	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1237	1777	327	1443	1771	535	654	0	0	1076	0	0
Stage 1	665	665	-	1105	1105	-	-	-	-	-	-	-
Stage 2	572	1112	-	338	666	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.9	8.1	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	4	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	177	102	*877	*112	103	495	1225	-	-	656	-	-
Stage 1	638	657	-	*213	289	-	-	-	-	-	-	-
Stage 2	433	287	-	*724	656	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	161	99	*877	*107	101	495	1225	-	-	656	-	-
Mov Cap-2 Maneuver	161	99	-	*107	101	-	-	-	-	-	-	-
Stage 1	629	651	-	*210	285	-	-	-	-	-	-	-
Stage 2	401	283	-	*706	650	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.8	68.3	0.1	0.1
HCM LOS	C	F		

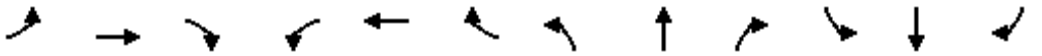
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1225	-	-	268	137	656	-	-
HCM Lane V/C Ratio	0.015	-	-	0.095	0.633	0.008	-	-
HCM Control Delay (s)	8	-	-	19.8	68.3	10.5	-	-
HCM Lane LOS	A	-	-	C	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	3.4	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1	12	53	3	22	16	962	6	5	586	3
Future Volume (vph)	10	1	12	53	3	22	16	962	6	5	586	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		50	210		145	225		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	60			60			120			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	
Total Split (s)	23.0	23.0		24.0	24.0		11.0	63.0	63.0	10.0	62.0	
Total Split (%)	19.2%	19.2%		20.0%	20.0%		9.2%	52.5%	52.5%	8.3%	51.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: N. Indian Canyon Dr. & 19th Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1	12	53	3	22	16	962	6	5	586	3
Future Volume (veh/h)	10	1	12	53	3	22	16	962	6	5	586	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	1	13	59	3	24	18	1069	7	6	651	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	43	3	36	86	9	69	34	2785	1242	14	2801	13
Arrive On Green	0.02	0.02	0.02	0.05	0.05	0.05	0.02	0.77	0.77	0.01	0.76	0.76
Sat Flow, veh/h	1810	116	1512	1810	182	1456	1810	3610	1610	1810	3685	17
Grp Volume(v), veh/h	11	0	14	59	0	27	18	1069	7	6	319	335
Grp Sat Flow(s),veh/h/ln	1810	0	1628	1810	0	1638	1810	1805	1610	1810	1805	1897
Q Serve(g_s), s	0.7	0.0	1.0	3.9	0.0	1.9	1.2	11.5	0.1	0.4	6.2	6.2
Cycle Q Clear(g_c), s	0.7	0.0	1.0	3.9	0.0	1.9	1.2	11.5	0.1	0.4	6.2	6.2
Prop In Lane	1.00		0.93	1.00		0.89	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	43	0	38	86	0	78	34	2785	1242	14	1372	1442
V/C Ratio(X)	0.26	0.00	0.37	0.69	0.00	0.35	0.53	0.38	0.01	0.44	0.23	0.23
Avail Cap(c_a), veh/h	279	0	251	294	0	266	98	2785	1242	83	1372	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	0.0	57.7	56.3	0.0	55.3	58.3	4.5	3.1	59.3	4.2	4.2
Incr Delay (d2), s/veh	3.1	0.0	5.7	9.3	0.0	2.6	12.2	0.4	0.0	20.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.5	2.0	0.0	0.9	0.6	2.9	0.0	0.3	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	0.0	63.4	65.6	0.0	58.0	70.5	4.9	3.2	79.9	4.6	4.6
LnGrp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		25			86			1094			660	
Approach Delay, s/veh		62.2			63.2			5.9			5.3	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	97.1		7.3	6.8	95.7		10.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	58.5		18.5	6.5	57.5		19.5				
Max Q Clear Time (g_c+I1), s	2.4	13.5		3.0	3.2	8.2		5.9				
Green Ext Time (p_c), s	0.0	8.1		0.0	0.0	3.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		9.1
HCM 6th LOS		A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	14	969	13	6	646
Future Volume (vph)	10	14	969	13	6	646
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	14	969	13	6	646
Future Vol, veh/h	10	14	969	13	6	646
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	15	1042	14	6	695

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1402	521	0	0	1056	0
Stage 1	1042	-	-	-	-	-
Stage 2	360	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	133	505	-	-	667	-
Stage 1	305	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	132	505	-	-	667	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	305	-	-	-	-	-
Stage 2	677	-	-	-	-	-

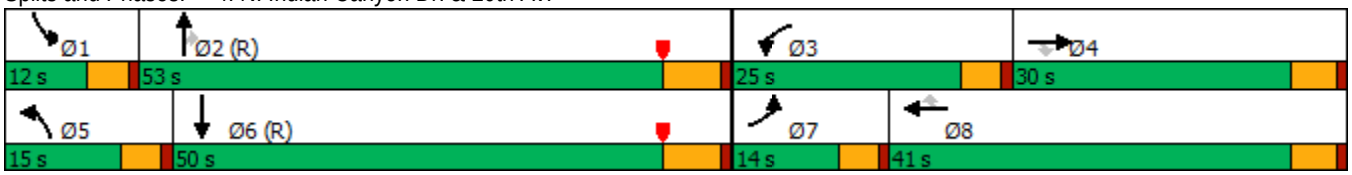
Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	0.1
HCM LOS	C		

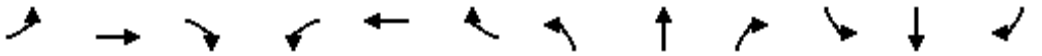
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	346	667	-
HCM Lane V/C Ratio	-	-	0.075	0.01	-
HCM Control Delay (s)	-	-	16.2	10.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	6	68	230	30	268	31	645	7	4	592	22
Future Volume (vph)	23	6	68	230	30	268	31	645	7	4	592	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						45%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	14.0	30.0	30.0	25.0	41.0	41.0	15.0	53.0	53.0	12.0	50.0	
Total Split (%)	11.7%	25.0%	25.0%	20.8%	34.2%	34.2%	12.5%	44.2%	44.2%	10.0%	41.7%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.





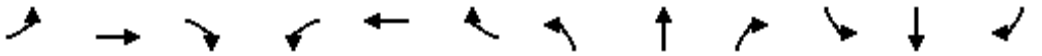
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	6	68	230	30	268	31	645	7	4	592	22
Future Volume (veh/h)	23	6	68	230	30	268	31	645	7	4	592	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	6	72	242	0	303	33	679	7	4	623	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	42	158	132	307	0	451	50	2367	1056	9	3251	120
Arrive On Green	0.02	0.08	0.08	0.08	0.00	0.15	0.03	0.59	0.59	0.00	0.57	0.57
Sat Flow, veh/h	1810	1900	1582	3619	0	3107	1810	3610	1610	1810	5135	189
Grp Volume(v), veh/h	24	6	72	242	0	303	33	679	7	4	419	227
Grp Sat Flow(s),veh/h/ln	1810	1900	1582	1810	0	1554	1810	1805	1610	1810	1729	1866
Q Serve(g_s), s	1.6	0.3	5.2	7.9	0.0	11.1	2.2	11.1	0.2	0.3	7.0	7.1
Cycle Q Clear(g_c), s	1.6	0.3	5.2	7.9	0.0	11.1	2.2	11.1	0.2	0.3	7.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	42	158	132	307	0	451	50	2367	1056	9	2189	1181
V/C Ratio(X)	0.58	0.04	0.55	0.79	0.00	0.67	0.66	0.29	0.01	0.43	0.19	0.19
Avail Cap(c_a), veh/h	142	394	328	615	0	930	157	2367	1056	112	2189	1181
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.90	0.90	0.90
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	50.6	52.8	53.8	0.0	48.6	57.9	10.7	8.5	59.5	11.0	11.0
Incr Delay (d2), s/veh	4.7	0.1	3.5	1.4	0.0	1.4	5.3	0.3	0.0	10.9	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.2	3.6	0.0	4.3	1.0	4.0	0.1	0.1	2.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	50.7	56.3	55.2	0.0	49.9	63.2	11.1	8.5	70.4	11.2	11.3
LnGrp LOS	E	D	E	E	A	D	E	B	A	E	B	B
Approach Vol, veh/h		102			545			719			650	
Approach Delay, s/veh		57.5			52.3			13.4			11.6	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	84.9	14.8	15.1	7.9	82.2	7.4	22.5
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	7.4	46.8	20.4	24.9	10.4	43.8	9.4	35.9
Max Q Clear Time (g_c+I1), s	2.3	13.1	9.9	7.2	4.2	9.1	3.6	13.1
Green Ext Time (p_c), s	0.0	6.4	0.3	0.2	0.0	5.6	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	683	184	0	747	143
Future Volume (vph)	0	0	0	0	0	0	0	683	184	0	747	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

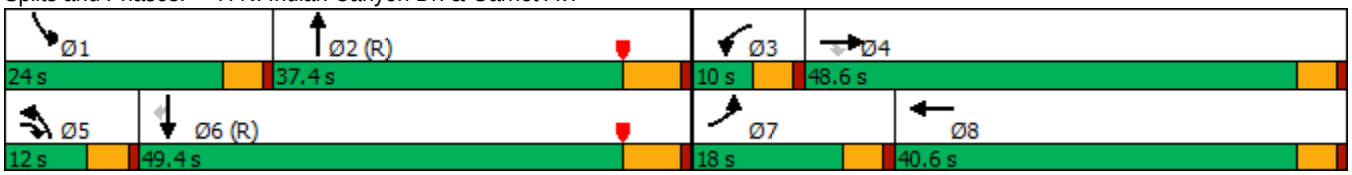
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	867	318	0	747
Future Volume (vph)	0	0	867	318	0	747
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

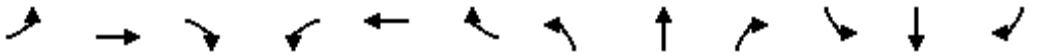
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	18	59	4	3	7	34	813	12	131	437	147
Future Volume (vph)	194	18	59	4	3	7	34	813	12	131	437	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	18.0	48.6	12.0	10.0	40.6		12.0	37.4		24.0	49.4	49.4
Total Split (%)	15.0%	40.5%	10.0%	8.3%	33.8%		10.0%	31.2%		20.0%	41.2%	41.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	18	59	4	3	7	34	813	12	131	437	147
Future Volume (veh/h)	194	18	59	4	3	7	34	813	12	131	437	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	19	63	4	3	7	36	865	13	139	465	156
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	265	299	297	9	43	101	53	3045	46	167	2315	1032
Arrive On Green	0.08	0.16	0.16	0.01	0.09	0.09	0.03	0.58	0.58	0.09	0.64	0.64
Sat Flow, veh/h	3510	1900	1586	1810	498	1163	1810	5265	79	1810	3610	1609
Grp Volume(v), veh/h	206	19	63	4	0	10	36	568	310	139	465	156
Grp Sat Flow(s),veh/h/ln	1755	1900	1586	1810	0	1661	1810	1729	1886	1810	1805	1609
Q Serve(g_s), s	6.9	1.0	4.0	0.3	0.0	0.7	2.4	9.9	10.0	9.1	6.4	4.6
Cycle Q Clear(g_c), s	6.9	1.0	4.0	0.3	0.0	0.7	2.4	9.9	10.0	9.1	6.4	4.6
Prop In Lane	1.00		1.00	1.00		0.70	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	265	299	297	9	0	145	53	2000	1091	167	2315	1032
V/C Ratio(X)	0.78	0.06	0.21	0.43	0.00	0.07	0.68	0.28	0.28	0.83	0.20	0.15
Avail Cap(c_a), veh/h	392	697	629	81	0	498	112	2000	1091	293	2315	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	43.0	41.3	59.5	0.0	50.3	57.7	12.8	12.8	53.6	8.9	8.5
Incr Delay (d2), s/veh	2.7	0.1	0.3	10.9	0.0	0.2	5.7	0.4	0.7	4.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.5	1.6	0.2	0.0	0.3	1.1	3.5	3.9	4.1	2.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	43.1	41.6	70.4	0.0	50.5	63.4	13.1	13.4	57.7	9.1	8.9
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	A	A
Approach Vol, veh/h		288			14			914			760	
Approach Delay, s/veh		52.8			56.2			15.2			17.9	
Approach LOS		D			E			B			B	

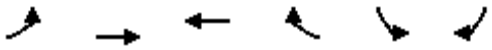
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	75.6	5.2	23.5	8.1	83.2	13.7	15.1
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	19.4	31.2	5.4	44.0	7.4	43.2	13.4	36.0
Max Q Clear Time (g_c+I1), s	11.1	12.0	2.3	6.0	4.4	8.4	8.9	2.7
Green Ext Time (p_c), s	0.1	6.7	0.0	0.3	0.0	5.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	52	61	130	190	11
Future Volume (vph)	21	52	61	130	190	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	21.0	82.0	61.0	38.0	38.0	38.0
Total Split (%)	17.5%	68.3%	50.8%	31.7%	31.7%	31.7%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	52	61	130	190	11
Future Volume (veh/h)	21	52	61	130	190	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	60	70	149	218	13
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	42	1556	1442	1361	304	140
Arrive On Green	0.02	0.82	0.25	0.25	0.09	0.09
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	24	60	70	149	218	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	1.6	0.7	3.4	5.5	7.3	0.9
Cycle Q Clear(g_c), s	1.6	0.7	3.4	5.5	7.3	0.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	42	1556	1442	1361	304	140
V/C Ratio(X)	0.58	0.04	0.05	0.11	0.72	0.09
Avail Cap(c_a), veh/h	249	1556	1442	1361	957	439
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	58.0	2.0	12.1	5.8	53.4	50.5
Incr Delay (d2), s/veh	4.7	0.0	0.1	0.2	4.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	1.3	3.6	3.3	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.7	2.1	12.2	5.9	57.8	50.9
LnGrp LOS	E	A	B	A	E	D
Approach Vol, veh/h		84	219		231	
Approach Delay, s/veh		19.4	7.9		57.4	
Approach LOS		B	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		104.3		15.7	7.3	97.0
Change Period (Y+Rc), s		6.0		5.3	4.5	6.0
Max Green Setting (Gmax), s		76.0		32.7	16.5	55.0
Max Q Clear Time (g_c+I1), s		2.7		9.3	3.6	7.5
Green Ext Time (p_c), s		0.3		1.1	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

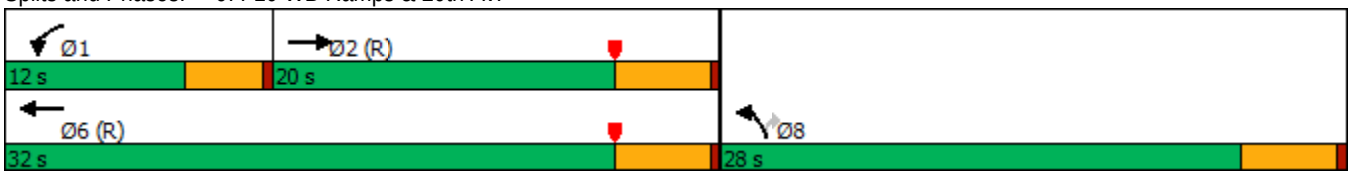
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	5	1	15	20	508	8
Future Volume (vph)	5	1	15	20	508	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	15.8	10.0	10.0
Total Split (s)	20.0		12.0	32.0	28.0	28.0
Total Split (%)	33.3%		20.0%	53.3%	46.7%	46.7%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 11 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

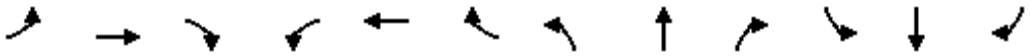
Splits and Phases: 9: I-10 WB Ramps & 20th Av.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	5	1	15	20	508	8
Future Volume (veh/h)	5	1	15	20	508	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	1	17	22	571	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	835	139	37	2214	796	365
Arrive On Green	0.53	0.53	0.02	0.61	0.23	0.23
Sat Flow, veh/h	1588	265	1810	3705	3510	1610
Grp Volume(v), veh/h	0	7	17	22	571	9
Grp Sat Flow(s),veh/h/ln	0	1852	1810	1805	1755	1610
Q Serve(g_s), s	0.0	0.1	0.6	0.1	9.0	0.3
Cycle Q Clear(g_c), s	0.0	0.1	0.6	0.1	9.0	0.3
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	975	37	2214	796	365
V/C Ratio(X)	0.00	0.01	0.46	0.01	0.72	0.02
Avail Cap(c_a), veh/h	0	975	241	2214	1357	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.8	29.1	4.5	21.4	18.0
Incr Delay (d2), s/veh	0.0	0.0	3.2	0.0	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.0	3.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.8	32.3	4.5	23.2	18.1
LnGrp LOS	A	A	C	A	C	B
Approach Vol, veh/h	7			39	580	
Approach Delay, s/veh	6.8			16.6	23.1	
Approach LOS	A			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.2	36.4				41.6	18.4
Change Period (Y+Rc), s	4.0	4.8				4.8	4.8
Max Green Setting (Gmax), s	8.0	15.2				27.2	23.2
Max Q Clear Time (g_c+I1), s	2.6	2.1				2.1	11.0
Green Ext Time (p_c), s	0.0	0.0				0.0	2.6

Intersection Summary		
HCM 6th Ctrl Delay		22.5
HCM 6th LOS		C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	15	1	2	8	13	1	0	2	7	0	0
Future Volume (vph)	0	15	1	2	8	13	1	0	2	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		800	0		50	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			1342			570			295	
Travel Time (s)		8.8			30.5			13.0			6.7	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↰	↗		↰	↗		↕	
Traffic Vol, veh/h	0	15	1	2	8	13	1	0	2	7	0	0
Future Vol, veh/h	0	15	1	2	8	13	1	0	2	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	800	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	21	1	3	11	19	1	0	3	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	22	0	0	49	58	22	40	39	11
Stage 1	-	-	-	-	-	-	22	22	-	17	17	-
Stage 2	-	-	-	-	-	-	27	36	-	23	22	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.6	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	1596	-	-	1607	-	-	930	837	1061	943	857	1076
Stage 1	-	-	-	-	-	-	974	881	-	980	885	-
Stage 2	-	-	-	-	-	-	968	869	-	973	881	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1596	-	-	1607	-	-	928	835	1061	939	855	1076
Mov Cap-2 Maneuver	-	-	-	-	-	-	928	835	-	939	855	-
Stage 1	-	-	-	-	-	-	974	881	-	980	883	-
Stage 2	-	-	-	-	-	-	966	867	-	970	881	-

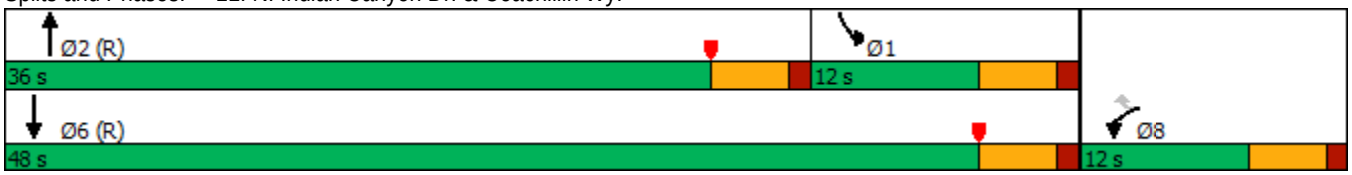
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.6	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	928	1061	1596	-	-	1607	-	-	939
HCM Lane V/C Ratio	0.002	0.003	-	-	-	0.002	-	-	0.011
HCM Control Delay (s)	8.9	8.4	0	-	-	7.2	0	-	8.9
HCM Lane LOS	A	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	996	1	1	523
Future Volume (vph)	1	1	996	1	1	523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		187			361
Travel Time (s)	12.8		4.3			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	12.0	12.0	36.0		12.0	48.0
Total Split (%)	20.0%	20.0%	60.0%		20.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

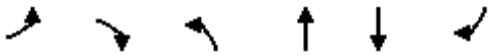
Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	996	1	1	523
Future Volume (veh/h)	1	1	996	1	1	523
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	1	1083	1	1	568
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	5	4	2810	3	447	3059
Arrive On Green	0.00	0.00	0.52	0.52	0.25	0.85
Sat Flow, veh/h	1810	1610	5523	5	1810	3705
Grp Volume(v), veh/h	1	1	700	384	1	568
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1899	1810	1805
Q Serve(g_s), s	0.0	0.0	7.2	7.2	0.0	1.7
Cycle Q Clear(g_c), s	0.0	0.0	7.2	7.2	0.0	1.7
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	5	4	1815	997	447	3059
V/C Ratio(X)	0.20	0.23	0.39	0.39	0.00	0.19
Avail Cap(c_a), veh/h	226	201	1815	997	447	3059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	29.9	8.5	8.5	17.0	0.8
Incr Delay (d2), s/veh	18.9	24.3	0.6	1.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.4	2.7	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.8	54.2	9.1	9.6	17.0	1.0
LnGrp LOS	D	D	A	A	B	A
Approach Vol, veh/h	2		1084			569
Approach Delay, s/veh	51.5		9.3			1.0
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.3	36.0			55.3	4.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	31.5			43.5	7.5
Max Q Clear Time (g_c+I1), s	2.0	9.2			3.7	2.0
Green Ext Time (p_c), s	0.0	7.7			4.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	21	0	996	520	4
Future Volume (vph)	0	21	0	996	520	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	384			475	187	
Travel Time (s)	8.7			10.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

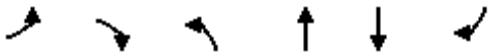
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	0	996	520	4
Future Vol, veh/h	0	21	0	996	520	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	23	0	1083	565	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	285	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	718	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	718	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	718	-	-
HCM Lane V/C Ratio	-	0.032	-	-
HCM Control Delay (s)	-	10.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	31	21	972	537	5
Future Volume (vph)	23	31	21	972	537	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		60			
Link Speed (mph)	30			30	30	
Link Distance (ft)	377			384	475	
Travel Time (s)	8.6			8.7	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

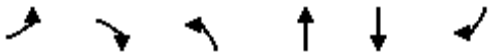
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	31	21	972	537	5
Future Vol, veh/h	23	31	21	972	537	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	34	23	1057	584	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1056	295	589	0	-	0
Stage 1	587	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Critical Hdwy	6.25	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	257	707	996	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	251	707	996	-	-	-
Mov Cap-2 Maneuver	355	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	567	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	996	-	497	-	-
HCM Lane V/C Ratio	0.023	-	0.118	-	-
HCM Control Delay (s)	8.7	-	13.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	29	0	993	565	2
Future Volume (vph)	0	29	0	993	565	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			285	384	
Travel Time (s)	8.5			6.5	8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	29	0	993	565	2
Future Vol, veh/h	0	29	0	993	565	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	32	0	1079	614	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	308	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	694	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	694	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	694	-	-
HCM Lane V/C Ratio	-	0.045	-	-
HCM Control Delay (s)	-	10.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

APPENDIX 6.1: EAC (2024) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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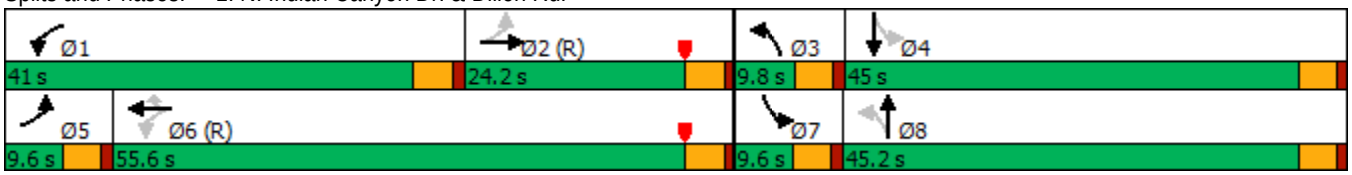
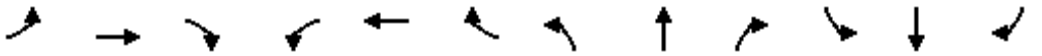
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	98	63	480	106	31	35	397	172	31	886	12
Future Volume (vph)	12	98	63	480	106	31	35	397	172	31	886	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	9.6	24.2		41.0	55.6	55.6	9.8	45.2		9.6	45.0	
Total Split (%)	8.0%	20.2%		34.2%	46.3%	46.3%	8.2%	37.7%		8.0%	37.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

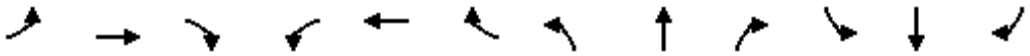




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	98	63	480	106	31	35	397	172	31	886	12
Future Volume (veh/h)	12	98	63	480	106	31	35	397	172	31	886	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	113	72	552	122	36	40	456	198	36	1018	14
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	381	511	304	738	1683	751	160	833	359	261	1231	17
Arrive On Green	0.02	0.23	0.23	0.25	0.47	0.47	0.03	0.34	0.34	0.03	0.34	0.34
Sat Flow, veh/h	1810	2177	1295	1810	3610	1610	1810	2456	1058	1810	3646	50
Grp Volume(v), veh/h	14	92	93	552	122	36	40	334	320	36	504	528
Grp Sat Flow(s),veh/h/ln	1810	1805	1667	1810	1805	1610	1810	1805	1710	1810	1805	1891
Q Serve(g_s), s	0.7	4.9	5.4	26.4	2.2	1.5	1.7	18.0	18.3	1.5	30.8	30.8
Cycle Q Clear(g_c), s	0.7	4.9	5.4	26.4	2.2	1.5	1.7	18.0	18.3	1.5	30.8	30.8
Prop In Lane	1.00		0.78	1.00		1.00	1.00		0.62	1.00		0.03
Lane Grp Cap(c), veh/h	381	424	391	738	1683	751	160	612	580	261	609	638
V/C Ratio(X)	0.04	0.22	0.24	0.75	0.07	0.05	0.25	0.55	0.55	0.14	0.83	0.83
Avail Cap(c_a), veh/h	430	424	391	841	1683	751	185	612	580	285	609	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	37.0	37.2	22.1	17.7	17.5	28.7	32.2	32.2	26.0	36.5	36.5
Incr Delay (d2), s/veh	0.0	1.2	1.4	3.2	0.1	0.1	0.8	3.5	3.8	0.2	12.2	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.3	2.3	11.1	0.9	0.5	0.7	8.0	7.7	0.6	14.7	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	38.2	38.6	25.4	17.8	17.6	29.5	35.6	36.0	26.2	48.7	48.2
LnGrp LOS	C	D	D	C	B	B	C	D	D	C	D	D
Approach Vol, veh/h		199			710			694			1068	
Approach Delay, s/veh		38.1			23.7			35.4			47.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.1	32.7	8.2	45.0	6.4	60.4	8.0	45.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	19.7	5.3	40.5	5.1	51.1	5.1	40.7
Max Q Clear Time (g_c+I1), s	28.4	7.4	3.7	32.8	2.7	4.2	3.5	20.3
Green Ext Time (p_c), s	1.2	0.7	0.0	3.4	0.0	0.8	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	6	40	1	17	22	806	163	73	1524	20
Future Volume (vph)	4	1	6	40	1	17	22	806	163	73	1524	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	11.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	6	40	1	17	22	806	163	73	1524	20
Future Vol, veh/h	4	1	6	40	1	17	22	806	163	73	1524	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	1	7	44	1	19	24	886	179	80	1675	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2338	2959	849	1932	2791	443	1697	0	0	1065	0	0
Stage 1	1846	1846	-	934	934	-	-	-	-	-	-	-
Stage 2	492	1113	-	998	1857	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	20	15	308	~ 41	19	568	381	-	-	662	-	-
Stage 1	79	126	-	290	347	-	-	-	-	-	-	-
Stage 2	532	286	-	265	125	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	16	12	308	~ 32	16	568	381	-	-	662	-	-
Mov Cap-2 Maneuver	16	12	-	~ 32	16	-	-	-	-	-	-	-
Stage 1	74	111	-	272	325	-	-	-	-	-	-	-
Stage 2	480	268	-	226	110	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	181.9	$ 457.3	0.3	0.5
HCM LOS	F	F		

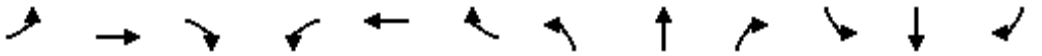
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	381	-	-	31	43	662	-	-
HCM Lane V/C Ratio	0.063	-	-	0.39	1.482	0.121	-	-
HCM Control Delay (s)	15.1	-	-	181.9	$ 457.3	11.2	-	-
HCM Lane LOS	C	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	6.4	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	6	40	1	17	22	806	163	73	1524	20
Future Volume (vph)	4	1	6	40	1	17	22	806	163	73	1524	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		50	210		145	225		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	60			60			120			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		10.0	79.0	79.0	18.0	87.0	
Total Split (%)	19.2%	19.2%		19.2%	19.2%		8.3%	65.8%	65.8%	15.0%	72.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: N. Indian Canyon Dr. & 19th Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	6	40	1	17	22	806	163	73	1524	20
Future Volume (veh/h)	4	1	6	40	1	17	22	806	163	73	1524	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	1	7	44	1	19	24	886	179	80	1675	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	112	10	70	123	4	75	42	2824	1260	102	2978	39
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.78	0.78	0.06	0.82	0.82
Sat Flow, veh/h	1414	205	1436	1430	81	1541	1810	3610	1610	1810	3649	48
Grp Volume(v), veh/h	4	0	8	44	0	20	24	886	179	80	828	869
Grp Sat Flow(s),veh/h/ln	1414	0	1641	1430	0	1623	1810	1805	1610	1810	1805	1891
Q Serve(g_s), s	0.3	0.0	0.6	3.6	0.0	1.4	1.6	8.5	3.3	5.2	18.7	18.8
Cycle Q Clear(g_c), s	1.8	0.0	0.6	4.2	0.0	1.4	1.6	8.5	3.3	5.2	18.7	18.8
Prop In Lane	1.00		0.88	1.00		0.95	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	112	0	80	123	0	79	42	2824	1260	102	1473	1544
V/C Ratio(X)	0.04	0.00	0.10	0.36	0.00	0.25	0.58	0.31	0.14	0.78	0.56	0.56
Avail Cap(c_a), veh/h	261	0	253	274	0	250	83	2824	1260	204	1473	1544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	54.6	56.6	0.0	55.0	58.0	3.8	3.2	55.9	3.7	3.8
Incr Delay (d2), s/veh	0.1	0.0	0.5	1.8	0.0	1.7	12.1	0.3	0.2	12.0	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	1.4	0.0	0.6	0.8	2.0	0.7	2.6	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	0.0	55.1	58.4	0.0	56.7	70.1	4.1	3.4	67.9	5.3	5.2
LnGrp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		12			64			1089			1777	
Approach Delay, s/veh		55.4			57.8			5.4			8.1	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	98.4		10.3	7.3	102.4		10.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	13.5	74.5		18.5	5.5	82.5		18.5				
Max Q Clear Time (g_c+I1), s	7.2	10.5		3.8	3.6	20.8		6.2				
Green Ext Time (p_c), s	0.1	7.1		0.0	0.0	16.8		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		8.4	
HCM 6th LOS		A	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	7	984	18	14	1557
Future Volume (vph)	12	7	984	18	14	1557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	7	984	18	14	1557
Future Vol, veh/h	12	7	984	18	14	1557
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	8	1058	19	15	1674

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1925	529	0	0	1077	0
Stage 1	1058	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	60	499	-	-	655	-
Stage 1	299	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	59	499	-	-	655	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	299	-	-	-	-	-
Stage 2	368	-	-	-	-	-

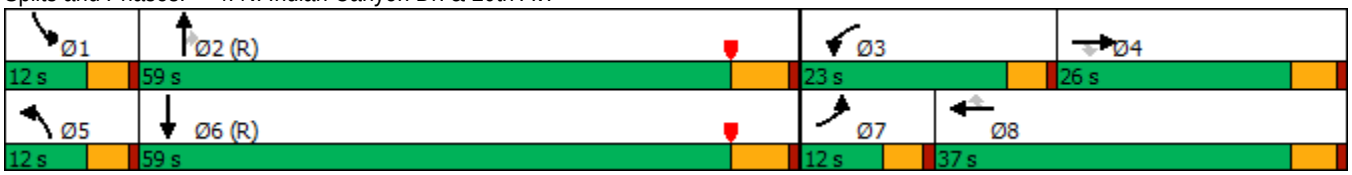
Approach	WB	NB	SB
HCM Control Delay, s	22	0	0.1
HCM LOS	C		

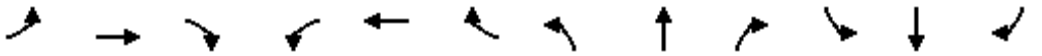
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	232	655	-
HCM Lane V/C Ratio	-	-	0.088	0.023	-
HCM Control Delay (s)	-	-	22	10.6	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	3	55	286	41	441	41	538	142	40	1480	12
Future Volume (vph)	41	3	55	286	41	441	41	538	142	40	1480	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)						46%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	12.0	26.0	26.0	23.0	37.0	37.0	12.0	59.0	59.0	12.0	59.0	
Total Split (%)	10.0%	21.7%	21.7%	19.2%	30.8%	30.8%	10.0%	49.2%	49.2%	10.0%	49.2%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.





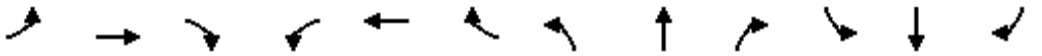
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	3	55	286	41	441	41	538	142	40	1480	12
Future Volume (veh/h)	41	3	55	286	41	441	41	538	142	40	1480	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	3	57	298	0	488	43	560	148	42	1542	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	222	185	362	0	577	57	2098	936	57	3083	24
Arrive On Green	0.03	0.12	0.12	0.10	0.00	0.19	0.03	0.58	0.58	0.03	0.58	0.58
Sat Flow, veh/h	1810	1900	1585	3619	0	3118	1810	3610	1610	1810	5309	41
Grp Volume(v), veh/h	43	3	57	298	0	488	43	560	148	42	1004	550
Grp Sat Flow(s),veh/h/ln	1810	1900	1585	1810	0	1559	1810	1805	1610	1810	1729	1892
Q Serve(g_s), s	2.8	0.2	4.0	9.7	0.0	18.1	2.8	9.2	5.1	2.8	20.6	20.6
Cycle Q Clear(g_c), s	2.8	0.2	4.0	9.7	0.0	18.1	2.8	9.2	5.1	2.8	20.6	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	57	222	185	362	0	577	57	2098	936	57	2008	1099
V/C Ratio(X)	0.75	0.01	0.31	0.82	0.00	0.85	0.75	0.27	0.16	0.74	0.50	0.50
Avail Cap(c_a), veh/h	112	331	276	555	0	829	112	2098	936	112	2008	1099
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.00	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	46.9	48.6	52.9	0.0	47.2	57.6	12.5	11.6	57.6	14.9	14.9
Incr Delay (d2), s/veh	7.1	0.0	0.9	2.4	0.0	4.1	7.1	0.3	0.4	6.8	0.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.1	1.6	4.5	0.0	7.3	1.4	3.4	1.9	1.3	7.3	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	46.9	49.5	55.3	0.0	51.3	64.7	12.8	12.0	64.4	15.8	16.5
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	B
Approach Vol, veh/h		103			786			751			1596	
Approach Delay, s/veh		55.8			52.8			15.6			17.3	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	75.9	16.6	19.1	8.4	75.9	8.4	27.3
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	7.4	52.8	18.4	20.9	7.4	52.8	7.4	31.9
Max Q Clear Time (g_c+I1), s	4.8	11.2	11.7	6.0	4.8	22.6	4.8	20.1
Green Ext Time (p_c), s	0.0	6.1	0.3	0.1	0.0	16.2	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	722	96	0	1698	124
Future Volume (vph)	0	0	0	0	0	0	0	722	96	0	1698	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	817	302	0	1698
Future Volume (vph)	0	0	817	302	0	1698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

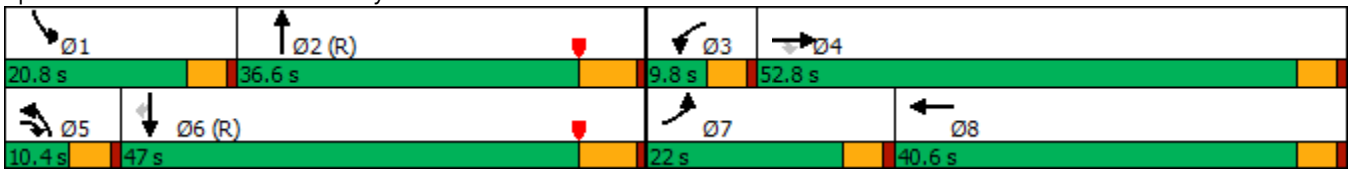
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

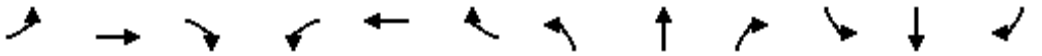
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	420	27	325	14	6	7	18	528	19	128	981	472
Future Volume (vph)	420	27	325	14	6	7	18	528	19	128	981	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	22.0	52.8	10.4	9.8	40.6		10.4	36.6		20.8	47.0	47.0
Total Split (%)	18.3%	44.0%	8.7%	8.2%	33.8%		8.7%	30.5%		17.3%	39.2%	39.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	27	325	14	6	7	18	528	19	128	981	472
Future Volume (veh/h)	420	27	325	14	6	7	18	528	19	128	981	472
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	457	29	353	15	7	8	20	574	21	139	1066	513
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	508	456	414	30	89	102	37	2492	91	166	2010	896
Arrive On Green	0.14	0.24	0.24	0.02	0.11	0.11	0.02	0.49	0.49	0.09	0.56	0.56
Sat Flow, veh/h	3510	1900	1588	1810	800	914	1810	5137	187	1810	3610	1609
Grp Volume(v), veh/h	457	29	353	15	0	15	20	386	209	139	1066	513
Grp Sat Flow(s),veh/h/ln	1755	1900	1588	1810	0	1714	1810	1729	1866	1810	1805	1609
Q Serve(g_s), s	15.4	1.4	25.4	1.0	0.0	0.9	1.3	7.8	7.8	9.1	22.3	24.9
Cycle Q Clear(g_c), s	15.4	1.4	25.4	1.0	0.0	0.9	1.3	7.8	7.8	9.1	22.3	24.9
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	508	456	414	30	0	191	37	1678	905	166	2010	896
V/C Ratio(X)	0.90	0.06	0.85	0.51	0.00	0.08	0.55	0.23	0.23	0.84	0.53	0.57
Avail Cap(c_a), veh/h	509	763	670	78	0	514	87	1678	905	244	2010	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	35.2	42.2	58.5	0.0	47.8	58.2	17.9	17.9	53.6	16.7	17.3
Incr Delay (d2), s/veh	12.0	0.0	3.6	4.9	0.0	0.2	4.6	0.3	0.6	10.1	1.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.7	10.4	0.5	0.0	0.4	0.6	2.9	3.3	4.4	8.4	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	35.2	45.9	63.4	0.0	47.9	62.8	18.2	18.5	63.7	17.7	20.0
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	B
Approach Vol, veh/h		839			30			615			1718	
Approach Delay, s/veh		54.5			55.7			19.8			22.1	
Approach LOS		D			E			B			C	

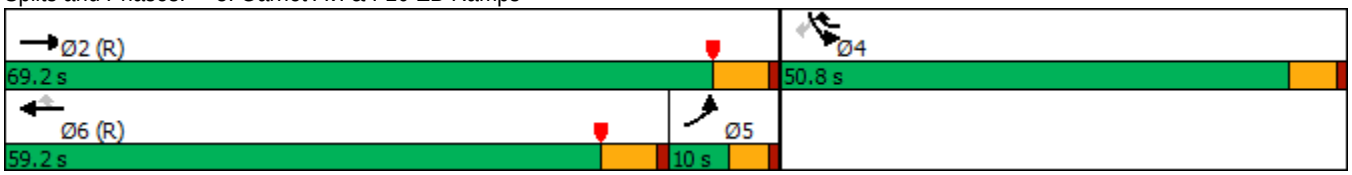
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	64.4	6.6	33.4	7.0	73.0	22.0	18.0
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	16.2	30.4	5.2	48.2	5.8	40.8	17.4	36.0
Max Q Clear Time (g_c+I1), s	11.1	9.8	3.0	27.4	3.3	26.9	17.4	2.9
Green Ext Time (p_c), s	0.1	4.5	0.0	1.4	0.0	9.3	0.0	0.0

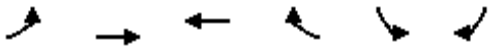
Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	36	44	480	715	12
Future Volume (vph)	8	36	44	480	715	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	10.0	69.2	59.2	50.8	50.8	50.8
Total Split (%)	8.3%	57.7%	49.3%	42.3%	42.3%	42.3%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	36	44	480	715	12
Future Volume (veh/h)	8	36	44	480	715	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	51	63	686	1021	17
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	395	1095	586	1027	1156	530
Arrive On Green	0.22	0.58	0.31	0.31	0.33	0.33
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	11	51	63	686	1021	17
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	0.6	1.4	2.8	32.3	33.0	0.9
Cycle Q Clear(g_c), s	0.6	1.4	2.8	32.3	33.0	0.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	395	1095	586	1027	1156	530
V/C Ratio(X)	0.03	0.05	0.11	0.67	0.88	0.03
Avail Cap(c_a), veh/h	395	1095	842	1244	1331	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	36.9	11.1	29.7	13.7	38.1	27.3
Incr Delay (d2), s/veh	0.0	0.1	0.3	3.1	7.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	1.4	21.9	14.6	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.9	11.1	30.0	16.8	45.1	27.3
LnGrp LOS	D	B	C	B	D	C
Approach Vol, veh/h		62	749		1038	
Approach Delay, s/veh		15.7	18.0		44.8	
Approach LOS		B	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		75.2		44.8	32.2	43.0
Change Period (Y+Rc), s		6.0		5.3	6.0	* 6
Max Green Setting (Gmax), s		63.2		45.5	5.5	* 53
Max Q Clear Time (g_c+I1), s		3.4		35.0	2.6	34.3
Green Ext Time (p_c), s		0.3		4.5	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

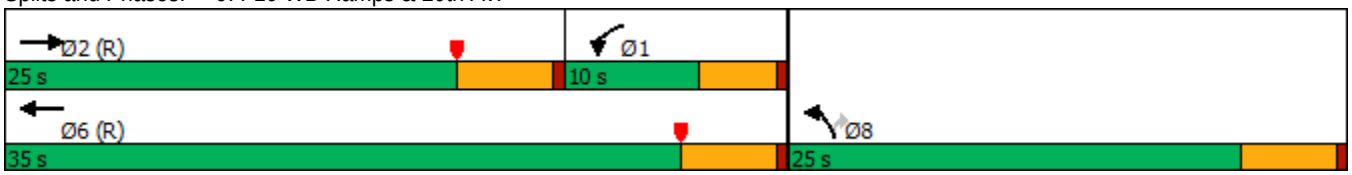
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	177	2	56	89	714	80
Future Volume (vph)	177	2	56	89	714	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	35.0	10.0	10.0
Total Split (s)	25.0		10.0	35.0	25.0	25.0
Total Split (%)	41.7%		16.7%	58.3%	41.7%	41.7%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 9: I-10 WB Ramps & 20th Av.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	177	2	56	89	714	80
Future Volume (veh/h)	177	2	56	89	714	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	221	2	70	111	892	100
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	376	3	462	1932	1070	491
Arrive On Green	0.07	0.07	0.26	0.54	0.30	0.30
Sat Flow, veh/h	1880	17	1810	3705	3510	1610
Grp Volume(v), veh/h	0	223	70	111	892	100
Grp Sat Flow(s),veh/h/ln	0	1897	1810	1805	1755	1610
Q Serve(g_s), s	0.0	6.9	1.8	0.9	14.2	2.8
Cycle Q Clear(g_c), s	0.0	6.9	1.8	0.9	14.2	2.8
Prop In Lane		0.01	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	379	462	1932	1070	491
V/C Ratio(X)	0.00	0.59	0.15	0.06	0.83	0.20
Avail Cap(c_a), veh/h	0	639	462	1932	1182	542
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.6	17.3	6.7	19.4	15.5
Incr Delay (d2), s/veh	0.0	6.5	0.1	0.1	5.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.7	0.3	5.6	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	32.1	17.4	6.7	24.6	15.7
LnGrp LOS	A	C	B	A	C	B
Approach Vol, veh/h	223			181	992	
Approach Delay, s/veh	32.1			10.9	23.7	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	20.1	16.8				36.9	23.1
Change Period (Y+Rc), s	4.8	* 4.8				4.8	4.8
Max Green Setting (Gmax), s	6.0	* 20				30.2	20.2
Max Q Clear Time (g_c+I1), s	3.8	8.9				2.9	16.2
Green Ext Time (p_c), s	0.0	0.6				0.5	2.1

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	9	1	14	17	1	3
Future Volume (vph)	9	1	14	17	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	50
Storage Lanes		0	0		1	1
Taper Length (ft)			60		60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	386			1342	570	
Travel Time (s)	8.8			30.5	13.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	1	14	17	1	3
Future Vol, veh/h	9	1	14	17	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	50
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	1	16	19	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	62	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	51	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1621	-	949	1076
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1621	-	940	1076
Mov Cap-2 Maneuver	-	-	-	-	940	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	967	-

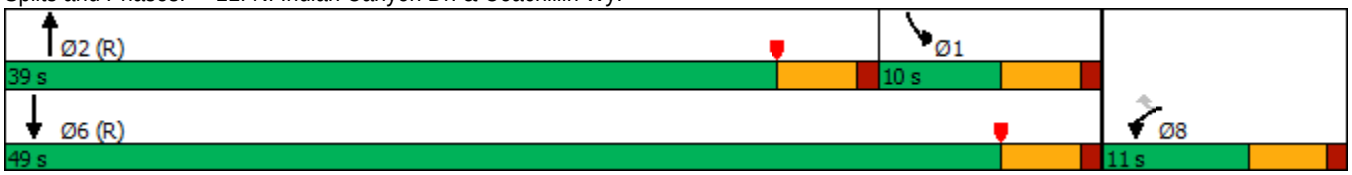
Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	940	1076	-	-	1621	-
HCM Lane V/C Ratio	0.001	0.003	-	-	0.01	-
HCM Control Delay (s)	8.8	8.4	-	-	7.2	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	68	3	616	168	17	1549
Future Volume (vph)	68	3	616	168	17	1549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		210			361
Travel Time (s)	12.8		4.8			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	11.0	11.0	39.0		10.0	49.0
Total Split (%)	18.3%	18.3%	65.0%		16.7%	81.7%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	68	3	616	168	17	1549
Future Volume (veh/h)	68	3	616	168	17	1549
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	74	3	670	183	18	1684
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	109	97	2339	629	253	2851
Arrive On Green	0.06	0.06	0.57	0.57	0.14	0.79
Sat Flow, veh/h	1810	1610	4238	1094	1810	3705
Grp Volume(v), veh/h	74	3	568	285	18	1684
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1703	1810	1805
Q Serve(g_s), s	2.4	0.1	5.0	5.1	0.5	11.0
Cycle Q Clear(g_c), s	2.4	0.1	5.0	5.1	0.5	11.0
Prop In Lane	1.00	1.00		0.64	1.00	
Lane Grp Cap(c), veh/h	109	97	1988	979	253	2851
V/C Ratio(X)	0.68	0.03	0.29	0.29	0.07	0.59
Avail Cap(c_a), veh/h	196	174	1988	979	253	2851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	26.5	6.5	6.5	22.4	2.5
Incr Delay (d2), s/veh	7.2	0.1	0.4	0.8	0.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.5	1.6	0.2	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.8	26.7	6.8	7.3	22.5	3.4
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	77		853			1702
Approach Delay, s/veh	34.5		7.0			3.6
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.9	39.0			51.9	8.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	34.5			44.5	6.5
Max Q Clear Time (g_c+I1), s	2.5	7.1			13.0	4.4
Green Ext Time (p_c), s	0.0	6.4			17.6	0.0

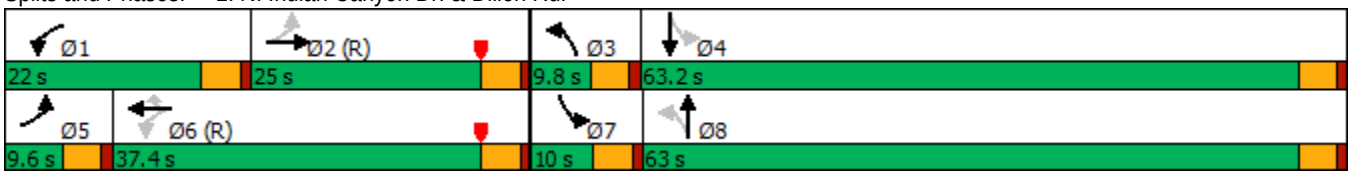
Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

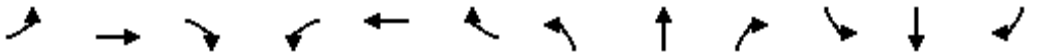
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	105	50	274	146	59	55	995	382	49	518	22
Future Volume (vph)	24	105	50	274	146	59	55	995	382	49	518	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	9.6	25.0		22.0	37.4	37.4	9.8	63.0		10.0	63.2	
Total Split (%)	8.0%	20.8%		18.3%	31.2%	31.2%	8.2%	52.5%		8.3%	52.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

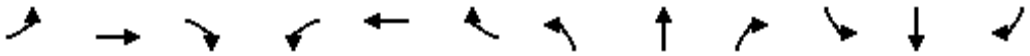




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	105	50	274	146	59	55	995	382	49	518	22
Future Volume (veh/h)	24	105	50	274	146	59	55	995	382	49	518	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	115	55	301	160	65	60	1093	420	54	569	24
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	314	432	196	491	1085	484	452	1258	474	158	1727	73
Arrive On Green	0.02	0.18	0.18	0.15	0.30	0.30	0.04	0.49	0.49	0.03	0.49	0.49
Sat Flow, veh/h	1810	2414	1094	1810	3610	1610	1810	2565	966	1810	3530	149
Grp Volume(v), veh/h	26	84	86	301	160	65	60	763	750	54	291	302
Grp Sat Flow(s),veh/h/ln	1810	1805	1703	1810	1805	1610	1810	1805	1726	1810	1805	1873
Q Serve(g_s), s	1.4	4.8	5.2	15.8	3.9	3.5	2.0	44.7	47.0	1.8	11.8	11.8
Cycle Q Clear(g_c), s	1.4	4.8	5.2	15.8	3.9	3.5	2.0	44.7	47.0	1.8	11.8	11.8
Prop In Lane	1.00		0.64	1.00		1.00	1.00		0.56	1.00		0.08
Lane Grp Cap(c), veh/h	314	323	305	491	1085	484	452	885	847	158	883	916
V/C Ratio(X)	0.08	0.26	0.28	0.61	0.15	0.13	0.13	0.86	0.89	0.34	0.33	0.33
Avail Cap(c_a), veh/h	347	323	305	491	1085	484	467	885	847	178	883	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	42.4	42.6	31.5	30.7	30.6	14.6	27.0	27.6	24.8	18.7	18.7
Incr Delay (d2), s/veh	0.1	2.0	2.3	2.3	0.3	0.6	0.1	10.8	13.2	1.3	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.3	2.3	6.9	1.7	1.4	0.7	19.8	20.3	0.7	4.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	44.4	44.9	33.7	31.0	31.2	14.7	37.8	40.8	26.1	19.7	19.6
LnGrp LOS	D	D	D	C	C	C	B	D	D	C	B	B
Approach Vol, veh/h		196			526			1573			647	
Approach Delay, s/veh		43.9			32.6			38.3			20.2	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	26.0	8.8	63.2	7.4	40.6	8.7	63.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	20.5	5.3	58.7	5.1	32.9	5.5	58.5
Max Q Clear Time (g_c+I1), s	17.8	7.2	4.0	13.8	3.4	5.9	3.8	49.0
Green Ext Time (p_c), s	0.0	0.6	0.0	3.2	0.0	1.1	0.0	6.0

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	1	11	150	3	53	5	1571	32	10	1110	7
Future Volume (vph)	17	1	11	150	3	53	5	1571	32	10	1110	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	338.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	1	11	150	3	53	5	1571	32	10	1110	7
Future Vol, veh/h	17	1	11	150	3	53	5	1571	32	10	1110	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	1	12	167	3	59	6	1746	36	11	1233	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2146	3053	621	2397	3021	873	1241	0	0	1782	0	0
Stage 1	1259	1259	-	1758	1758	-	-	-	-	-	-	-
Stage 2	887	1794	-	639	1263	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	28	13	435	~ 18	13	297	568	-	-	353	-	-
Stage 1	184	244	-	~ 90	140	-	-	-	-	-	-	-
Stage 2	309	134	-	436	243	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 17	12	435	~ 16	12	297	568	-	-	353	-	-
Mov Cap-2 Maneuver	~ 17	12	-	~ 16	12	-	-	-	-	-	-	-
Stage 1	182	236	-	~ 89	138	-	-	-	-	-	-	-
Stage 2	239	133	-	409	235	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 480.4	$ 4812.6	0	0.1
HCM LOS	F	F		

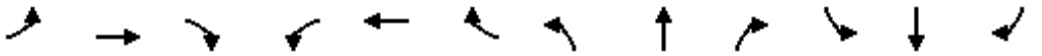
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	568	-	-	26	21	353	-	-
HCM Lane V/C Ratio	0.01	-	-	1.239	10.899	0.031	-	-
HCM Control Delay (s)	11.4	-	-	$ 480.4	$ 4812.6	15.5	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	3.9	29	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	1	11	150	3	53	5	1571	32	10	1110	7
Future Volume (vph)	17	1	11	150	3	53	5	1571	32	10	1110	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		50	210		145	225		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	60			60			120			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	
Total Split (s)	29.2	29.2		29.2	29.2		10.0	80.8	80.8	10.0	80.8	
Total Split (%)	24.3%	24.3%		24.3%	24.3%		8.3%	67.3%	67.3%	8.3%	67.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: N. Indian Canyon Dr. & 19th Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1	11	150	3	53	5	1571	32	10	1110	7
Future Volume (veh/h)	17	1	11	150	3	53	5	1571	32	10	1110	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	19	1	12	167	3	59	6	1746	36	11	1233	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	208	18	214	253	11	220	14	2643	1179	23	2711	18
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.73	0.73	0.01	0.74	0.74
Sat Flow, veh/h	1362	125	1504	1423	78	1544	1810	3610	1610	1810	3677	24
Grp Volume(v), veh/h	19	0	13	167	0	62	6	1746	36	11	605	636
Grp Sat Flow(s),veh/h/ln	1362	0	1629	1423	0	1622	1810	1805	1610	1810	1805	1896
Q Serve(g_s), s	1.5	0.0	0.8	13.8	0.0	4.1	0.4	30.1	0.7	0.7	15.9	15.9
Cycle Q Clear(g_c), s	5.6	0.0	0.8	14.6	0.0	4.1	0.4	30.1	0.7	0.7	15.9	15.9
Prop In Lane	1.00		0.92	1.00		0.95	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	208	0	232	253	0	231	14	2643	1179	23	1331	1398
V/C Ratio(X)	0.09	0.00	0.06	0.66	0.00	0.27	0.44	0.66	0.03	0.48	0.45	0.45
Avail Cap(c_a), veh/h	294	0	335	343	0	334	83	2643	1179	83	1331	1398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	0.0	44.5	50.8	0.0	45.9	59.3	8.3	4.4	58.8	6.2	6.2
Incr Delay (d2), s/veh	0.2	0.0	0.1	2.9	0.0	0.6	20.6	1.3	0.0	14.3	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.3	5.2	0.0	1.7	0.3	8.8	0.2	0.4	4.7	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	0.0	44.6	53.7	0.0	46.5	79.9	9.7	4.5	73.2	7.3	7.3
LnGrp LOS	D	A	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h		32			229			1788			1252	
Approach Delay, s/veh		46.9			51.7			9.8			7.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	92.4		21.6	5.4	93.0		21.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	76.3		24.7	5.5	76.3		24.7				
Max Q Clear Time (g_c+I1), s	2.7	32.1		7.6	2.4	17.9		16.6				
Green Ext Time (p_c), s	0.0	18.3		0.1	0.0	9.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.3	
HCM 6th LOS		B	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	15	1593	14	6	1264
Future Volume (vph)	10	15	1593	14	6	1264
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	15	1593	14	6	1264
Future Vol, veh/h	10	15	1593	14	6	1264
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	16	1713	15	6	1359

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2405	857	0	0	1728	0
Stage 1	1713	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	28	305	-	-	370	-
Stage 1	134	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	28	305	-	-	370	-
Mov Cap-2 Maneuver	103	-	-	-	-	-
Stage 1	134	-	-	-	-	-
Stage 2	456	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.9	0	0.1
HCM LOS	D		

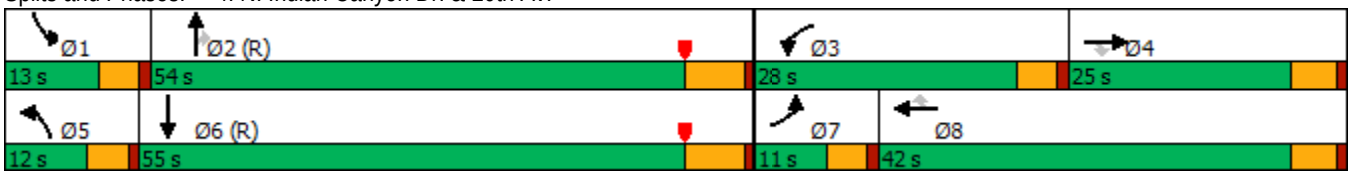
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	171	370	-
HCM Lane V/C Ratio	-	-	0.157	0.017	-
HCM Control Delay (s)	-	-	29.9	14.9	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	6	93	379	33	678	37	856	147	42	1170	23
Future Volume (vph)	24	6	93	379	33	678	37	856	147	42	1170	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						48%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	11.0	25.0	25.0	28.0	42.0	42.0	12.0	54.0	54.0	13.0	55.0	
Total Split (%)	9.2%	20.8%	20.8%	23.3%	35.0%	35.0%	10.0%	45.0%	45.0%	10.8%	45.8%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.



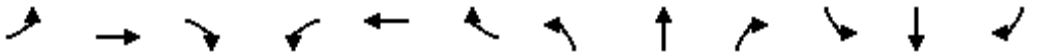
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	6	93	379	33	678	37	856	147	42	1170	23
Future Volume (veh/h)	24	6	93	379	33	678	37	856	147	42	1170	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	6	98	399	0	737	39	901	155	44	1232	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	43	296	248	467	0	818	55	1848	824	58	2691	52
Arrive On Green	0.02	0.16	0.16	0.13	0.00	0.26	0.03	0.51	0.51	0.03	0.51	0.51
Sat Flow, veh/h	1810	1900	1586	3619	0	3129	1810	3610	1610	1810	5237	102
Grp Volume(v), veh/h	25	6	98	399	0	737	39	901	155	44	813	443
Grp Sat Flow(s),veh/h/ln	1810	1900	1586	1810	0	1564	1810	1805	1610	1810	1729	1881
Q Serve(g_s), s	1.6	0.3	6.7	12.9	0.0	27.3	2.6	19.5	6.2	2.9	17.9	18.0
Cycle Q Clear(g_c), s	1.6	0.3	6.7	12.9	0.0	27.3	2.6	19.5	6.2	2.9	17.9	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	43	296	248	467	0	818	55	1848	824	58	1776	967
V/C Ratio(X)	0.59	0.02	0.40	0.85	0.00	0.90	0.71	0.49	0.19	0.76	0.46	0.46
Avail Cap(c_a), veh/h	97	315	263	706	0	962	112	1848	824	127	1776	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.69	0.00	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	42.9	45.5	51.1	0.0	42.8	57.7	19.0	15.8	57.6	18.6	18.6
Incr Delay (d2), s/veh	4.7	0.0	1.0	3.0	0.0	7.5	6.2	0.9	0.5	7.3	0.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.7	6.0	0.0	11.2	1.2	7.6	2.4	1.4	6.7	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	42.9	46.6	54.1	0.0	50.3	63.8	20.0	16.3	64.9	19.4	20.1
LnGrp LOS	E	D	D	D	A	D	E	B	B	E	B	C
Approach Vol, veh/h		129			1136			1095			1300	
Approach Delay, s/veh		49.5			51.6			21.0			21.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	67.6	20.1	23.8	8.2	67.8	7.4	36.5
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	8.4	47.8	23.4	19.9	7.4	48.8	6.4	36.9
Max Q Clear Time (g_c+I1), s	4.9	21.5	14.9	8.7	4.6	20.0	3.6	29.3
Green Ext Time (p_c), s	0.0	9.4	0.5	0.2	0.0	12.1	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	1042	191	0	1366	276
Future Volume (vph)	0	0	0	0	0	0	0	1042	191	0	1366	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	1233	331	0	1366
Future Volume (vph)	0	0	1233	331	0	1366
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

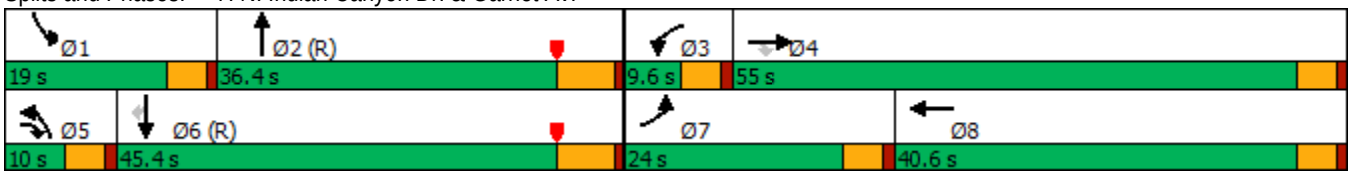
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

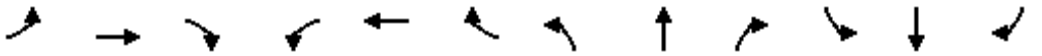
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	404	19	61	4	3	7	35	976	12	136	577	620
Future Volume (vph)	404	19	61	4	3	7	35	976	12	136	577	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	24.0	55.0	10.0	9.6	40.6		10.0	36.4		19.0	45.4	45.4
Total Split (%)	20.0%	45.8%	8.3%	8.0%	33.8%		8.3%	30.3%		15.8%	37.8%	37.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	19	61	4	3	7	35	976	12	136	577	620
Future Volume (veh/h)	404	19	61	4	3	7	35	976	12	136	577	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	430	20	65	4	3	7	37	1038	13	145	614	660
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	490	422	400	9	44	102	53	2699	34	172	2082	928
Arrive On Green	0.14	0.22	0.22	0.01	0.09	0.09	0.03	0.51	0.51	0.10	0.58	0.58
Sat Flow, veh/h	3510	1900	1588	1810	498	1163	1810	5280	66	1810	3610	1609
Grp Volume(v), veh/h	430	20	65	4	0	10	37	680	371	145	614	660
Grp Sat Flow(s),veh/h/ln	1755	1900	1588	1810	0	1661	1810	1729	1888	1810	1805	1609
Q Serve(g_s), s	14.4	1.0	3.8	0.3	0.0	0.7	2.4	14.4	14.4	9.5	10.4	35.3
Cycle Q Clear(g_c), s	14.4	1.0	3.8	0.3	0.0	0.7	2.4	14.4	14.4	9.5	10.4	35.3
Prop In Lane	1.00		1.00	1.00		0.70	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	490	422	400	9	0	146	53	1768	965	172	2082	928
V/C Ratio(X)	0.88	0.05	0.16	0.43	0.00	0.07	0.69	0.38	0.38	0.84	0.29	0.71
Avail Cap(c_a), veh/h	568	798	714	75	0	498	81	1768	965	217	2082	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	36.7	35.1	59.5	0.0	50.3	57.7	17.8	17.8	53.4	13.0	18.2
Incr Delay (d2), s/veh	10.3	0.0	0.2	10.9	0.0	0.2	5.8	0.6	1.2	17.5	0.4	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.5	1.5	0.2	0.0	0.3	1.2	5.3	6.0	5.0	3.8	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	36.8	35.2	70.4	0.0	50.4	63.5	18.5	19.0	70.9	13.3	22.8
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	C
Approach Vol, veh/h		515			14			1088			1419	
Approach Delay, s/veh		56.7			56.1			20.2			23.6	
Approach LOS		E			E			C			C	

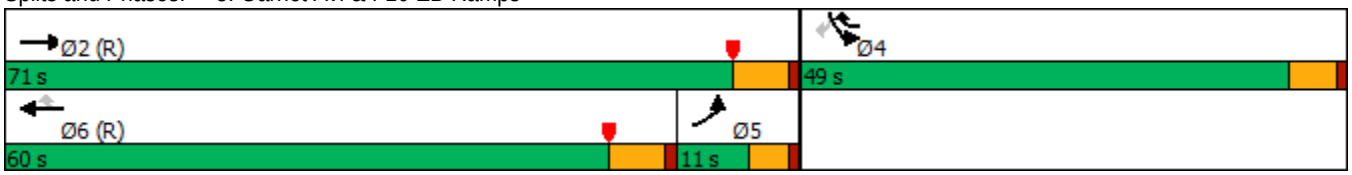
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	67.5	5.2	31.2	8.1	75.4	21.3	15.1
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	14.4	30.2	5.0	50.4	5.4	39.2	19.4	36.0
Max Q Clear Time (g_c+I1), s	11.5	16.4	2.3	5.8	4.4	37.3	16.4	2.7
Green Ext Time (p_c), s	0.0	6.7	0.0	0.3	0.0	1.4	0.3	0.0

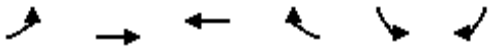
Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	54	63	602	400	11
Future Volume (vph)	22	54	63	602	400	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	11.0	71.0	60.0	49.0	49.0	49.0
Total Split (%)	9.2%	59.2%	50.0%	40.8%	40.8%	40.8%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	54	63	602	400	11
Future Volume (veh/h)	22	54	63	602	400	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	62	72	692	460	13
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	564	1408	721	876	579	265
Arrive On Green	0.31	0.74	0.38	0.38	0.16	0.16
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	25	62	72	692	460	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	1.2	1.0	2.9	41.2	15.1	0.8
Cycle Q Clear(g_c), s	1.2	1.0	2.9	41.2	15.1	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	564	1408	721	876	579	265
V/C Ratio(X)	0.04	0.04	0.10	0.79	0.80	0.05
Avail Cap(c_a), veh/h	564	1408	855	990	1278	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	28.8	4.2	24.0	21.9	48.2	42.2
Incr Delay (d2), s/veh	0.0	0.1	0.2	6.1	3.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	1.4	22.7	6.7	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.8	4.2	24.3	28.0	51.7	42.3
LnGrp LOS	C	A	C	C	D	D
Approach Vol, veh/h		87	764		473	
Approach Delay, s/veh		11.3	27.6		51.5	
Approach LOS		B	C		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.9		25.1	43.4	51.5
Change Period (Y+Rc), s		6.0		5.3	6.0	* 6
Max Green Setting (Gmax), s		65.0		43.7	6.5	* 54
Max Q Clear Time (g_c+I1), s		3.0		17.1	3.2	43.2
Green Ext Time (p_c), s		0.3		2.7	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	183	1	174	214	877	85
Future Volume (vph)	183	1	174	214	877	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	35.0	10.0	10.0
Total Split (s)	19.0		16.0	35.0	25.0	25.0
Total Split (%)	31.7%		26.7%	58.3%	41.7%	41.7%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 9: I-10 WB Ramps & 20th Av.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	183	1	174	214	877	85
Future Volume (veh/h)	183	1	174	214	877	85
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	1	196	240	985	96
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	378	2	432	1873	1128	517
Arrive On Green	0.07	0.07	0.24	0.52	0.32	0.32
Sat Flow, veh/h	1889	9	1810	3705	3510	1610
Grp Volume(v), veh/h	0	207	196	240	985	96
Grp Sat Flow(s),veh/h/ln	0	1898	1810	1805	1755	1610
Q Serve(g_s), s	0.0	6.3	5.5	2.1	15.9	2.6
Cycle Q Clear(g_c), s	0.0	6.3	5.5	2.1	15.9	2.6
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	380	432	1873	1128	517
V/C Ratio(X)	0.00	0.55	0.45	0.13	0.87	0.19
Avail Cap(c_a), veh/h	0	449	432	1873	1182	542
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.4	19.5	7.4	19.2	14.7
Incr Delay (d2), s/veh	0.0	5.5	0.3	0.1	7.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4	2.1	0.7	6.5	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	30.9	19.8	7.6	26.7	14.9
LnGrp LOS	A	C	B	A	C	B
Approach Vol, veh/h	207			436	1081	
Approach Delay, s/veh	30.9			13.1	25.7	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	19.1	16.8				35.9	24.1
Change Period (Y+Rc), s	4.8	* 4.8				4.8	4.8
Max Green Setting (Gmax), s	12.0	* 14				30.2	20.2
Max Q Clear Time (g_c+I1), s	7.5	8.3				4.1	17.9
Green Ext Time (p_c), s	0.1	0.4				1.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	18	1	5	9	1	12
Future Volume (vph)	18	1	5	9	1	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	50
Storage Lanes		0	0		1	1
Taper Length (ft)			60		60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	386			1342	570	
Travel Time (s)	8.8			30.5	13.0	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	1	5	9	1	12
Future Vol, veh/h	18	1	5	9	1	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	50
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	1	7	13	1	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	54	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.6	3.3
Pot Cap-1 Maneuver	-	-	1600	-	933	1054
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	929	1054
Mov Cap-2 Maneuver	-	-	-	-	929	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	969	-

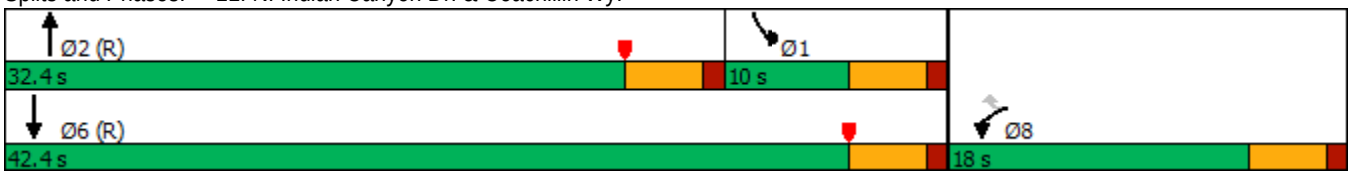
Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	929	1054	-	-	1600	-
HCM Lane V/C Ratio	0.002	0.016	-	-	0.004	-
HCM Control Delay (s)	8.9	8.5	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	238	15	1497	95	12	889
Future Volume (vph)	238	15	1497	95	12	889
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		210			361
Travel Time (s)	12.8		4.8			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	18.0	18.0	32.4		10.0	42.4
Total Split (%)	29.8%	29.8%	53.6%		16.6%	70.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60.4	
Actuated Cycle Length: 60.4	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	238	15	1497	95	12	889
Future Volume (veh/h)	238	15	1497	95	12	889
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	259	16	1627	103	13	966
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	315	280	2318	147	246	2441
Arrive On Green	0.17	0.17	0.47	0.47	0.14	0.68
Sat Flow, veh/h	1810	1610	5157	315	1810	3705
Grp Volume(v), veh/h	259	16	1128	602	13	966
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1843	1810	1805
Q Serve(g_s), s	8.3	0.5	15.5	15.6	0.4	7.1
Cycle Q Clear(g_c), s	8.3	0.5	15.5	15.6	0.4	7.1
Prop In Lane	1.00	1.00		0.17	1.00	
Lane Grp Cap(c), veh/h	315	280	1608	857	246	2441
V/C Ratio(X)	0.82	0.06	0.70	0.70	0.05	0.40
Avail Cap(c_a), veh/h	407	362	1608	857	246	2441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	20.7	12.7	12.8	22.6	4.3
Incr Delay (d2), s/veh	10.1	0.1	2.6	4.8	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.2	5.6	6.5	0.2	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.0	20.8	15.3	17.5	22.6	4.8
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	275		1730			979
Approach Delay, s/veh	33.3		16.1			5.0
Approach LOS	C		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.7	32.4			45.1	14.9
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	27.9			37.9	13.5
Max Q Clear Time (g_c+I1), s	2.4	17.6			9.1	10.3
Green Ext Time (p_c), s	0.0	7.6			8.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

APPENDIX 7.1: EAPC (2024) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND QUEUEING ANALYSIS WORKSHEETS

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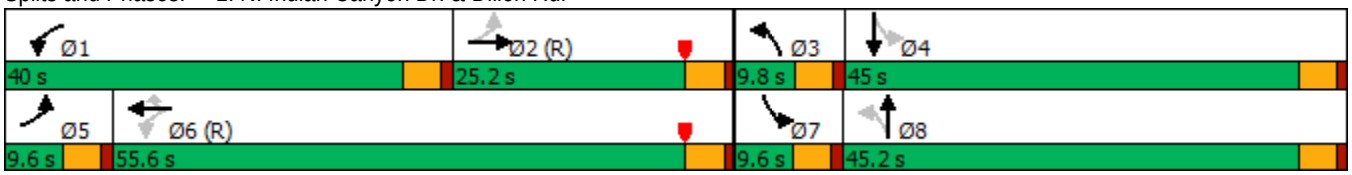
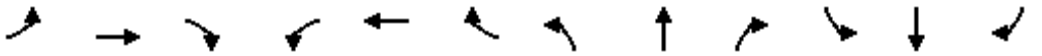
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	98	66	486	106	31	36	400	174	31	898	12
Future Volume (vph)	12	98	66	486	106	31	36	400	174	31	898	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	9.6	25.2		40.0	55.6	55.6	9.8	45.2		9.6	45.0	
Total Split (%)	8.0%	21.0%		33.3%	46.3%	46.3%	8.2%	37.7%		8.0%	37.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

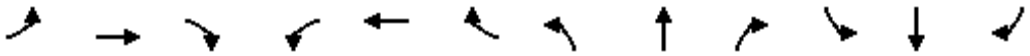




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	98	66	486	106	31	36	400	174	31	898	12
Future Volume (veh/h)	12	98	66	486	106	31	36	400	174	31	898	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	113	76	559	122	36	41	460	200	36	1032	14
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	377	493	309	737	1682	750	158	833	360	259	1231	17
Arrive On Green	0.02	0.23	0.23	0.25	0.47	0.47	0.03	0.34	0.34	0.03	0.34	0.34
Sat Flow, veh/h	1810	2131	1334	1810	3610	1610	1810	2455	1059	1810	3647	49
Grp Volume(v), veh/h	14	94	95	559	122	36	41	337	323	36	511	535
Grp Sat Flow(s),veh/h/ln	1810	1805	1660	1810	1805	1610	1810	1805	1709	1810	1805	1891
Q Serve(g_s), s	0.7	5.1	5.6	26.9	2.2	1.5	1.8	18.2	18.5	1.5	31.4	31.4
Cycle Q Clear(g_c), s	0.7	5.1	5.6	26.9	2.2	1.5	1.8	18.2	18.5	1.5	31.4	31.4
Prop In Lane	1.00		0.80	1.00		1.00	1.00		0.62	1.00		0.03
Lane Grp Cap(c), veh/h	377	418	384	737	1682	750	158	613	580	259	609	638
V/C Ratio(X)	0.04	0.23	0.25	0.76	0.07	0.05	0.26	0.55	0.56	0.14	0.84	0.84
Avail Cap(c_a), veh/h	426	418	384	820	1682	750	182	613	580	283	609	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	37.4	37.6	22.3	17.7	17.5	28.9	32.2	32.3	26.0	36.7	36.7
Incr Delay (d2), s/veh	0.0	1.3	1.5	3.7	0.1	0.1	0.9	3.5	3.8	0.2	13.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.3	2.4	11.4	0.9	0.5	0.8	8.1	7.8	0.6	15.1	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	38.7	39.1	26.0	17.8	17.6	29.8	35.7	36.1	26.3	49.7	49.2
LnGrp LOS	C	D	D	C	B	B	C	D	D	C	D	D
Approach Vol, veh/h		203			717			701			1082	
Approach Delay, s/veh		38.6			24.2			35.5			48.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.5	32.3	8.2	45.0	6.4	60.4	8.0	45.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	35.5	20.7	5.3	40.5	5.1	51.1	5.1	40.7
Max Q Clear Time (g_c+I1), s	28.9	7.6	3.8	33.4	2.7	4.2	3.5	20.5
Green Ext Time (p_c), s	1.1	0.7	0.0	3.3	0.0	0.8	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	7	40	1	20	50	844	163	74	1545	20
Future Volume (vph)	5	1	7	40	1	20	50	844	163	74	1545	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	17

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	7	40	1	20	50	844	163	74	1545	20
Future Vol, veh/h	5	1	7	40	1	20	50	844	163	74	1545	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	1	8	44	1	22	55	927	179	81	1698	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2445	3087	860	2049	2919	464	1720	0	0	1106	0	0
Stage 1	1871	1871	-	1037	1037	-	-	-	-	-	-	-
Stage 2	574	1216	-	1012	1882	-	-	-	-	-	-	-
Critical Hdwy	10	6.5	6.9	10	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	6.5	4	3.3	6.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	6	4	*471	*49	8	550	685	-	-	639	-	-
Stage 1	165	265	-	*188	311	-	-	-	-	-	-	-
Stage 2	316	256	-	*239	258	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	~ 5	3	*471	*~ 30	6	550	685	-	-	639	-	-
Mov Cap-2 Maneuver	~ 5	3	-	*~ 30	6	-	-	-	-	-	-	-
Stage 1	152	231	-	*173	286	-	-	-	-	-	-	-
Stage 2	278	236	-	*204	225	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 952.1	$ 548.7	0.5	0.5
HCM LOS	F	F		

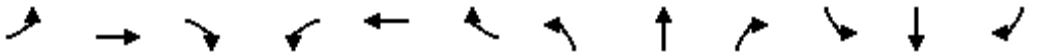
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	685	-	-	10	40	639	-	-
HCM Lane V/C Ratio	0.08	-	-	1.429	1.676	0.127	-	-
HCM Control Delay (s)	10.7	-	-	$ 952.1	$ 548.7	11.5	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.6	7	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	7	40	1	20	50	844	163	74	1545	20
Future Volume (vph)	5	1	7	40	1	20	50	844	163	74	1545	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		50	210		145	225		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	60			60			120			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		13.0	81.0	81.0	16.0	84.0	
Total Split (%)	19.2%	19.2%		19.2%	19.2%		10.8%	67.5%	67.5%	13.3%	70.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: N. Indian Canyon Dr. & 19th Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	7	40	1	20	50	844	163	74	1545	20
Future Volume (veh/h)	5	1	7	40	1	20	50	844	163	74	1545	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1	8	44	1	22	55	927	179	81	1698	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	111	9	72	124	4	77	71	2818	1257	103	2913	38
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.78	0.78	0.06	0.80	0.80
Sat Flow, veh/h	1410	182	1456	1428	70	1550	1810	3610	1610	1810	3649	47
Grp Volume(v), veh/h	5	0	9	44	0	23	55	927	179	81	839	881
Grp Sat Flow(s),veh/h/ln	1410	0	1638	1428	0	1621	1810	1805	1610	1810	1805	1892
Q Serve(g_s), s	0.4	0.0	0.6	3.6	0.0	1.6	3.6	9.1	3.3	5.3	21.0	21.1
Cycle Q Clear(g_c), s	2.1	0.0	0.6	4.3	0.0	1.6	3.6	9.1	3.3	5.3	21.0	21.1
Prop In Lane	1.00		0.89	1.00		0.96	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	111	0	81	124	0	81	71	2818	1257	103	1441	1510
V/C Ratio(X)	0.05	0.00	0.11	0.36	0.00	0.29	0.77	0.33	0.14	0.78	0.58	0.58
Avail Cap(c_a), veh/h	258	0	253	273	0	250	128	2818	1257	173	1441	1510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	0.0	54.5	56.5	0.0	55.0	57.1	3.9	3.2	55.8	4.6	4.6
Incr Delay (d2), s/veh	0.2	0.0	0.6	1.7	0.0	1.9	15.9	0.3	0.2	12.1	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	1.4	0.0	0.7	1.9	2.2	0.8	2.7	5.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	55.1	58.3	0.0	56.9	73.0	4.2	3.5	67.9	6.3	6.2
LnGrp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		14			67			1161			1801	
Approach Delay, s/veh		55.4			57.8			7.3			9.0	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	98.2		10.5	9.2	100.3		10.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	76.5		18.5	8.5	79.5		18.5				
Max Q Clear Time (g_c+I1), s	7.3	11.1		4.1	5.6	23.1		6.3				
Green Ext Time (p_c), s	0.0	7.5		0.0	0.0	17.1		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		9.7	
HCM 6th LOS		A	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	7	1050	18	14	1579
Future Volume (vph)	12	7	1050	18	14	1579
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	7	1050	18	14	1579
Future Vol, veh/h	12	7	1050	18	14	1579
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	8	1129	19	15	1698

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2008	565	0	0	1148	0
Stage 1	1129	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	53	473	-	-	616	-
Stage 1	275	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	473	-	-	616	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	362	-	-	-	-	-

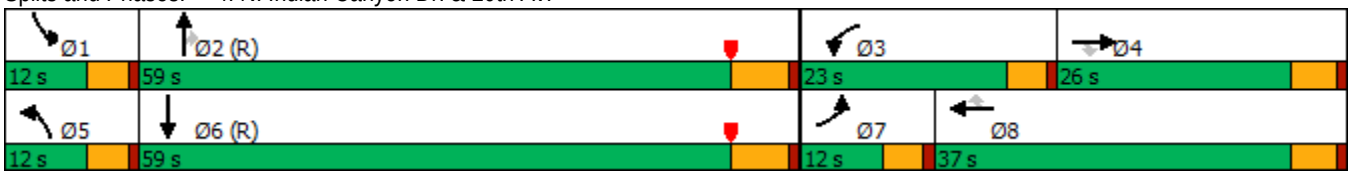
Approach	WB	NB	SB
HCM Control Delay, s	23.2	0	0.1
HCM LOS	C		

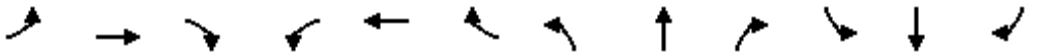
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	218	616	-
HCM Lane V/C Ratio	-	-	0.094	0.024	-
HCM Control Delay (s)	-	-	23.2	11	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	3	55	286	41	465	41	580	142	40	1502	12
Future Volume (vph)	41	3	55	286	41	465	41	580	142	40	1502	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)						46%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	12.0	26.0	26.0	23.0	37.0	37.0	12.0	59.0	59.0	12.0	59.0	
Total Split (%)	10.0%	21.7%	21.7%	19.2%	30.8%	30.8%	10.0%	49.2%	49.2%	10.0%	49.2%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	3	55	286	41	465	41	580	142	40	1502	12
Future Volume (veh/h)	41	3	55	286	41	465	41	580	142	40	1502	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	3	57	298	0	513	43	604	148	42	1565	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	236	197	362	0	601	57	2070	923	57	3043	23
Arrive On Green	0.03	0.12	0.12	0.10	0.00	0.19	0.03	0.57	0.57	0.03	0.57	0.57
Sat Flow, veh/h	1810	1900	1585	3619	0	3119	1810	3610	1610	1810	5310	41
Grp Volume(v), veh/h	43	3	57	298	0	513	43	604	148	42	1019	558
Grp Sat Flow(s),veh/h/ln	1810	1900	1585	1810	0	1560	1810	1805	1610	1810	1729	1893
Q Serve(g_s), s	2.8	0.2	3.9	9.7	0.0	19.1	2.8	10.3	5.2	2.8	21.4	21.4
Cycle Q Clear(g_c), s	2.8	0.2	3.9	9.7	0.0	19.1	2.8	10.3	5.2	2.8	21.4	21.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	57	236	197	362	0	601	57	2070	923	57	1982	1085
V/C Ratio(X)	0.75	0.01	0.29	0.82	0.00	0.85	0.75	0.29	0.16	0.74	0.51	0.51
Avail Cap(c_a), veh/h	112	331	276	555	0	829	112	2070	923	112	1982	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.00	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	46.1	47.7	52.9	0.0	46.8	57.6	13.1	12.0	57.6	15.5	15.5
Incr Delay (d2), s/veh	7.1	0.0	0.8	2.3	0.0	4.6	7.1	0.4	0.4	6.8	1.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.1	1.6	4.5	0.0	7.7	1.4	3.8	1.9	1.3	7.7	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	46.1	48.5	55.3	0.0	51.4	64.7	13.5	12.4	64.4	16.5	17.2
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	B
Approach Vol, veh/h		103			811			795			1619	
Approach Delay, s/veh		55.2			52.8			16.0			18.0	
Approach LOS		E			D			B			B	

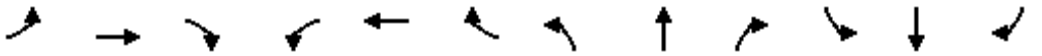
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	75.0	16.6	20.0	8.4	75.0	8.4	28.2
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	7.4	52.8	18.4	20.9	7.4	52.8	7.4	31.9
Max Q Clear Time (g_c+I1), s	4.8	12.3	11.7	5.9	4.8	23.4	4.8	21.1
Green Ext Time (p_c), s	0.0	6.6	0.3	0.1	0.0	16.2	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	764	96	0	1709	135
Future Volume (vph)	0	0	0	0	0	0	0	764	96	0	1709	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

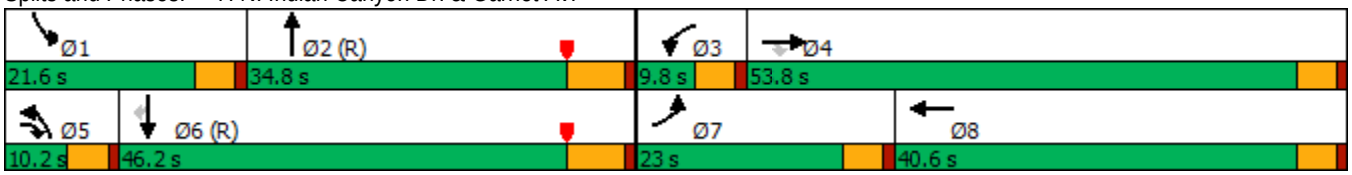
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	859	302	0	1709
Future Volume (vph)	0	0	859	302	0	1709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

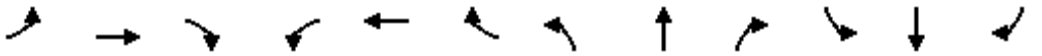
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	453	27	325	14	6	7	18	537	19	128	984	480
Future Volume (vph)	453	27	325	14	6	7	18	537	19	128	984	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	23.0	53.8	10.2	9.8	40.6		10.2	34.8		21.6	46.2	46.2
Total Split (%)	19.2%	44.8%	8.5%	8.2%	33.8%		8.5%	29.0%		18.0%	38.5%	38.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	453	27	325	14	6	7	18	537	19	128	984	480
Future Volume (veh/h)	453	27	325	14	6	7	18	537	19	128	984	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	492	29	353	15	7	8	20	584	21	139	1070	522
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	538	456	414	30	82	94	37	2493	89	166	2009	896
Arrive On Green	0.15	0.24	0.24	0.02	0.10	0.10	0.02	0.48	0.48	0.09	0.56	0.56
Sat Flow, veh/h	3510	1900	1588	1810	800	914	1810	5140	184	1810	3610	1609
Grp Volume(v), veh/h	492	29	353	15	0	15	20	392	213	139	1070	522
Grp Sat Flow(s),veh/h/ln	1755	1900	1588	1810	0	1714	1810	1729	1866	1810	1805	1609
Q Serve(g_s), s	16.6	1.4	25.4	1.0	0.0	1.0	1.3	7.9	8.0	9.1	22.4	25.5
Cycle Q Clear(g_c), s	16.6	1.4	25.4	1.0	0.0	1.0	1.3	7.9	8.0	9.1	22.4	25.5
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	538	456	414	30	0	177	37	1677	905	166	2009	896
V/C Ratio(X)	0.91	0.06	0.85	0.51	0.00	0.08	0.55	0.23	0.24	0.84	0.53	0.58
Avail Cap(c_a), veh/h	538	779	684	78	0	514	84	1677	905	256	2009	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	35.2	42.2	58.5	0.0	48.7	58.2	18.0	18.0	53.6	16.8	17.5
Incr Delay (d2), s/veh	12.8	0.0	3.3	4.9	0.0	0.2	4.6	0.3	0.6	7.8	1.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.7	10.4	0.5	0.0	0.4	0.6	3.0	3.3	4.3	8.5	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	35.2	45.5	63.4	0.0	48.9	62.8	18.3	18.6	61.4	17.8	20.2
LnGrp LOS	E	D	D	E	A	D	E	B	B	E	B	C
Approach Vol, veh/h		874			30			625			1731	
Approach Delay, s/veh		54.9			56.2			19.8			22.0	
Approach LOS		D			E			B			C	

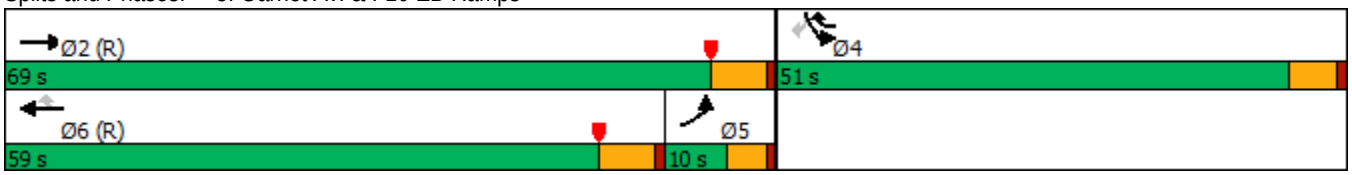
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	64.4	6.6	33.4	7.0	73.0	23.0	17.0
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	17.0	28.6	5.2	49.2	5.6	40.0	18.4	36.0
Max Q Clear Time (g_c+I1), s	11.1	10.0	3.0	27.4	3.3	27.5	18.6	3.0
Green Ext Time (p_c), s	0.1	4.4	0.0	1.4	0.0	8.6	0.0	0.0

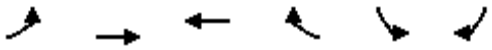
Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	36	44	488	748	12
Future Volume (vph)	8	36	44	488	748	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	10.0	69.0	59.0	51.0	51.0	51.0
Total Split (%)	8.3%	57.5%	49.2%	42.5%	42.5%	42.5%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	36	44	488	748	12
Future Volume (veh/h)	8	36	44	488	748	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	51	63	697	1069	17
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	375	1073	585	1045	1197	549
Arrive On Green	0.21	0.56	0.31	0.31	0.34	0.34
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	11	51	63	697	1069	17
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	0.6	1.4	2.8	32.2	34.6	0.8
Cycle Q Clear(g_c), s	0.6	1.4	2.8	32.2	34.6	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	375	1073	585	1045	1197	549
V/C Ratio(X)	0.03	0.05	0.11	0.67	0.89	0.03
Avail Cap(c_a), veh/h	375	1073	839	1260	1337	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	38.0	11.7	29.7	13.1	37.5	26.3
Incr Delay (d2), s/veh	0.0	0.1	0.3	3.0	7.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	1.4	22.2	15.4	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.0	11.8	30.1	16.1	45.2	26.4
LnGrp LOS	D	B	C	B	D	C
Approach Vol, veh/h		62	760		1086	
Approach Delay, s/veh		16.4	17.2		45.0	
Approach LOS		B	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.8		46.2	30.8	42.9
Change Period (Y+Rc), s		6.0		5.3	6.0	* 6
Max Green Setting (Gmax), s		63.0		45.7	5.5	* 53
Max Q Clear Time (g_c+I1), s		3.4		36.6	2.6	34.2
Green Ext Time (p_c), s		0.3		4.3	0.0	2.8

Intersection Summary		
HCM 6th Ctrl Delay	33.0	
HCM 6th LOS	C	

Notes

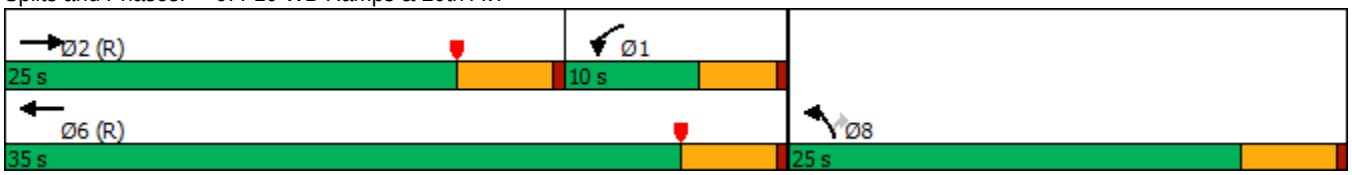
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	177	2	56	89	738	80
Future Volume (vph)	177	2	56	89	738	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	35.0	10.0	10.0
Total Split (s)	25.0		10.0	35.0	25.0	25.0
Total Split (%)	41.7%		16.7%	58.3%	41.7%	41.7%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 9: I-10 WB Ramps & 20th Av.



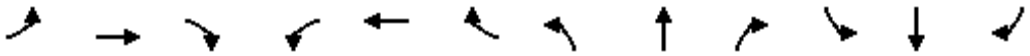
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	177	2	56	89	738	80
Future Volume (veh/h)	177	2	56	89	738	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	221	2	70	111	922	100
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	376	3	451	1911	1090	500
Arrive On Green	0.07	0.07	0.25	0.53	0.31	0.31
Sat Flow, veh/h	1880	17	1810	3705	3510	1610
Grp Volume(v), veh/h	0	223	70	111	922	100
Grp Sat Flow(s),veh/h/ln	0	1897	1810	1805	1755	1610
Q Serve(g_s), s	0.0	6.9	1.8	0.9	14.7	2.7
Cycle Q Clear(g_c), s	0.0	6.9	1.8	0.9	14.7	2.7
Prop In Lane		0.01	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	379	451	1911	1090	500
V/C Ratio(X)	0.00	0.59	0.16	0.06	0.85	0.20
Avail Cap(c_a), veh/h	0	639	451	1911	1182	542
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.6	17.6	6.9	19.3	15.2
Incr Delay (d2), s/veh	0.0	6.5	0.1	0.1	5.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.7	0.3	5.8	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	32.1	17.6	6.9	25.2	15.5
LnGrp LOS	A	C	B	A	C	B
Approach Vol, veh/h	223			181	1022	
Approach Delay, s/veh	32.1			11.1	24.2	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	19.8	16.8				36.6	23.4
Change Period (Y+Rc), s	4.8	* 4.8				4.8	4.8
Max Green Setting (Gmax), s	6.0	* 20				30.2	20.2
Max Q Clear Time (g_c+I1), s	3.8	8.9				2.9	16.7
Green Ext Time (p_c), s	0.0	0.6				0.5	1.9

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	1	14	17	28	1	0	3	2	0	0
Future Volume (vph)	0	9	1	14	17	28	1	0	3	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		800	0		50	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			1342			570			295	
Travel Time (s)		8.8			30.5			13.0			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↰	↱		↰	↱		↕	
Traffic Vol, veh/h	0	9	1	14	17	28	1	0	3	2	0	0
Future Vol, veh/h	0	9	1	14	17	28	1	0	3	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	800	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	10	1	16	19	31	1	0	3	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	11	0	0	78	93	11	63	62	19
Stage 1	-	-	-	-	-	-	11	11	-	51	51	-
Stage 2	-	-	-	-	-	-	67	82	-	12	11	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1570	-	-	1621	-	-	916	801	1076	936	833	1065
Stage 1	-	-	-	-	-	-	1015	890	-	967	856	-
Stage 2	-	-	-	-	-	-	948	831	-	1014	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1621	-	-	909	793	1076	926	825	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	909	793	-	926	825	-
Stage 1	-	-	-	-	-	-	1015	890	-	967	847	-
Stage 2	-	-	-	-	-	-	939	823	-	1011	890	-

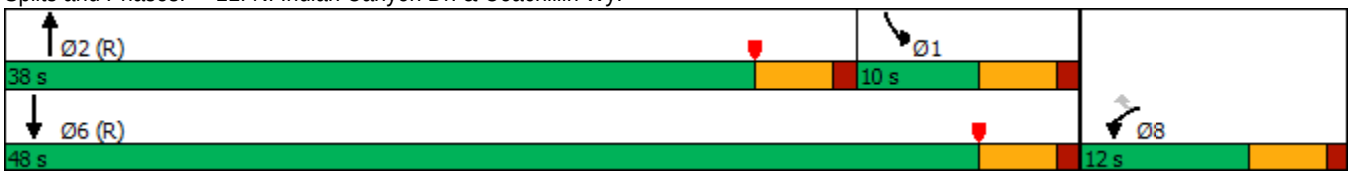
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.7	8.5	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	909	1076	1570	-	-	1621	-	-	926
HCM Lane V/C Ratio	0.001	0.003	-	-	-	0.01	-	-	0.002
HCM Control Delay (s)	9	8.4	0	-	-	7.2	0	-	8.9
HCM Lane LOS	A	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	68	3	623	168	17	1570
Future Volume (vph)	68	3	623	168	17	1570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		187			361
Travel Time (s)	12.8		4.3			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		10.0	22.5
Total Split (s)	12.0	12.0	38.0		10.0	48.0
Total Split (%)	20.0%	20.0%	63.3%		16.7%	80.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

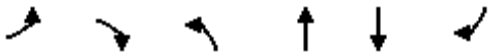
Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	68	3	623	168	17	1570
Future Volume (veh/h)	68	3	623	168	17	1570
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	74	3	677	183	18	1707
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	109	97	2276	606	283	2851
Arrive On Green	0.06	0.06	0.56	0.56	0.16	0.79
Sat Flow, veh/h	1810	1610	4248	1086	1810	3705
Grp Volume(v), veh/h	74	3	573	287	18	1707
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1705	1810	1805
Q Serve(g_s), s	2.4	0.1	5.3	5.4	0.5	11.3
Cycle Q Clear(g_c), s	2.4	0.1	5.3	5.4	0.5	11.3
Prop In Lane	1.00	1.00		0.64	1.00	
Lane Grp Cap(c), veh/h	109	97	1931	952	283	2851
V/C Ratio(X)	0.68	0.03	0.30	0.30	0.06	0.60
Avail Cap(c_a), veh/h	226	201	1931	952	283	2851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	26.5	7.0	7.0	21.6	2.5
Incr Delay (d2), s/veh	7.2	0.1	0.4	0.8	0.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.6	1.8	0.2	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.8	26.7	7.4	7.9	21.7	3.5
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	77		860			1725
Approach Delay, s/veh	34.5		7.6			3.6
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.9	38.0			51.9	8.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	33.5			43.5	7.5
Max Q Clear Time (g_c+I1), s	2.5	7.4			13.3	4.4
Green Ext Time (p_c), s	0.0	6.4			17.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	0	791	1630	7
Future Volume (vph)	0	6	0	791	1630	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	384			475	187	
Travel Time (s)	8.7			10.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

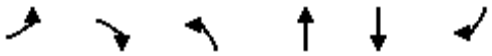
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	791	1630	7
Future Vol, veh/h	0	6	0	791	1630	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	0	860	1772	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	890	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	290	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	290	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	290	-	-
HCM Lane V/C Ratio	-	0.022	-	-
HCM Control Delay (s)	-	17.7	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	7	41	828	1628	9
Future Volume (vph)	5	7	41	828	1628	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		60			
Link Speed (mph)	30			30	30	
Link Distance (ft)	377			384	475	
Travel Time (s)	8.6			8.7	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

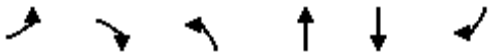
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	7	41	828	1628	9
Future Vol, veh/h	5	7	41	828	1628	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	8	45	900	1770	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2225	890	1780	0	-	0
Stage 1	1775	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Critical Hdwy	6.25	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	52	290	354	-	-	-
Stage 1	122	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	45	290	354	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	107	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30.7	0.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	354	-	153	-	-
HCM Lane V/C Ratio	0.126	-	0.085	-	-
HCM Control Delay (s)	16.6	-	30.7	-	-
HCM Lane LOS	C	-	D	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	8	0	869	1630	4
Future Volume (vph)	0	8	0	869	1630	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			285	384	
Travel Time (s)	8.5			6.5	8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	869	1630	4
Future Vol, veh/h	0	8	0	869	1630	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	9	0	945	1772	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	888	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	291	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	291	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.8	0	0
HCM LOS	C		

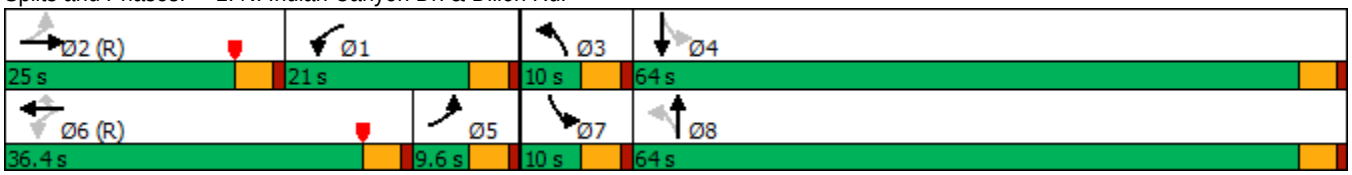
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	291	-	-
HCM Lane V/C Ratio	-	0.03	-	-
HCM Control Delay (s)	-	17.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

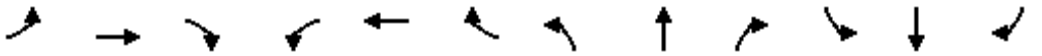
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	105	52	277	146	59	61	1008	390	49	524	22
Future Volume (vph)	24	105	52	277	146	59	61	1008	390	49	524	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	95		95	100		0	115		115
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	80			60			60			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		572			610			2679			486	
Travel Time (s)		8.7			9.2			33.2			6.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	9.6	25.0		21.0	36.4	36.4	10.0	64.0		10.0	64.0	
Total Split (%)	8.0%	20.8%		17.5%	30.3%	30.3%	8.3%	53.3%		8.3%	53.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max		None	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: N. Indian Canyon Dr. & Dillon Rd.

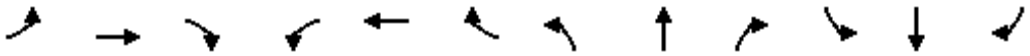




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	105	52	277	146	59	61	1008	390	49	524	22
Future Volume (veh/h)	24	105	52	277	146	59	61	1008	390	49	524	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	115	57	304	160	65	67	1108	429	54	576	24
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	313	408	191	460	960	428	458	1276	483	157	1751	73
Arrive On Green	0.05	0.17	0.17	0.15	0.27	0.27	0.04	0.50	0.50	0.03	0.50	0.50
Sat Flow, veh/h	1810	2386	1118	1810	3610	1610	1810	2561	970	1810	3532	147
Grp Volume(v), veh/h	26	85	87	304	160	65	67	774	763	54	294	306
Grp Sat Flow(s),veh/h/ln	1810	1805	1699	1810	1805	1610	1810	1805	1725	1810	1805	1874
Q Serve(g_s), s	0.0	4.9	5.3	5.1	4.1	3.2	2.2	45.2	47.8	1.7	11.8	11.8
Cycle Q Clear(g_c), s	0.0	4.9	5.3	5.1	4.1	3.2	2.2	45.2	47.8	1.7	11.8	11.8
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.56	1.00		0.08
Lane Grp Cap(c), veh/h	313	308	290	460	960	428	458	899	860	157	895	929
V/C Ratio(X)	0.08	0.28	0.30	0.66	0.17	0.15	0.15	0.86	0.89	0.34	0.33	0.33
Avail Cap(c_a), veh/h	313	308	290	460	960	428	474	899	860	177	895	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	43.3	43.5	41.4	33.8	24.4	14.2	26.4	27.1	24.8	18.2	18.2
Incr Delay (d2), s/veh	0.1	2.2	2.6	3.5	0.4	0.8	0.1	10.6	13.1	1.3	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.3	2.4	8.2	1.8	1.5	0.8	19.9	20.6	0.7	4.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	45.5	46.1	44.9	34.2	25.1	14.4	37.0	40.2	26.1	19.2	19.2
LnGrp LOS	D	D	D	D	C	C	B	D	D	C	B	B
Approach Vol, veh/h		198			529			1604			654	
Approach Delay, s/veh		45.1			39.2			37.6			19.8	
Approach LOS		D			D			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	25.0	9.0	64.0	10.6	36.4	8.7	64.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	16.5	20.5	5.5	59.5	5.1	31.9	5.5	59.5
Max Q Clear Time (g_c+I1), s	7.1	7.3	4.2	13.8	2.0	6.1	3.7	49.8
Green Ext Time (p_c), s	0.6	0.6	0.0	3.2	0.0	1.1	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1	14	150	3	55	18	1591	32	14	1187	7
Future Volume (vph)	20	1	14	150	3	55	18	1591	32	14	1187	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	210		145	225		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			60			120			60		
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	667.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	1	14	150	3	55	18	1591	32	14	1187	7
Future Vol, veh/h	20	1	14	150	3	55	18	1591	32	14	1187	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	210	-	145	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	1	16	167	3	61	20	1768	36	16	1319	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2281	3199	664	2500	3167	884	1327	0	0	1804	0	0
Stage 1	1355	1355	-	1808	1808	-	-	-	-	-	-	-
Stage 2	926	1844	-	692	1359	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.9	8.1	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	4	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	23	5	*623	*~ 11	5	292	878	-	-	346	-	-
Stage 1	440	456	-	*~ 80	132	-	-	-	-	-	-	-
Stage 2	271	127	-	*514	453	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	~ 8	4	*623	*~ 8	5	292	878	-	-	346	-	-
Mov Cap-2 Maneuver	~ 8	4	-	*~ 8	5	-	-	-	-	-	-	-
Stage 1	430	435	-	*~ 78	129	-	-	-	-	-	-	-
Stage 2	204	124	-	*477	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	$ 1487.3	$ 9668.2	0.1	0.2
HCM LOS	F	F		

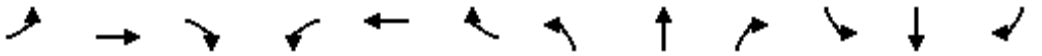
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	878	-	-	13	11	346	-	-
HCM Lane V/C Ratio	0.023	-	-	2.991	21.01	0.045	-	-
HCM Control Delay (s)	9.2	-	-	$ 1487.3	$ 9668.2	15.9	-	-
HCM Lane LOS	A	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.8	30.4	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1	14	150	3	55	18	1591	32	14	1187	7
Future Volume (vph)	20	1	14	150	3	55	18	1591	32	14	1187	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		50	210		145	225		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	60			60			120			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1342			707			494			285	
Travel Time (s)		36.6			19.3			6.1			3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	
Total Split (s)	29.3	29.3		29.3	29.3		10.0	80.7	80.7	10.0	80.7	
Total Split (%)	24.4%	24.4%		24.4%	24.4%		8.3%	67.3%	67.3%	8.3%	67.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: N. Indian Canyon Dr. & 19th Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1	14	150	3	55	18	1591	32	14	1187	7
Future Volume (veh/h)	20	1	14	150	3	55	18	1591	32	14	1187	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	22	1	16	167	3	61	20	1768	36	16	1319	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	210	14	222	253	11	224	37	2618	1168	31	2656	16
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.02	0.73	0.73	0.02	0.72	0.72
Sat Flow, veh/h	1359	96	1529	1418	76	1546	1810	3610	1610	1810	3679	22
Grp Volume(v), veh/h	22	0	17	167	0	64	20	1768	36	16	647	680
Grp Sat Flow(s),veh/h/ln	1359	0	1625	1418	0	1622	1810	1805	1610	1810	1805	1896
Q Serve(g_s), s	1.8	0.0	1.1	13.8	0.0	4.2	1.3	31.7	0.8	1.1	18.6	18.6
Cycle Q Clear(g_c), s	6.0	0.0	1.1	14.9	0.0	4.2	1.3	31.7	0.8	1.1	18.6	18.6
Prop In Lane	1.00		0.94	1.00		0.95	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	210	0	236	253	0	235	37	2618	1168	31	1303	1369
V/C Ratio(X)	0.10	0.00	0.07	0.66	0.00	0.27	0.55	0.68	0.03	0.51	0.50	0.50
Avail Cap(c_a), veh/h	293	0	336	340	0	335	83	2618	1168	83	1303	1369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	0.0	44.3	50.8	0.0	45.6	58.2	8.9	4.6	58.5	7.2	7.2
Incr Delay (d2), s/veh	0.2	0.0	0.1	2.9	0.0	0.6	12.0	1.4	0.0	12.5	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.5	5.2	0.0	1.8	0.7	9.4	0.2	0.6	5.8	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	0.0	44.4	53.7	0.0	46.3	70.2	10.3	4.7	70.9	8.6	8.5
LnGrp LOS	D	A	D	D	A	D	E	B	A	E	A	A
Approach Vol, veh/h		39			231			1824			1343	
Approach Delay, s/veh		46.7			51.6			10.8			9.3	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	91.5		21.9	6.9	91.1		21.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	76.2		24.8	5.5	76.2		24.8				
Max Q Clear Time (g_c+I1), s	3.1	33.7		8.0	3.3	20.6		16.9				
Green Ext Time (p_c), s	0.0	18.4		0.1	0.0	10.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		13.4	
HCM 6th LOS		B	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	15	1625	14	6	1345
Future Volume (vph)	10	15	1625	14	6	1345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	40	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				30	
Link Speed (mph)	30		55			55
Link Distance (ft)	348		338			494
Travel Time (s)	7.9		4.2			6.1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	15	1625	14	6	1345
Future Vol, veh/h	10	15	1625	14	6	1345
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	50	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	16	1747	15	6	1446

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2482	874	0	0	1762	0
Stage 1	1747	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	25	297	-	-	359	-
Stage 1	128	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	25	297	-	-	359	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	433	-	-	-	-	-

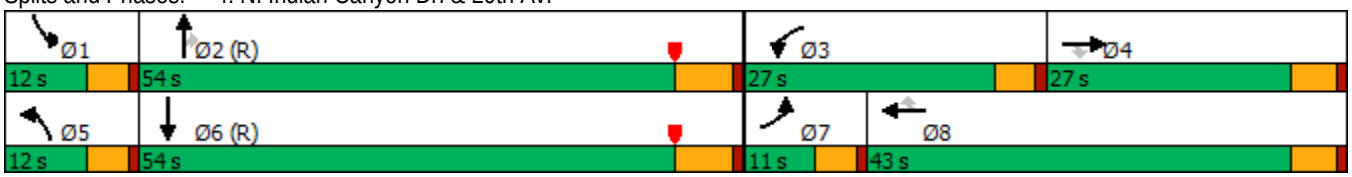
Approach	WB	NB	SB
HCM Control Delay, s	31.2	0	0.1
HCM LOS	D		

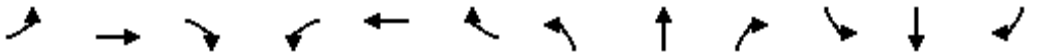
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	164	359	-
HCM Lane V/C Ratio	-	-	0.164	0.018	-
HCM Control Delay (s)	-	-	31.2	15.2	-
HCM Lane LOS	-	-	D	C	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	6	93	379	33	690	37	876	147	42	1251	23
Future Volume (vph)	24	6	93	379	33	690	37	876	147	42	1251	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	180		0	155		0	150		0
Storage Lanes	1		1	2		1	1		1	1		0
Taper Length (ft)	50			80			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		758			612			306			290	
Travel Time (s)		14.8			11.9			3.8			3.6	
Confl. Peds. (#/hr)						3						2
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						48%						
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	15.1	15.1	9.6	35.1	35.1	9.6	16.2	16.2	9.6	35.2	
Total Split (s)	11.0	27.0	27.0	27.0	43.0	43.0	12.0	54.0	54.0	12.0	54.0	
Total Split (%)	9.2%	22.5%	22.5%	22.5%	35.8%	35.8%	10.0%	45.0%	45.0%	10.0%	45.0%	
Yellow Time (s)	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2	5.2	3.6	5.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2	6.2	4.6	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: N. Indian Canyon Dr. & 20th Av.





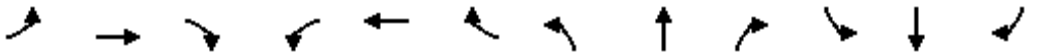
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	6	93	379	33	690	37	876	147	42	1251	23
Future Volume (veh/h)	24	6	93	379	33	690	37	876	147	42	1251	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	6	98	399	0	749	39	922	155	44	1317	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	43	306	255	466	0	833	55	1832	817	58	2671	49
Arrive On Green	0.02	0.16	0.16	0.13	0.00	0.27	0.03	0.46	0.46	0.03	0.46	0.46
Sat Flow, veh/h	1810	1900	1586	3619	0	3129	1810	3610	1610	1810	5245	96
Grp Volume(v), veh/h	25	6	98	399	0	749	39	922	155	44	868	473
Grp Sat Flow(s),veh/h/ln	1810	1900	1586	1810	0	1565	1810	1805	1610	1810	1729	1883
Q Serve(g_s), s	1.6	0.3	6.6	13.0	0.0	27.7	2.6	21.6	6.9	2.9	21.1	21.1
Cycle Q Clear(g_c), s	1.6	0.3	6.6	13.0	0.0	27.7	2.6	21.6	6.9	2.9	21.1	21.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	43	306	255	466	0	833	55	1832	817	58	1761	959
V/C Ratio(X)	0.59	0.02	0.38	0.86	0.00	0.90	0.71	0.50	0.19	0.76	0.49	0.49
Avail Cap(c_a), veh/h	97	347	290	676	0	988	112	1832	817	112	1761	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.90	0.90	0.90
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.00	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	42.4	45.0	51.2	0.0	42.5	57.8	21.9	17.9	57.8	21.7	21.7
Incr Delay (d2), s/veh	4.7	0.0	0.9	3.6	0.0	7.1	6.2	1.0	0.5	7.3	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.7	6.0	0.0	11.3	1.2	8.9	0.1	1.4	8.3	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	42.4	46.0	54.8	0.0	49.5	64.0	22.9	18.4	65.1	22.7	23.5
LnGrp LOS	E	D	D	D	A	D	E	C	B	E	C	C
Approach Vol, veh/h		129			1148			1116			1385	
Approach Delay, s/veh		49.1			51.4			23.7			24.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	67.1	20.1	24.4	8.2	67.3	7.4	37.0
Change Period (Y+Rc), s	4.6	6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	7.4	47.8	22.4	21.9	7.4	47.8	6.4	37.9
Max Q Clear Time (g_c+I1), s	4.9	23.6	15.0	8.6	4.6	23.1	3.6	29.7
Green Ext Time (p_c), s	0.0	9.3	0.5	0.2	0.0	12.2	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	1062	191	0	1407	316
Future Volume (vph)	0	0	0	0	0	0	0	1062	191	0	1407	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		60	0		90
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			25			55			55	
Link Distance (ft)		818			542			828			306	
Travel Time (s)		12.4			14.8			10.3			3.8	
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑↑	↱		↑↑↑
Traffic Volume (vph)	0	0	1253	331	0	1407
Future Volume (vph)	0	0	1253	331	0	1407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	45		55			55
Link Distance (ft)	504		376			828
Travel Time (s)	7.6		4.7			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free		Free			Free

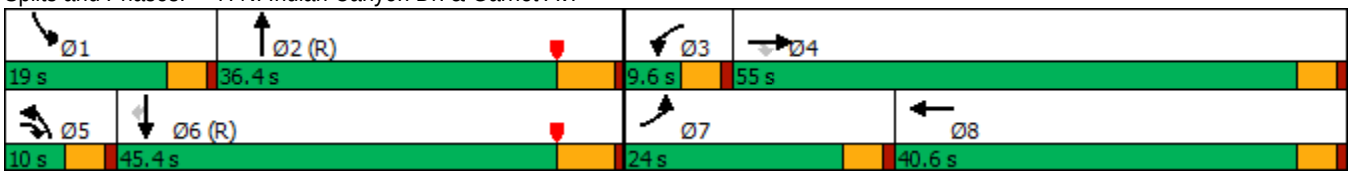
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

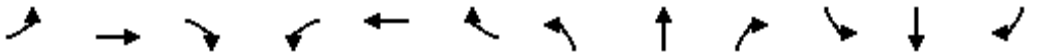
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	420	19	61	4	3	7	35	980	12	136	588	649
Future Volume (vph)	420	19	61	4	3	7	35	980	12	136	588	649
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	75		0	130		0	220		0
Storage Lanes	2		1	1		0	1		0	1		1
Taper Length (ft)	95			90			70			75		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1245			529			380			376	
Travel Time (s)		34.0			14.4			4.7			4.7	
Confl. Peds. (#/hr)						2			2			1
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	9.6	9.6	40.6		9.6	32.2		9.6	32.2	32.2
Total Split (s)	24.0	55.0	10.0	9.6	40.6		10.0	36.4		19.0	45.4	45.4
Total Split (%)	20.0%	45.8%	8.3%	8.0%	33.8%		8.3%	30.3%		15.8%	37.8%	37.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6		3.6	5.2		3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	6.2		4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 7: N. Indian Canyon Dr. & Garnet Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	19	61	4	3	7	35	980	12	136	588	649
Future Volume (veh/h)	420	19	61	4	3	7	35	980	12	136	588	649
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	447	20	65	4	3	7	37	1043	13	145	626	690
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	505	430	407	9	44	102	53	2675	33	172	2066	921
Arrive On Green	0.14	0.23	0.23	0.01	0.09	0.09	0.03	0.51	0.51	0.10	0.57	0.57
Sat Flow, veh/h	3510	1900	1588	1810	498	1163	1810	5280	66	1810	3610	1609
Grp Volume(v), veh/h	447	20	65	4	0	10	37	683	373	145	626	690
Grp Sat Flow(s),veh/h/ln	1755	1900	1588	1810	0	1661	1810	1729	1888	1810	1805	1609
Q Serve(g_s), s	15.0	1.0	3.8	0.3	0.0	0.7	2.4	14.6	14.6	9.5	10.8	38.5
Cycle Q Clear(g_c), s	15.0	1.0	3.8	0.3	0.0	0.7	2.4	14.6	14.6	9.5	10.8	38.5
Prop In Lane	1.00		1.00	1.00		0.70	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	505	430	407	9	0	146	53	1752	957	172	2066	921
V/C Ratio(X)	0.88	0.05	0.16	0.43	0.00	0.07	0.69	0.39	0.39	0.84	0.30	0.75
Avail Cap(c_a), veh/h	568	798	714	75	0	498	81	1752	957	217	2066	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	36.3	34.6	59.5	0.0	50.3	57.7	18.2	18.2	53.4	13.3	19.2
Incr Delay (d2), s/veh	11.2	0.0	0.1	10.9	0.0	0.2	5.8	0.7	1.2	17.5	0.4	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.5	1.5	0.2	0.0	0.3	1.2	5.4	6.1	5.0	4.0	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	36.3	34.8	70.4	0.0	50.4	63.5	18.8	19.4	70.9	13.7	24.8
LnGrp LOS	E	D	C	E	A	D	E	B	B	E	B	C
Approach Vol, veh/h		532			14			1093			1461	
Approach Delay, s/veh		57.4			56.1			20.5			24.6	
Approach LOS		E			E			C			C	

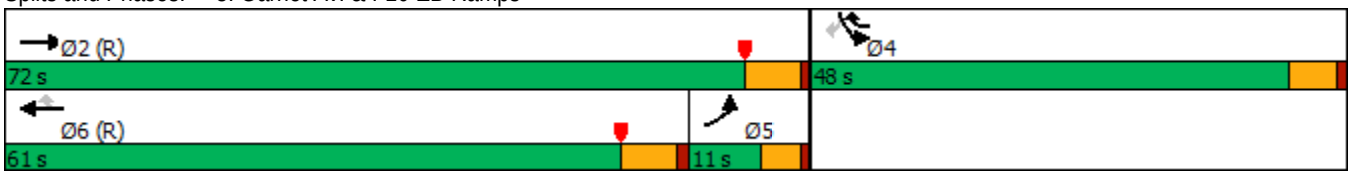
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	67.0	5.2	31.8	8.1	74.9	21.9	15.1
Change Period (Y+Rc), s	4.6	6.2	4.6	4.6	4.6	6.2	4.6	4.6
Max Green Setting (Gmax), s	14.4	30.2	5.0	50.4	5.4	39.2	19.4	36.0
Max Q Clear Time (g_c+I1), s	11.5	16.6	2.3	5.8	4.4	40.5	17.0	2.7
Green Ext Time (p_c), s	0.0	6.7	0.0	0.3	0.0	0.0	0.3	0.0

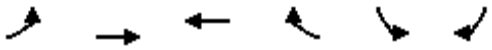
Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	54	63	631	416	11
Future Volume (vph)	22	54	63	631	416	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	250	40
Storage Lanes	1			1	1	1
Taper Length (ft)	55				120	
Right Turn on Red				Yes		Yes
Link Speed (mph)		25	25		45	
Link Distance (ft)		693	1245		298	
Travel Time (s)		18.9	34.0		4.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	4	4	
Permitted Phases				6		4
Detector Phase	5	2	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	16.0	5.0	5.0	5.0
Minimum Split (s)	10.0	16.0	59.0	10.3	10.3	10.3
Total Split (s)	11.0	72.0	61.0	48.0	48.0	48.0
Total Split (%)	9.2%	60.0%	50.8%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	5.0	5.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.3	5.3	5.3
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Garnet Av. & I-10 EB Ramps





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	54	63	631	416	11
Future Volume (veh/h)	22	54	63	631	416	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	62	72	725	478	13
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	561	1397	713	879	598	274
Arrive On Green	0.31	0.74	0.12	0.12	0.17	0.17
Sat Flow, veh/h	1810	1900	1900	1610	3510	1610
Grp Volume(v), veh/h	25	62	72	725	478	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1755	1610
Q Serve(g_s), s	1.2	1.1	4.0	40.4	15.7	0.8
Cycle Q Clear(g_c), s	1.2	1.1	4.0	40.4	15.7	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	561	1397	713	879	598	274
V/C Ratio(X)	0.04	0.04	0.10	0.83	0.80	0.05
Avail Cap(c_a), veh/h	561	1397	871	1012	1249	573
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.82	0.82	1.00	1.00
Uniform Delay (d), s/veh	28.9	4.3	34.6	30.3	47.8	41.6
Incr Delay (d2), s/veh	0.0	0.1	0.2	7.3	3.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	2.0	25.3	7.0	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.0	4.4	34.8	37.5	51.4	41.7
LnGrp LOS	C	A	C	D	D	D
Approach Vol, veh/h		87	797		491	
Approach Delay, s/veh		11.5	37.3		51.1	
Approach LOS		B	D		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.3		25.7	43.2	51.0
Change Period (Y+Rc), s		6.0		5.3	6.0	* 6
Max Green Setting (Gmax), s		66.0		42.7	6.5	* 55
Max Q Clear Time (g_c+I1), s		3.1		17.7	3.2	42.4
Green Ext Time (p_c), s		0.3		2.7	0.0	2.6

Intersection Summary		
HCM 6th Ctrl Delay	40.6	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	183	1	174	214	889	85
Future Volume (vph)	183	1	174	214	889	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	90		0	40
Storage Lanes		0	1		2	1
Taper Length (ft)			65		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	45	
Link Distance (ft)	612			329	161	
Travel Time (s)	11.9			6.4	2.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		5.0	11.0	5.0	5.0
Minimum Split (s)	16.8		10.0	35.0	10.0	10.0
Total Split (s)	19.0		16.0	35.0	25.0	25.0
Total Split (%)	31.7%		26.7%	58.3%	41.7%	41.7%
Yellow Time (s)	4.3		3.5	4.3	4.3	4.3
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8		4.0	4.8	4.8	4.8
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min		None	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 9: I-10 WB Ramps & 20th Av.

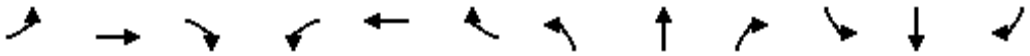
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	183	1	174	214	889	85
Future Volume (veh/h)	183	1	174	214	889	85
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	1	196	240	999	96
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	378	2	428	1865	1135	521
Arrive On Green	0.07	0.07	0.24	0.52	0.32	0.32
Sat Flow, veh/h	1889	9	1810	3705	3510	1610
Grp Volume(v), veh/h	0	207	196	240	999	96
Grp Sat Flow(s),veh/h/ln	0	1898	1810	1805	1755	1610
Q Serve(g_s), s	0.0	6.3	5.6	2.1	16.1	2.6
Cycle Q Clear(g_c), s	0.0	6.3	5.6	2.1	16.1	2.6
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	380	428	1865	1135	521
V/C Ratio(X)	0.00	0.55	0.46	0.13	0.88	0.18
Avail Cap(c_a), veh/h	0	449	428	1865	1182	542
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.4	19.6	7.5	19.2	14.6
Incr Delay (d2), s/veh	0.0	5.5	0.3	0.1	7.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4	2.2	0.7	6.6	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	30.9	19.9	7.7	27.1	14.8
LnGrp LOS	A	C	B	A	C	B
Approach Vol, veh/h	207			436	1095	
Approach Delay, s/veh	30.9			13.2	26.1	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	19.0	16.8				35.8	24.2
Change Period (Y+Rc), s	4.8	* 4.8				4.8	4.8
Max Green Setting (Gmax), s	12.0	* 14				30.2	20.2
Max Q Clear Time (g_c+I1), s	7.6	8.3				4.1	18.1
Green Ext Time (p_c), s	0.1	0.4				1.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	18	1	5	9	13	1	0	12	7	0	0
Future Volume (vph)	0	18	1	5	9	13	1	0	12	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		800	0		50	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			1342			570			295	
Travel Time (s)		8.8			30.5			13.0			6.7	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↰	↗		↰	↗		↕	
Traffic Vol, veh/h	0	18	1	5	9	13	1	0	12	7	0	0
Future Vol, veh/h	0	18	1	5	9	13	1	0	12	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	800	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	26	1	7	13	19	1	0	17	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	27	0	0	64	73	27	62	54	13
Stage 1	-	-	-	-	-	-	27	27	-	27	27	-
Stage 2	-	-	-	-	-	-	37	46	-	35	27	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.6	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	1593	-	-	1600	-	-	910	821	1054	913	841	1073
Stage 1	-	-	-	-	-	-	968	877	-	968	877	-
Stage 2	-	-	-	-	-	-	957	861	-	959	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1593	-	-	1600	-	-	907	818	1054	896	838	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	907	818	-	896	838	-
Stage 1	-	-	-	-	-	-	968	877	-	968	873	-
Stage 2	-	-	-	-	-	-	953	858	-	943	877	-

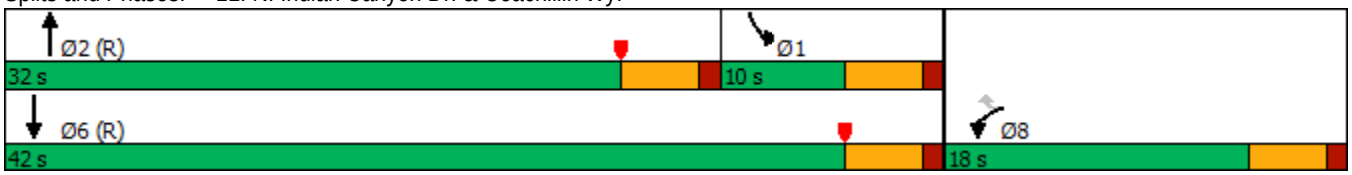
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	8.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	907	1054	1593	-	-	1600	-	-	896
HCM Lane V/C Ratio	0.002	0.016	-	-	-	0.004	-	-	0.011
HCM Control Delay (s)	9	8.5	0	-	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	238	15	1524	95	12	899
Future Volume (vph)	238	15	1524	95	12	899
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	563		187			361
Travel Time (s)	12.8		4.3			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	10.0	22.5		10.0	22.5
Total Split (s)	18.0	18.0	32.0		10.0	42.0
Total Split (%)	30.0%	30.0%	53.3%		16.7%	70.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

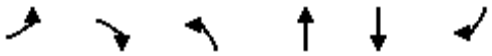
Splits and Phases: 11: N. Indian Canyon Dr. & Coachillin Wy.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	238	15	1524	95	12	899
Future Volume (veh/h)	238	15	1524	95	12	899
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	259	16	1657	103	13	977
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	315	280	2288	142	258	2441
Arrive On Green	0.17	0.17	0.46	0.46	0.14	0.68
Sat Flow, veh/h	1810	1610	5163	310	1810	3705
Grp Volume(v), veh/h	259	16	1147	613	13	977
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1844	1810	1805
Q Serve(g_s), s	8.3	0.5	16.1	16.2	0.4	7.2
Cycle Q Clear(g_c), s	8.3	0.5	16.1	16.2	0.4	7.2
Prop In Lane	1.00	1.00		0.17	1.00	
Lane Grp Cap(c), veh/h	315	280	1585	845	258	2441
V/C Ratio(X)	0.82	0.06	0.72	0.72	0.05	0.40
Avail Cap(c_a), veh/h	407	362	1585	845	258	2441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	20.7	13.2	13.2	22.2	4.3
Incr Delay (d2), s/veh	10.1	0.1	2.9	5.4	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.2	5.9	6.9	0.2	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.0	20.8	16.1	18.6	22.3	4.8
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	275		1760			990
Approach Delay, s/veh	33.3		16.9			5.0
Approach LOS	C		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.1	32.0			45.1	14.9
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	27.5			37.5	13.5
Max Q Clear Time (g_c+I1), s	2.4	18.2			9.2	10.3
Green Ext Time (p_c), s	0.0	7.1			8.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	21	0	1619	1134	4
Future Volume (vph)	0	21	0	1619	1134	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	384			475	187	
Travel Time (s)	8.7			10.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

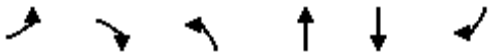
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	0	1619	1134	4
Future Vol, veh/h	0	21	0	1619	1134	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	23	0	1760	1233	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	619	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	436	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	436	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	436	-	-
HCM Lane V/C Ratio	-	0.052	-	-
HCM Control Delay (s)	-	13.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	31	21	1644	1151	5
Future Volume (vph)	23	31	21	1644	1151	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		60			
Link Speed (mph)	30			30	30	
Link Distance (ft)	377			384	475	
Travel Time (s)	8.6			8.7	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

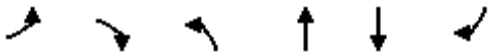
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	31	21	1644	1151	5
Future Vol, veh/h	23	31	21	1644	1151	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	34	23	1787	1251	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2015	628	1256	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Critical Hdwy	6.25	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	70	431	561	-	-	-
Stage 1	231	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	67	431	561	-	-	-
Mov Cap-2 Maneuver	158	-	-	-	-	-
Stage 1	222	-	-	-	-	-
Stage 2	398	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	561	-	248	-	-
HCM Lane V/C Ratio	0.041	-	0.237	-	-
HCM Control Delay (s)	11.7	-	24	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	29	0	1665	1179	2
Future Volume (vph)	0	29	0	1665	1179	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			285	384	
Travel Time (s)	8.5			6.5	8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	29	0	1665	1179	2
Future Vol, veh/h	0	29	0	1665	1179	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	32	0	1810	1282	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	642	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	422	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	422	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	422	-	-
HCM Lane V/C Ratio	-	0.075	-	-
HCM Control Delay (s)	-	14.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Intersection: 10: Newhall St./Dwy. 4 & 19th Av.

Movement	NB	NB
Directions Served	LT	R
Maximum Queue (ft)	6	6
Average Queue (ft)	1	1
95th Queue (ft)	11	11
Link Distance (ft)	536	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: N. Indian Canyon Dr. & Dwy. 1

Movement	EB	NB	SB
Directions Served	R	T	T
Maximum Queue (ft)	24	12	9
Average Queue (ft)	7	2	2
95th Queue (ft)	28	17	17
Link Distance (ft)	338	413	125
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: N. Indian Canyon Dr. & Dwy. 2

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	28	48
Average Queue (ft)	11	27
95th Queue (ft)	36	56
Link Distance (ft)	331	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		2
Queuing Penalty (veh)		4

Intersection: 14: N. Indian Canyon Dr. & Dwy. 3

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	25	27	51
Average Queue (ft)	9	7	14
95th Queue (ft)	31	32	60
Link Distance (ft)	327	334	334
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Newhall St./Dwy. 4 & 19th Av.

Movement	NB	SB
Directions Served	R	LTR
Maximum Queue (ft)	31	17
Average Queue (ft)	12	7
95th Queue (ft)	37	24
Link Distance (ft)		246
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 12: N. Indian Canyon Dr. & Dwy. 1

Movement	EB	NB	NB	NB
Directions Served	R	T	T	T
Maximum Queue (ft)	35	172	212	141
Average Queue (ft)	14	87	123	30
95th Queue (ft)	41	185	220	123
Link Distance (ft)	338	413	413	413
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: N. Indian Canyon Dr. & Dwy. 2

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	82	29
Average Queue (ft)	42	8
95th Queue (ft)	87	33
Link Distance (ft)	331	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		1

Intersection: 14: N. Indian Canyon Dr. & Dwy. 3

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	40	15	68
Average Queue (ft)	25	2	11
95th Queue (ft)	50	23	55
Link Distance (ft)	327	334	334
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Appendix L.2

VMT Report

January 9, 2023

Mike Rowe
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

SUBJECT: N INDIAN CANYON/19TH AVE WAREHOUSE VMT ANALYSIS

Dear Mike Rowe:

Urban Crossroads, Inc. is pleased to provide the following vehicle miles traveled (VMT) analysis for the N Indian Canyon/19th Ave Warehouse (referred to as "Project"), which is located on the northwest corner of Indian Canyon Drive at 19th Avenue in the City of Palm Springs.

The Project evaluated consists of approximately 739,360 square feet of high-cube warehouse.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**) (1). Based on OPR's Technical Advisory, the City of Palm Springs adopted City of Palm Springs TIA Guidelines (July 2020) (2) (**City Guidelines**), which documents the City's VMT analysis methodology and approved impact thresholds. The VMT analysis presented in this report has been developed based on the adopted City Guidelines.

PROJECT SCREENING

Consistent with City Guidelines, projects that meet certain screening thresholds based on their location and project type may be presumed to result in a less than significant transportation impact. The following screening criteria are described within the City Guidelines:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact.

STEP 1: TPA SCREENING

Consistent with the guidance identified in the City Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary.

However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on the Screening Tool, the Project site is shown not to be located within a TPA.

STEP 2: LOW VMT AREA SCREENING

As noted in the City Guidelines, "Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary." The City-provided low VMT area map has been reviewed and the Project is not found to be in a low VMT area.[3]

Because of the location of the Project, the low VMT Area screening criteria is not met.

STEP3: PROJECT TYPE SCREENING

The City Guidelines identify that local serving uses and local essential services (e.g., local parks, day care centers, public schools, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. The uses that can be presumed to have a less than significant impact generate less than 110 daily vehicle trips, which typically

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").
[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").
[3] City Guidelines; Page 33

include 15,000 square feet of light industrial or 63,000 square feet of warehousing, among other unrelated uses.

The Project as designed includes 739,360 SF of high-cube warehouse uses and does not meet the requirement.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021 (3). As shown in Attachment A, the proposed Project is anticipated to generate 1,574 two-way trips per day, with 89 AM peak hour trips, and 122 PM peak hour trips.

The Project type screening criteria is not met.

A project level VMT analysis has been prepared because the aforementioned screening criteria have not been met.

PROPOSED PROJECT GENERATED VMT

City Guidelines identify RIVTAM or Riverside County Model (RIVCOM), once available, as the appropriate tool for conducting VMT analysis for land use projects in the City of Palm Springs. RIVCOM was released recently in June 2020 and is currently at version 3.5. RIVCOM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment.

The initial step to prepare a project-level VMT analysis is to convert the Project's land use information into socio-economic data (SED) (i.e., employment) to be entered into the travel demand model. Adjustments in SED were made to an isolated TAZ to reflect the Project's proposed land use. Table 1 summarizes the land use and SED estimates for the Project.

TABLE 1: PROPOSED PROJECT EMPLOYMENT ESTIMATE

Land Use Type	Quantity	Density Factor	Project Quantity
High-Cube Warehouse	739,360 SF	1,030 square feet per employee	718

Adjustments to SED to represent the Proposed Project were made for the base year and cumulative models. Proposed Project generated total VMT was then calculated for the base year and cumulative year conditions. Proposed Project generated VMT was calculated using the origin-destination (OD) trip matrices. The VMT value was then normalized by dividing by the Project's service population (SP), which in this case is employment, but also includes population for residential land uses.

Table 2 presents the key inputs for the calculation of project generated VMT per service population, resulting in a Project generated VMT per SP of 59.77 for baseline and 52.24 for cumulative conditions.

TABLE 2: PROPOSED PROJECT VMT PER SERVICE POPULATION

	Baseline	Cumulative
Project generated VMT	42,918	37,511
Service Population	718	718
VMT per Service Population	59.77	52.24

Table 3 illustrates a comparison between the Proposed Project's Baseline VMT per SP to the City's adopted impact threshold (City' General Plan build out VMT per SP[4]). The Proposed Project's baseline and cumulative VMT per Service Population are greater than the City's impact threshold, and a potential Project impact is found for Baseline and Cumulative conditions.

TABLE 3: PROPOSED PROJECT GENERATED VMT PER SP COMPARISON

	Baseline	Cumulative
City VMT per SP Threshold	34.52	34.52
Project VMT per SP	59.77	52.24
Potentially Significant?	Yes	Yes

PROPOSED PROJECT'S CUMULATIVE EFFECTS ON VMT

Consistent with City Guidelines, projects should also assess a project's potential effect on citywide VMT. This analysis is performed using the boundary method, which includes all vehicle trips with one or both trip-ends within a specific geographic area of interest (i.e., the City of Palm Springs). Once the areawide VMT value is calculated, it is then normalized by dividing by the service population (employees and population) in the City (based on the RIVCOM model). Baseline and Cumulative link-level boundary VMT per SP (City) is calculated for both No Project and With Project conditions. If an increase occurs for the With Project condition as compared to Without Project condition, then the impact is considered significant. As shown in Table 4, citywide VMT per SP was not found to increase under cumulative conditions, so no impact is found.

[4] City Guidelines; Page 36

TABLE 4: PROPOSED PROJECT CITYWIDE VMT PER SERVICE POPULATION

	Baseline		Cumulative	
	Without Project	With Project	Without Project	With Project
SP	80,391	81,109	103,771	104,489
VMT	926,023	928,363	1,303,015	1,304,457
VMT per SP	11.52	11.45	12.56	12.48
Change in VMT/SP	-0.07		-0.08	
Potentially Significant?	No		No	

CONCLUSION

The Project was not found to meet any of the City's adopted screening criteria and a project generated VMT analysis was performed. Results from the VMT analysis finds that the Proposed Project experiences a potentially significant VMT impact for project generated VMT per SP as compared to the City's adopted impact threshold.

If you have any questions, please contact Marlie at (714) 585-0574 or John at (949) 375-2435.

Respectfully submitted,

URBAN CROSSROADS, INC.

John Kain

Marlie Whiteman

John Kain, AICP
Principal

Marlie Whiteman, P.E.
Senior Associate

Attachments

TABLE 1: PROJECT TRIP GENERATION SUMMARY - ACTUAL VEHICLES

Project Trip Generation Rates

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	--	739.360 TSF	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4-Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217

Project Trip Generation Results

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4-Axle Trucks			*4*	*1*	*5*	*2*	*6*	*8*	*120*
5+-Axle Trucks			*6*	*2*	*8*	*2*	*5*	*7*	*160*
- Net Truck Trips (Actual Vehicles)			10	3	13	4	11	15	280
TOTAL TRIPS (ACTUAL VEHICLES)[3]			68	21	89	34	88	122	1,574

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] High-Cube Warehouse Subtotal (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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Appendix M

Water Supply Assessment / Water Supply Verification

Water Supply Assessment
and
Water Supply Verification

for the Proposed

Palm Springs Fulfillment Center

Prepared for:

Mission Springs Water District
66575 2nd Street
Desert Hot Springs, CA 92240

Prepared by:

MSA Consulting Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

October 2023

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1 Summary and Requirements

The environmental review of the Palm Springs Fulfillment Center (Project) is being prepared in compliance with the California Environmental Quality Act (CEQA) process. The City of Palm Springs is the Lead Agency for the planning and environmental review of the proposed Project. The City has identified the Mission Springs Water District (MSWD) as the Public Water System (PWS) that will supply water for the proposed Project, and has requested that MSWD assist in preparing a Water Supply Assessment (WSA) as part of the environmental review for the Project.

The Project is located in the western portion of the Coachella Valley within the City of Palm Springs, Riverside County. The Project proposes to develop 39.54 acres of vacant land to include 16.70 acres of industrial building area, 15.39 acres of parking, access roads, and hardscape, approximately 3 acres of right of way dedication, and 4.38 acres of landscaping, open space, and retention areas.

This WSA determined that the total projected water demand for the Project is 118.37 AFY, or 2.99 acre-feet per acre. This WSA demonstrates that sufficient water supplies exist, or will exist based on current water planning assumptions, to meet the projected demands of the Project, in addition to current and future projected water demands within MSWD's service area in normal, single-dry, and multiple-dry years over a 20-year projection. This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. Consistent with the provisions of SB 610, neither this WSA nor its approval shall be construed to create a right or entitlement to water service or any specific level of water service, and shall not impose, expand, or limit any duty concerning the obligation of MSWD to provide certain service to its existing customers or to any future potential customers.

This WSA does not constitute an agreement to provide water service to the Project, and does not entitle the Project, Project Applicant, or any other person or entity to any right, priority or allocation in any supply, capacity, or facility. To receive water service, the Project will be subject to an agreement with MSWD, together with any and all applicable fees, charges, plans and specifications, conditions, and any and all other applicable MSWD requirements in place and as amended from time to time. Nor does anything in this WSA prevent or otherwise interfere with MSWD's discretionary authority to declare a water shortage emergency in accordance with the Water Code.

1.1 Regulatory Requirements

This WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of MSWD, as required by Senate Bill (SB) 610 and SB 1262. This WSA also includes identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified

water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA has been prepared in compliance with the requirements under SB 610 and SB 1262 by MSA Consulting in consultation with MSWD and the City. This WSA does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations, including any landscape ordinance and indoor water use performance standards provided in the California Water Code (CWC). This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify MSWD when construction begins.

1.1.1 Senate Bill 610

On January 1, 2002, Senate Bill 610 (SB 610) was enacted and codified in CWC Section 10910 et seq., requiring the preparation of a Water Supply Assessment (WSA) for certain new development projects. As stated in SB 610, the purpose of a WSA is to determine whether the PWS's "total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the PWS's existing and planned future uses, including agricultural and manufacturing uses."

CWC Section 10912 defines a "project" as any of the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project (about 250 acre-feet per year).

The intent of SB 610 is to improve the link between information on water supply availability and certain land-use decisions made by cities and counties.

1.1.2 Senate Bill 1262

On January 1, 2017, Senate Bill 1262 (SB 1262) was enacted and amended CWC Section 10910, requiring that information regarding the Sustainable Groundwater Management Act (SGMA) be included in a WSA if the water supply for a proposed project includes groundwater from a basin that is not adjudicated and was designated medium- or high-priority by the California Department of Water Resources (DWR).

1.2 Water Management Planning Documents

MSWD prepared long-term planning documents to protect future water use and manage the water supplies within its service area. These planning documents can be used for compliance with SB 610 and SB 1262 and are discussed in further detail in the following sections.

1.2.1 Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMPA) was established by Assembly Bill 797 (AB 797) on September 21, 1983, and passage of this law recognized that water is a limited resource, and that efficient water use, and conservation would be actively pursued throughout the State. The UWMPA requires that municipal water suppliers providing either directly or indirectly to more than 3,000 customers or supplying more the 3,000 acre-feet per year (AFY), prepare and adopt an Urban Water Management Plan (UWMP) every five years which defines their current and future water use, source of supply, source reliability, and existing conservation measures.

1.2.1.1 Coachella Valley Water District Urban Water Management Plan

The six urban water suppliers in the Coachella Valley (MSWD, Coachella Water Authority, Desert Water Agency (DWA), Indio Water Authority (IWA), Coachella Valley Water District (CVWD), and Myoma Dunes Mutual Water Company) collaboratively prepared the 2020 Coachella Valley Regional UWMP, including regional and individual agency content and other necessary elements as set forth in DWR's 2020 UWMP Guidebook. The 2020 Coachella Valley Regional UWMP was submitted to DWR on July 1, 2021.

1.2.2 Sustainable Groundwater Management Act

In September 2014, Governor Brown signed three bills into law: Assembly Bill 1739, Senate Bill 1319, and Senate Bill 1168, which became collectively known as the Sustainable Groundwater Management Act (SGMA), creating a framework for sustainable, local groundwater management for the first time in California history. DWR evaluated and prioritized the 515 groundwater basins identified in Bulletin 118, and 94 of these groundwater basins were designated as high- or medium-priority basins, as of December 2019, requiring them to be sustainably managed within 20 years. SGMA required local authorities to form local Groundwater Sustainability Agencies (GSAs) by June 30, 2017, to evaluate conditions in their local groundwater basins and adopt locally-based Groundwater Sustainability Plans (GSPs), or Alternatives to a GSP (Alternative Plans), tailored to their regional economic and environmental needs.

As defined by DWR, the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. MSWD, CVWD, and DWA are collectively the Mission Creek Subbasin Management Committee (Management Committee) working collaboratively to implement the SGMA in the Mission Creek Subbasin. The Mission Creek Subbasin has been designated medium-priority by DWR and is subject to the requirements of SGMA. The Project is located within the Mission Creek Subbasin, which has been designated as a medium priority groundwater basin by DWR under SGMA.

1.2.2.1 Alternative Plan for the Mission Creek Subbasin

In 2004, MSWD, DWA, and CVWD reached an agreement and created the Management Committee as discussed above. The Management Committee jointly prepared the 2013 Mission Creek-Garnet Hill Subbasin Water Management Plan (2013 MC-GH WMP). On December 29, 2016, MSWD, DWA, and CVWD collaboratively submitted the 2013 MC-GH WMP as an Alternative Plan for the Mission Creek Subbasin, with an associated Bridge Document and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Mission Creek Subbasin satisfies the objectives of SGMA and notified the Management Committee that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to SGMA by January 1, 2022, and every five years thereafter. The 2022 Alternative Plan Update for the Mission Creek Subbasin was submitted to DWR on December 30, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018, and every year thereafter. MSWD, DWA, and CVWD have collaboratively prepared and submitted the Mission Creek Subbasin Annual Reports for Water Years 2016-2017 through 2021-2022.

1.2.3 Groundwater Replenishment

State Water Code (SWC) 31630-31639 provides CVWD with the authority to levy and collect water replenishment assessments to implement groundwater replenishment programs (GRPs) within its jurisdictional boundary. Groundwater replenishment is necessary to mitigate overdraft of the groundwater basin and associated undesirable results. The jurisdictional areas that benefit from the GRPs, and where CVWD levies replenishment assessments on groundwater production, are termed Areas of Benefit (AOBs). There are three AOBs within CVWD's boundary: the Mission Creek Subbasin AOB, the West Whitewater River Subbasin AOB, and the East Whitewater River Subbasin AOB. The GRP for the West Whitewater River Subbasin AOB was formed in 1976, the GRP for the Mission Creek Subbasin AOB was formed in 2003, and the GRP for the East Whitewater River Subbasin AOB was formed in 2004. The Project is located within the Mission Creek Subbasin AOB.

2 Public Water System

The City is the Lead Agency for the planning and environmental review of the proposed Palm Springs Fulfillment Center (Project). The City has identified the MSWD as the Public Water System

(PWS) that will supply water for the proposed Project, and has requested that MSWD assist in preparing a Water Supply Assessment (WSA) as part of the environmental review for the Project.

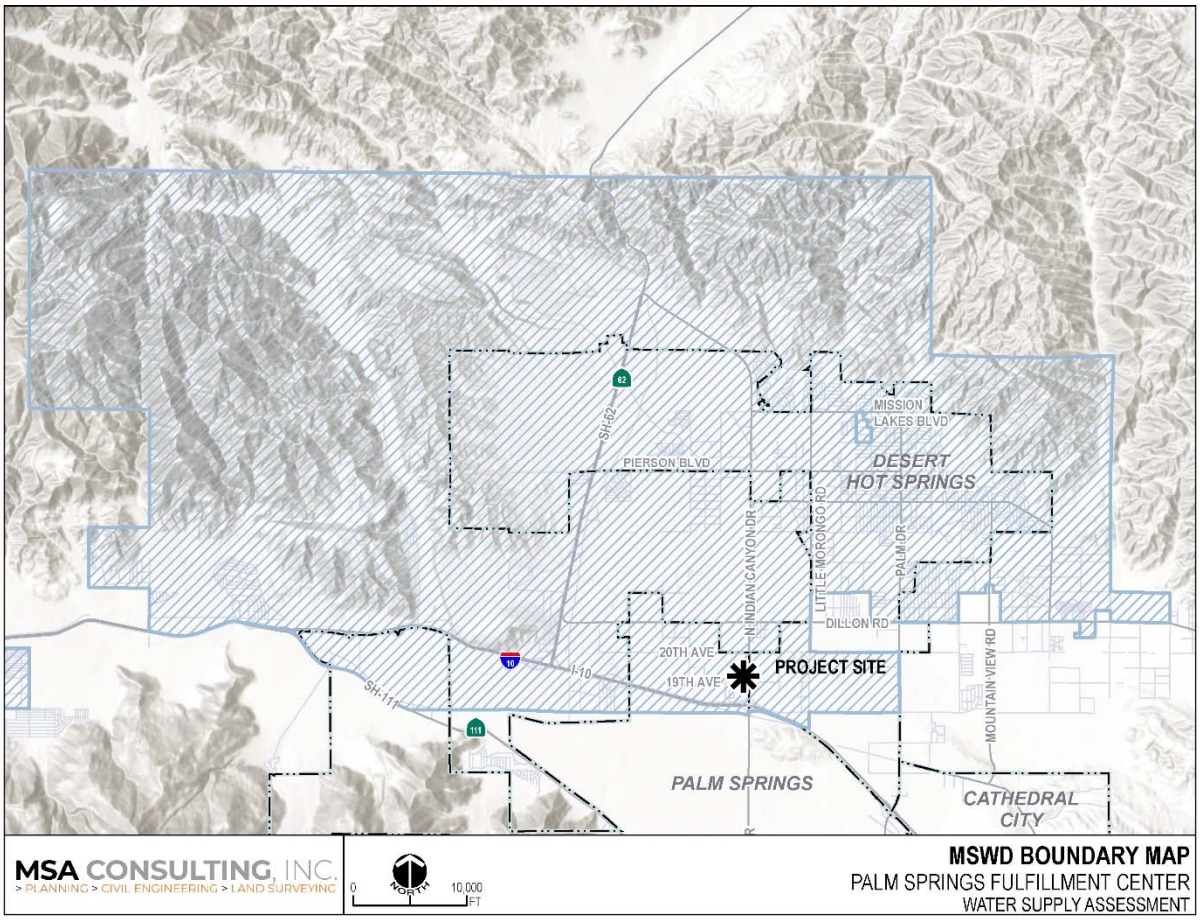
2.1 Mission Springs Water District (MSWD)

MSWD is a public water and wastewater agency organized under the County Water District Law, through the California Water Code. MSWD began as a mutual water company in the late 1940s. By 1953, it had evolved into an incorporated entity, the Desert Hot Springs County Water District. That name was changed to Mission Springs Water District in 1987. MSWD is governed by a five-member board, elected from five separate divisions, for a four-year term.

MSWD provides water services to more than 13,500 retail water customers through three independent production and distribution systems; and provides wastewater service to more than 9,200 customers through two independent wastewater collection and treatment systems.

MSWD's service area consists of 135 square miles, including the City of Desert Hot Springs, a portion of the City of Palm Springs, and ten smaller communities in Riverside County, including North Palm Springs, West Palm Springs Village and Palm Springs Crest as shown in **Figure 2-1**.

Figure 2-1: Mission Springs Water District Boundary



The 2020 Regional UMWP projected that population in MSWD's urban water service area would increase as shown in **Table 2-1**.

Table 2-1: Current and Projected Population for MSWD's Service Area

Population Served	2020	2025	2030	2035	2040	2045
	38,962	49,081	54,414	59,747	66,064	72,380

Source: 2020 Coachella Valley Regional Urban Water Management Plan

2.2 Coachella Valley Hydrology

The bulk of natural groundwater replenishment comes from runoff from the adjacent mountains. The climate in the Coachella Valley is characterized by low humidity, high summer temperatures, and mild dry winters. Average annual precipitation varies from 3 to 6 inches of rain on the Coachella Valley floor to more than 30 inches in the surrounding mountains. Most of the precipitation occurs between December and February, except for summer thundershowers. Prevailing winds in the area are usually gentle, but occasionally increase to velocities as high as 30 miles per hour or more. Mid-summer temperatures commonly exceed 100 degrees Fahrenheit (°F), frequently reach 110 °F, and periodically reach or exceed 120 °F, and the average winter temperature is approximately 60 °F as shown in **Table 2-2** and **Table 2-3**.

Table 2-2: Monthly Average Climate Data for Palm Springs

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F)[1]	71	73	80	86	94	104	108	107	102	90	78	69	89
Min (°F)[1]	47	49	54	59	65	73	80	79	74	64	53	46	62
Rain (in)[1]	0.95	0.92	0.36	0.10	0.02	0.00	0.25	0.14	0.20	0.20	0.26	0.70	3.80
ETo (in)[2]	2.5	3.4	5.6	7.1	8.3	8.7	8.1	7.5	6.2	4.7	2.9	2.2	67.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Palm Springs Airport, 1998-2020

[2] CIMIS Station 218 – Thermal South, 2010-2020

Table 2-3: Monthly Average Climate Data for Thermal

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F) [1]	71	74	81	87	95	103	107	106	101	91	79	69	89
Min (°F) [1]	39	43	49	55	63	69	76	75	68	57	45	38	56
Rain (in)[1]	0.64	0.61	0.34	0.08	0.01	0.01	0.13	0.12	0.32	0.19	0.17	0.34	2.96
ETo (in) [2]	2.7	3.9	6.4	8.0	9.3	9.3	9.6	9.1	7.1	5.3	3.2	2.4	70.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Desert Resorts Regional Airport, 1990-2020

[2] CIMIS Station 218 – Thermal South, 2010-2020

3 Groundwater

Groundwater is the principal source of potable supply in the Coachella Valley. MSWD currently receives 100 percent of its water supply from groundwater production and does not purchase imported water from a water wholesaler. However, CVWD and DWA are remediating the overdraft condition of the groundwater in the Upper Coachella Valley by replenishment with

Colorado River and State Water Project (SWP) Exchange water from Metropolitan Water District of Southern California (MWD). CVWD has the legal authority to manage the groundwater basin under the County Water District Law (California Water Code section 30000, et seq.) and as a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act (SGMA).

3.1 Coachella Valley Groundwater Basin

The Coachella Valley Groundwater Basin is bounded on the north and east by the San Bernardino and Little San Bernardino Mountains, on the south and west by the Santa Rosa and San Jacinto Mountains, and on the south by the Salton Sea. At the west end of the San Gorgonio Pass, between Beaumont and Banning, the basin boundary is defined by a surface drainage divide separating the Coachella Valley Groundwater Basin from the Beaumont Groundwater Basin of the Upper Santa Ana Drainage Area.

The southern boundary is formed primarily by the watershed of the Mecca Hills and by the northwest shoreline of the Salton Sea running between the Santa Rosa Mountains and Mortmar. Between the Salton Sea and Travertine Rock, at the base of the Santa Rosa Mountains, the southern boundary crosses the Riverside County Line into Imperial and San Diego Counties.

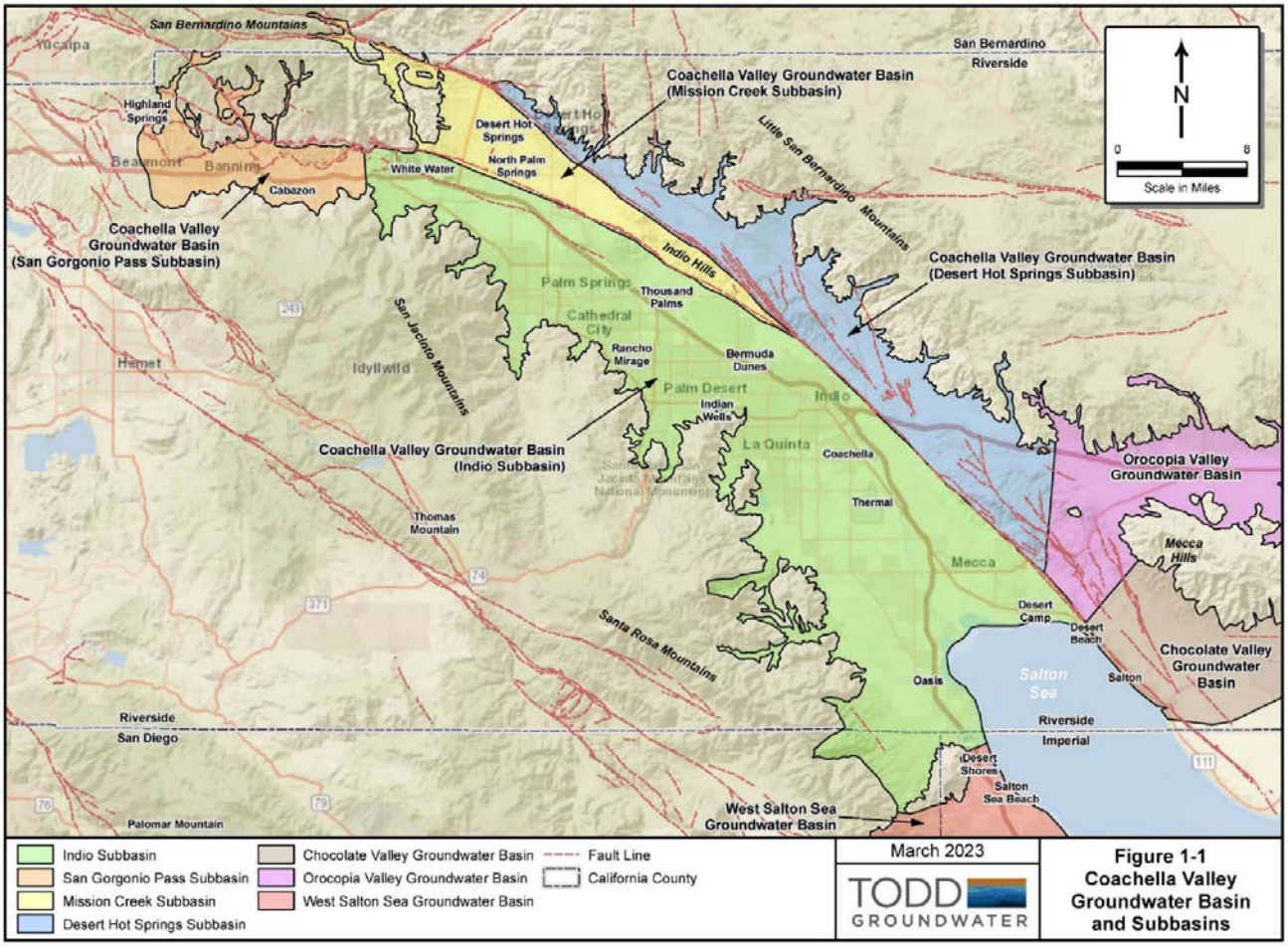
Although there is interflow of groundwater throughout the Coachella Valley Groundwater Basin, fault barriers, constrictions in the basin profile, and areas of low permeability limit and control movement of groundwater. Based on these factors, the Coachella Valley Groundwater Basin has been divided into subbasins and subareas as described by DWR in 1964 and 2003, and by the United States Geological Survey (USGS) in 1974.

3.1.1 Coachella Valley Groundwater Basin – Subbasins

As shown on **Figure 3-1,** the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. The subbasins are defined without regard to water quantity or quality. They delineate areas underlain by formations which readily yield stored groundwater through water wells and offer natural reservoirs for the regulation of water supplies.

The boundaries between subbasins within the Coachella Valley Groundwater Basin are generally defined by faults that impede the lateral movement of groundwater. Minor subareas have also been delineated based on one or more of the following geologic or hydrologic characteristics: types of water-bearing formations, water quality, areas of confined groundwater, forebay areas, groundwater divides, and surface drainage divides.

Figure 3-1: Coachella Valley Groundwater Basin and Subbasins



Source: Indio Subbasin Annual Report for Water Year 2021-2022

The following is a list of the subbasins in the Coachella Valley Groundwater Basin as designated by DWR in Bulletin 118:

- Indio Subbasin (Subbasin 7-21.01)
- Mission Creek Subbasin (Subbasin 7-21.02)
- San Gorgonio Pass Subbasin (Subbasin 7-21.03)
- Desert Hot Springs Subbasin (Subbasin 7-21.04)

DWR designated the Indio, Mission Creek, and San Gorgonio Pass Subbasins as medium-priority, and the Desert Hot Springs Subbasin as very low priority. None of the subbasins are adjudicated or in a state of overdraft.

In 1964, DWR estimated that the subbasins in the Coachella Valley Groundwater Basin contained approximately 39,200,000 acre-feet (AF) of water in the first 1,000 feet below the groundwater surface. The capacities of the subbasins are shown in **Table 3-1**.

Table 3-1: Groundwater Storage in the Coachella Valley Groundwater Basin

Subbasin/Subarea	Storage (AF) [1]
Indio Subbasin	
Palm Springs Subarea	4,600,000
Thousand Palms Subarea	1,800,000
Oasis Subarea	3,000,000
Garnet Hill Subarea	1,000,000
Thermal Subarea	19,400,000
Indio Subbasin Subtotal	**29,800,000**
Mission Creek Subbasin	2,600,000
San Gorgonio Subbasin	2,700,000
Desert Hot Springs Subbasin	4,100,000
Total	**39,200,000**

Source: DWR Bulletin 108 (1964)

[1] First 1,000 feet below ground surface. (DWR, 1964)

3.1.2 Groundwater Demand

Groundwater is the principal source of potable supply in the Coachella Valley and MSWD obtains groundwater from the Mission Creek Subbasin San Gorgonio Pass, and the Garnet Hill Subarea of the Coachella Valley Groundwater Basin. MSWD's groundwater demand in the Coachella Valley Groundwater Basin for 2016 through 2020 is shown in **Table 3-2**.

Table 3-2: MSWD Groundwater Demand in the Coachella Valley Groundwater Basin

Groundwater Production (AF)	2016	2017	2018	2019	2020
Mission Creek Subbasin	6,792	7,207	7,568	7,273	7,833
San Gorgonio Pass	145	156	153	153	165
Garnet Hill Subarea	285	449	154	266	270
Total	**7,222**	**7,812**	**7,875**	**7,692**	**8,268**

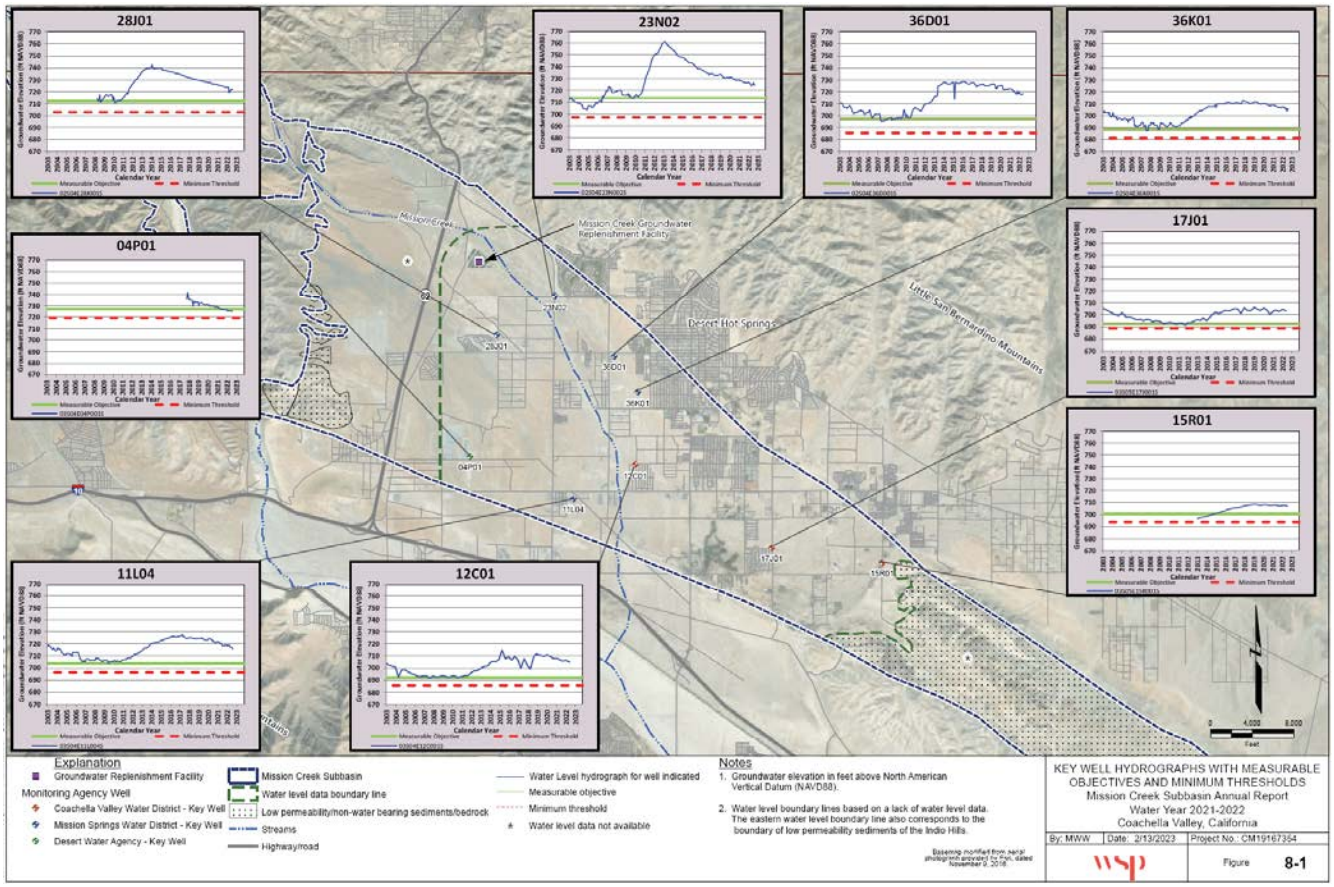
3.1.3 Groundwater Sustainability

Long-term sustainability is typically assessed based on changes in groundwater storage over a period on the order of ten to twenty years that includes wet and dry periods.

3.1.3.1 Mission Creek Subbasin

The 2022 Mission Creek Subbasin Alternative Plan Update identified nine Key Wells across the subbasin to represent local groundwater levels, as shown in **Figure 3-2**. The plan set MTs at each Key Well to demonstrate sustainability. In WY 2021-2022, water levels in all nine Key Wells remained above their respective MTs, as shown in the hydrographs in **Figure 3-2**. This confirms that the significant undesirable results of chronic lowering of groundwater levels, depletion of groundwater storage, and potential subsidence are not occurring in the Mission Creek Subbasin.

Figure 3-2: Water Level Monitoring Wells in the Mission Creek Subbasin

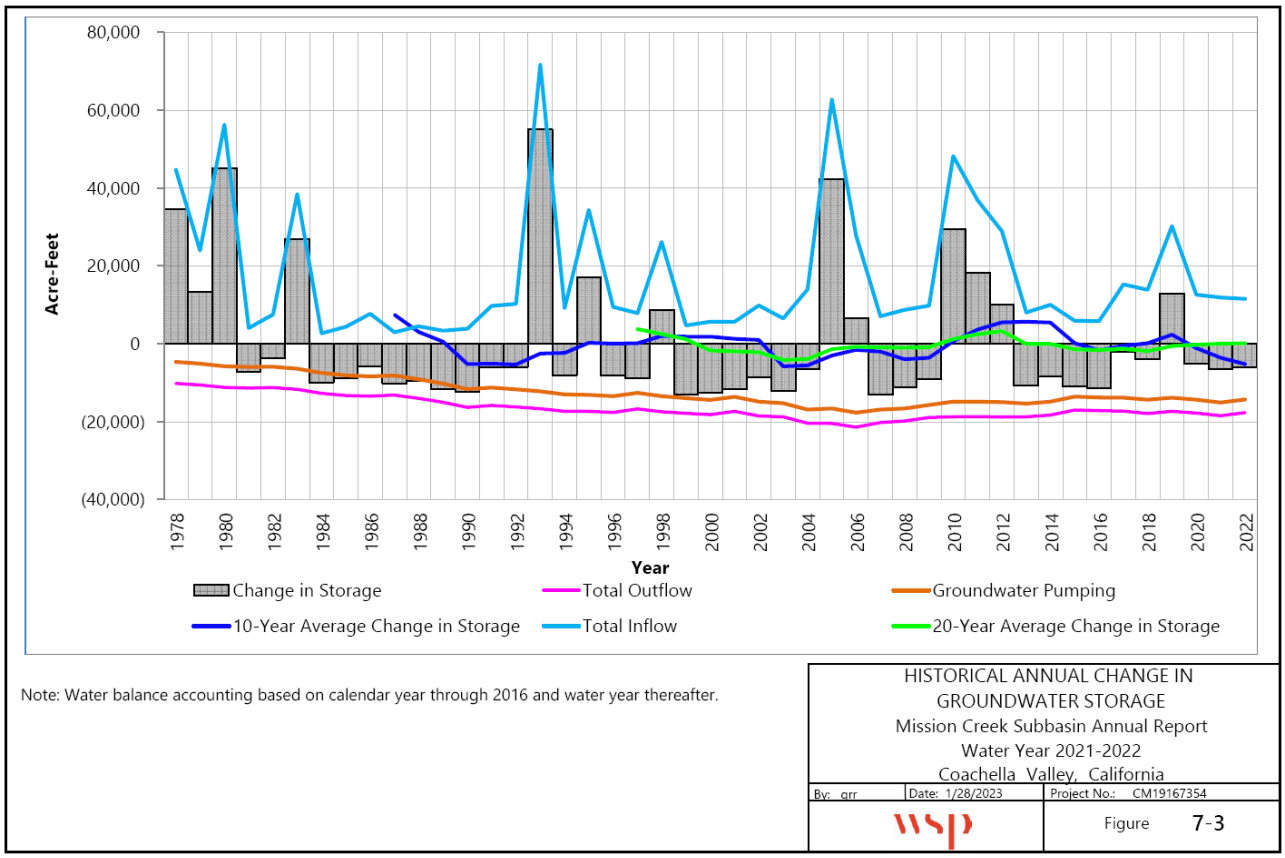


Source: 2022 Alternative Plan Update for the Mission Creek Subbasin

Figure 3-3 shows the historical annual change in groundwater storage from 1978 through WY 2021-2022 in the Mission Creek Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage can be negative.

As shown in **Figure 3-3**, after a period of decline, starting in 2004 both the 10-year and 20-year running-average change in groundwater storage have shown positive trends. Annual inflows to the Mission Creek Subbasin are highly variable with years of high inflows corresponding to years when SWP delivery volumes were greater. The 20-year running-average change in storage shows that the Mission Creek Subbasin has been in balance since 2012.

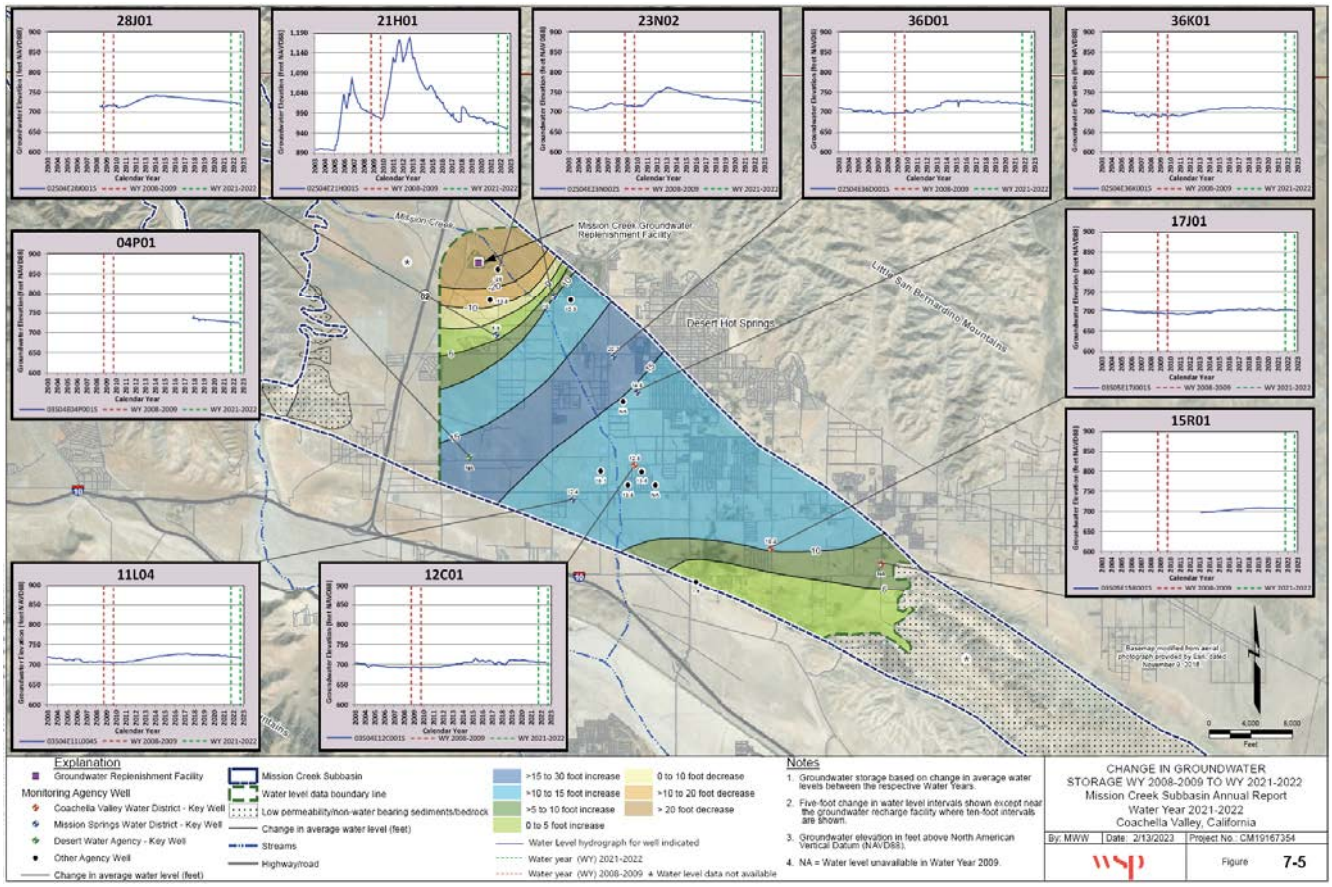
Figure 3-3: Historical Annual Change in Groundwater Storage in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2021-2022

Groundwater levels have increased significantly in the Mission Creek Subbasin over the past 10 years from WY 2008-2009 to WY 2021-2022 as shown in **Figure 3-4**. The Mission Creek Subbasin Annual Report uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Mission Creek Subbasin. The Mission Creek Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Mission Creek Subbasin Alternative Plan.

Figure 3-4: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2021-2022

3.2 Imported Water

MSWD currently receives 100 percent of its water supply from groundwater production and does not purchase imported water from a water wholesaler. However, CVWD and DWA are remediating the overdraft condition of the groundwater in the Upper Coachella Valley by replenishment with Colorado River and State Water Project (SWP) Exchange water from Metropolitan Water District of Southern California (MWD). These imported water sources are used to recharge the groundwater basin and as an alternative source to meet non-potable demands from irrigation of agriculture, golf, and urban uses that would have otherwise been met by pumping groundwater.

3.2.1 Colorado River Water

Colorado River water has been a significant water supply source for the Indio Subbasin since the Coachella Canal was completed in 1949. CVWD and DWA's groundwater replenishment programs have percolated billions of gallons of water into the aquifer. This has been possible due to a supply of imported water from the State Water Project and the Colorado River, as well as long-term water rights to stream flows in the Whitewater River and its tributaries.

The Colorado River is managed and operated in accordance with the Law of the River, a collection of interstate compacts, federal and state legislation, various agreements and contracts, an international treaty, a U.S. Supreme Court decree, and federal administrative actions that govern the rights to use Colorado River water within the seven Colorado River Basin states. The 1922 Colorado River Compact apportioned the waters of the Colorado River Basin between the Upper Colorado River Basin (i.e., Colorado, Wyoming, Utah, and New Mexico) and the Lower Basin (i.e., Nevada, Arizona, and California). The 1922 Colorado River Compact allocates 15 million AFY of Colorado River water as follows: 7.5 million AFY to the Upper Basin and 7.5 million AFY to the Lower Basin, plus up to 1 million AFY of surplus supplies. The Lower Basin's water was further apportioned among the three Lower Basin states by the 1928 Boulder Canyon Project Act and the 1931 Boulder Canyon Project Agreement, typically called the 1931 Seven Party Agreement, which allocates California's apportionment of Colorado River water among Palo Verde Irrigation District, Imperial Irrigation District (IID), CVWD, Metropolitan Water District of Southern California (MWD), City of Los Angeles, City of San Diego, and County of San Diego. The 1964 U.S. Supreme Court decree in Arizona v. California established Arizona's basic annual apportionment at 2.8 million AFY, California's at 4.4 million AFY, and Nevada's at 0.3 million AFY. Mexico is entitled to 1.5 million AFY of the Colorado River under the 1944 United States-Mexico Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande. However, this treaty did not specify a required quality for water entering Mexico. In 1973, the United States and Mexico signed Minute No. 242 of the International Boundary and Water Commission requiring certain water quality standards for water entering Mexico. California's Colorado River supply is protected by the 1968 Colorado River Basin Project Act, which provides that in years of insufficient supply on the main stem of the Colorado River, supplies to the Central Arizona Project shall be reduced to zero before California will be reduced below 4.4 million AF in any year. This assures full supplies to the Coachella Valley, except in periods of extreme drought.

The Coachella Canal is a branch of the All-American Canal that brings Colorado River water into the Imperial and Coachella Valleys. Under the 1931 Seven Party Agreement, CVWD receives 330,000 AFY of Priority 3A Colorado River water diverted from the All-American Canal at the Imperial Dam. The Coachella Canal originates at Drop 1 on the All-American Canal and extends approximately 123 miles, terminating in CVWD's Lake Cahuilla. The service area for Colorado River water delivery under CVWD's contract with the U.S. Bureau of Reclamation (USBR) is defined as Improvement District No. 1 (ID-1), which encompasses 136,400 acres covering most of the East Valley and a portion of the West Valley north of Interstate 10. Under the 1931 Seven Party Agreement, CVWD has water rights to Colorado River water as part of the first 3.85 million AFY allocated to California. CVWD is in the third priority position along with IID.

In 2003, CVWD, IID, and MWD successfully negotiated the 2003 Quantification Settlement Agreement (2003 QSA), which quantifies Colorado River allocations through 2077 and supports the transfer of water between agencies. Under the 2003 QSA, CVWD has a base entitlement of 330,000 AFY. CVWD negotiated water transfer agreements with MWD and IID that increased CVWD supplies by an additional 123,000 AFY. CVWD's net QSA supply will increase to 424,000 AFY by 2026 and remain at that level until 2047, decreasing to 421,000 AFY until 2077, when the agreement terminates. As of 2021, CVWD's available Colorado River water diversions at Imperial

Dam under the QSA were 399,000 AFY. This includes the base entitlement of 330,000 AFY, the MWD/IID Transfer of 20,000 AFY, IID/CVWD First Transfer of 50,000 AFY, and IID/CVWD Second Transfer of 28,000 AFY. CVWD's QSA diversions also deducts the -26,000 AFY transferred to San Diego County Water Authority (SDCWA) as part of the Coachella Canal Lining Project and the -3,000 AFY transfer to Indian Present Perfected Rights. Additionally, under the 2003 QSA, MWD transferred 35,000 AFY of its State Water Project (SWP) Table A Amount to CVWD. This SWP water is exchanged for Colorado River water and can be delivered at Imperial Dam for delivery via the Coachella Canal to the eastern portion of the Indio Subbasin or at Lake Havasu for delivery via the Colorado River Aqueduct to the western portion of the Indio Subbasin at the Whitewater River Groundwater Replenishment Facility (WWR-GRF). The 2019 Second Amendment guaranteed delivery of the 35,000 AFY from 2019 to 2026, for a total of 280,000 AFY of water to the WWR-GRF during that timeframe. MWD can deliver the water through CVWD's Whitewater Service Connections (for recharge at WWR-GRF) or via the Advance Delivery account.

The MWD/IID Transfer originated in a 1989 agreement with MWD to receive 20,000 AF of its Colorado River supply. The 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water defined the exchange and delivery terms between MWD, CVWD, and DWA. The 2019 Second Amendment to Delivery and Exchange Agreement reduced CVWD's annual delivery of the MWD/IID Transfer to 15,000 AFY, for a total of 105,000 AF, if taken at the Whitewater Service Connections (for recharge at WWR-GRF) between 2020 and 2026. For those seven years, MWD keeps the remaining 5,000 AFY, after which CVWD's allocation increases back up to 20,000 AFY. CVWD's total allocations under the QSA, including MWD's transfer of 35,000 AFY and the MWD/IID Transfer, will increase from 424,000 AFY in 2020 to 459,000 AFY by 2026 and remain at that level for the remainder of the 75-year term of the QSA. **Table 3-3** lists total Colorado River entitlements under existing agreements.

Table 3-3: CVWD Colorado River Entitlements (AFY)

Diversion	2020	2025	2030	2035	2040	2045
Base Entitlement	330,000	330,000	330,000	330,000	330,000	330,000
1988 MWD/IID Approval Agreement	20,000	20,000	20,000	20,000	20,000	20,000
IID/CVWD First Transfer	50,000	50,000	50,000	50,000	50,000	50,000
IID/CVWD Second Transfer[1]	23,000	48,000	53,000	53,000	53,000	53,000
Coachella Canal Lining	-26,000	-26,000	-26,000	-26,000	-26,000	-26,000
Indian Present Perfected Rights Transfer	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000
QSA Diversions	**394,000**	**419,000**	**424,000**	**424,000**	**424,000**	**424,000**
MWD SWP Transfer[2]	35,000	35,000	35,000	35,000	35,000	35,000
Total Diversions	**429,000**	**454,000**	**459,000**	**459,000**	**459,000**	**459,000**
Assumed Conveyance Losses (5%)	-21,200	-22,700	-22,950	-22,950	-22,950	-22,950
MWD/IID Approval Agreement Transfer[3]	-5,000	-5,000	0	0	0	0
Total Available Deliveries	**402,800**	**426,300**	**436,050**	**436,050**	**436,050**	**436,050**

Source: 2022 Alternative Plan Update for the Indio Subbasin

[1] The Second IID/CVWD Transfer began in 2018 with 13,000 AF of water. This amount increases annually by 5,000 AFY for a total of 53,000 AFY in 2026.

[2] The 35,000 AFY MWD/CVWD SWP Transfer may be delivered at either Imperial Dam or Whitewater River and is not subject to SWP or Colorado River reliability.

1 Accounts for -5,000 AFY reduction in MWD/IID Approval Agreement deliveries from 2020-2026 per the 2019 Amendments with MWD.

The Colorado River deliveries to CVWD at the Imperial Dam/Coachella Canal from 2018 through 2022 are shown in **Table 3-4.**

Table 3-4: Colorado River Deliveries to CVWD at the Imperial Dam/Coachella Canal

Diversions (AF)	2018	2019	2020[1]	2021[1]	2022[1]
Imperial Dam/Coachella Canal	338,035	343,971	350,618	351,904	330,387

Source: U.S. Bureau of Reclamation, Lower Colorado Region, Colorado River Accounting and Water Use Reports for Arizona, California, and Nevada.

[1] The 15,000 AFY of 1988 MWD/IID Approval Agreement water was delivered at WWR-GRF from 2020 to 2022.

CVWD's recharge volumes of Colorado River water from 2018 through 2022 are shown in **Table 3-5**.

Table 3-5: CVWD Groundwater Recharge of Colorado River Water

Groundwater Recharge (AF)	2018	2019	2020	2021	2022
Thomas E. Levy GRF	33,348	36,143	37,536	37,971	27,993
Palm Desert GRF	0	7,757	9,700	10,633	10,949
Total	**33,348**	**43,900**	**47,236**	**48,604**	**38,942**

Source: 2023-2024 CVWD Annual Engineer's Reports on Water Supply and Replenishment Assessment

3.2.2 State Water Project

The SWP is managed by DWR and includes 705 miles of aqueduct and conveyance facilities extending from Lake Oroville in Northern California to Lake Perris in Southern California. The SWP has contracts to deliver 4.172 million AFY to the State Water Contractors. The State Water Contractors consist of 29 public entities with long-term contracts with DWR for all, or a portion of, their water supply needs. In 1962 and 1963, DWA and CVWD, respectively, entered contracts with the State of California for a total of 61,200 AFY of SWP water. SWP water has been an important component of the region's water supply mix since CVWD and DWA began receiving and recharging SWP exchange water at the WWR-GRF. Starting in 1973, CVWD and DWA began exchanging their SWP water with MWD for Colorado River water delivered via MWD's Colorado River Aqueduct. Because CVWD and DWA do not have a physical connection to SWP conveyance facilities, MWD takes delivery of CVWD's and DWA's SWP water, and in exchange, delivers an equal amount of Colorado River water to the Whitewater Service Connections (for recharge at WWR-GRF and Mission Creek Groundwater Replenishment Facility). The exchange agreement was most recently re-established in the 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water.

Each SWP contract contains a "Table A" exhibit that defines the maximum annual amount of water each contractor can receive excluding certain interruptible deliveries. DWR uses Table A amounts to allocate available SWP supplies and some SWP project costs among the contractors. Each year, DWR determines the amount of water available for delivery to SWP contractors based on hydrology, reservoir storage, the requirements of water rights licenses and permits, water

quality, and environmental requirements for protected species in the Sacramento-San Joaquin River Delta (Delta). The available supply is then allocated according to each SWP contractor's Table A amount.

CVWD's and DWA's collective increments of Table A water are listed in **Table 3-6**. Original Table A SWP water allocations for CVWD and DWA were 23,100 AFY and 38,100 AFY, respectively, for a combined amount of 61,200 AFY. CVWD and DWA obtained a combined 100,000 AFY transfer from MWD under the 2003 Exchange Agreement. In 2004, CVWD purchased an additional 9,900 AFY of SWP Table A water from the Tulare Lake Basin Water Storage District (Tulare Lake Basin) in Kings County. In 2007, CVWD and DWA made a second purchase of Table A SWP water from Tulare Lake Basin totaling 7,000 AFY. In 2007, CVWD and DWA also completed the transfer of 16,000 AFY of Table A Amounts from the Berrenda Mesa Water District in Kern County. These latter two transfers became effective in January 2010. With these additional transfers, the total SWP Table A Amount for CVWD and DWA is 194,100 AFY. **Table 3-7** shows the percent allocation of SWP Table A allocations from 2018 through 2022. **Table 3-8** shows the recharge of SWP Exchange Water from 2018 through 2022.

Table 3-6: State Water Project Table A Allocations

	Original SWP Table A (AFY)	Tulare Lake Basin 2004 Transfer (AFY)	Metropolitan Water District 2003 Transfer (AFY)	Tulare Lake Basin 2007 Transfer (AFY)	Berrenda Mesa 2007 Transfer (AFY)	Total (AFY)
CVWD	23,100	9,900	88,100	5,250	12,000	138,350
DWA	38,100	0	11,900	1,750	4,000	55,750
Total	**61,200**	**9,900**	**100,000**	**7,000**	**16,000**	**194,100**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

Table 3-7: State Water Project Table A Percent Allocations

	2018	2019	2020	2021	2022
Table A Allocation	35%	75%	20%	5%	5%

Source: CA Department of Water Resources Historical Table A Allocations for Years 1996-2023

Table 3-8: CVWD and DWA Groundwater Recharge

Groundwater Recharge (AF)	2018	2019	2020	2021	2022
Whitewater River GRF	129,725	235,600	126,487[1]	15,006[1]	15,011[1]
Mission Creek GRF	2,027	3,688	1,768	0	0
Total	**131,752**	**239,288**	**128,255**	**15,006**	**15,011**

Source: CVWD 2023-2024 Annual Engineer's Reports on Water Supply and Replenishment Assessment

[1] Between 2020 and 2022, the 15,000 AFY of 1988 MWD/IID Approval Agreement water was delivered at Whitewater River GRF.

3.2.3 Other SWP Water

There are other types of SWP water that can be purchased, such as individual water purchase opportunities and transfers/exchanges. These may be conveyed to CVWD and DWA as available, but no commitments exist.

In 2008, CVWD and DWA entered into separate agreements with DWR for the purchase and conveyance of supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program (Yuba Accord). This program provides dry year supplies through a water purchase agreement between DWR and Yuba County Water Agency, which settled long-standing operational and environmental issues over instream flow requirements for the lower Yuba River. The amount of water available for purchase varies annually and is allocated among participating SWP contractors based on their Table A amounts. CVWD and DWA may purchase up to 1.72 percent and 0.69 percent, respectively, of available Yuba Accord water, in years it is made available. Yuba Accord deliveries have varied from zero in multiple years to a total of 2,664 AFY to CVWD and DWA in 2013.

Article 21 water (described in Article 21 of the SWP water contracts), "Interruptible Water," is water that State Water Contractors may receive on a short-term basis in addition to their Table A water if they request it in years when it is available. Article 21 water is used by many contractors to help meet demands in low allocation years. Article 21 water is not available every year, amounts vary when it is available, and is proportionately allocated among participating Contractors. The availability and delivery of Article 21 water cannot interfere with normal SWP operations and cannot be carried over for delivery in a subsequent year.

3.3 Surface Water

MSWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.1 River/Stream Diversion

Surface water supplies come from several local rivers and streams including the Whitewater River, Snow Creek, Falls Creek, and Chino Creek, as well as a number of smaller creeks and washes. Because surface water supplies are affected by variations in annual precipitation, the annual supply is highly variable. The 50-year hydrologic period from 1970 to 2019 had an annual average watershed runoff of 52,506 AFY, with approximately 43,300 AFY in natural infiltration. Runoff during the 25-year period from 1995 to 2019 was below average, with 39,196 AFY in watershed runoff and 29,200 AFY in natural infiltration. MSWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.2 Stormwater Capture

The Coachella Valley drainage area is approximately 65 percent mountainous and 35 percent typical desert valley with alluvial fan topography buffering the valley floor from the steep mountain slopes. The mean annual precipitation ranges from 30 inches or more in the San Bernardino Mountains to less than 3 inches at the Salton Sea. Three types of storms produce precipitation in the drainage area: general winter storms, general thunderstorms, and local thunderstorms. Longer duration, lower intensity rainfall events tend to have higher recharge

rates, but runoff from flash flooding can result from all three types of storms. Otherwise, there is little to no flow in most of the streams in the drainage area.

Significant amounts of local runoff are currently captured at the Whitewater River GRF, Mission Creek GRF, and in the debris basins and unlined channels of the western Coachella Valley. Additional stormwater will be captured when the Thousand Palms Flood Control Project is completed and when flood control is constructed in the Oasis area. However, limited data exists to estimate the amount of additional stormwater that could be captured by new facilities in the Coachella Valley. Nonetheless, large-scale stormwater capture is not expected to yield sufficient water to be worth the investment as a single purpose project. Small-scale stormwater retention systems located in areas of suitable geology to allow percolation could capture small intensity storms as well as street runoff. The potential yield of this system is not known at this time, but stormwater capture should be considered in conjunction with projects that construct stormwater and flood control facilities.

3.4 Wastewater and Recycled Water

Wastewater that has been highly treated and disinfected can be reused for landscape irrigation and other purposes. Recycled wastewater has historically been used for irrigation of golf courses and municipal landscaping in the Coachella Valley since as early as the 1960s. As growth occurs in the eastern Coachella Valley, the supply of recycled water is expected to increase, creating an additional opportunity to maximize local water supply.

MSWD currently operates two wastewater treatment plants. The Horton Wastewater Treatment Plant (Horton WWTP), located on Verbena Drive about a half mile south of Two Bunch Palms Trail, has a capacity of 2.3 million gallons per day (MGD). The plant uses an extended aeration process for treatment and disposes of the secondary wastewater, which is not disinfected, in adjacent percolation/evaporation ponds. The sludge generated from the treatment process is run through a dewatering sludge filter press and then trucked offsite to proper disposal areas. The average daily flow metered to the plant in 2020 was 2.0 MGD.

The Desert Crest Wastewater Treatment Plant, located about a half mile southeast of the intersection of Dillion Road and Long Canyon Road, has a capacity of 0.18 MGD and serves a country club development and mobile home park. The facility operates similarly to the Horton WWTP using an aeration basin for treatment and disposes of the secondary wastewater, which is not disinfected, by way of percolation/evaporation ponds. The sludge generated from the treatment process is dried in on-site beds and then trucked offsite to proper disposal areas. The average daily flow to the plant in 2020 was metered at 0.05 MGD.

Both District wastewater treatment plants uses an extended aeration process for treatment and dispose of the secondary wastewater, which is not disinfected, in adjacent percolation/evaporation ponds located within the plant on the southwest (potable water) side of the Mission Creek Fault. In addition, effluent is used for irrigation and maintenance at the treatment plants.

The District is constructing the MSWD Nancy Wright Regional Water Reclamation Facility (NWRWRF) to meet increasing wastewater demands. In its initial phase, the RWRF will use a sequence batch reactor process for treatment and disposal of the secondary wastewater, which is not disinfected, in adjacent percolation/evaporation ponds located within the plant over the Garnet Hill Subarea. The District plans to produce recycled water meeting Title 22 standards with tertiary treatment facilities in the subsequent phase. The primary recycled water demands are foreseen to be replenishment of the Mission Creek Subbasin and public green areas, golf courses and playing fields that were identified as part of the 2018 study. Consistent with recycled water demands that have been identified and estimated system wastewater flows, it is envisioned that the recycled water system including the NWRWRF will be expanded to accommodate a system recycled water system demand of 5,000 AFY by 2045.

3.5 Conservation

Water conservation, and the reduced groundwater production associated with water conservation, benefits the groundwater basin and is an important element of the Alternative Plans and the 2020 Regional Urban Water Management Plan (UWMP).

The purpose of this regional UWMP is to allow the six agencies to address UWMP requirements. These requirements originated in California's Urban Water Management Planning Act of 1983 (Act), and the requirements have been expanded and updated with subsequent legislation. Agencies are required to prepare an updated UWMP every five years and submit it to the California Department of Water Resources (DWR). DWR then performs a review to verify that each UWMP addresses the requirements of the California Water Code (CWC). MSWD created and adopted a Water Shortage Contingency Plan (WSCP) in June 2021.

MSWD utilizes rebate programs within its service area, including a turf removal rebate program and a toilet rebate program. These rebates assist homeowners, homeowner associations, and commercial customers to reduce water usage. MSWD is also a partner in CV Water Counts, a nonprofit group formed to focus on water conservation, through awareness-building and education to Coachella Valley residents, businesses, and government. The group is comprised of the six Coachella Valley water agencies.

3.6 Landscape Ordinance

In order to practice water conservation, the Project would abide by Mission Spring Water District Water Efficient Landscaping Guidelines (Landscape Guidelines). The intent of the Landscape Guidelines is to promote water conservation through climate appropriate plant material and efficient irrigation practices and comply with the State of California's Water Conservation in Landscaping Act. The Landscape Guidelines apply to all new and rehabilitated landscapes for private, recreational and commercial developments, including single or multifamily housing developments, and residential infill unless the owner selects a pre-approved landscape design model that conforms to these guidelines.

In Exhibit 1, *Landscape Documentation Package,* of the Landscape Guidelines, a formula is provided to determine a project's annual maximum applied water allowance (MAWA). To calculate the total water demand for the Project, this document references the most updated ETo map for the region. Additionally, the document references the most updated evapotranspiration adjustment factor (ET adjustment factor) for the region. This is shown in **Table 6-2: Projected Outdoor Irrigation Water Demand** in the **Project Water Demands** section below.

3.7 Water Shortage Contingency Planning

Each level in **Table 3-9** represents an anticipated reduction in the supplies that would normally be available to MSWD. These supply reductions could be the result of a variety of potential causes including natural forces, system component failure or interruption, regulatory actions, contamination, or any combination of factors. MSWD may need to activate shortage levels across its entire service area or within certain areas that are impacted by an event. The levels involve voluntary and mandatory conservation measures and restrictions, depending on the causes, severity, and anticipated duration of the water supply shortage. The locally appropriate shortage response actions that would be taken at each level to address the resulting gap between supplies and demands are described in the following section.

Table 3-9: Urban Water Shortage Contingency Plan Shortage Levels

Shortage Level	Shortage Range	Water Supply Condition
1	Up to 10%	Normal water supplies
2	Up to 20%	Slightly limited water supplies
3	Up to 30%	Moderately limited water supplies
4	Up to 40%	Limited water supplies
5	Up to 50%	Significantly limited water supplies
6	Greater than 50%	Severe shortage or catastrophic incident

Source: 2021 MSWD Water Shortage Contingency Plan

4 Public Water System – Projected Supply and Demand

Mission Springs Water District (MSWD) projects that a majority of its urban potable water uses will continue to be supplied from local groundwater. Although MSWD does not buy imported water from a wholesaler, CVWD has secured imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to replenish the groundwater basin which benefits all water districts in the Coachella Valley.

4.1 Projected Urban Demand and Supply

The following tables from the 2020 Regional Urban Water Management Plan (Regional UWMP) provide the MSWD's projected water supplies and demands. Projected demands for water use in the MSWD service area are summarized in **Table 4-1**.

Table 4-1: MSWD Projected Demands for Water

	Projected Water Use				
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	4,743	5,143	5,543	6,066	6,588
Multi-Family	1,316	1,427	1,538	1,683	1,828
Commercial	459	498	537	587	638
Industrial	298	323	348	381	413
Institutional /Governmental	179	194	209	229	249
Landscape	984	1,067	1,150	1,258	1,366
Other	1,017	1,102	1,188	1,300	1,412
Total	**8,996**	**9,754**	**10,513**	**11,504**	**12,494**
Note: "Other" represents non-revenue water, which includes losses.					

Source: 2020 Coachella Valley Regional Urban Water Management Plan

MSWD currently receives 100 percent of its water supply from groundwater production and does not purchase imported water from a water wholesaler. However, CVWD and DWA are remediating the overdraft condition of the groundwater in the Upper Coachella Valley by replenishment with Colorado River and State Water Project (SWP) Exchange water from Metropolitan Water District of Southern California (MWD). District groundwater meets all Federal and State primary and secondary water quality standards without treatment (other than chlorination for disinfection) with the exceptions that groundwater from Well No. 26A is treated at each well site to meet the primary water quality standard for uranium.

The construction of recycled water infrastructure including tertiary treatment facilities at the planned RWRF is projected to accommodate future deliveries of recycled water. MSWD's projected supplies through 2045 are presented in **Table 4-2**.

Table 4-2: MSWD Projected Urban Water Supplies

# Water Supply	Projected Water Supply (AFY)					
	Additional Detail on Water Supply	**2025**	**2030**	**2035**	**2040**	**2045**
Groundwater	All Subbasins	8,996	9,754	10,513	11,504	12,495
Recycled Water		0	1,210	2,200	3,600	5,000
Total		**8,996**	**10,964**	**12,713**	**15,104**	**17,495**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

4.2 Normal, Single-Dry, Multiple-Dry Year Comparison

The following tables from the 2020 Regional UWMP provide MSWD's projected water supplies and demands in a normal year, single-dry year, and multiple-dry years.

During normal years, MSWD will be able to meet current and future urban water demand needs projected in the 2020 Regional UWMP as shown in **Table 4-3**.

Table 4-3: Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	8,996	10,874	12,713	15,104	17,495
Demand Totals (AFY)	8,996	10,874	12,713	15,104	17,495
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: MSWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During single-dry years, MSWD will be able to meet current and future urban water demand needs as shown in **Table 4-4**. Water supplies during the single-dry year are 100 percent reliable. CVWD's groundwater replenishment program replenishes the basin to increase groundwater storage during wet years and that supply is available for use during dry years which benefits all water districts using ground water, including MSWD. Thus, the supply and demand comparison for the single-dry year is the same as the normal year.

Table 4-4: Single-Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	8,996	10,874	12,713	15,104	17,495
Demand Totals (AFY)	8,996	10,874	12,713	15,104	17,495
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: MSWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During multiple-dry years, MSWD will be able to meet current and future urban water demand needs through groundwater pumping as shown in **Table 4-5**. Similar to the single-dry year, the multiple-dry year water supply reliability is 100 percent. Thus, the supply and demand comparison for the multiple-dry years is the same as the normal year. MSWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

Table 4-5: Multiple-Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	**Supply Totals (AFY)**	8,996	10,874	12,713	15,104	17,495
	Demand Totals (AFY)	8996	10,874	12,713	15,104	17,495
	Difference	**0**	**0**	**0**	**0**	**0**
Second Year	**Supply Totals (AFY)**	8,996	10,874	12,713	15,104	17,495
	Demand Totals (AFY)	8,996	10,874	12,713	15,104	17,495
	Difference	**0**	**0**	**0**	**0**	**0**
Third Year	**Supply Totals (AFY)**	8,996	10,874	12,713	15,104	17,495
	Demand Totals (AFY)	8,996	10,874	12,713	15,104	17,495
	Difference	**0**	**0**	**0**	**0**	**0**

Fourth Year	**Supply Totals (AFY)**	8,996	10,874	12,713	15,104	17,495
	Demand Totals (AFY)	8,996	10,874	12,713	15,104	17,495
	Difference	**0**	**0**	**0**	**0**	**0**
Fifth Year	**Supply Totals (AFY)**	8,996	10,874	12,713	15,104	17,495
	Demand Totals (AFY)	8,996	10,874	12,713	15,104	17,495
	Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: MSWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

5 Project Description

The Project is located in the western portion of the Coachella Valley within the incorporated limits of the City of Palm Springs, Riverside County as shown in **Figure 5-1**. The Project will be accessible from Indian Canyon Drive and is bounded by undeveloped land to the north, Indian Canyon Drive to the east, 19th Avenue to the south, and a wind turbine site to the west. The Project proposes to develop 39.54 acres of vacant land in the Coachella Valley to include 16.70 acres of industrial building area, 15.39 acres of parking, access roads, and hardscape, approximately 3 acres of right of way dedication, and 4.38 acres of landscaping, open space, and retention areas. **Figure 5-2** displays the vicinity map; **Figure 5-3** displays the site plan; **Table 5-1** describes the land use summary of the project.

Figure 5-1: Project Regional Location Map

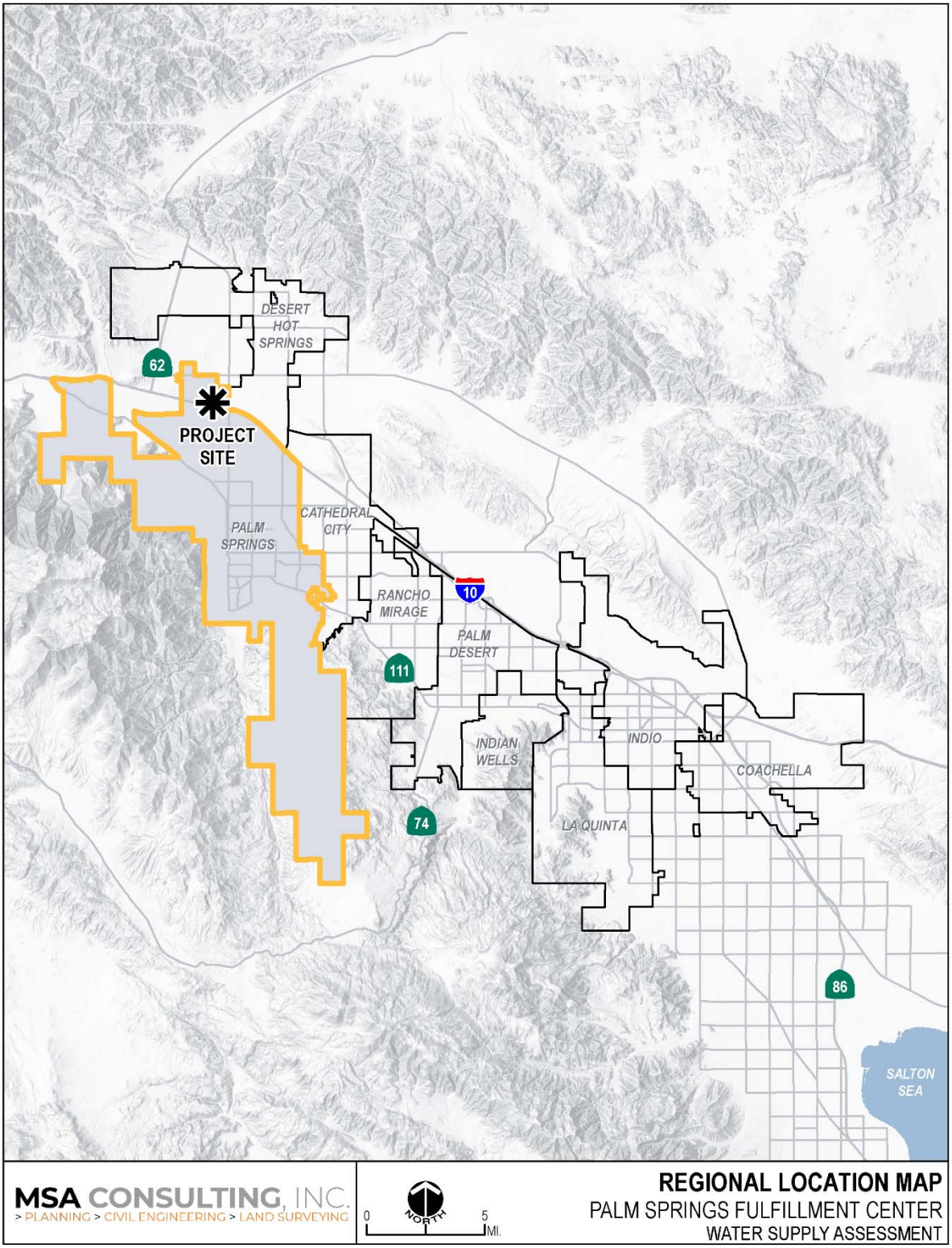


Figure 5-2: Project Vicinity Map

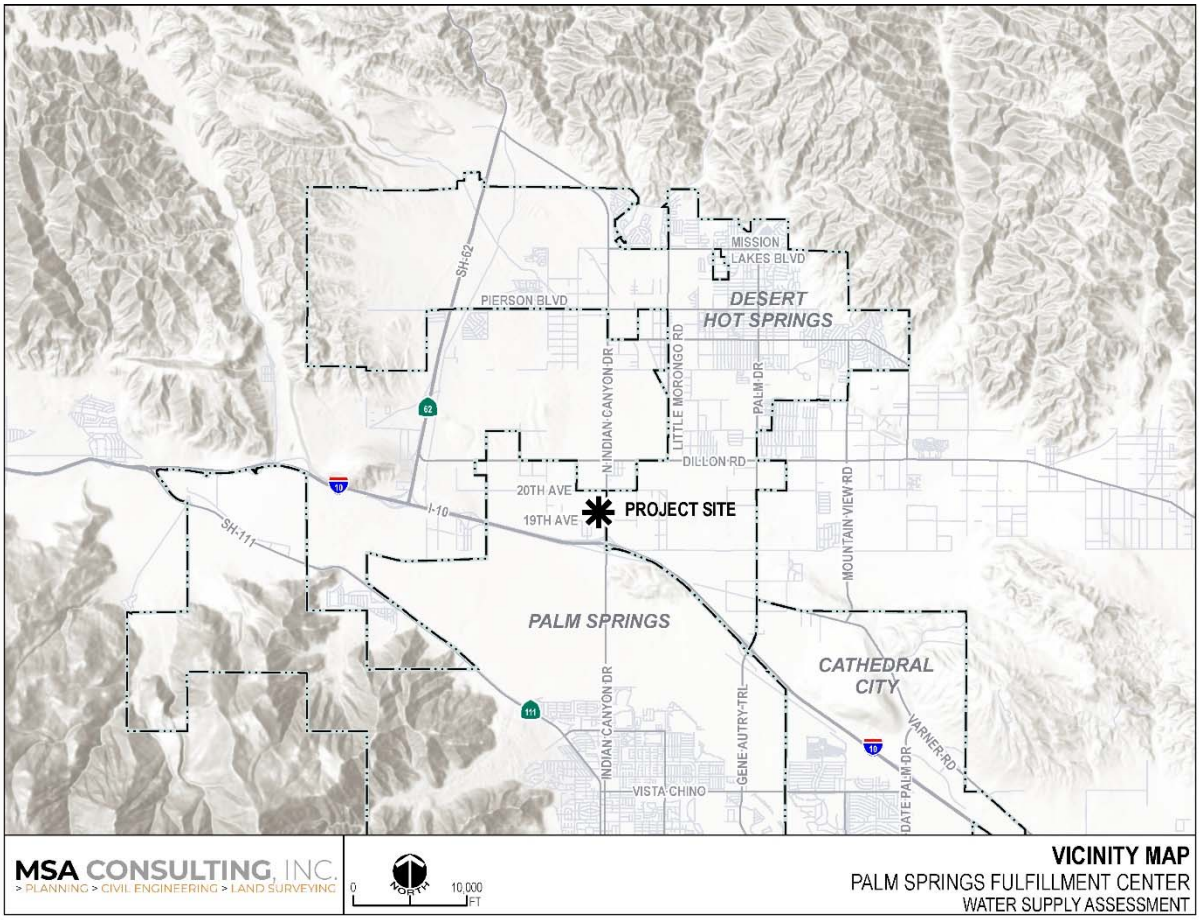


Figure 5-3: Project Site Plan

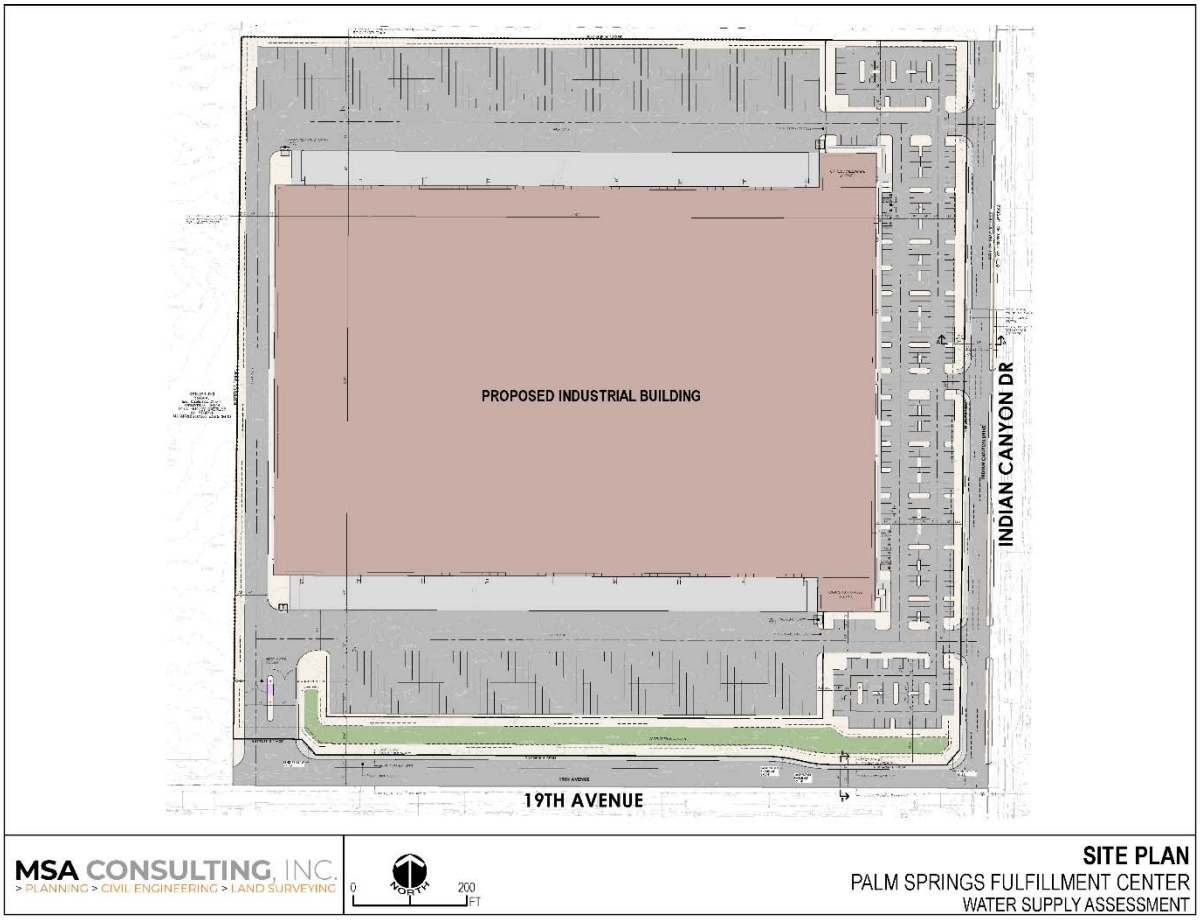


Table 5-1: Project Land Use Summary

Specific Plan/Land Use Designation	Land Area (Acres)	Target Density (EDUs/Acre)	Estimated Dwelling Units (EDUs)	Non-Residential Building Area (ft^2)
Industrial Building Area	16.7	0.00	0	727,360
Access Roads/Hardscape/Parking	15.39	0.00	0	670,291
Landscape/Open Space/Retention Basins	4.38	0.00	0	190,815
Right of Way Dedication	3.07	0.00	0	133,708
Total	**39.54**		**0**	**1,722,174**

6 Project Water Demands

The Palm Springs Fulfillment Center (Project) proposes to develop 39.54 acres of vacant land in the Coachella Valley to include 16.70 acres (727,360 square feet) of industrial building area, 15.39

acres of parking, access roads, and hardscape, approximately 3 acres of right of way dedication, and 4.38 acres of landscaping, open space, and retention areas.

6.1 Projected Indoor Residential Water Demand

The projected indoor residential unit usage for this Water Supply Assessment/Water Supply Verification (WSA/WSV) is based on indoor water use performance standards as provided in the California Water Code (CWC) for residential water demand Water Code Section 10910 approved November 10, 2009, codified in CWC section 10608.20 (b)(2)(A). The projected indoor residential water demand for the Project is 0 due to there being no residential areas.

6.2 Projected Indoor Commercial and Industrial Water Demand

The projected indoor commercial and industrial unit usage for this WSA/WSV are based on the American Water Works Association Research Foundations (AWWARF's) Commercial and Industrial End Uses of Water. The projected indoor commercial and industrial water demand for the Project totals 78.13 AFY as shown in **Table 6-1** below.

Table 6-1: Projected Indoor Commercial and Industrial Water Demand

Planning Area	Indoor Area (ft^2)	Number of Rooms	Maximum Interior Floor Space per Unit	Water Demand Factor (gal/ ft^2)[1]	Water Demand (gpd)	Water Demand (AFY)
Industrial Planning Area	727,360			35	69,746.85	78.13

[1] AWWARF Commercial and Industrial End Uses of Water, 2000.

6.3 Projected Outdoor Irrigation Water Demand

The projected outdoor irrigation water usage is based on the District's Water Efficient Landscaping Guidelines which complies with the State of California's Water Conservation in Landscaping Act. Exhibit 1, *Landscape Documentation Package,* was referenced to calculate the projected outdoor irrigation water demand. In Exhibit 1, *Landscape Documentation Package,* a formula is provided to determine a project's annual maximum applied water allowance (MAWA). To calculate the total water demand for the Project, this document references the most updated ETo map for the region. Additionally, this document references the most updated evapotranspiration adjustment factor (ET adjustment factor) for the region. The projected outdoor irrigation water demand for the Project is 40.24 AFY as shown in **Table 6-2** below.

Table 6-2: Projected Outdoor Irrigation Water Demand

Planning Area	Landscaped Area (ft^2)	ETo (in/yr) [1]	ETAF [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
Industrial Building Area	0	83.3	0.45	0.62	0.00	0.00
Access Roads/Hardscape /Parking	335,194.20	83.3	0.45	0.62	21,342.87	23.91
Landscape/Open Space/Retention Areas	162,173.88	83.3	0.45	0.62	10,326.12	11.57
Right of Way Dedication	66,864.60	83.3	0.45	0.62	4,257.48	4.77
Total	**564,232.68**				**35,926.47**	**40.24**

[1] Reference Evapotranspiration (ETo) from CVWD Landscape Ordinance 1302.5, Appendix C

[2] Evapotranspiration Adjustment Factor (ETAF) from CVWD Landscape Ordinance 1302.5, Appendix D

[3] Conversion Factor from MSWD Water Efficient Landscaping Guidelines, Exhibit 1, Landscape Documentation Package

6.4 Projected Outdoor Water Features Demand

The projected outdoor recreational water usage is based on the Estimated Total Water Usage (ETWU) equation from Appendix D of CVWD's Landscape Ordinance No. 1302.5. The projected outdoor water features demand for the Project is 0 due to there being no outdoor water features.

6.5 Projected Total Water Demand

The total projected water demand for the Project is 118.37 AFY, or 2.99 acre-feet per acre, as shown in **Table 6-3** below.

Table 6-3: Projected Total Water Demand

Planning Area	Land Area (Acres)	Indoor Residential Demand (AFY)	Indoor Commercial and Industrial Demand (AFY)	Outdoor Irrigation Demand (AFY)	Outdoor Recreational Demand (AFY)	Total Water Demand (AFY)
Industrial Building Area	16.70	0.00	78.13	0.00	0.00	78.13
Access Roads/Hardscape/Parking	15.39	0.00	0.00	23.91	0.00	23.91
Landscape/Open Space/Retention Areas	4.38	0.00	0.00	11.57	0.00	11.57
Right of Way Dedication	3.07	0.00	0.00	4.77	0.00	4.77
Total	**39.54**	**0.00**	**78.13**	**40.24**	**0.00**	**118.37**

6.6 Projected Water Sources

Project domestic water supplies and associated landscape irrigation supplies will be provided from groundwater from the Mission Creek Subbasin in the Coachella Valley Groundwater Basin via Mission Springs Water District (MSWD) potable water distribution system. This source will serve all indoor and outdoor uses as shown in **Table 6-4** below.

Table 6-4: Projected Water Sources

Planning Area	Land Area (Acres)	Indoor Residential Demand	Indoor Commercial and Industrial Demand	Outdoor Irrigation Demand	Outdoor Water Feature Demand
Industrial Building Area	16.70		MSWD Domestic Water System		
Access Roads/Hardscape/Parking	15.39			MSWD Domestic Water System	
Landscape/Open Space/Retention Areas	4.38				
Right of Way Dedication	3.07				

6.7 Conservation Measures

The following section describes the water conservation measures to be implemented by the proposed Project.

6.7.1 Project Specific Water Conservation Measures

A broad range of design components and mitigation measures will be implemented to address the Project's potential impacts on water resources.

Project developers will be required to implement the following measures in order to assure the most efficient use of water resources and to meet and maintain the 2010 CVWMP Update goals throughout the life of the Project:

1. To the greatest extent practicable, native plant materials and other drought-tolerant plants shall be used in all non-turf areas of Project landscaping. Turf and other water-intensive landscaped areas shall be kept to the minimum necessary and consistent with the functional and aesthetic needs of the Project, while providing soil stability to resist erosion.

2. The landscaping and irrigation plans and irrigation system shall comply with all City ordinances and MSWD's Water Efficient Landscaping Guidelines relating to water

efficiency, and irrigation shall be an automatic system with an irrigation timer and two drop or bubbler heads per tree to produce deep root irrigation.

3. In the event recycled water becomes available to the Project, the potential use of tertiary treated water will be reviewed to determine feasibility of its use for on-site landscaped areas to reduce the use of groundwater for irrigation.

7 Availability of Sufficient Supplies

7.1 Water Supply Assessment

Based on the analysis in this Water Supply Assessment (WSA), the projected total water demand for the Palm Springs Fulfillment Center (Project) will be 118.37 acre-feet per year (AFY), or 2.99 acre-feet per acre. MSWD's long-term water management planning ensures that adequate water supplies are available to meet existing and future water needs within its service area. MSWD's urban water demand was 8,269 acre-feet (AF) for 2020, and the projected urban water demand by 2025 is 8,996 and by 2045 is 17,494 AFY. This Project's water demand of 118.37 AFY accounts for approximately 16.3 percent of the total planned increase in demand of 727 AFY by 2025 based off 2020's water demand of 8,269 and approximately 1.3 percent of the total planned increases in demand of 9,225 AFY by 2045 based off 2020's water demand.

This WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of MSWD, as required by Senate Bill (SB) 610 and SB 1262. This WSA also includes identification of existing water supply entitlements, water rights, water service contracts, and agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA has been prepared in compliance with the requirements of SB 610 and SB 1262 by MSA Consulting in consultation with MSWD and the City. This WSA does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations including the 2009 Mission Springs Water District Water Efficient Landscaping Guidelines, and indoor water use performance standards provided in the California Water Code now or in the future.

Consistent with the provisions of SB 610, neither this WSA nor its approval shall be construed to create a right or entitlement to water service or any specific level of water service, and shall not impose, expand, or limit any duty concerning the obligation of MSWD to provide certain service to its existing customers or to any future potential customers.

This WSA does not constitute an agreement to provide water service to the Project, and does not entitle the Project, Project applicant, or any other person or entity to any right, priority, or allocation in any supply, capacity, or facility. To receive water service, the Project will be subject to an agreement with MSWD, together with any and all applicable fees, charges, plans and

specifications, conditions, and any and all other applicable MSWD requirements in place and as amended from time to time. Nor does anything in this WSA prevent or otherwise interfere with MSWD's discretionary authority to declare a water shortage emergency in accordance with the Water Code.

This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify MSWD when construction begins.

7.2 Requirement for Written Verification of Water Supply Availability

Government Code §66473.7 requires that a Written Verification of Water Supply (WV) be prepared in connection with the approval of a development agreement or tentative map that includes a subdivision. A subdivision is defined as a proposed residential development of more than 500 units, except that for a water agency with fewer than 5,000 service connections, a subdivision includes a residential development project that would account for an increase of 10 percent or more in the number of the agency's existing service connections.

This WSA is not a WV. If the City determines that the Project or any planning area meets the definition of a subdivision and therefore requires preparation of a WV, the City must request a WV prepared by MSWD in compliance with the requirements of SB 221. This WSA may be used to support the WV. Depending on circumstances including but not limited to new water efficiency regulations or changes in water supply availability, MSWD may recommend preparation of an updated supply and demand assessment to support the WV.

8 References

American Water Works Association Research Foundation, *Commercial and Institutional End Uses of Water*, 2000

California Department of Water Resources, *Final State Water Project Delivery Capability Report 2019*, August 2020

California Department of Water Resources, *Results of the Indoor Residential Water Use Study*, November 2021

California Department of Water Resources, *State Water Project Historical Table A Allocations, Water Years 1996-2023*, April 2023

Coachella Valley Water District, Coachella Water Authority, Desert Water Agency, Indio Water Authority, Mission Springs Water District, Myoma Dunes Mutual Water Company, *2020 Coachella Valley Regional Urban Water Management Plan*, Water Systems Consulting, Inc., June 2021

Coachella Valley Water District, *2023-2024 Engineer's Report on Water Supply and Replenishment Assessment*, April 2023

Mission Springs Water District Water Efficient Landscaping Guidelines, September 2009

Mission Springs Water District website

CVWD Landscape Ordinance 1302.5, Appendix C

CVWD Landscape Ordinance 1302.5, Appendix D

Coachella Valley Water District, Coachella Water Authority, Desert Water Agency, and Indio Water Authority, *Indio Subbasin Annual Report for Water Year 2021-2022*, Todd Groundwater Inc., March 2023

Coachella Valley Water District, Coachella Water Authority, Desert Water Agency, and Indio Water Authority, *2022 Indio Subbasin Water Management Plan Update/Alternative Plan Update*, Todd Groundwater Inc., December 2021

Coachella Valley Water District, Desert Water Agency, and Mission Springs Water District, *Mission Creek Subbasin Annual Report for Water Year 2021-2022*, Wood Environment & Infrastructure Solutions Inc., February 2023

United States Bureau of Reclamation, *Colorado River Accounting and Water Use Reports for Arizona, California, and Nevada*

Appendix N

Project Alternatives Memo

January 18, 2024

Ms. Michelle Witherspoon
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

N. INDIAN CANYON / 19TH AVE. HIGH-CUBE WAREHOUSE, PROJECT ALTERNATIVES

Dear Ms. Michelle Witherspoon:

Three alternatives to the N. Indian Canyon / 19th Ave. High-Cube Warehouse are evaluated in this letter as follows:

Alternative 1: No Project

Under the No Project Alternative ("Alternative 1"), the project site would remain vacant. Therefore, there would be no VMT impacts or LOS improvement needs.

Alternative 2: Reduced Intensity

Alternative 2 involves the same type of land uses as the Project (high-cube warehouse), with reduced square footage to a Project size of 369,680 square feet.

Alternative 3: Industrial Business Park

Under the Industrial Business Park Alternative ("Alternative 3"), the project would involve a mixed use multi-building project representing a typical industrial business park. For trip generation purposes, Project Alternative 3 has been represented as 860,000 square feet of Industrial Park.

PROJECT TRIP GENERATION

The N. Indian Canyon / 19th Avenue High-Cube Warehouse Traffic Analysis (**TA**), March 1, 2023 evaluated a 739,360 square foot high-cube warehouse project. Table 1 presents the actual vehicle trip generation rates and resulting trip generation summary for the proposed Project (consistent with the TA). As shown on Table 1, the proposed Project is anticipated to generate a net total of 1,574 trip-ends per day with 89 vehicles per hour (VPH) during the AM peak hour and 122 VPH during the PM peak hour.

Table 2 presents the passenger-car-equivalent (PCE) trip generation rates for the Project with the resulting PCE daily and peak hour trip generation estimates (consistent with the TA). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses.

As shown on Table 2, the Project is anticipated to generate a total of 2,134 PCE trip-ends per day, 118 PCE AM peak hour trips and 155 PCE PM peak hour trips.

Trip Generation for Alternative 2: Reduced Intensity

Trip rates used in the N. Indian Canyon / 19th Avenue High-Cube Warehouse TA are also used to develop trip generation for Project Alternative 2.

As shown on Table 3, Alternative 2 is anticipated to generate a net total of 787 trip-ends per day with 45 vehicles per hour (VPH) during the AM peak hour and 61 VPH during the PM peak hour.

As shown on Table 4, Project Alternative 2 is anticipated to generate a total of 1,068 PCE trip-ends per day with 59 PCE AM peak hour trips and 76 PCE PM peak hour trips.

Trip Generation for Alternative 3: Industrial Business Park

For the Project Alternative 3, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation (11th Edition, 2021) manual for Industrial Park (Code 130) are utilized.

Project Alternative 3 (Industrial Business Park) is shown on Table 5 for actual vehicle trips. The Project alternative is anticipated to generate a total of 2,898 trip-ends per day with 292 vehicles per hour (VPH) during the AM peak hour and 292 VPH during the PM peak hour.

As shown on Table 6, Project Alternative 3 is anticipated to generate a total of 4,338 PCE trip-ends per day with 431 PCE AM peak hour trips and 389 PCE PM peak hour trips.

Trip Generation Comparisons

Based on the comparison results presented on Table 7 for actual vehicles and Table 8 for PCEs, the potential Project land use alternatives are estimated to generate the following differences when compared to the proposed Project provided in TA:

- Alternative 2: Reduced Intensity
  - 787 fewer trip-ends per day, 44 fewer AM peak hour trips, and 61 fewer PM peak hour trips.
  - 1,066 fewer PCE trip-ends per day, 59 fewer PCE AM peak hour trips, and 79 fewer PCE PM peak hour trips.
- Alternative 3: Industrial Business Park
  - 1,324 more trip-ends per day, 203 more AM peak hour trips, and 170 more PM peak hour trips.
  - 2,204 more PCE trip-ends per day, 313 more PCE AM peak hour trips, and 234 more PCE PM peak hour trips.

LOS AND VMT ANALYSIS IMPLICATIONS

As a result of the TA, the Project is recommended to install a traffic signal at the intersection of Indian Canyon Drive at 19th Avenue. The traffic signal at the intersection of Indian Canyon Drive at 19th Avenue is warranted and required to achieve acceptable intersection operations for existing conditions. This traffic signal also involves providing separate eastbound and westbound left turn lanes.

For Driveway 4 at 19th Avenue, the TA recommends that the Project provide a southbound shared left-through-right lane and an extended westbound right turn storage area for the staging of entering trucks.

For Indian Canyon Drive at Driveway 1, the TA recommends the Project restrict left urn movements to/from Indian Canyon Drive and provide an eastbound right turn lane.

For Indian Canyon Drive at Driveway 2, the TA recommends the Project providing a northbound left turn lane and an eastbound shared left-right turn lane.

For Indian Canyon Drive at Driveway 3, the TA recommends the Project restrict left urn movements to/from Indian Canyon Drive and provide an eastbound right turn lane.

The other study area intersections were found in the TA to experience acceptable level of service for all evaluated scenarios.

LOS and VMT Implications for Alternative 2: Reduced Intensity

Intersections that are anticipated to experience acceptable operations with the Project are also anticipated to experience acceptable operations with Project Alternative 2. The Project access configurations for Alternative 2 (Reduced Intensity) and the improvements to the intersection of Indian Canyon Drive / 19th Avenue are likely to be comparable to the Proposed Project.

The Project is located adjacent to other commercial / industrial buildings and vacant lots, rather than in a populous area. The Project VMT impact is based upon VMT per service population (in this case, employees). Although Alternative 2 (reduced intensity high-cube warehouse) generates significantly less vehicle and PCE traffic volumes in comparison to the Project, the VMT impact that was found for the proposed Project in the N. Indian Canyon / 19th Ave. High-Cube Warehouse Vehicle Miles Traveled (VMT) Analysis is likely to remain with Alternative 2.

LOS and VMT Implications for Alternative 3: Industrial Business Park

The Project access configurations for Alternative 3 (Industrial Business Park) and signal improvements to the Indian Canyon Drive / 19th Avenue intersection are likely to be comparable to the Proposed Project. However, it is possible that the increase in trip generation would contribute traffic volumes to intersections that are forecast to experience LOS D conditions with the proposed Project, resulting in LOS E or F conditions, which would lead to a recommendation for additional lanes to maintain an acceptable level of service, particularly for the Indian Canyon Drive / Dillon Road intersection or the I-10 EB Ramps / Garnet Avenue intersection.

The VMT impact that was found for the Project in the N. Indian Canyon / 19th Ave. High-Cube Warehouse Vehicle Miles Traveled (VMT) Analysis would remain with Alternative 3.

CONCLUSIONS

The land use alternatives discussed above are anticipated to experience the following differences when compared to the proposed Project:

- Alternative 1: No Project
  - No VMT impact is anticipated for Alternative 1 because existing (vacant) land uses remain.
  - Project driveway intersections and lanes would not be necessary if the site remained vacant.
  - The intersection of Indian Canyon Drive / 19th Avenue would continue to operate at LOS "F" in the PM peak hour, consistent with existing conditions, unless another funding source for the currently warranted traffic signal (and associated east/west left turn lanes) were found.
- Alternative 2: Reduced Intensity
  - The reduction in intensity associated with Alternative 2 does not qualify the Project Alternative 2 to screen out of VMT analysis. In addition, the VMT impact that was found for the proposed Project in the N. Indian Canyon / 19th Avenue High-Cube Warehouse VMT Analysis is anticipated to remain with Alternative 2.
  - The Project access configurations for Alternative 2 (Reduced Intensity) and the improvements to the intersection of Indian Canyon Drive / 19th Avenue are likely to be comparable to the Proposed Project.
- Alternative 3: Industrial Business Park
  - The VMT impact that was found for the proposed Project in the N. Indian Canyon / 19th Avenue High-Cube Warehouse VMT Analysis is anticipated to remain with Alternative 3.
  - The Project access configurations for Alternative 3 (Industrial Business Park) and the improvements to the intersection of Indian Canyon Drive / 19th Avenue are likely to be comparable to the Proposed Project.
  - However, it is possible that additional lanes might be required to maintain an acceptable level of service, particularly for the intersection of Indian Canyon Drive / Dillon Road or the intersection of I-10 EB Ramps / Garnet Avenue.

If you have any questions, please contact John Kain at (949) 375-2435 or Marlie Whiteman at (714) 585-0574.

Respectfully submitted,

URBAN CROSSROADS, INC.

John Kain, AICP
Principal

Marlie Whiteman, PE
Senior Associate

TABLE 1: PROPOSED PROJECT TRIP GENERATION SUMMARY
ACTUAL VEHICLES

Proposed Project Trip Generation Rates (Actual Vehicles)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	--	739.360 TSF	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4-Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217

Proposed Project Trip Generation Results (Actual Vehicles)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4-Axle Trucks			*4*	*1*	*5*	*2*	*6*	*8*	*120*
5+-Axle Trucks			*6*	*2*	*8*	*2*	*5*	*7*	*160*
- Net Truck Trips (Actual Vehicles)			10	3	13	4	11	15	280
PROPOSED PROJECT TOTAL TRIPS (ACTUAL VEHICLES)[3]			68	21	89	34	88	122	1,574

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] Proposed Project Total Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

TABLE 2: PROPOSED PROJECT TRIP GENERATION SUMMARY
PASSENGER CAR EQUIVALENTS (PCE)

Proposed Project Trip Generation Rates (PCE)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	-	739.360 TSF	0.121	0.039	0.160	0.058	0.149	0.207	2.887
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4 Axle Trucks (PCE = 3.0)[3]			0.018	0.006	0.024	0.009	0.024	0.033	0.486
5+-Axle Trucks (PCE = 3.0)[3]			0.024	0.009	0.033	0.009	0.021	0.030	0.651

Proposed Project Trip Generation Results (PCE)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	739.360 TSF							
- Passenger Cars			58	18	76	30	77	107	1,294
- Truck Trips									
2 to 4 Axle Trucks (PCE = 3.0)			*13*	*4*	*17*	*7*	*18*	*25*	*359*
5+-Axle Trucks (PCE = 3.0)			*18*	*7*	*25*	*7*	*16*	*23*	*481*
- Net Truck Trips (PCE)[3]			31	11	42	14	34	48	840
PROPOSED PROJECT TOTAL TRIPS (PCE)[4]			89	29	118	44	111	155	2,134

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] PCE = Passenger Car Equivalent
The County of Riverside TIA & VMT Guidelines (December 2020) provide the following PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+ axle = 3.0.
Since the WSP study does not provide a breakdown between the 2 to 4-axle trucks, the highest PCE factor of 3 has been utilized.

[4] Proposed Project Total Trips (PCE) = Passenger Cars + Net Truck Trips (PCE).

TABLE 3: ALTERNATIVE 2, REDUCED INTENSITY PROJECT TRIP GENERATION SUMMARY ACTUAL VEHICLES

Alternative 2 Project Trip Generation Rates (Actual Vehicles)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	--	369.680 TSF	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4-Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217

Alternative 2 Project Trip Generation Results (Actual Vehicles)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	369.680 TSF							
- Passenger Cars			29	9	38	15	38	53	647
- Truck Trips									
2 to 4-Axle Trucks			*2*	*1*	*3*	*1*	*3*	*4*	*60*
5+-Axle Trucks			*3*	*1*	*4*	*1*	*3*	*4*	*80*
- Net Truck Trips (Actual Vehicles)			5	2	7	2	6	8	140
ALTERNATIVE 2 PROJECT TOTAL TRIPS (ACTUAL VEHICLES)[3]			34	11	45	17	44	61	787

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] Alternative 2 Project Total Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

TABLE 4: ALTERNATIVE 2, REDUCED INTENSITY PROJECT TRIP GENERATION SUMMARY PASSENGER CAR EQUIVALENTS (PCE)

Alternative 2 Project Trip Generation Rates (PCE)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse[2]	-	369.680 TSF	0.121	0.039	0.160	0.058	0.149	0.207	2.887
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2 to 4 Axle Trucks (PCE = 3.0)[3]			0.018	0.006	0.024	0.009	0.024	0.033	0.486
5+-Axle Trucks (PCE = 3.0)[3]			0.024	0.009	0.033	0.009	0.021	0.030	0.651

Alternative 2 Project Trip Generation Results (PCE)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
High-Cube Warehouse	--	369.680 TSF							
- Passenger Cars			29	9	38	15	38	53	647
- Truck Trips									
2 to 4 Axle Trucks (PCE = 3.0)			*7*	*2*	*9*	*3*	*9*	*12*	*180*
5+-Axle Trucks (PCE = 3.0)			*9*	*3*	*12*	*3*	*8*	*11*	*241*
- Net Truck Trips (PCE)[3]			16	5	21	6	17	23	421
ALTERNATIVE 2 PROJECT TOTAL TRIPS (PCE)[4]			45	14	59	21	55	76	1,068

[1] TSF = Thousand Square Feet

[2] Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.
AM/PM peak hour (in/out) splits are estimated from ITE 154 (High-Cube Transload & Short-Term Storage Warehouse)

[3] PCE = Passenger Car Equivalent
The County of Riverside TIA & VMT Guidelines (December 2020) provide the following PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+ axle = 3.0.
Since the WSP study does not provide a breakdown between the 2 to 4-axle trucks, the highest PCE factor of 3 has been utilized.

[4] Alternative 2 Project Total Trips (PCE) = Passenger Cars + Net Truck Trips (PCE).

TABLE 5: ALTERNATIVE 3, INDUSTRIAL BUSINESS PARK PROJECT TRIP GENERATION SUMMARY ACTUAL VEHICLES

Alternative 3 Project Trip Generation Rates (Actual Vehicles)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Industrial Park[2,3,4]	130	860.000 TSF	0.280	0.060	0.340	0.070	0.270	0.340	3.370
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.194	0.042	0.236	0.055	0.211	0.266	2.285
2-Axle Trucks (5.10% AM, 3.70% PM, 5.40% Daily)			0.014	0.003	0.017	0.003	0.010	0.012	0.181
3-Axle Trucks (6.40% AM, 4.60% PM, 6.70% Daily)			0.018	0.004	0.022	0.003	0.012	0.015	0.225
4-Axle+ Trucks (19.30% AM, 13.40% PM, 20.10% Daily)			0.054	0.011	0.065	0.009	0.037	0.046	0.679

Alternative 3 Project Trip Generation Results (Actual Vehicles)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Industrial Park	130	860.000 TSF							
- Passenger Cars			167	36	203	47	181	228	1,965
Truck Trips (2-axle):			*12*	*3*	*15*	*2*	*8*	*10*	*156*
Truck Trips (3-axle):			*15*	*3*	*18*	*3*	*11*	*14*	*193*
Truck Trips (4+-axle):			*46*	*10*	*56*	*8*	*32*	*40*	*584*
- Net Truck Trips (Actual Vehicles)			73	16	89	13	51	64	933
ALTERNATIVE 3 PROJECT TOTAL TRIPS (ACTUAL VEHICLES)[5]			240	52	292	60	232	292	2,898

[1] TSF = Thousand Square Feet

[2] Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Handbook, Third Edition (September 2017).

[3] Vehicle Mix Source: Institute of Transportation Engineers (ITE), High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016).

[4] Truck Mix Source: SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014).
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

[5] Alternative 3 Project Total (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

TABLE 6: ALTERNATIVE 3, INDUSTRIAL BUSINESS PARK PROJECT TRIP GENERATION SUMMARY PASSENGER CAR EQUIVALENTS (PCE)

Alternative 3 Project Trip Generation Rates (PCE)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Industrial Park	130	860.000 TSF	0.413	0.088	0.501	0.093	0.361	0.454	5.044
- Passenger Cars			0.194	0.042	0.236	0.055	0.211	0.266	2.285
2-Axle Trucks (PCE = 1.5)			0.022	0.005	0.027	0.004	0.015	0.019	0.272
3-Axle Trucks (PCE = 2.0)			0.036	0.007	0.043	0.006	0.024	0.030	0.449
2 to 4 axle + Trucks (PCE = 3.0)			0.162	0.034	0.196	0.028	0.111	0.139	2.038

Alternative 3 Project Trip Generation Results (PCE)

Land Use	ITE LU Code	Quantity[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Industrial Park	130	860.000 TSF							
- Passenger Cars			167	36	203	47	181	228	1,965
- Truck Trips									
2-Axle Trucks (PCE = 1.5)			*19*	*4*	*23*	*3*	*13*	*16*	*234*
3-Axle Trucks (PCE = 2.0)			*31*	*6*	*37*	*5*	*21*	*26*	*386*
2 to 4 axle + Trucks (PCE = 3.0)			*139*	*29*	*168*	*24*	*95*	*119*	*1,753*
- Net Truck Trips (PCE)[2]			189	39	228	32	129	161	2,373
ALTERNATIVE 3 PROJECT TOTAL TRIPS (PCE)[3]			356	75	431	79	310	389	4,338

[1] TSF = Thousand Square Feet

[2] PCE = Passenger Car Equivalent
The County of Riverside TIA & VMT Guidelines (December 2020) provide the following PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+ axle = 3.0.

[3] Alternative 3 Project Total (PCE) = Passenger Cars + Net Truck Trips (PCE).

TABLE 7: PROJECT TRIP GENERATION COMPARISON SUMMARY
ACTUAL VEHICLES

Land Use[1]	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Alternative 2 Trip Generation Comparison (Actual Vehicles)							
Proposed Project ➢ ***High-Cube Warehouse*** *- 739.360 TSF*	68	21	89	34	88	122	1,574
Alternative 2, Reduced Intensity ➢ ***High-Cube Warehouse*** *- 369.680 TSF*	34	11	45	17	44	61	787
ALTERNATIVE 2 DELTA ACTUAL VEHICLES **(Alternative 2 - Proposed Project)**	**-34**	**-10**	**-44**	**-17**	**-44**	**-61**	**-787**
Alternative 3 Trip Generation Comparison (Actual Vehicles)							
Proposed Project ➢ ***High-Cube Warehouse*** *- 739.360 TSF*	68	21	89	34	88	122	1,574
Alternative 3, Industrial Business Park ➢ ***Industrial Park*** *- 860 TSF*	240	52	292	60	232	292	2,898
ALTERNATIVE 3 DELTA ACTUAL VEHICLES **(Alternative 3 - Proposed Project)**	**172**	**31**	**203**	**26**	**144**	**170**	**1,324**

[1] TSF = Thousand Square Feet

TABLE 8: PROJECT TRIP GENERATION COMPARISON SUMMARY
PASSENGER CAR EQUIVALENTS (PCE)

Land Use[1]	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Alternative 2 Trip Generation Comparison (PCE)							
Proposed Project ➢ ***High-Cube Warehouse*** *- 739.360 TSF*	89	29	118	44	111	155	2,134
Alternative 2, Reduced Intensity ➢ ***High-Cube Warehouse*** *- 369.680 TSF*	45	14	59	21	55	76	1,068
ALTERNATIVE 2 DELTA PCE **(Alternative 2 - Proposed Project)**	**-44**	**-15**	**-59**	**-23**	**-56**	**-79**	**-1,066**
Alternative 3 Trip Generation Comparison (PCE)							
Proposed Project ➢ ***High-Cube Warehouse*** *- 739.360 TSF*	89	29	118	44	111	155	2,134
Alternative 3, Industrial Business Park ➢ ***Industrial Park*** *- 860 TSF*	356	75	431	79	310	389	4,338
ALTERNATIVE 3 DELTA PCE **(Alternative 3 - Proposed Project)**	**267**	**46**	**313**	**35**	**199**	**234**	**2,204**

[1] TSF = Thousand Square Feet

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