Environmental Checklist Form (Initial Study)

County of Los Angeles, Department of Regional Planning

Project title: Trojan Calabasas / Project No. 2020-000422 / Case No(s). RPPL2020000735

Lead agency name and address: Los Angeles County, 320 West Temple Street, Los Angeles, CA 90012

Contact Person and phone number: Ingo Giani, 310-372-8600

Project sponsor's name and address: Trojan Storage, 1732 Aviation Boulevard, Suite 217, Redondo Beach, California 90278

Project location: Vicinity of Old Scandia Lane and Ventura Boulevard, at 5050 Old Scandia Lane, in unincorporated County of Los Angeles (County). The Project site is north of the City of Calabasas and south of the City of Hidden Hills. *Assessor Parcel Number (APN)*: 2049-022-040 *United States Geological Survey (USGS) Quad*: Calabasas. See **Exhibit 1: Regional Vicinity**; and **Exhibit 2: Site Vicinity**.

Gross Acreage: 3.83

General Plan Designation: N/A.

Community/Area wide Plan Designation: C (Commercial) land use category of the Santa Monica Mountains North Area Plan Land Use Policy Map.

Zoning: Malibu Zoned District, M-1 (Light Manufacturing) Zone. Surrounding zoning is City of Hidden Hills large-lot residential to the north, M-1 Zone to the south and east, and Heavy Manufacturing – Development Program (M-2-DP) Zone to the west.

Description of project: The Project site is comprised of a single approximately 3.83-gross acre vacant undeveloped property situated immediately east of the existing Los Angeles Pet Cemetery. The Old Scandia Lane frontage contains an approximately 11-foot area with sidewalk and ornamental landscaping.

The Project proposes construction and operation of an approximately 155,900 square feet (SF) of self-storage facility (79,991 SF aboveground and 75,909 SF belowground) in three buildings, with 1,334 self-storage units, a 2,000 SF office/manager's residence, and 27 surface parking spaces; see **Exhibit 3: Conceptual Site Plan.** Development is oriented toward the site's Old Scandia Lane frontage to avoid the steep-sloped hillside at the site's rear/northern portion. Primary access to the Project site is proposed via an entrance/exit driveway off of Old Scandia Lane. The proposed facility would provide storage space for personal goods, business goods, and recreational vehicles. No outside storage is proposed. The hours of operation would be from 9 AM to 9 PM daily.

The Project's construction activities are estimated to occur over approximately 18 months, beginning in the fourth quarter of 2024 and ending in the second quarter of 2026. Construction would require approximately 38,253 CY of cut and 1,454 CY of fill, with a net export of approximately 36,799 CY. Grading would be mostly toward the site's southern portion, where buildings and paved areas are proposed.

Surrounding land uses and setting: The Project site is in the Santa Monica Mountains North Area, north of the 101 Freeway and Ventura Boulevard. The Project site is entirely undeveloped and disturbed by pre-existing conditions. The Project site's topography contains moderate to steep slopes, with elevations increasing towards the site's rear portion and ranging from 945 to 1,050 feet above mean sea level. The onsite vegetation is ruderal/disturbed and several ornamental pepper trees occur at the Project site's northeastern and southwestern portions.

The land uses surrounding the Project site are vacant land and City of Hidden Hills large-lot single-family residential uses to the north, light industrial/manufacturing uses to the south (beyond Old Scandia Lane), light industrial and commercial uses to the east, and a pet cemetery to the west.

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code § 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the California Environmental Quality Act (CEQA) process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code § 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code § 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code § 21082.3(c) contains provisions specific to confidentiality.

The County has received one request for consultation; see **Section 18: Tribal Cultural Resources**.

Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

Public Agency	*Approval Required*
U.S. Army Corps of Engineers	Nationwide Permit
California Department of Fish and Wildlife (CDFW)	§ 1602 Lake or Streambed Alteration Agreement
Los Angeles Regional Water Quality Control Board	Water Discharge Requirements (WDR)

Major projects in the area:

Project/Case No.	*Description and Status*
None	N/A

Exhibit 1: Regional Vicinity

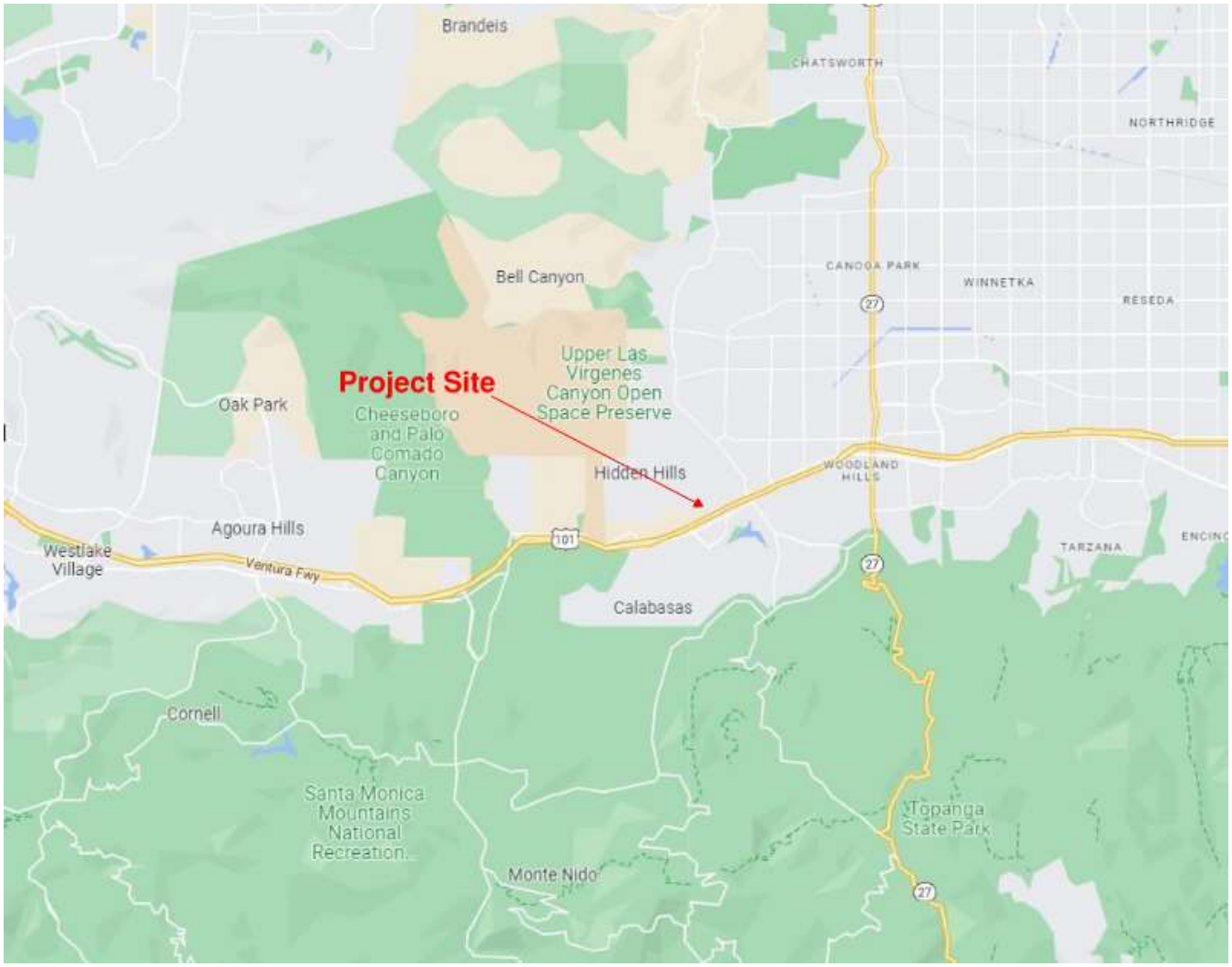


Exhibit 2: Site Vicinity

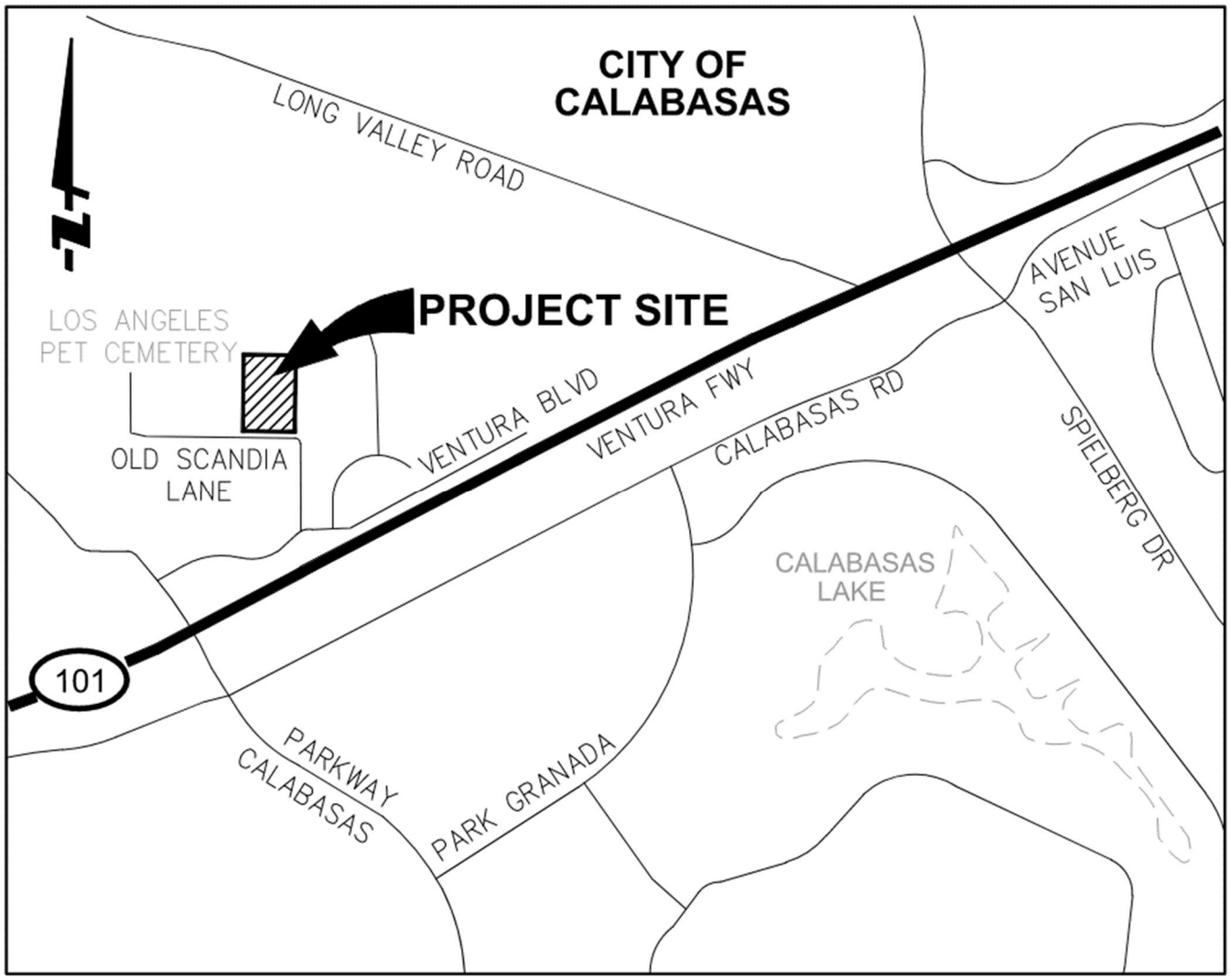
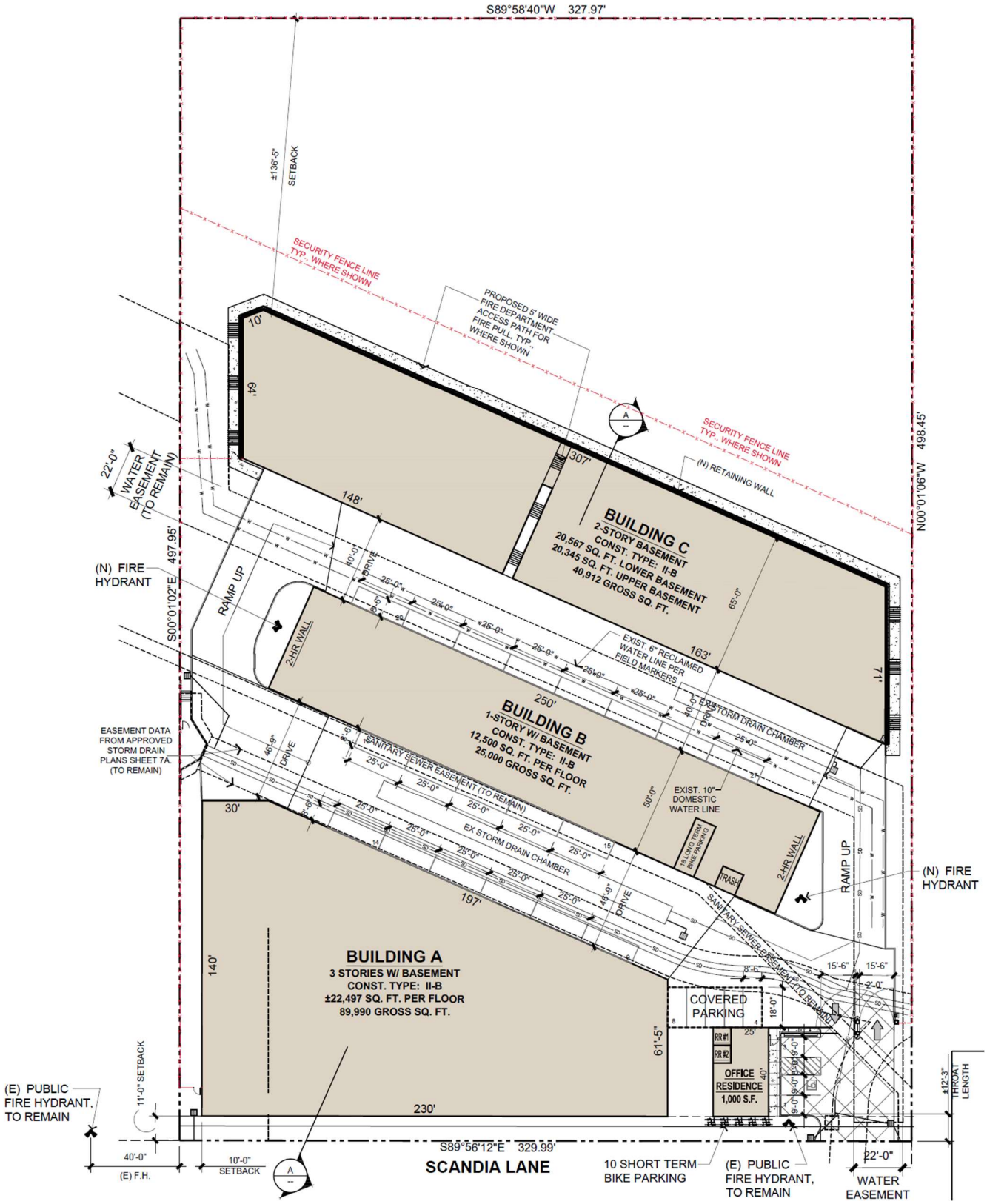


Exhibit 3: Conceptual Site Plan



Reviewing Agencies: [*See* **CEQA Appendix B** *to help determine which agencies should review your project***]**

Responsible Agencies	*Special Reviewing Agencies*	*Regional Significance*
☐ None Regional Water Quality Control Board: ☒ Los Angeles Region ☐ Lahontan Region ☐ Coastal Commission ☒ Army Corps of Engineers ☐ LAFCO	☐ None ☒ Santa Monica Mountains Conservancy ☐ National Parks ☐ National Forest ☐ Edwards Air Force Base ☐ Resource Conservation District of Santa Monica Mountains Area	☐ None ☐ SCAG Criteria ☐ Air Quality ☐ Water Resources ☒ Santa Monica Mountains Area
Trustee Agencies	*County Reviewing Agencies*	
☐ None ☒ State Dept. of Fish and Wildlife ☐ State Dept. of Parks and Recreation ☐ State Lands Commission ☐ University of California (Natural Land and Water Reserves System)	☒ DPW – Land Development Division ☒ Fire Department ☒ Public Health/Environmental Health Division:	

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially significant impacts affected by this project.

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

DETERMINATION: (To be completed by the Lead Department.)
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.

William Chen — Signature (Prepared by)

17SEP24 — Date

Rob Glaser — Signature (Approved by)

17SEP24 — Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources the Lead Department cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the Lead Department has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. (Mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.)

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA processes, an effect has been adequately analyzed in an earlier EIR or negative declaration. (State CEQA Guidelines § 15063(c)(3)(D).) In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) The explanation of each issue should identify: the significance threshold, if any, used to evaluate each question, and; mitigation measures identified, if any, to reduce the impact to less than significant. Sources of thresholds include the County General Plan, other County planning documents, and County ordinances. Some thresholds are unique to geographical locations.

1. AESTHETICS

Except as provided in Public Resources Code § 21099, would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
1a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

There are no scenic vistas within or adjacent to the Project site.[1] Therefore, the Project would not result in any adverse effect on a scenic vista. No impact would occur.

1b) Be visible from or obstruct views from a regional riding, hiking, or multi-use trail?	☐	☐	☐	☒

There are no regional riding, hiking, or multi-use trails that traverse or are near the Project site.[2] The trail nearest the Project site (Calabasas Stairs Trail) is approximately 1.7 miles to the south. There are no views of the Project site from this trail given they are obstructed by intervening residential and other uses. Therefore, the Project would not be visible from or obstruct views from a regional riding, hiking, or multi-use trail. No impact would occur.

1c) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

The Project site is not near a State scenic highway.[3] There are no special status or landmark trees located onsite. Only sparse ruderal/disturbed vegetation occurs onsite, with several ornamental pepper trees at the Project site's northeastern and southwestern portions; see Responses 4a and 4b. Additionally, there are no rock outcroppings or historic buildings on or near the Project site; see Response 5a. Therefore, the Project would not damage any scenic resource within a State scenic highway. No impact would occur.

1d) Substantially degrade the existing visual character or quality of public views of the site and its surroundings because of height, bulk, pattern, scale, character, or other features and/or conflict with applicable zoning and other regulations governing scenic quality? (Public views are those that are experienced from publicly accessible vantage point)	☐	☐	☒	☐

The land uses surrounding the Project site are vacant land and large-lot single-family residential uses to the north, light industrial/manufacturing uses to the south, light industrial and commercial uses to the east, and a pet cemetery to the west. Therefore, public views of the Project site are limited to the site's frontage, as

(1 Los Angeles County Department of Regional Planning. SMMLCP-NET: Scenic Resources layer. https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=SMMLCP_NET.SMMLCP. Accessed 06/15/22.
2 Los Angeles County Department of Regional Planning. SMMLCP-NET: Scenic Resources layer. https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=SMMLCP_NET.SMMLCP. Accessed 06/15/22.
3 Caltrans. 2022. State Scenic Highways Map. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed 08/26/22.

experienced from Old Scandia Lane. The Project proposes one three-story storage building (maximum building height of 75 feet) and one two-story office/residence building (maximum building height of 75 feet) along the site's frontage (Old Scandia Lane), and two two-story storage buildings on the middle and northern portions of the site (maximum building height of 75 feet). Thus, the Project places the taller buildings near existing industrial buildings to the south and transitions to shorter buildings near single-family residential uses to the north. The Project site is zoned M-1 and the self-storage facility is a permitted use in the M-1 Zone; see County Municipal Code (LACMC) Chapter 22.332 and County of Los Angeles Code of Ordinances (County Code) § 22.22.010.[4,5] The development is subject to compliance with the M-1 Zone's site development standards that influence visual character (e.g., building materials and height, lot coverage, setbacks, etc.).[6,7] As a light industrial use, the self-storage facility would be compatible with the immediately adjacent industrial/manufacturing uses to the south, and the light industrial and commercial uses to the east, concerning height, bulk, pattern, scale, and character. Moreover, the self-storage facility would continue the pattern of existing light industrial uses. Therefore, the Project would not degrade the existing visual character or quality of public views of the site or its surroundings. A less than significant impact would occur, and no mitigation is required.

1e) Create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area? ☐ ☐ ☒ ☐

The Project site is not within a Rural Outdoor Lighting District, however, the cemetery adjacent to the west is within a Rural Outdoor Lighting District.[8] Existing outdoor lighting at and near the Project site is associated with light industrial, commercial, single-family residential, and street lighting along Old Scandia Way typical of urbanized areas. The Project would generate lighting from two primary sources: lighting from building interiors that would pass through windows, and lighting from exterior sources (e.g., building illumination, parking lot and drive aisle lighting, security lighting, and landscape lighting). The Project would be subject to compliance with County Code § 22.140.560 lighting standards, which include requirements for light shielding, deflecting, and shading.[9] The Project's drive aisles are interior to the Project site; thus, drive aisle lighting would also be shielded by the proposed buildings. Therefore, a less than significant impact would occur, and no mitigation is required.

[4] County of Los Angeles Municipal Code. 2022. Chapter 22.336.060. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances/354460?nodeId=TIT22PLZO_DIV10COSTDI_CH22.336SAMOMONOARCOSTDI_22.336.060COWIDEST. Accessed 08/26/2022.

[5] County of Los Angeles Code of Ordinances. 2022. Title 22 Planning and Zoning – Chapter 22.22 Industrial Zones. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT22PLZO_DIV3ZO_CH22.22INZO_22.22.010PU. Accessed 08/26/22.

[6] County of Los Angeles Code of Ordinances. Title 22 Planning and Zoning – Division 6, Development Standards. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT22PLZO_DIV6DEST. Accessed 08/26/22.

[7] County of Los Angeles Municipal Code. 2022. Chapter 22.336.060. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances/354460?nodeId=TIT22PLZO_DIV10COSTDI_CH22.336SAMOMONOARCOSTDI_22.336.060COWIDEST. Accessed 08/26/2022.

[8] Los Angeles County Department of Regional Planning. https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public. Accessed 06/15/22.

[9] County of Los Angeles Code of Ordinances. Title 22 Planning and Zoning – Section 22.140.560, Self-Service Storage Facilities. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT22PLZO_DIV7STSPUS_CH22.140STSPUS_22.140.560SERVSTFA. Accessed 08/26/2022.

2. AGRICULTURE / FOREST

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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
2a) 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?	☐	☐	☐	☒

There are no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within or adjacent to the Project site.[10] The Project site is mapped as "Other Land"; thus, the Project would not convert Farmland to non-agricultural use. No impact would occur.

2b) Conflict with existing zoning for agricultural use, with a designated Agricultural Resource Area, or with a Williamson Act contract?	☐	☐	☐	☒

The Project site is zoned M-1 and there is no nearby zoning for agricultural use. Therefore, the Project would not conflict with existing zoning for agricultural use. The Project site is not within a designated Agricultural Resource Area.[11] The County does not participate in the Williamson Act program; thus, the Project site is not under a Williamson Act contract.[12] No impact would occur.

2c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220 (g)), timberland (as defined in Public Resources Code § 4526), or timberland zoned Timberland Production (as defined in Government Code § 51104(g))?	☐	☐	☐	☒

[10] Department of Conservation. *California Important Farmland Finder*. https://maps.conservation.ca.gov/dlrp/ciff/. Accessed 06/14/22.
[11] Los Angeles County Department of Regional Planning. *GIS-NET: Agricultural Resource Area layer*. https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public. Accessed 06/14/22.
[12] Department of Conservation. *2022 Williamson Act Status Report*. https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2022%20WA%20Status%20Report.pdf. Accessed 06/14/22.

The Project site is zoned M-1 and there is no nearby zoning for forest land. Therefore, the Project would not conflict with existing zoning for timberland or timberland production. No impact would occur.

2d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

The Project site is a vacant and undeveloped lot. The onsite vegetation is ruderal/disturbed and several ornamental pepper trees occur at the Project site's northeastern and southwestern portions. The Project site is surrounded by urban uses. There is no forest land on or near the Project site. Therefore, no impact would occur.

2e) 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?	☐	☐	☐	☒

There are no Farmlands or forest lands on or near the Project site. Therefore, the Project would not involve changes in the existing environment which could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

3. AIR QUALITY

This section is based on the Air Quality Assessment (Kimley-Horn, 2022) and Greenhouse Gas Emissions Assessment, which are included in their entirety as **Appendix A1: Air Quality Assessment**.

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
3a) Conflict with or obstruct implementation of applicable air quality plans of either the South Coast AQMD (SCAQMD) or the Antelope Valley AQMD (AVAQMD)?	☐	☐	☒	☐

South Coast Air Quality Management District (South Coast AQMD) Thresholds

Mass Emissions Thresholds

The South Coast AQMD CEQA Air Quality Handbook provides significance thresholds for volatile organic compounds (VOC) (also referred to as reactive organic gases [ROG]), nitrogen oxides (NOX), carbon monoxide (CO), sulfur oxides (SOX), particulate matter 10 microns or less in diameter (PM10), and particulate matter 2.5 microns or less in diameter (PM2.5). The significance thresholds apply to a project's construction and operations within the South Coast AQMD jurisdictional boundaries. However, ultimately the lead agency determines the significance thresholds for impacts. If a project proposes development in excess of the established significance thresholds outlined in **Table 3-1: South Coast Air Quality Management District Emissions Thresholds**, a significant air quality impact could occur, and additional analysis is warranted to fully assess the significance of Project impacts.

TABLE 3-1: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT EMISSIONS THRESHOLDS		
CRITERIA AIR POLLUTANTS AND PRECURSORS	(MAXIMUM POUNDS PER DAY)	
	CONSTRUCTION	OPERATIONS
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55
Source: South Coast Air Quality Management District. (2019). South Coast AQMD Air Quality Significance Thresholds.		

Localized Carbon Monoxide

In addition to the daily thresholds listed above, the Project would also be subject to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near a project site are above CAAQS and NAAQS for CO (the more stringent CAAQS

are 20 ppm for 1-hour and 9 ppm for 8-hour). The South Coast Air Basin (SCAB) has been designated as attainment under the 1-hour and 8-hour CAAQS and NAAQS.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the South Coast AQMD developed localized significance thresholds (LSTs) for NO2, CO, PM10, and PM2.5 emissions generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to cause or substantially contribute to an exceedance of the most stringent CAAQS or NAAQS. LSTs are based on the ambient concentrations of that pollutant within a project source receptor area (SRA), as demarcated by the South Coast AQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5.0 acres or less on a single day. The Project site is located within South Coast AQMD SRA 6 (West San Fernando Valley). **Table 3-2: Local Significance Thresholds for Construction/Operations** shows the LSTs for a 1.0-acre, 2.0-acre, and 5.0-acre project site in SRA 6 with sensitive receptors located within 25 meters of a project site. LSTs associated with all acreage categories are provided in **Table 3-2** for informational purposes. **Table 3-2** shows that the LSTs increase as acreages increase. It is noted that LSTs are screening thresholds and are therefore conservative.

TABLE 3-2: LOCAL SIGNIFICANCE THRESHOLDS (CONSTRUCTION/OPERATIONS)

PROJECT SIZE	(MAXIMUM POUNDS PER DAY)			
	NITROGEN OXIDE (NO_X)	CARBON MONOXIDE (CO)	COARSE PARTICULATES (PM_{10})	FINE PARTICULATES ($PM_{2.5}$)
1.0 Acre: Construction/ Operations	103/103	426/426	4/1	3/1
2.0 Acres: Construction/ Operations	147/147	644/644	6/2	4/1
5.0 Acres: Construction/ Operations	221/221	1,158/1,158	11/3	6/2

Source: South Coast Air Quality Management District. (July 2008). *Localized Significance Threshold Methodology.*

AQMP Consistency

As part of its enforcement responsibilities, the United States Environmental Protection Agency (U.S. EPA) requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the California Clean Air Act (CCAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project site is within the SCAB, which is under the South Coast AQMD's jurisdiction. The South Coast AQMD is required, pursuant to the FCAA, to reduce criteria pollutant emissions for which the SCAB is in nonattainment. To reduce such emissions, the South Coast AQMD adopted the 2016 and 2022 AQMPs (AQMPs). The AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving CAAQS and NAAQS. The AQMPs are a regional and multi-agency effort including the South Coast AQMD, the CARB, the Southern California Association of Governments (SCAG), and the U.S. EPA. The AQMPs pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the AQMPs.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- Consistency Criterion No. 1: The 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.
- Consistency Criterion No. 2: The project will not exceed the assumptions in the AQMP, or increments based on the years of the Project build-out phase.

According to the South Coast AQMD's CEQA Air Quality Handbook, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in **Table 3-3: Project Construction Emissions** and **Table 3-4: Operational Emissions** below, Project construction and operational emissions would not exceed CAAQS or NAAQS. Therefore, the Project would not contribute to an existing air quality violation and is consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMPs contain air pollutant reduction strategies based on SCAG's latest growth forecasts, which were defined in consultation with local governments and with reference to local general plans. The Project site is designated Rural Commercial and zoned M-1 (Light Manufacturing). The M-1 zone allows for light industry, repair, wholesale, and packaging, including the manufacture, assembly, distribution, and storage of goods that have low nuisance impacts; therefore, the Project is a permitted use. Given no General Plan or Zoning amendments are proposed/required, and since the Project would generate only nominal population growth (three persons, see Response 14a), the Project would not exceed the population or job growth projections used by the South Coast AQMD to develop the AQMPs. Thus, the Project is consistent with the second criterion. A less than significant impact would occur , and no mitigation is required.

3b) 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?	☐	☐	☒	☐

Construction Air Pollutant Emissions

Project construction activities would generate short-term criteria air pollutant emissions. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur. Construction activities temporarily generate emissions from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Airborne particulate matter emissions are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water.

Minor Project refinements occurred subsequent to completion of the air quality modeling. The air quality modeling assumes the Project's construction activities would occur over approximately 18 months, beginning in the fourth quarter of 2024 and ending in the second quarter of 2026. Construction is currently assumed to include approximately 39,707 CY of earthwork, or approximately 337 CY more than assumed in the air quality modeling. However, the air quality modeling concerning construction is considered conservative because CalEEMod emissions factors for future years decline given advancements in construction equipment technology and fleet turnover, and the earthwork changed only nominally (less than one percent). The Project's construction-generated emissions were calculated using CARB-approved California Emissions Estimator Model (CalEEMod) version 2020.4.0, which models emissions for land use development projects, based on typical construction requirements. See **Appendix A1: Air Quality Assessment** for more information regarding the construction assumptions used in this analysis.

Table 3-3: Project Construction Emissions provides the Project's estimated maximum daily construction-related criteria pollutant emissions and indicates these would remain below South Coast AQMD significance thresholds. Therefore, the Project's construction-related air pollutant emissions would be less than significant, and no mitigation is required. Notwithstanding, the Project would be subject to compliance with South Coast AQMD Rules 402, 403, and 1113, which prohibit nuisances, require dust control measures, and limit VOC content in paints, respectively. Compliance with South Coast AQMD rules have been included in CalEEMod. As previously noted, Project construction emissions were modeled based on an earlier estimate of 39,370 CY of earthwork. The Project's earthwork estimate was since updated to approximately 39,700 CY of earthwork, or approximately 0.86 percent more than assumed in modeling. As shown in **Table 3-3**, even with a 0.84 percent increase, all Project construction emissions would still be substantially below SCAQMD thresholds, thus, a less than significant impact would occur, and no mitigation is required.

TABLE 3-3: PROJECT CONSTRUCTION EMISSIONS						
CONSTRUCTION YEAR	(MAXIMUM POUNDS PER DAY)					
	REACTIVE ORGANIC GASES (ROG)	NITROGEN OXIDE (NOX)	CARBON MONOXIDE (CO)	SULFUR DIOXIDE (SO2)	COARSE PARTICULATE MATTER (PM10)	FINE PARTICULATE MATTER (PM2.5)
2023	2.72	27.57	19.18	0.06	9.29	5.47
2024	19.79	15.93	21.20	0.04	1.74	0.93
Highest Construction Year	19.79	27.57	21.20	0.06	9.29	5.47
0.86% increase due to revised earthwork	19.96	27.81	21.38	0.06	9.37	5.52
South Coast AQMD Threshold	75	100	550	150	150	55
Exceed South Coast AQMD Threshold?	No	No	No	No	No	No
Notes: South Coast AQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the South Coast AQMD CEQA Handbook (Tables XI-A through XI-E) were applied.						
Source: CalEEMod version 2020.4.0. Refer to **Appendix A1: Air Quality Assessment** for Model Data Outputs.						

Operational Air Pollutant Emissions

Operational emissions are typically associated with three sources: mobile sources (i.e., motor vehicle use); area sources (i.e., landscape maintenance equipment, hearths, consumer products, and architectural coatings); and energy sources (i.e., electricity and natural gas (non-hearth) usage). **Table 3-4: Operational Emissions** provides the Project's estimated operational criteria pollutant emissions and indicates these would remain below South Coast AQMD significance thresholds. Therefore, the Project's operational air pollutant emissions would be less than significant, and no mitigation is required.

TABLE 3-4: OPERATIONAL EMISSIONS						
SOURCE	EMISSIONS (POUNDS PER DAY)1					
	ROG	NOX	CO	SO2	PM10	PM2.5
Area	3.56	0.02	0.35	<1	0.04	0.04
Energy	0.02	0.17	0.14	<1	0.01	0.01
Mobile	0.82	0.96	9.04	0.02	2.18	0.59
Total	**4.40**	**1.15**	**9.53**	**0.02**	**2.23**	**0.64**
South Coast AQMD Threshold	55	55	550	150	150	55
South Coast AQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Notes: 1. Emissions were calculated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, as recommended by the South Coast AQMD. Worst-case seasonal maximum daily emissions are reported.						

Cumulative Construction Impacts

The SCAB is designated nonattainment for CAAQS for O_3, PM_{10}, and $PM_{2.5}$ and nonattainment for NAAQS O_3 and $PM_{2.5}$. Appendix D of the South Coast AQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific South Coast AQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the South Coast AQMD are designed to ensure

compliance with both NAAQS and CAAQS and are based on an inventory of projected SCAB emissions. Therefore, if a project is estimated to result in construction emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable.

As shown in **Table 3-3** above, Project construction-related emissions by themselves would not exceed the South Coast AQMD significance thresholds for criteria pollutants. Therefore, the Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction and impacts would be less than significant.

Cumulative Operational Impacts

The South Coast AQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The South Coast AQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, if a project is estimated to result in operational emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable.

As shown in **Table 3-4** above, Project operational emissions by themselves would not exceed the South Coast AQMD significance thresholds for criteria pollutants. Therefore, the Project would not generate a cumulatively considerable contribution to air pollutant emissions during operations and impacts would be less than significant.

3c) Expose sensitive receptors to substantial pollutant concentrations? ☐ ☐ ☒ ☐

Construction Localized Significance Analysis

The sensitive receptors nearest the Project site are the single-family residential uses located approximately 485 feet (148 meters) to the north. To determine potential impacts to sensitive receptors, the South Coast AQMD recommends addressing LSTs for construction. LSTs were developed in response to South Coast AQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The South Coast AQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level analyses.

The South Coast AQMD's methodology indicates that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. As previously noted, the sensitive receptors nearest the Project site are single-family residential uses located approximately 485 feet (148 meters) to the north. LSTs are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 148 meters were utilized in this analysis.

Table 3-5: Localized Significance of Construction Emissions provides the Project's estimated construction-related localized emissions on the peak day of construction and shows emissions concentrations at nearby sensitive receptors would remain below South Coast AQMD significance thresholds. Therefore, the Project would result in a less than significant impact concerning LSTs during construction and no mitigation is required.

TABLE 3-5: LOCALIZED SIGNIFICANCE OF CONSTRUCTION EMISSIONS				
SOURCE/ACTIVITY	**EMISSIONS (POUNDS PER DAY)1**			
	NOX	**CO**	**PM10**	**PM2.5**
Construction Emissions				
Site Preparation 2023	27.52	18.24	9.10	5.42
Grading 2023	17.94	14.75	3.42	2.14
Building Construction 2023	14.38	16.24	0.70	0.66
Building Construction 2024	13.44	16.17	0.61	0.58
Paving 2024	8.27	12.22	0.40	0.37
Architectural Coating 2024	1.22	1.81	0.06	0.06
Maximum Daily Emissions	*27.52*	*18.24*	*9.10*	*5.42*
South Coast AQMD Localized Screening Threshold (2.5 acres of disturbance at 148 meters)	186	2,210	51	17
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to **Appendix A1: Air Quality Assessment** for Model Data Outputs.				

Operational Localized Significance Analysis

According to the South Coast AQMD LST methodology, operational LSTs apply to on-site sources. LSTs for receptors located at 148 meters for SRA 6 were utilized in this analysis. The 3.5-acre LST was conservatively used for the 3.83-acre Project site. The operational emissions shown in **Table 3-6: Localized Significance of Operational Emissions** include all on-site Project-related stationary sources (i.e., area and energy sources). **Table 3-6** shows the Project's maximum daily operational pollutant emissions at nearby sensitive receptors would remain below South Coast AQMD significance thresholds. Therefore, the Project would result in a less than significant impact concerning LSTs during operations and no mitigation is required.

TABLE 3-6: LOCALIZED SIGNIFICANCE OF OPERATIONAL EMISSIONS				
ACTIVITY	**(MAXIMUM POUNDS PER DAY)**			
	NITROGEN OXIDE (NOX)	**CARBON MONOXIDE (CO)**	**COARSE PARTICULATE MATTER (PM10)**	**FINE PARTICULATE MATTER (PM2.5)**
On-Site Emissions (Area and Energy)	0.19	0.49	0.05	0.05
South Coast AQMD Localized Screening Threshold (3.5 acres at 148 meters)	208	2,552	14	5
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to **Appendix A1: Air Quality Assessment** for Model Data Outputs.				

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The South Coast AQMD has set its CEQA significance thresholds based on the Federal Clean Air Act (FCAA), which defines a major stationary source (in extreme ozone nonattainment areas such as the SCAB) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and South Coast AQMD Rule 1303 for new or modified sources. The NSR Program[13] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the South Coast AQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur.

As previously discussed, Project emissions would not exceed South Coast AQMD thresholds (see **Table 3-3** and **Table 3-4**), thus, would be less than significant. Localized effects of on-site Project emissions on nearby sensitive receptors were also found to be less than significant (see **Table 3-5** and **Table 3-6**). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable CAAQS and NAAQS. The LSTs were developed by the South Coast AQMD based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The CAAQS and NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. As shown above, Project-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the CAAQS or NAAQS or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels in excess of the health-based ambient air quality standards.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether a project's change in the level of service (LOS) at an intersection could result in exceedances of the NAAQS or CAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO vehicle emissions standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CAAQS or NAAQS for CO. An analysis prepared for CO attainment in the SCAB by the South Coast AQMD can assist in evaluating the potential for CO exceedances. CO attainment was thoroughly analyzed as part of the South Coast AQMD's 2003 Air Quality Management Plan (AQMP). The SCAB was re-designated as attainment in 2007 and is no longer addressed in the South Coast AQMD's AQMP.

The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the South Coast AQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of Southern

California's most congested intersections with an average daily traffic (ADT) volume of approximately 100,000 vehicles, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 parts per million (ppm), which is well below the 35 ppm NAAQS and the CAAQS 1-hour standard of 20 ppm and 8-hour standard of 9 ppm. The Project is anticipated to generate 240 daily vehicle trips,[14] thus, would not produce the volume of traffic required to generate a CO hot spot in the context of South Coast AQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any intersections near the Project site, as the Project would generate only 240 daily vehicle trips. Therefore, the Project would result in a less than significant impact concerning a CO hot spot and no mitigation is required.

3d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g., diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. Given the nature and duration of construction-related odors, the Project would result in a less than significant impact concerning the creation of objectionable odors during construction and no mitigation is required.

The South Coast AQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project proposes a self-storage facility with an office/residence, and would not include any of the land uses that have been identified by the South Coast AQMD as odor sources. Therefore, no impact concerning the creation of objectionable odors during operations would occur and no mitigation is required.

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13 Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

14 RK Engineering Group, Inc. (October 2021). Trojan Calabasas Self-Storage Project Traffic Study.

4. BIOLOGICAL RESOURCES

This section is based on the Biological Resources Assessment (LSA, 2022), which is included in its entirety as **Appendix B1: Biological Resources Assessment**, and the Jurisdictional Delineation Report (LSA, 2022), which is included in its entirety as **Appendix B2: Jurisdictional Delineation Report**.

	Potentially Significant Impact	***Less Than Significant Impact with Mitigation Incorporated***	***Less Than Significant Impact***	***No Impact***
Would the project:				
4a) 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	☐	☐	☒	☐

Based on a field investigation and database search conducted on August 16, 2022, the property is a vacant and undeveloped site that is entirely disturbed by pre-existing land uses and surrounding development. The onsite vegetation is ruderal/disturbed and several ornamental pepper trees occur at the Project site's northeastern and southwestern portions.

A literature review was conducted to assist in determining the existence or potential occurrence of special-status plant and animal species within a 1.0-mile radius of the Project site. Only one special-status species (coast horned lizard (*Phrynosoma blainvillii*)) is known to occur in the region and has records within a 1.0-mile radius of the Project site. The coast horned lizard was not observed during the field survey and the Project site is highly disturbed and lacks suitable soils for this species. There are no suitable washes and floodplains present on the Project site, which is within an urban environment with associated predators, and isolated from better habitat. No federally or State-listed species have the potential to occur on the Project site. Additionally, no USFWS designated critical habitat is present on the Project site. Therefore, the Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Impacts would be less than significant, and no mitigation is required.

4b) Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS? ☐ ☐ ☐ ☒

The Project site is not within a County-mapped Biological Resources zone[15] or a Significant Ecological Area.[16] The Jurisdictional Delineation Report presents the results of a delineation of aquatic resources and drainage features conducted for the Project site. There are no rivers or lakes within or immediately adjacent to the Project limits. One jurisdictional delineated feature was identified within the Project site- a concrete box culvert and a small portion of an unnamed perennial drainage are on the site's western border. The perennial drainage lacks any associated riparian habitat; see also Response 4c. There are no sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) present on the Project site. Therefore, the Project would have no impact on any sensitive natural communities identified in local or region plans, policies, regulations or by CDFW or USFWS.

4c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means? ☐ ☒ ☐ ☐

The USFWS National Wetlands Inventory reports there is a 9.69-acre riverine habitat crossing the Project site's southern portion; see **Exhibit 4: National Wetland Inventory**. The riverine originates offsite to the west and flows onto the site briefly before entering a concrete box culvert. The culvert remains underground through most of the site and continues underground offsite before entering Arroyo Calabasas to the east of the site. This drainage feature is likely jurisdictional as a non-wetland waters of the United States/waters of the State ((WOTUS/WOTS) and California Department of Fish and Wildlife (CDFW) jurisdictional area, as depicted on **Exhibit 5: Jurisdictional Delineation Map**, and summarized in **Table 3-7: Total Acreages of Potential Jurisdictional Areas**.

TABLE 3-7: TOTAL ACREAGES OF POTENTIAL JURISDICTIONAL AREAS

AGENCY	WIDTH	ACREAGE
Corps	6 feet	0.005 acre
CDFW	16 feet	0.007 acre
RWQCB	6 feet	0.005 acre

As indicated in **Table 3-7**, approximately 0.005 acre of non-wetland WOTUS/WOTS and approximately 0.007 acre of CDFW jurisdictional area exist on the Project site. Review of **Exhibit 3: Conceptual Site Plan**, and **Exhibit 5** indicates the Project does not propose any development or modifications to the riverine/drainage feature's associated culvert structure. Therefore, the Project would not impact the classified riparian habitat or potential jurisdictional waters. To avoid potential construction-related impacts to the drainage feature, the Project would be subject to compliance with Mitigation Measure (MM) BIO-1, which

[15] Los Angeles County Department of Regional Planning. *SMMLCP-Net: Biological Resources layer.* https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=SMMLCP_NET.SMMLCP. Accessed 06/15/22.

[16] Los Angeles County Department of Regional Planning. *GIS-NET: Significant Ecological Area layer.* https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public. Accessed 06/14/22.

requires installation of signs in upland areas adjacent to the culvert structure associated with the drainage feature prior to the start of Project construction. These signs would communicate that the area is environmentally sensitive and that entry is prohibited. Therefore, the Project would result in a less than significant impact to riparian habitat/jurisdictional waters with mitigation incorporated.

Exhibit 4: National Wetland Inventory

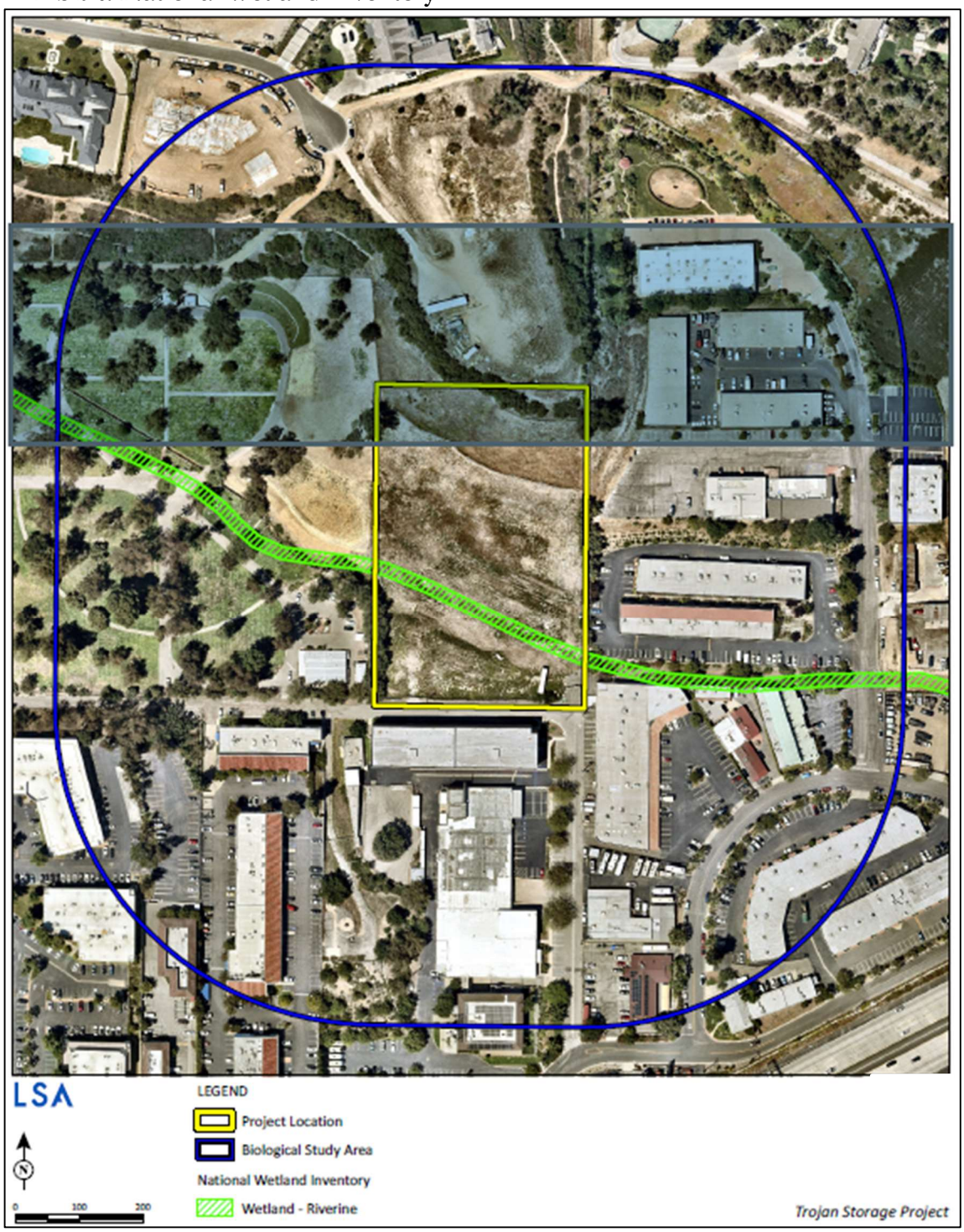
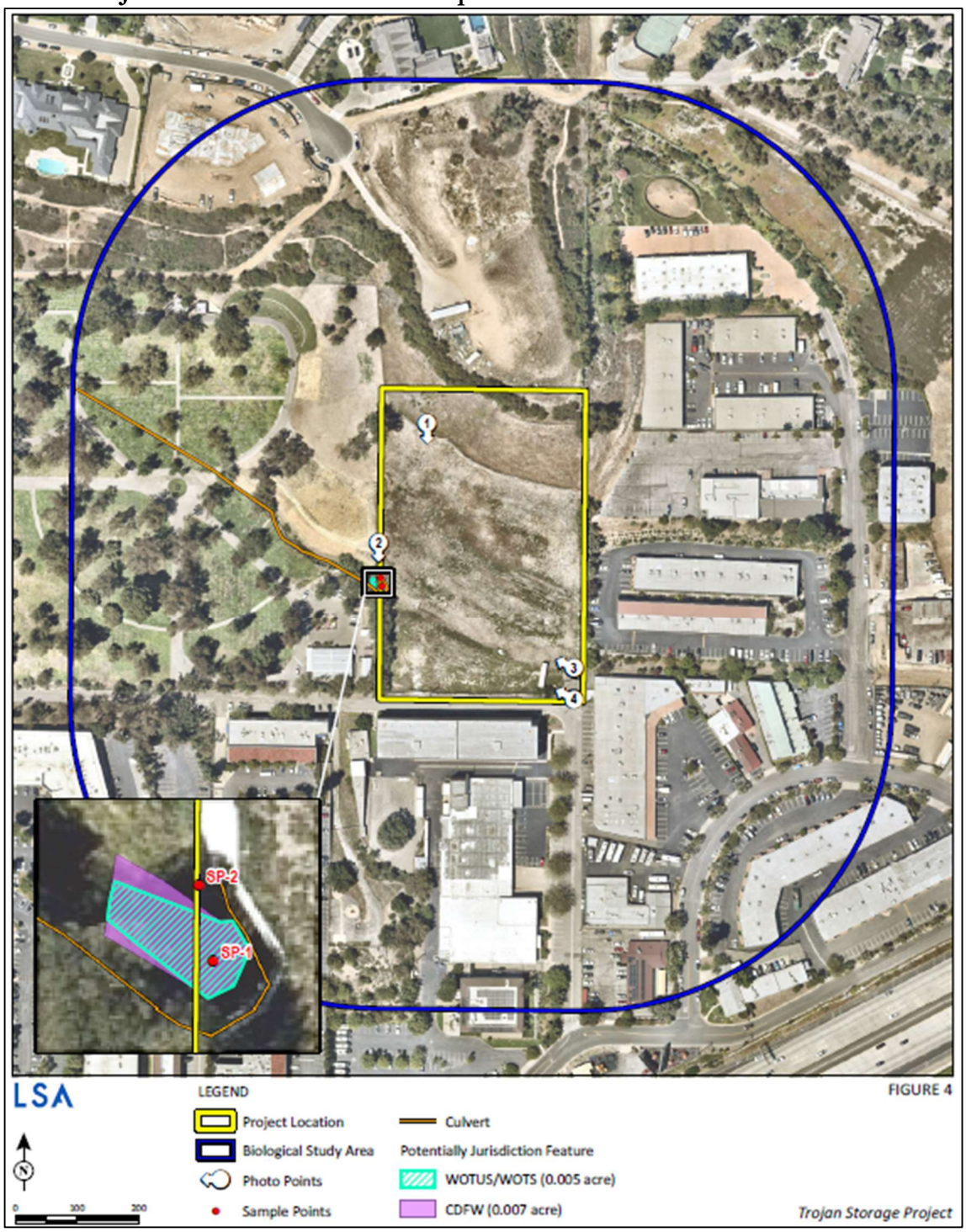


Exhibit 5: Jurisdictional Delineation Map



4d) 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?	☐	☒	☐	☐

The property is a vacant undeveloped site that is entirely disturbed by pre-existing land uses. The Project is an infill development surrounded by single-family residential uses to the north, light industrial/manufacturing uses to the south, light industrial and commercial uses to the east, and a pet cemetery to the west. Therefore, the Project does not support regional wildlife movement or wildlife corridors.

The Project site contains pepper trees on the northeastern and southwestern portions, and a pine tree on the southeastern portion, which are suitable habitat for nesting bird species. Nesting birds are protected by California Fish and Game Code §§ 3503, 3503.5, and 3800, and by the Migratory Bird Treaty Act, which regulate the take, possession, or destruction of the nest or eggs of any migratory bird or bird of prey. To avoid potential effects to nesting birds, the Project is subject to compliance with MM BIO-2, which restricts construction activities from occurring during nesting bird season. Following compliance with MM BIO-2, the Project would result in a less than significant impact. Therefore, the Project would result in a less than significant impact to nesting birds with mitigation incorporated.

4e) Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or other unique native woodlands (juniper, Joshua, southern California black walnut, etc.)?	☐	☐	☐	☒

There are no oak trees or other unique native woodlands within the Project site; see Response 4a. Therefore, the Project would not convert oak woodlands or other unique native woodlands. No impact would occur.

4f) Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.174), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Ch. 102), Specific Plans (L.A. County Code, Title 22, Ch. 22.46), Community Standards Districts (L.A. County Code, Title 22, Ch. 22.300 et seq.), and/or Coastal Resource Areas (L.A. County General Plan, Figure 9.3)?	☐	☐	☒	☐

The Project site is not within a: Wildflower Reserve Area;[17] Significant Ecological Area;[18] Coastal Resource Area;[19] or a Specific Plan.[20] There are no oak trees within the Project site, thus, the Project would not conflict with the County Oak Tree Ordinance.

The Project site is within the Santa Monica Mountains Area Plan Community Standards District (CSD).[21] Review by County staff would ensure the Project complies with CSD standards protecting biological resources. Additionally, the Project is within an area governed by the Santa Monica Mountains North Area Plan (SMMNAP), which is a component of the Los Angeles County General Plan. The SMMNAP covers an unincorporated portion of the Santa Monica Mountains, west of the City of Los Angeles, and north of the Coastal Zone boundary and provides focused policies for the regulation of development and protection of biological resources within the SMMNAP.

SMMNAP's Conservation and Natural Resources Element provides guidelines on how to address several natural resources found within the SMMNAP boundaries. The categories addressing biological resources include open space, biological resources, and tree protection.

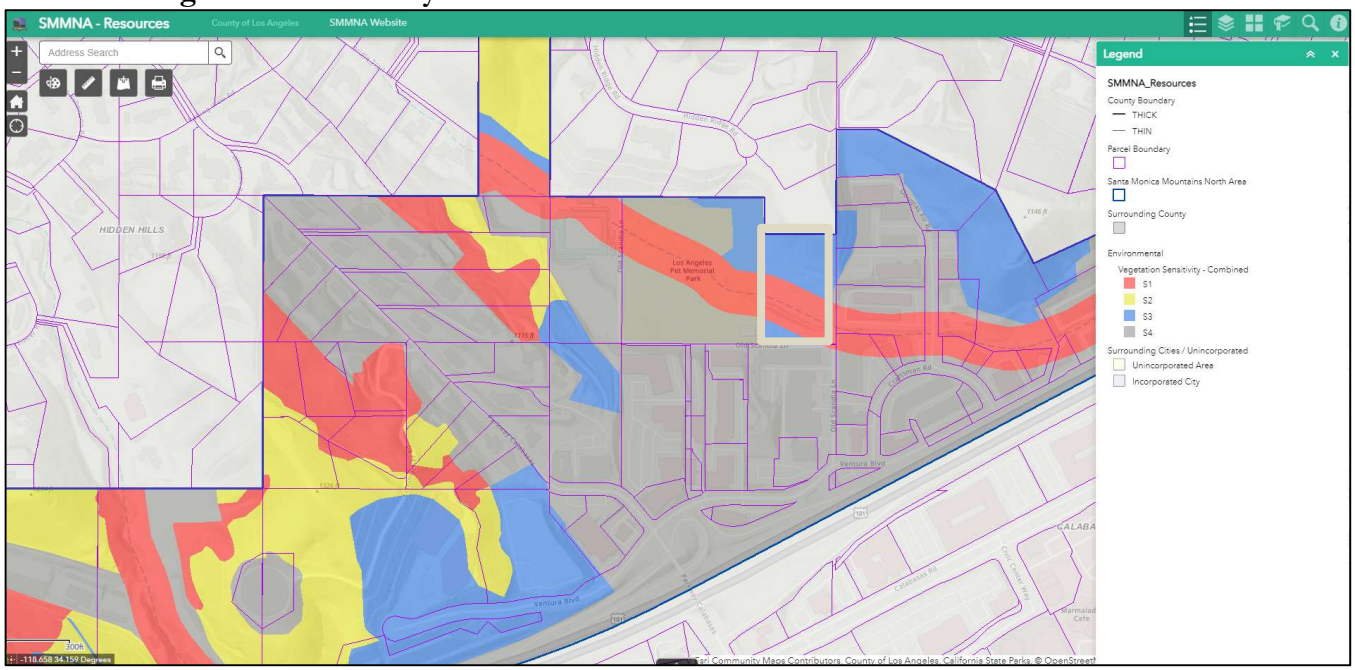
Open Space. The Project site does not fit into any open space descriptions described in this element, therefore no SMMNAP open space guidelines would apply to the Project. No impact would occur.

Biological Resources. The Santa Monica Mountains North Area Resources (SMMNAR) geographic information system reports the Project site has S1 and S3 vegetation sensitivity;[22] see **Exhibit 6: Vegetation Sensitivity Areas**. S1 vegetation sensitivity denotes an area with the highest biological significance, supporting the most sensitive resources where development is highly restricted. S3 vegetation sensitivity denotes an area with disturbed, exotic and cleared communities. A vegetation sensitivity of S4 is described as supporting existing residential or commercial development, other facilities, or agricultural practices where development is least restricted. There are no S4 communities within the Project site. The site's southern portion around the wetland feature (see Response 4c above) is assigned a vegetation sensitivity of S1. As the Project proposes development within an S1 sensitivity area, a Biological Resources Assessment was prepared; see **Appendix**

[17] Los Angeles County. *Wildflower Reserve Areas Designated.* http://lacounty-ca.elaws.us/code/coor_title12_ch12.36_sec12.36.020. Accessed 06/15/22.
[18] Los Angeles County. *2035 General Plan: Figure 9.3*. https://planning.lacounty.gov/assets/upl/project/gp_2035_2019-FIG_9-3_significant_ecological_areas.pdf. Accessed 06/15/22.
[19] Ibid.
[20] Los Angeles County Department of Regional Planning. *SMMLCP-NET: Scenic Resources layer.* https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=SMMLCP_NET.SMMLCP. Accessed 06/15/22.
[21] Ibid.
[22] Los Angeles County Department of Regional Planning. *SMMNA – Resources: Vegetation Sensitivity layer.* https://lacounty.maps.arcgis.com/apps/webappviewer/index.html?id=03cc5bbb6dbe4cb9b03e1d86cb3e539f. Accessed 09/20/22.

B1. The Biological Resources Assessment concluded that the Project would not have effects on special-status species, including threatened and endangered species and critical habitat.

Exhibit 6: Vegetation Sensitivity Areas



Tree Protection. The SMMNAP grants protection to trees within the SMMNAP boundaries that requires monitoring during tree removal within the Project site. Since the trees on the Project site are non-native Peruvian pepper trees and do not have high habitat or historical value, no additional polices or mitigation are required. Impacts would be less than significant.

The Project site is not within a Significant Ecological Area; thus, the Project would not require Significant Ecological Area counseling.

The Project would not conflict with the above-mentioned policies and ordinances protecting biological resources. Following compliance with MM BIO-2, a less than significant impact would occur.

4g) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved state, regional, or local habitat conservation plan?	☐	☐	☐	☒

The Project site does not contain wildlife corridors, nursery sites, or natural communities of concern. The Project site not within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved state, regional, or local habitat conservation plan. No impact would occur.

Mitigation Program

MM BIO-1 Prior to the start of Project activities, the Applicant shall install signs in upland areas adjacent to the culvert structure associated with the drainage feature. The signs shall note that the area is an environmentally sensitive area, and that entry is prohibited.

MM BIO-2 Project activities shall be avoided during nesting bird season (February 1 through August 31), if possible. If unable, prior to construction activities, including vegetation removal, a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than 3 days prior to any construction activities and vegetation removal. If nesting birds are found, an exclusionary buffer shall be established by the qualified biologist. The buffer shall be clearly marked in the field by construction personnel under the qualified biologist's guidance. No construction activities shall be allowed within this zone until the qualified biologist determines the young have fledged or the nest is no longer active.

5. CULTURAL RESOURCES

This section is based on the Cultural Resources Records Search Results for the Trojan Storage Project (BCR Consulting, 2022), which is included in its entirety as **Appendix C: Cultural Resources Records Search**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
5a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines § 15064.5?	☐	☐	☐	☒

Topographic maps and aerial photographs reviewed as part of the records search conducted for the Project showed portions of the Project site had been subject to previous disturbances related to mechanical excavation, as well as the existence of a building that had been removed by 1985. The Project site is currently vacant and undeveloped. There are no buildings or known historical resources present on the Project site. Therefore, the Project would not cause an adverse change in the significance of a historical resource. No impact would occur.

5b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?	☐	☒	☐	☐

To identify prior studies and previously recorded historic and prehistoric archaeological sites, as well as built environment resources (including historic districts) within one half-mile of the Project site, multiple sources, including a records search at the South-Central Coastal Information Center (SCCIC) at California State University, Fullerton were examined; see **Appendix C**. The records search indicated that 17 previous studies have been completed resulting in one cultural resource (a prehistoric habitation site designated P-19-1127) being recorded within one half-mile of the Project site; see **Appendix C** Table A. One study (designated LA-2020) assessed the entire Project site for cultural resources in 1990. No cultural resources were identified within the Project site boundaries during this study. The lack of identified prehistoric archaeological resources suggests the Project site is not highly sensitive to prehistoric archaeological remains. Further, because the Project site was previously disturbed, it is unlikely to contain significant historic period archaeological deposits.[23]

The Project site is underlain by artificial fill to depths of approximately 7 to 10 feet below grade.[24] The Project would require basement excavations to depths of approximately 15 to 20 feet below grade,[25] thus, is anticipated to disturb approximately 5 to 10 feet of native soil. Further, while aerial photographs indicated previous disturbances within the Project site boundaries, the extent and severity of the disturbances are not known. Notwithstanding the findings of the records search discussed above and extent of past site disturbance, given the anticipated excavations into native soils, the potential exists for accidental discovery of archaeological resources during ground-disturbing activities. Should archaeological deposits be encountered

[23] BCR Consulting LLC. Cultural Resources Records Search Results for the Trojan Storage Project, Calabasas, Los Angeles County, California (BCR Consulting Project No. KIM2215). August 24, 2022

[24] LGC Geotechnical, Inc. *Supplemental Geotechnical Evaluation, Proposed Self Storage Facility, 5050 Old Scania Lane, Calabasas California*. December 2019.

[25] Ibid.

during ground-disturbing activities, the Project could cause an adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5. As discussed in detail in **Section 4.18: Tribal Cultural Resources**, implementation of measures to mitigate potential impacts to as-yet undiscovered tribal cultural resources is required; see MMs TCR-1 and TCR-2 in **Section 4.18**. MM TCR-1 and MM TCR-2 require the retention of a qualified archaeologist and monitor and outlines specific instructions if resources are found. If resources are found, the archaeologist would temporarily halt or redirect work to permit the sampling, identification, and evaluation of the artifacts and resources, as appropriated. If resources are significant, the archaeologist would determine appropriate actions, in cooperation with the City and Project applicant. With implementation of MM TCR-1 and TCR-2, the Project's potential impacts concerning an adverse change in the significance of an archaeological resource would be reduced to less than significant.

5c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

The Project is not anticipated to destroy a unique paleontological resource or site or unique geologic feature directly or indirectly. BCR Consulting conducted a records search of the Project site resources within one half-mile; see **Appendix C: Cultural Resources Records Search**. No paleontological resources were identified within the Project site boundaries during this study. Because no paleontological resources were identified within the Project site, implementation of the Project would not be expected to cause direct or indirect impact to a paleontological resource or unique geologic feature. Therefore, impacts on paleontological resources would not occur. The lack of identified paleontological resources suggests the Project site is not highly sensitive to prehistoric remains. Further, because the Project site was previously disturbed, it is unlikely to contain significant paleontological deposits.

5d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

There are no human cemeteries within or adjacent to the Project site. Most Native American human remains are found in association with prehistoric archaeological sites. As discussed previously, the records search conducted for the Project found the Project site is not near identified archaeological resources. However, the Project would require basement excavations to depths of approximately 15 to 20 feet below grade, thus, would disturb approximately 5.0 to 10.0 feet of native soil. If previously unknown human remains are discovered during the Project's ground-disturbing activities, a substantial adverse change in the significance of such a resource could occur. If human remains are found, those remains would require proper treatment in accordance with applicable laws, including State of California Health and Safety Code (HSC) §§ 7050.5-7055 and Public Resources Code § 5097.98 and § 5097.99. HSC §§ 7050.5-7055 describe the general provisions for treatment of human remains. Specifically, HSC § 7050.5 prescribes the requirements for the treatment of any human remains that are accidentally discovered during excavation of a site. HSC § 7050.5 also requires that all activities cease immediately, and a qualified archaeologist and Native American monitor be contacted immediately. As required by State law, the procedures set forth in Public Resources Code § 5087.98 would be implemented, including evaluation by the County Coroner and notification of the NAHC. The NAHC would designate the "Most Likely Descendent" of the unearthed human remains. If human remains are found during excavation, excavation would be halted near the find and any area that is reasonably suspected to overlay adjacent remains shall remain undisturbed until the County Coroner has investigated, and appropriate recommendations have been made for treatment and disposition of the remains. Following compliance with the established regulatory framework (i.e., HSC §§ 7050.5-7055 and Public Resources Code § 5097.98 and § 5097.99), the Project's potential impacts concerning human remains would be less than significant, and no mitigation is required.

Mitigation Program

See **Section 18: Tribal Cultural Resources** for MM TCR-1 and MM TCR-2.

6. ENERGY

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

Various State and local plans and policies exist to conserve energy and decrease overall per-capita energy usage. In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the State's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code § 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the CARB adopted its Renewable Electricity Standard regulations, which require all the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill (SB) 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the program's goal to achieve the 50 percent renewable resources target by December 31, 2026, and a 60 percent renewable resources target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The Project's electricity demand is expected to be served by existing Southern California Edison (SCE) electrical facilities.[26] The Project's construction-related electrical demand for construction lighting and equipment is anticipated to be nominal, since most construction equipment would be gas- or diesel-powered. Heavy equipment fuel usage during construction would be temporary and would not require expanded energy supplies or new infrastructure. The Project's operational electrical demand would be minimal for on-site lighting, appliances, and other equipment. The Project's estimated operational electrical demand is approximately 659-megawatt hour (MWh) per year, an increase of 0.001 percent over total usage in Los Angeles County, which would represent a less than significant percent increase compared to the SCE service area's overall demand.[27] The Project would also involve minimal transportation energy usage associated with the estimated 240 daily vehicle trips. Therefore, Project construction and operations would not result in wasteful, inefficient, or unnecessary electricity consumption.

[26] **Appendix A2: Greenhouse Gas Emissions Assessment**.
[27] Ibid.

Southern California Gas Company (SoCalGas) provides natural gas service to the Project area. No construction-related natural gas demand is anticipated for the Project since most construction equipment would be gas- or diesel-powered. The Project's estimated operational natural gas demand is approximately 6,279 therms per year, an increase of 0.0002 percent over total usage in Los Angeles County, which would represent a less than significant percent increase compared to SoCalGas' service area's overall demand.[28] Therefore, Project construction and operations would not result in wasteful, inefficient, or unnecessary consumption of natural gas resources.

Additionally, the Project would be subject to compliance with all building codes in effect at the time of construction, which include energy conservation measures mandated by Title 24 of the California Building Standards Code – Energy Efficiency Standards and the California Green Building Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, and water-conserving plumbing fixtures). California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The most recent 2022 standards went into effect January 1, 2023. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and a less than significant impact would occur, and no mitigation is required.

[28] Ibid.

7. GEOLOGY AND SOILS

This section is based on the Supplemental Geotechnical Evaluation, Proposed Self Storage Facility, 5050 Old Scania Lane, Calabasas California (LGC Geotechnical, Inc, 2019), which is included in its entirety as **Appendix D1: Supplemental Geotechnical Evaluation**, and the Geotechnical Addendum Report, Proposed Self Storage Facility, 5050 Old Scandia Lane, Calabasas, California, (LGC Geotechnical, Inc, 2020), which is included in its entirety as **Appendix D2: Geotechnical Addendum Report**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
7a) 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 active fault trace? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act requires the State Geologist to establish regulatory zones, known as "Alquist Priolo (AP) Earthquake Fault Zones," around the surface traces of active faults and to issue appropriate maps. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically 50 feet). The Project site is not located within an Alquist-Priolo Earthquake Fault Zone.[29] Additionally, no evidence exists of a known fault within or adjacent to the Project site.[30] Therefore, the Project would not expose people or structures to adverse effects involving rupture of a known earthquake fault. No impact would occur.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

The Project site is located between several active fault zones, including the Chatsworth Fault, Simi Fault, the Santa Susana Fault, the Hollywood Fault, and the Santa Monica Fault. The fault zone nearest the Project site, the Chatsworth Fault, is approximately 5.0 miles to the north.[31] Additionally, Southern California is considered a seismically active region. Therefore, Project implementation could expose people and structures to potential adverse effects involving strong seismic ground shaking. The intensity of ground shaking on the Project site would depend upon the earthquake's magnitude, distance to the epicenter, and geology of the area between the Project site and epicenter. Regulatory controls to address potential seismic hazards would be imposed on

[29] California Department of Conservation. (2022). Earthquake Zones of Required Investigation. Retrieved from https://maps.conservation.ca.gov/cgs/EQZApp/app/.
[30] United States Geological Survey (USGS). U.S. Quaternary Faults. https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf.
[31] California Department of Conservation. 2022. Fault Activity Map of California. https://maps.conservation.ca.gov/cgs/fam/.

the Project through the permitting process. Pursuant to County Code Title 26: Building Code and Title 31: Green Building Standards Code, the County has adopted the 2019 California Building Code (CBC), subject to certain amendments and changes, including those that address seismic resistance. CBC design standards correspond to the level of seismic risk in a given location and are intended primarily to protect public safety and secondly to minimize property damage. The Project would be subject to compliance with all applicable regulations in the most recently published CBC standards (as amended by County Code Title 26 and Title 31), which specifies design requirements to mitigate the effects of potential earthquake hazards. Moreover, the Geotechnical Evaluation and Geotechnical Addendum evaluated various geologic and seismic hazards based on site-specific parameters, including strong seismic ground shaking shrinkage and subsidence. The Geotechnical Evaluation and Addendum makes recommendations concerning seismic design parameters, foundations, slabs, and general earthwork and grading, among other factors. The Geotechnical Evaluation and Addendum concludes that the Project appears feasible from a geotechnical standpoint.[32] The Geotechnical Evaluation and Addendum provide recommendations to address seismic and other site conditions, which would be implemented prior to Project development. Following compliance with standard engineering practices, the established regulatory framework (i.e., County Code and CBC), and the Geotechnical Evaluation and Addendum's recommendations, the Project's potential impacts concerning exposure of people or structures to potential adverse effects involving strong seismic ground shaking would be less than significant, and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction and lateral spreading? ☐ ☐ ☐ ☒

Liquefaction is a phenomenon where earthquake-induced ground vibrations increase the pore pressure in saturated, granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. For liquefaction to occur, three criteria must be met: underlying loose, coarse grained (sandy) soils, a groundwater depth of approximately 25 feet, and a potential for seismic shaking from nearby large-magnitude earthquakes. Lateral spreading is caused by the accumulation of incremental displacements that develop within liquefied soil.

The Project site is not within a mapped area of liquefaction.[33] However, the Geotechnical Addendum reports that groundwater was encountered at depths ranging from approximately 20 feet (approximate elevation of 941 feet) to 37 feet (approximate elevation of 935 feet) below existing grade during the field evaluation. Groundwater is anticipated to be at an approximate elevation of 941 to 945 feet and may be encountered at higher elevations. The Geotechnical Addendum recommends that design groundwater for permanent conditions be taken as elevation of 949 feet. However, since the site is underlain at shallow depths by Modelo Formation bedrock which is sufficiently dense to prevent liquefaction even if saturated, it does not appear liquefaction poses a hazard to the proposed development.[34]

Additionally, the Geotechnical Evaluation did not identify any potential for lateral spreading or collapse and concluded that subsidence is not anticipated. Therefore, the Project would not cause potential substantial adverse effects involving liquefaction or lateral spreading. A less than significant impact would occur following compliance with standard engineering practices, the established regulatory framework (i.e., County Code and CBC), and the Geotechnical Evaluation and Addendum's recommendations and no mitigation is required.

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[32] LGC Geotechnical, Inc. (2020). Geotechnical Addendum Report, Proposed Self Storage Facility, 5050 Old Scandia Lane, Calabasas, California; see **Appendix D2**.

[33] California State Geoportal. CGS Seismic Hazards Program: Liquefaction Zones, 5050 Old Scandia Lane, Calabasas, California. (https://gis.data.ca.gov/datasets/b70a766a60ad4c0688babdd47497dbad_0/explore?location=34.090390%2C-118.702332%2C9.97

[34] LGC Geotechnical, Inc. (2020). Geotechnical Addendum Report, Proposed Self Storage Facility, 5050 Old Scandia Lane, Calabasas, California; see **Appendix D2**.

iv) Landslides? ☐ ☐ ☒ ☐

Landslides are mass movements of the ground that include rock falls, relatively shallow slumping and sliding of soil, and deeper rotational or transitional movement of soil or rock. The Geotechnical Evaluation concluded no landslides or debris flows are known to exist on or trend into the property. [35] Based on these findings, the Geotechnical Evaluation concludes that the hazards posed by land sliding and debris flows are low.[36] Further, no significant outcrops were noted on the slopes above the site; thus, the hazard posed by rock fall is low.

As part of the Project design, the Project would construct a north facing retaining wall adjacent to the hillside that would reduce the risk of landslides in the event of post-fire instability. A rockfall barrier would also be placed along the hillside to prevent debris and rocks from damaging the proposed structures. Additionally, a concrete V-gutter proposed around the northern and western Project boundaries would capture runoff from the hillside. Therefore, given the proposed Project design features, which would minimize downstream flooding, landslides, and post-fire slope instability risks, , the Project would not cause potential substantial adverse effects involving landslides. A less than significant impact would occur, and no mitigation is required.

7b) Result in substantial soil erosion or the loss of topsoil? ☐ ☐ ☒ ☐

Construction activities such as grading, site stripping, and excavation would potentially result in soil erosion and the loss of topsoil. Grading and excavation proposed by the Project would cut/remove approximately 38,253 CY of existing undocumented fill soils and the potentially compressible portion of alluvium are to be removed and replaced as properly compacted fills. Approximately 1,454 CY would be used to fill the site. Over excavation and alluvial removal and compaction would total 5,433 CY. The difference of approximately 36,799 CY of cut soil material would be exported off-site. Site preparation would include the removal of any engineered structures or improvements, existing vegetation (grass, etc.), surface obstructions, existing debris, and potentially compressible or otherwise unsuitable material.

Grading and earthwork activities during construction would expose soils to potential short-term erosion by wind and water. The Project is required to comply with County Code Title 26 and County Code § 12.80.520 for the purpose of preventing soil erosion, and the National Pollutant Discharge Elimination System (NPDES) permitting process for construction activities (e.g., implementation of Best Management Practices [BMPs] through preparation of a Stormwater Pollution Prevention Plan (SWPPP)). Following compliance with the established regulatory framework, the Project's potential impacts concerning soil erosion and loss of topsoil would be less than significant, and no mitigation is required. See also Response 10a.

7c) 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? ☐ ☐ ☒ ☐

As discussed in Response 7aiii, above, liquefaction and landslides are not considered to be a design concern for the Project, and potential for lateral spreading would be low. The Project site includes a north-south slope consisting of highly expansive soils. Project construction would include removal of undocumented fill and highly expansive soils under buildings and replacing with artificial fill consisting of low-expansive soils. This replacement would ensure that Project buildings, drive aisles, and hardscape would be stabilized. Therefore,

[35] Ibid.
[36] Ibid.

the Project is not expected to result in on or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse, and is not expected to create substantial risks to life and property, and impacts are therefore expected to be less than significant.

7d) 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?	☐	☐	☒	☐

The Project site's soil is highly expansive, with Expansion Index (EI) rating ranging from 91 to 113, respectively.[37] The Project would include removal of high-expansion soils underneath building foundations in accordance with standard grading practices and the Geotechnical Evaluation and Geotechnical Addendum's recommendations. Upon completion of these grading practices, Project buildings would be underlain by suitable soil compacted to support multi-story buildings. The Geotechnical Evaluation concluded the Project would not create substantial direct or indirect risks to life or property following proper implementation of geotechnical recommendations. A less than significant impact would occur.

7e) Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

The Project would connect to existing public sewer system within Old Scandia Lane, thus, would not require onsite wastewater treatment systems. No impact would occur.

7f) Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, Ch.22.104)?	☐	☐	☒	☐

The County's GIS-NET Public map viewer reports that the Project site contains Hillside Management Area (HMA; 25 percent to 50 percent) and HMA (50 percent or greater slope).[38] Hillside Design Guidelines are contained in County Code Appendix I Chapter 22.104 – Hillside Management Areas.[39] The Hillside Design Guidelines are required for development in HMAs, unless exempted under the Ordinance's provisions. The Project does not fall under the list of development exempted under § 22.104.030 – Permit Required; therefore, a Conditional Use Permit is required. The Project would be required to adhere to the HMA Ordinance and the Hillside Design Guidelines, thus, would be required to implement sensitive and creative engineering, architectural, and landscaping site design techniques. Therefore, a less than significant impact would occur, and no mitigation is required.

[37] LGC Geotechnical, Inc. *Supplemental Geotechnical Evaluation, Proposed Self Storage Facility, 5050 Old Scania Lane, Calabasas California*. December 2019. Page 4

[38] Los Angeles County. ND. GIS-NET Public map viewer. https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public (accessed August 2022).

[39] Los Angeles County Code. ND. Appendix I – Hillside Design Guidelines. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT22PLZO_DIV5SPMAAR_CH22.104HIMAAR_APXIHIDEGU.

8. GREENHOUSE GAS EMISSIONS

This section is based on the Air Quality Assessment (Kimley-Horn, 2022), which is included in its entirety as **Appendix A2: Greenhouse Gas Emissions Assessment.**

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
8a) Generate greenhouse gas (GHGs) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Addressing GHG emissions impacts requires an agency to determine what constitutes a significant impact. Amendments to the State CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions would have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions.[40]

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project normally would have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

South Coast Air Quality Management District Thresholds

The South Coast AQMD formed a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting #15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency.

With the tiered approach, a project is compared with each tier's requirements sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold.

The South Coast AQMD has adopted a threshold of 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year for industrial projects. During Working Group Meeting #7, it was explained that the industrial projects' threshold was derived using a 90 percent capture rate of a large sampling of industrial

[40] 14 California Code of Regulations, Section 15064.4a

facilities. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). A threshold of 3,000 $MTCO_2e$ per year for non-industrial projects was proposed but has not been adopted. The South Coast AQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact. As previously noted, the Project site is within the Santa Monica Mountains North Area Plan (Area Plan). The Project site is designated Rural Commercial and zoned M-1 (Light Manufacturing). The M-1 zone allows for light industry, repair, wholesale, and packaging, including the manufacture, assembly, distribution, and storage of goods that have low nuisance impacts. Although the Project is a light industrial use, this analysis conservatively utilizes the 3,000 $MTCO_2e$ per year threshold to evaluate the Project's potential GHG emissions impacts.

Short-Term Construction Greenhouse Gas Emissions

Project construction activities would generate direct CO_2, N_2O, and CH_4 emissions from construction equipment, transport of materials, and construction workers commuting to and from the Project site. Construction GHG emissions are typically summed and amortized over a 30-year period.[41] Total GHG emissions generated during all construction phases were combined and are presented in **Table 8-1: Construction Greenhouse Gas Emissions**. The CalEEMod outputs are contained within **Appendix A2.** As shown in **Table 8-1**, Project construction-related GHG emissions would total approximately 830.93 $MTCO_2e$ (approximately 27.70 $MTCO_2e$/year when amortized over 30 years). Once construction is complete, construction-related GHG emissions would cease.

TABLE 8-1: CONSTRUCTION GREENHOUSE GAS EMISSIONS

CATEGORY	MTCO2E
2023	449.33
2024	381.60
Total GHG Emission (2023 and 2024)	*830.93*
30-Year Amortized Construction	27.70

Source: CalEEMod version 2020.4.0. Refer to **Appendix A2: Greenhouse Gas Emissions Assessment** for Model Data Outputs.

Long-Term Operational Greenhouse Gas Emissions

Long-term operational GHG emissions would occur over the life of the Project. Direct operational GHG emissions would occur from mobile sources (i.e., Project-generated vehicular traffic), and area sources (e.g., on-site natural gas combustion and landscaping equipment operations). Indirect operational GHG emissions would occur from energy sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, and emissions associated with Project-generated solid waste and any fugitive refrigerants from air conditioning or refrigerators. The Project's operational GHG emissions are summarized in **Table 8-2: Project Greenhouse Gas Emissions**. As shown in **Table 8-2**, Project operational GHG emissions would total 642.62 $MTCO_2e$ annually.

Table 8-2 also indicates the Project's construction and operational GHG emissions combined would total approximately 670.32 $MTCO_2e$ annually, which would remain below the 3,000 $MTCO_2e$ per year threshold.

[41] The standard 30-year period is based on the South Coast AQMD (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Therefore, the Project's construction and operational GHG emissions would be less than significant, and no mitigation is required.

TABLE 8-2: PROJECT GREENHOUSE GAS EMISSIONS	
EMISSIONS SOURCE	**CO2E EMISSIONS, METRIC TONS/YEAR**
Operational Emissions	
Area	0.31
Energy	151.23
Mobile	346.68
Waste	37.20
Water	107.20
Subtotal Operational Emissions	*642.62*
Amortized Construction Emissions	*27.70*
Total GHG Emissions	**670.32**
Threshold	3,000
Exceeds Threshold?	**No**
Source: CalEEMod version 2020.4.0. Refer to **Appendix A2: Greenhouse Gas Emissions Assessment** for Model Data Outputs.	

8b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ☐ ☐ ☒ ☐

SCAG RTP/SCS Consistency

SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15.

GHG emissions resulting from development-related mobile sources are the most potent emissions source, and therefore Project comparison to the RTP/SCS is an appropriate indicator of whether the Project would inhibit post-2020 GHG reduction goals promulgated by the State. RTP/SCS goals are used to determine a project's consistency with the planning efforts discussed above. The Project's consistency with the RTP/SCS goals is analyzed in **Table 8-3: Project Consistency with the Regional Transportation Plan/Sustainable Communities Strategy**. As indicated in **Table 8-3**, the Project would comply with the applicable RTP/SCS goals. Further, compliance with applicable State standards would ensure consistency with State and regional GHG reduction planning efforts. Therefore, the Project would not interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets. A less than significant impact would occur, and no mitigation is required.

TABLE 8-3: PROJECT CONSISTENCY WITH THE REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY			
SCAG GOALS		**COMPLIANCE**	
GOAL 1:	Encourage regional economic prosperity and global competitiveness.	Not Applicable:	This is not a project-specific goal. Notwithstanding, the Project would develop a vacant site, which would contribute to regional economic prosperity.
GOAL 2:	Improve mobility, accessibility, reliability, and travel safety for people and goods.	Not Applicable:	The Project is not a transportation improvement project.
GOAL 3:	Enhance the preservation, security, and resilience of the regional transportation system.	Not Applicable:	The Project is not a transportation improvement project.
GOAL 4:	Increase person and goods movement and travel choices within the transportation system.	Not Applicable:	The Project is not a transportation improvement project.
GOAL 5:	Reduce greenhouse gas emissions and improve air quality.	Consistent:	The Project site is in an urban area near existing freeways. The Project's location within an urban area would reduce trip lengths, which would reduce GHG and air quality emissions.
GOAL 6:	Support healthy and equitable communities.	Consistent:	The Project does not exceed the South Coast AQMD's regional or localized thresholds. Based on the Friant Ranch decision, projects that do not exceed the South Coast AQMD's LSTs would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and result in no criteria pollutant health impacts.
GOAL 7:	Adapt to a changing climate and support an integrated regional development pattern and transportation network.	Not Applicable:	This is not a project-specific goal.
GOAL 8:	Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	Not Applicable:	This is not a project-specific goal.
GOAL 9:	Encourage development of diverse housing types in areas that are supported by multiple transportation options.	Not Applicable:	The Project involves development of a self-storage facility and does not include housing.
GOAL 10:	Promote conservation of natural and agricultural lands and restoration of habitats.	Not Applicable:	The Project is not on agricultural lands and does not contain native habitat; see Responses 2.b and 4.b.
Source: Southern California Association of Governments. (2020). *Connect SoCal – The Regional Transportation Plan/Sustainable Communities Strategy*.			

Consistency with the 2022 CARB Scoping Plan

Pursuant to AB 32 requirements, CARB adopted the *Climate Change Scoping Plan* (Scoping Plan) in 2008, which provides a range of GHG reduction actions. CARB's 2022 Scoping Plan sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. The transportation, electricity, and industrial sectors are the State's largest GHG contributors. The 2022 Scoping Plan intends to achieve the AB 1279 targets primarily through zero-emission transportation (e.g., electrifying cars, buses, trains, and trucks). Additional GHG reductions would be achieved through decarbonizing the electricity and industrial sectors.

Statewide strategies to reduce GHG emissions in the latest 2022 Scoping Plan include implementing SB 100, which would achieve 100 percent clean electricity by 2045; achieving 100 percent zero-emission vehicle sales in 2035 through Advanced Clean Cars II; and implementing the Advanced Clean Fleets regulation to deploy zero-emission electric vehicle buses and trucks. Additional transportation policies include 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, and Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation. The 2022 Scoping Plan would continue to implement SB 375. GHGs would be further reduced through the Cap-and-Trade Program carbon pricing and SB 905. SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon dioxide removal projects and technology.

As shown in **Table 8-2**, approximately 77 percent of the Project's GHG emissions would be from energy and mobile sources, which would be further reduced by the 2022 Scoping Plan measures described above. It is noted that the County has no control over vehicle emissions (approximately 54 percent of the Project's total emissions). However, these emissions would decline in the future due to the Statewide measures discussed above, as well as cleaner technology and fleet turnover. Several of the State's plans and policies would contribute to a reduction in the Project's mobile source emissions, including the following:

- CARB's Advanced Clean Truck Regulation: Adopted in June 2020, CARB's Advanced Clean Truck Regulation requires truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8.

- Executive Order N-79-20: Executive Order N-79-20 establishes the goal for all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, to be zero-emission by 2035 and all medium and heavy-duty vehicles to be zero-emission by 2045. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new ZEVs "towards the target of 100 percent."

- CARB's Mobile Source Strategy: CARB's Mobile Source Strategy takes an integrated planning approach to identify the level of transition to cleaner mobile source technologies needed to achieve all of California's targets by increasing the adoption of ZEV buses and trucks.

While these measures are not directly applicable to the Project, any activity associated with the Project would be required to comply with these measures as adopted. The Project would not obstruct or interfere with efforts to increase ZEVs or State efforts to improve system efficiency. Compliance with applicable State standards (e.g., continuation of the Cap-and-Trade regulation; CARB's Mobile Source Strategy, Sustainable Freight Action Plan, and Advanced Clean Truck Regulation; Executive Order N-79-20; SB 100/renewable electricity portfolio improvements that require 60 percent renewable electricity by 2030 and 100 percent renewable by 2045, etc.,) would ensure consistency with State and regional GHG reduction planning efforts, including the 2022 Scoping Plan. It is also noted that the Project would not convert any Natural and Working Lands (NWL) and/or decrease the State's urban forest carbon stock, which are areas of emphasis in the 2022 Scoping Plan.

The Project does not conflict with the applicable plans that are discussed above and therefore concerning this threshold, the Project would result in a less than significant impact, and no mitigation is required.

Consistency with the Unincorporated Los Angeles County Community Climate Action Plan 2020

The Los Angeles County CAP sets emissions reduction goals, and applies policies, programs, and initiatives to reach them. The CAP identifies several opportunities to reduce GHG emissions through upgrading existing structures, incorporating efficiencies into new buildings, and utilizing alternative modes of transportation. The Project would be consistent with the Los Angeles County CAP by incorporating efficiencies into the proposed buildings through compliance with applicable energy efficiency standards.

The Project would be subject to compliance with all building codes in effect at the time of construction, which include energy conservation measures mandated by Title 24 of the California Building Standards Code – Energy Efficiency Standards and the California Green Building Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water-conserving plumbing fixtures), these standards indirectly regulate and reduce GHG emissions. California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The most recent 2022 standards went into effect January 1, 2023.

Further, the Project would be subject to compliance with State Building Code provisions and the County's Climate Action Plan policies, which are intended to reduce GHG emissions. The Project would also be subject to compliance with all applicable South Coast AQMD rules and regulations during construction and operations and would not impede achieving statewide 2030 and 2050 GHG emission reduction targets. Therefore, the Project would not conflict with any applicable GHG reductions plans or policies, and a less than significant impact would occur.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
9a) Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	☐	☐	☒	☐

Any potentially hazardous materials used during Project construction would be handled on-site. This generally includes paints and solvents and other petroleum-based products, usually used for on-site construction equipment and for building exterior finishes. The use or handling of these potentially hazardous materials would be short-term, only during the Project's construction phase. Although these materials could be stored on-site, such storage would be required to comply with Los Angeles County SWPPP regulations. The transport, removal, and disposal of hazardous materials on the Project site would be conducted by a permitted and licensed service provider, consistent with federal, State, and local requirements, including applicable regulations promulgated by the U.S. EPA, the California Department of Toxic Substances Control (DTSC), the California Occupational Safety and Health Administration (Cal/OSHA), Caltrans, the Resource Conservation and Recovery Act, and the Los Angeles County Fire Department (LACFD). Therefore, Project construction activities would not create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials.

The Project proposes approximately 155,900 SF of self-storage space. During operations, the Project would not emit hazardous emissions or involve hazardous or acutely hazardous materials, substances, or waste. The Project could involve the use of materials associated with routine property maintenance, such as janitorial supplies for cleaning purposes and/or herbicides and pesticides for landscaping. However, these uses would not involve the routine transport, use, or disposal of quantities of hazardous materials that could create a significant hazard to the public or environment. The hazardous materials used during operations would be stored, handled, and disposed of in accordance with applicable regulations. Additionally, the proposed Project would be reviewed by LACFD for hazardous material use, safe handling and storage, as appropriate. LACFD would impose Conditions of Approval (COAs) upon the Project to reduce hazardous material impacts. Therefore, following compliance with the regulatory requirements and COAs, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts would be less than significant in this regard, and no mitigation is required.

9b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment? ☐ ☐ ☒ ☐

The Project site is not identified as a hazardous waste site with either an active or past occurrence.[42,43,44] Of the three nearest listed sites on GeoTracker, two are classified as Case Closed and one is classified as Open - Remediation, as follows:

- Rantec Microwave Systems, Inc. (Former): Located approximately 725 feet to the south, with Cleanup Status reported as Open - Remediation;
- Chevron #9-4106 (Former): Located approximately 790 feet to the southwest, with Cleanup Status reported as Completed - Case Closed; and
- Chevron #9-5153: Located approximately 1,100 feet to the southwest, with Cleanup Status reported as Completed - Case Closed.

Although the Rantec Microwave Systems, Inc. site's Cleanup Status is reported as Open – Remediation, it is not considered a recognized environmental condition concerning the Project site given the Rantec property is situated downgradient and 725 feet from Project site.

Additionally, the Project involves the development of a self-storage facility with 1,334 self-storage units, a 2,000 SF office/manager residence, and 27 parking spaces. Although typical hazardous materials associated with light industrial uses may be used during Project operations (e.g., pesticides, oils, fertilizers, cleaning chemicals, etc.) these hazardous materials would not be used in large quantities such that they would create a significant hazard involving the accidental release of these materials. Additionally, hazardous materials storage at the Project site would be prohibited. With adherence to existing regulations, the Project would not 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; impacts would be less than significant. No mitigation is required.

9c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses? ☐ ☐ ☒ ☐

There is one sensitive land use within 0.25 mile of the Project site. Belmont Village Senior Living Calabasas at 24141 Ventura Boulevard, Calabasas, CA 91302, is approximately 0.25 mile southwest of the Project site. The proposed use is a self-storage facility, which would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste that would impact nearby sensitive land uses. The types of hazardous materials that would be routinely handled would be limited to cleaners, paints, solvents, and fertilizers and pesticides for site landscaping. Further, the Project would be required to adhere to all applicable federal, State, and regional regulations regarding handling, transport, and disposal of hazardous materials. Therefore, Project impacts would be less than significant, and no mitigation is required.

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[42] DTSC EnviroStor. 2022. *Hazardous Waste and Substances Site List.* https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=calbasas (accessed August 2022).

[43] DTSC. 2022. *DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List).* https://dtsc.ca.gov/dtscs-cortese-list/ (accessed August 2022).

[44] State Water Resources Control Board. 2022. *GeoTracker.* https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Calabasas (accessed August 2022).

9d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ☐ ☐ ☐ ☒

Government Code § 65962.5 refers to the Hazardous Waste and Substances Site List, commonly known as the Cortese List, maintained by the State of California Department of Toxic Substances Control (DTSC). The Cortese List identifies hazardous waste and substance sites including public drinking water wells with detectable levels of contamination; sites with known USTs having a reportable release; and solid waste disposal facilities from which there is a known migration. The Cortese List also includes hazardous substance sites selected for remedial action; historic Cortese sites; and sites with known toxic material identified through the abandoned site assessment program. Review of EnviroStor and GeoTracker databases indicates the Project site is not on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5; see Response 9b. No impact would occur, and no mitigation is required.

9e) 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? ☐ ☐ ☐ ☒

The Project site is approximately 9.5 miles southwest of the nearest airport- the Van Nuys Airport, and not within the Van Nuys Airport Influence Area.[45] Therefore, the Project would not result in a safety hazard or excessive noise for people working or residing at the Project site. No impact would occur, and no mitigation is required.

9f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒

The County General Plan Safety Element works jointly with the Operational Area Emergency Response Plan (OAERP), which is prepared by County's Chief Executive Office - Office of Emergency Management (CEO OEM). The OAERP strengthens short and long-term emergency response and recovery capability and identifies emergency procedures and emergency management routes the County. The CEO OEM also prepares the All-Hazards Mitigation Plan, which provides policy guidance for minimizing threats from natural and human-made hazards in the County. The OAERP is the emergency response plan for the unincorporated areas of Los Angeles County. The OAERP strengthens short- and long-term emergency response and recovery capability and identifies emergency procedures and emergency management routes in the County. The All-Hazards Mitigation Plan includes a compilation of known and projected hazards in the County and includes information on historical disasters in the County.[46] General Plan Figure 12.6 indicates that the Project site is not located along any identified disaster routes. Therefore, the Project would not impair implementation of, or physically interfere with, an adopted County emergency response or evacuation plan. No impact would occur.

[45] Los Angeles County. 2020. Airport Influence Area. https://data-lahub.opendata.arcgis.com/datasets/lacounty::airport-influence-area-1/explore?location=34.089515%2C-118.114950%2C9.92 (accessed August 2022).

[46] Los Angeles County. 2022. General Plan 2035, Chapter 12: Safety Element. https://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch12_update-20220712.pdf (accessed August 2022).

9g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving fires, because the project is located:

i) within a high fire hazard area with inadequate access? ☐ ☐ ☒ ☐

The Project site is located in a Very High Fire Hazard Severity Zone (VHFHSZ).[47,48] The Project has been reviewed by the Los Angeles County Fire Department, which has a list of requirements for projects in this zone for construction, access, water mains, fire flows, and fire hydrants, which include:

- Turning radii of not less than 32 feet and a LACFD approved turning area;
- Fire flows of up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration;
- Fire hydrant spacing shall be 300 feet;
- A LACFD approved automatic sprinkler system

The Project would comply with all applicable LACFD requirements and therefore the Project is not expected to expose people or structures to a significant risk of loss, injury, or death involving fires due to being located in a VHFHSZ, inadequate access, inadequate fire flows, or being located within proximity to land uses that have potential for dangerous fire hazard. Therefore, impacts would be less than significant.

ii) within an area with inadequate water and pressure to meet fire flow standards? ☐ ☐ ☒ ☐

As noted in Response 9a above, the Project would be subject to review by LACFD Fire Prevention Division and compliance with COAs concerning water for required fire flow, fire hydrant locations, fire flow testing, and proving vehicular access to fire hydrants. Therefore, following LACFD review and compliance with COA, the Project would not expose people or structures to a significant risk involving fires, given it would not be in an area where fire flow standards could not be met. A less than significant impact would occur, and no mitigation is required.

iii) within proximity to land uses that have the potential for dangerous fire hazard? ☐ ☐ ☒ ☐

The Project site is vacant and undeveloped. The Project would be an infill development and surrounded by large-lot single-family residential uses to the north, light industrial/manufacturing uses to the south, light industrial and commercial uses to the east, and a pet cemetery to the west. Examples of light industrial uses include materials testing laboratories, assembly of data processing equipment, contractor offices, cabinetry work, machine shops, management services, photocopying services, software publishing/production, engineering/architectural services, and electronic/computer component production.[49] Given their scale and nature, the nearby light industrial uses are not anticipated to elevate the potential for dangerous fire hazards. Therefore, the Project would not expose people or structures to a significant risk involving fires associated with proximity to land uses that have the potential for dangerous fire hazard. A less than significant impact would occur, and no mitigation is required.

[49] Law Insider. ND. Light industrial definition. https://www.lawinsider.com/dictionary/light-industrial. Accessed August 2022.

h) Does the proposed use constitute a potentially dangerous fire hazard? ☐ ☐ ☒ ☐

The Project proposes a self-storage facility with 1,334 self-storage units that would be rented to individuals and businesses. Storage of flammables in the storage space would occur in compliance with the Los Angeles County Fire Department Prevention Bureau, Health Hazardous Materials Division, *Compliance Guideline for Hazardous Wastes and Materials*.[50] Therefore, the proposed Project does not constitute a potentially dangerous fire hazard. A less than significant impact would occur, and no mitigation is required.

[50] Los Angeles County Fire Department. 2019. Compliance Guideline for Hazardous Wastes and Materials. https://fire.lacounty.gov/wp-content/uploads/2019/09/HHMD-Compliance-Guidance-Document-2-1.pdf (accessed September 20, 2022).

10. HYDROLOGY AND WATER QUALITY

This section is based on the Hydrology Report (Adams Steeter Civil Engineers, 2021), which is included in its entirety as **Appendix E1: Hydrology Report**, and the Low Impact Development (LID) Report (Adams Steeter Civil Engineers, 2022), which is included in its entirety as **Appendix E2: Low Impact Development Report**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
10a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐

Short-Term Construction

The Project's construction-related activities would include excavation, grading, and trenching, which would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. Construction-related erosion effects would be addressed through compliance with the NPDES program's Construction General Permit. Construction activity subject to this Construction General Permit includes any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than 1.0 acre. Given that the Project would disturb an area greater than 1.0 acre, it would be subject to the Construction General Permit. To obtain coverage under the Construction General Permit, dischargers are required to file with the State Water Board the Permit Registration Documents (PRDs), which include a Notice of Intent (NOI) and other compliance-related documents. The Construction General Permit requires development and implementation of a SWPPP and monitoring plan, which must include erosion-control and sediment-control BMPs that would meet or exceed General Permit-required measures to control potential construction-related pollutants.

County Code Chapter 12.80: Stormwater and Runoff Pollution Control, addresses stormwater and runoff pollution control and is intended to reduce the quantity of pollutants being discharged to receiving waters of the County and the United States. County Code § 12.80.450 specifies that no person shall commence any construction activity for which a permit is required by County Code Title 26 without implementing all stormwater and runoff pollution mitigation measures required by such permit. All BMPs required as a condition of any permit for construction activity granted pursuant to County Code Title 26 must be maintained in full force and effect during the Project's term, unless otherwise authorized by the Director of Public Works (County Code § 12.80.510). Following compliance with NPDES and County Code requirements, the Project's construction-related activities would not violate water quality or waste discharge requirements. A less than significant impact would occur, and no mitigation is required.

Long-Term Operations

Urban stormwater runoff is covered under the municipal permit for Los Angeles County, the NPDES MS4 Permit for stormwater and non-stormwater discharges from the MS4 within the Los Angeles County Flood Control District (LACFCD), Los Angeles County, and 84 incorporated cities within the County's coastal watersheds, except Long Beach (CAS004001, Order No. R4-2012-0175). Each Permittee is required to implement a Planning and Land Development Program pursuant to Part VI.D.7.b for all New Development and Redevelopment projects subject to the Order. The New Development category includes all development

projects equal to 1.0 acre or greater of disturbed area and adding more than 10,000 SF of impervious surface area, among other types of projects. The Project would create more than 10,000 SF of impervious surface area; as such, a Planning and Land Development Program is required. The Planning and Land Development Program must be implemented to minimize pollutant loadings from impervious surfaces such as roof tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), LID Strategies, and Treatment Control BMPs.

The Project site is currently vacant and undeveloped. The lower two-thirds of the site are relatively level, while the upper one-third slopes to the north. Presently, the Project site drains from the northwest to the southeast, ultimately discharging near the site's southeast corner and Old Scandia Lane. As depicted in **Exhibit 5**, a riverine/drainage feature that collects into Los Angeles County Flood Control District's underground storm drain (i.e., Oakfield Drain Line C) traverses the southern portion of the Project site.[51] Receiving waters include Calabasas Creek and the Los Angeles River.

All development must comply with County Title 12, Chapter 12.84 requirements for a LID, including County Code § 12.84.450, which requires the applicant for any development project to submit a LID plan to the Director for review and approval that provides a comprehensive, technical discussion of how the development project will comply with County Code Chapter 12.84 and the applicable provisions specified in the LID Standards Manual. The LID plan shall be approved prior to issuance of a grading permit for such development project. Further, per County Code § 12.84.460, all grading/site drainage plans for the development shall incorporate the approved LID plan features.

A LID Report (see **Appendix E2**) was prepared per County Code Chapter 12.84 to provide Best Management Practices (BMP) for reducing pollutants in storm water discharges after Project completion. The Project falls under County LID requirements with a classification of a Designated Project given the Project would disturb more than 1.0 acre and add more than 10,000 ft^2 of impervious surface area. The Project proposes a biofiltration system and trench drains and catch basins to capture and treat urban runoff from the site. For stormwater treatment, the Project site has been divided into eight distinct Drainage Management Areas (DMAs) to determine the required stormwater quality design volume (SWODv). DMA's A, B, G, F and H consist of stabilized vegetated pervious areas comprising of a total 1.52 acres. DMA-C consists of buildings C, D, and their surrounding improvements. Runoff from DMA C would discharge into a Filterra bio-filtration system before ultimately discharging into an existing LA County Flood Control 60" RCP storm drain system (i.e., Oakfield Drain Line C) located onsite between buildings A and B. DMA-D consists of building A, the office building and surrounding improvements. Runoff generated from this area would follow similar drainage patterns to DMA-C. Building roof runoff would discharge onto the concrete drive aisle where a 3.0-foot concrete v-gutter would direct the runoff westerly before turning south and discharging into a 110 SF Filterra Bio-scape system located between Building A and the office. Lastly, DMA-E (0.16 acres) consists of the site entrance improvements and the ramp leading up to Building C. Trench drains located at the entrance, by the security gates and at the bottom of the ramp would intercept stormwater runoff from this steep portion of the site and would redirect the runoff to a Filterra bio-filtration system before converging with the runoff from the remaining site and collectively discharging into Oakfield Drain Line C. As required under County Code § 12.84.460, the Project proposes to implement various BMPs, including the structural BMPs (i.e., biofiltration as described above) and various non-structural BMPs; see **Appendix E2**. Notwithstanding, because the LID Report is subject to County review and approval, the Project would be subject to compliance with MM-HYD-1, which requires the applicant for any development project to submit a LID plan to the Director of Public Works for review and approval that provides a comprehensive, technical discussion of how the development project will comply with County Code Chapter 12.84. Following compliance with the

[51]The portion of the open tributary that once traversed the site in a northwest-southeast orientation was replaced in 2020 with a 60-inch underground reinforced concrete pipe (RCP) to extend to the property's western limits.

existing water quality regulatory framework (i.e., NPDES and County Code), including implementation of BMP's, and MM-HYD-1, Project operations would not violate water quality or waste discharge requirements and a less than significant impact with mitigation would occur.

10b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

The LVMWD provides water (and wastewater) services to the Project site and surrounding communities. The LVMWD relies on four water supply sources: imported potable water (78 percent); recycled water from the Tapia Water Reclamation Facility (TWRF) (22 percent); and, to a lesser extent, groundwater from the Thousand Oaks Area Basin, and surface runoff into the Las Virgenes Reservoir.

As noted above, groundwater from the Thousand Oaks Area Basin is one of LVMWD's water supply sources. This groundwater is only used to supplement the recycled water supplies. Therefore, the Project's potable water demand would not substantially decrease groundwater supplies.

If the Project were to remove an existing groundwater recharge area or substantially reduces runoff that results in groundwater recharge such that existing wells would no longer be able to operate, a potentially significant impact could occur. LVMWD service area overlies portions of multiple groundwater basins (i.e., Thousand Oaks Area, Russel Valley, Malibu Valley, and San Fernando Valley Groundwater Basins).[52] The Project site is in the Los Angeles River Watershed and the San Fernando Valley Groundwater Basin.[53] Currently, LVMWD only operates two groundwater production wells, both in the Thousand Oaks Area Groundwater Basin and both used solely to augment recycled water supplies. Thus, the LVMWD does not currently use the San Fernando Valley Groundwater Basin where the Project site is located. Moreover, four infiltration tests were conducted at the Project site, and the observed infiltration rate was 0 inches/hour for the clay soil present on-site. With that, the likelihood that the Project site under existing conditions serves as an area of groundwater recharge is low. Lastly, the LID Report found that due to low infiltration rates found on the Project site, on-site infiltration is not a viable treatment method for stormwater runoff existing conditions. Given these conditions, site development (i.e., replacing portions of a vacant site with impermeable areas) would not affect groundwater recharge. Since LVMWD only uses groundwater from the Thousand Oaks Area Basin to supplement recycled water supplies, the Project would not interfere substantially with groundwater recharge.

Therefore, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. A less than significant impact would occur, and no mitigation is required.

10c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of a Federal 100-year flood hazard area or County Capital Flood floodplain; 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 off-site?	☐	☒	☐	☐

[52] 2020 Urban Water Management Plan for Las Virgenes Municipal Water District. 2021. page 6.6. https://www.lvmwd.com/home/showpublisheddocument/13459/637616788962730000.
[53] DWR. ND. Groundwater Basin Boundary Assessment Tool. https://gis.water.ca.gov/app/bbat/ (accessed August 2022).

(ii) Substantially increase the rate, amount, or depth 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 which would expose existing housing or other insurable structures in a Federal 100-year flood hazard area or County Capital Flood floodplain to a significant risk of loss or damage involving flooding?	☐	☒	☐	☐

An approved Hydrology Study is needed to confirm a project's stormwater runoff does not increase from the existing to the proposed condition.[54] For unincorporated areas, the Hydrology Study approval process is conducted by the Land Development Division.

The Hydrology Study was prepared per Los Angeles County Public Works requirements to determine the amount of stormwater runoff generated from the Project site in the existing and proposed conditions. The Hydrology Study was developed using the HydroCalc Calculator (version 1.0.3) and the County of Los Angeles Hydrology Manual. Soil Classification number (#4) and the 50-year rain-depth of approximately 7.3 inches were obtained through the Los Angeles County Public Works Hydrology Map GIS Application. A 25-year storm intensity was used for on-site runoff calculations in conformance with LA County and City of Calabasas guidelines.

Existing Drainage Condition

In its current condition, the Project site is vacant and undeveloped. An existing channel that once traversed the site in a northwest-southeast orientation at southern portion of the property was replaced with an 60-inch underground RCP. The site's peak runoff based on a 25-year storm event is provided in **Table 10-1: Overall Existing Condition Peak Runoff and Volume**.

TABLE 10-1: OVERALL EXISTING CONDITION PEAK RUNOFF AND VOLUME

DRAINAGE SUB-AREA	AREA (ACRE)	TOTAL RUNOFF – Q25 (CFS)	TOTAL RUNOFF VOLUME – V25 (CF)
Project Site	3.74	9.99	17,439

Source: Hydrology Report (**Appendix E1: Hydrology Report**)

[54] Los Angeles County Department of Public Works Hydrology Study Approval Process. https://dpw.lacounty.gov/ldd/lddservices/HydrologyStudy.shtml (accessed February 2023).

Proposed Drainage Condition

Project development would consist of improvements for and construction of three self-storage buildings (Buildings "A" through "C"), with their respective "Subareas" (1A through 3C). A two story, at-grade office building (Building "D") would be located near Building "A." A parking lot would be located at the site's southeast corner.

The proposed condition onsite drainage patterns would remain similar to existing conditions; stormwater runoff generated from Subareas 1A and 1B (the hillside undeveloped portions) would be intercepted by a concrete v-gutter located along Building C's northside and would be redirected to the east and west, respectively, to drain inlets which would bypass the biofiltration treatment systems and discharge directly into an 18-inch RCP stub-out. Subareas 1C and 2A, which would make up most of the improved site, would share similar drainage patterns. Buildings A through C would discharge at grade and centered along each drive aisle, concrete v-gutters would convey runoff to the west where drain inlets would intercept the runoff and redirect to the tributary biofiltration systems before converging with the runoff from Subareas 1A and 1B at the existing 18-inch stub-out point of connection. At the site's southeast corner, Subarea 2B would sheet flow south towards Old Scandia Lane where a trench drain at the property line would intercept the runoff redirect to the same storm drain system servicing Subarea 2A.

Offsite run-off and run-on was encountered on the Project site. Subarea 3A consists of a triangular offsite area (0.07 acres) located at the top of the site, which generates stormwater run-on. Subarea 3B is another triangular area (0.14 acres) located at the site's northwest corner that is considered within the site boundary but discharges offsite due to the natural sloping nature of the hillside. Though the discharge is offsite, it would remain tributary and is accounted for in the existing 60-inc LACFCD storm drain system. The final offsite discharge is associated with Subarea 3C where a narrow strip (0.03 acres) of landscaping along the west side of Building A would flow south and discharge onto Old Scandia Lane via a parkway drain.

Proposed Condition Peak Flow:

The proposed on-site peak runoff and volume corresponding to each individual drainage Sub-areas (1A through 3C) and the overall site based on the 25-year storm event is provided by the Proposed Condition Hydrology Map and hydrologic calculations in **Appendix E1** Section II. The calculated peak flows for individual Sub-areas are summarized in **Table 10-2: Proposed Condition Individual Subarea Peak Runoff and Volumes**.

TABLE 10-2: PROPOSED CONDITION INDIVIDUAL SUBAREA PEAK RUNOFF AND VOLUMES

DRAINAGE SUB-AREA	AREA (ACRE)	TOTAL RUNOFF – Q25 (CFS)	TOTAL RUNOFF VOLUME – V25 (CF)
1A		1.56	2,472
1B	0.75	2.21	3,499
1C	1.12	3.85	23,258
2A	0.97	3.33	19,828
2B	0.2	0.66	3,340
3A	0.07	0.21	327
3B	0.14	0.41	653
3C	0.03	0.09	140

Source: Hydrology Report (**Appendix E1**)

Conclusion:

The results from the Hydrology Study utilizing HydroCalc software provided by Los Angeles County Department of Public Works demonstrate that the proposed stormwater peak flow from the Project site would be generally higher than the existing condition peak flow, as indicated in **Table 10-1 and 10-2**. The proposed condition peak flow rate would be higher primarily because the Project would increase the site's impervious area causing higher runoff flow rates and higher concentration times. As stated above, the existing condition Q25 runoff was estimated at 9.99 CFS, whereas the proposed condition was estimated at 12.32 CFS, producing an increase of 2.33 CFS. According to LACFD, the Project site runoff pertains to LACFCD Facility: PD 2662/Oakfield Drain System where the confirmed maximum allowable runoff discharge from this site into the existing lateral is 14.46 CFS; thus, the 12.32 CFS is within the allowable discharge rate. Additionally, there are no streams or rivers near the Project site. Therefore, based on Hydrology Study findings, the Project would not substantially alter the site's existing drainage pattern or add impervious surfaces, such that it would substantially increase the rate or amount of surface runoff in a manner which would result in flooding, create/contribute runoff, which would exceed the capacity of existing drainage system, or impede/redirect flood flows. Notwithstanding, because the Hydrology Study is subject to County review and approval, the Project would be subject to compliance with MM-HYD-2, which requires the applicant for any development project to submit to the County of Los Angeles Land Development Division prior to grading permit issuance a Hydrology Study that analyzes the existing and proposed Project conditions to determine the impact from stormwater runoff generated and leaving the site. Following compliance with MM HYD-2, the Project would not alter the existing drainage pattern in a manner which would result in substantial flooding, capacity, or substantial additional sources of polluted runoff and a less than significant impact would occur with mitigation incorporated. Refer to Response 10a concerning potential impacts involving erosion.

10d) Otherwise place structures in Federal 100-year flood hazard or County Capital Flood floodplain areas which would require additional flood proofing and flood insurance requirements?	☐	☐	☒	☐

The County Flood Zone Determination Map[55] identifies the Project site as Zones D and X, which are identified as areas in which flood hazards are undetermined, but possible, and areas determined to be outside the 0.2% annual chance floodplain, respectively.[56] However, Federal Emergency Management Agency (FEMA) reports the Project site is not in a flood hazard area.[57] Therefore, the Project would not place structures in Federal 100-year flood hazard or County Capital Flood floodplain areas. A less than significant impact would occur, and no mitigation is required.

10e) Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?	☐	☒	☐	☐

As discussed above, all development must comply with County Title 12, Chapter 12.84 requirements for a LID, including County Code § 12.84.450, which requires the applicant for any development project to submit a LID plan to the Director for review and approval that provides a comprehensive, technical discussion of

[55] Los Angeles County. 2022. Flood Zone Determination Map. Retrieved from: https://apps.gis.lacounty.gov/dpw/m/?viewer=floodzone

[56] Los Angeles County. 2022. FEMA Flood Zone Definitions. Retrieved from: https://pw.lacounty.gov/wmd/floodzone/docs/FZD_Legend.pdf.

[57] Federal Emergency Management Agency. 2022. *FEMA National Flood Hazard Layer Map.* Retrieved from https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd.

how the development project will comply with County Code Chapter 12.84 and the applicable provisions specified in the LID Standards Manual. The LID plan shall be approved prior to issuance of a grading permit for such development project. Further, per County Code § 12.84.460, all grading/site drainage plans for the development shall incorporate the approved LID plan features.

The Los Angeles County LID Ordinance is designed to lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters and other water bodies; minimize pollutant loadings from impervious surfaces by requiring development projects to incorporate properly designed, technically appropriate BMPs and other LID strategies; and minimize erosion and other hydrologic impacts on natural drainage systems by requiring development projects to incorporate properly designed, technically appropriate hydromodification control development principles and technologies. As required under County Code § 12.84.460, the Project would be subject to the County's LID Ordinance and is required to incorporate BMPs to treat and release off- and on-site runoff. See Response 10a above. Notwithstanding, because the LID Report is subject to County review and approval, the Project is subject to MM HYD-1, which requires the applicant for any development project to submit a LID plan to the Director of Public Works for review and approval that provides a comprehensive, technical discussion of how the development project will comply with County Code Chapter 12.84. Following compliance with MM HYD-1, the Project would not conflict with County Code, Title 12, Chapter 12.84 and a less than significant impact would occur with mitigation incorporated.

10f) Use onsite wastewater treatment systems in areas with known geological limitations (e.g., high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)?	☐	☐	☐	☒

The Project would connect to the existing public sewer system, thus, would not require an onsite wastewater treatment system. No impact would occur.

10g) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒

The Project site is not in a flood hazard area.[58] Tsunamis are sea waves that are generated in response to large-magnitude earthquakes. When these waves reach shorelines, they sometimes produce coastal flooding. Seiches are the oscillation of large bodies of standing water, such as lakes, which can occur in response to ground shaking. The Project site is approximately 8.5 miles north/inland of the Pacific Ocean and there are no nearby bodies of standing water. Therefore, tsunamis and seiches do not pose hazards to the Project site. The Project is not within a flood hazard, tsunami, or seiche zone and would not risk the release of pollutants. Therefore, no impact would occur by flood hazard, tsunami, or seiche, and no mitigation is required.

101h) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

As discussed in Response 10a above, as required under County Code § 12.84.460, the Project proposes to implement various BMPs, including the structural BMPs (i.e., biofiltration) and various non-structural BMPs outlined in the LID Report; see **Appendix E2**. Notwithstanding, because the LID Report is subject to County review and approval, the Project would be subject to compliance with MM HYD-1, which requires the

[58] Federal Emergency Management Agency. 2022. *FEMA National Flood Hazard Layer Map*. Retrieved from https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd.

applicant for any development project to submit a LID plan to the Director of Public Works for review and approval that provides a comprehensive, technical discussion of how the development project will comply with County Code Chapter 12.84. Following compliance with the existing water quality regulatory framework (i.e., NPDES and County Code), including implementation of BMP's, and MM HYD-1 the Project would not conflict or obstruct implementation of a water quality control plan and a less than significant impact would occur with mitigation incorporated.

The Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. The latest basin prioritization project, SGMA 2019 Basin Prioritization, was completed in December 2019. SGMA 2019 Basin Prioritization identified 94 basins/sub-basins as medium or high priority. Both the Thousand Oaks Area Groundwater Basin, which is currently used by LVMWD, and the San Fernando Valley Groundwater Basin where the Project site is located, are very low priority basins.[59] Therefore, the Project would not conflict with or obstruct implementation of a sustainable groundwater management plan. A less than significant impact would occur.

Mitigation Program

MM HYD-1 Prior to issuance of a grading permit, the applicant for the Project shall submit a Low Impact Development Report to the Director of Public Works for review and approval that provides a comprehensive, technical discussion of how the Project will comply with County Code Chapter 12.84 and the applicable provisions specified in the LID Standards Manual. A deposit and fee to recover the costs associated with LID plan review shall be required. Any future project within the planning area shall comply with the recommendations of an approved Hydrology Study and LID Report. These recommendations shall be implemented in the design of a project.

MM HYD-2 Prior to issuance of a grading permit, a State of California registered Civil Engineer shall prepare and submit to the County of Los Angeles Land Development Division a detailed Hydrology Study. The report shall analyze the existing and proposed conditions of the Project to determine the impact to stormwater runoff generated and leaving the site.

[59] State Water Resources Control Board. (2019). Sustainable Groundwater Management Act (SGMA). https://www.waterboards.ca.gov/water_issues/programs/gmp/sgma.html.

11. LAND USE AND PLANNING

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
11a) Physically divide an established community?	☐	☐	☐	☒

Examples of projects that could physically divide an established community include a new freeway or highway that traverse an established neighborhood. The Project proposes an infill development (i.e., a self-storage facility) surrounded by large-lot single-family residential uses to the north, light industrial/manufacturing uses to the south (beyond Old Scandia Lane), light industrial and commercial uses to the east, and a pet cemetery to the west. The Project does not propose any new streets or other physical barriers, which could physically divide an established community. Therefore, given its nature and scope, the Project would not physically divide an established community. No impact would occur.

11b) Cause a significant environmental impact due to a conflict with any County land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

The Project site is designated as Commercial under the Santa Monica Mountains North Area Plan.[60] The Commercial land use category is intended for general shopping and commercial service needs of area residents and workers, as well as the needs of highway users and tourists. In addition, quiet, non-polluting light industrial uses such as the found in "high-tech" business are also appropriate. The Project proposes a self-storage facility, which is a quiet non-polluting light industrial use. Additionally, the Project would be consistent with Santa Monica Mountains North Area Plan Policies VI-19 and VI-29, as follows:

- *Policy VI-19: Require that light industrial and commercial uses include adequately landscaped open space, and be designed to relate to the surrounding environment.* The slope at the Project site's northern portion would remain undisturbed. Also, the Project would provide landscaping along the Old Sandia Lane frontage.
- Policy VI-29: *Concentrate light industrial, commercial, and office uses adjacent to the Ventura Freeway corridor, and ensure that each project has adequate access, can handle the traffic, and is accessible to essential services, with appropriate site design to enhance community character.* The Project site is situated north of the 101 Freeway and Ventura Boulevard. Also, the Project is an infill development with light industrial/manufacturing uses to the south, light industrial and commercial uses to the east, and a pet cemetery to the west. Therefore, development of the proposed self-storage facility would be compatible with the area's existing development pattern.

The Project site is zoned M-1 (Light Manufacturing). The M-1 Zone allows for light industry, including storage of goods that have low nuisance impacts. The Project proposes a self-storage facility with and office/residence. Self-storage facilities are an allowed use in the M-1 Zone subject to a CUP; see County Code §§ 22.22.0110 – 22.22.030. The Project would be subject to compliance with the land use regulations for the M-1 Zone (County Code §§ 22.22.0110 – 22.22.030) and for self-storage facilities (County Code § 22.140.560 - Self-Service Storage Facilities). Additionally, the Santa Monica Mountains Community Standards District (CSD) requirements specify that any project with over 5,000 CY of grading requires a CUP (County Code §

[60] Santa Monica Mountains North Area Plan. 2021. https://planning.lacounty.gov/assets/upl/project/smmnap_final-plan.pdf.

22.44.133.D.4.b). Construction would require approximately 38,253 CY of cut and approximately 1,454 CY of fill, with a net export of approximately 36,799 CY. The Project requires more than 5,000 CY of grading, thus, requires a CUP for this activity also. The County will review the Project to verify consistency with the applicable policies and land use regulations. Therefore, the Project would not cause a significant environmental impact due to a conflict with the relevant land use policies and land use regulations. A less than significant impact would occur, and no mitigation is required.

11c) Conflict with the goals and policies of the General Plan related to Hillside Management Areas or Significant Ecological Areas?	☐	☐	☒	☐

The Project site is not located in a Significant Ecological Area.[61] Additionally, Hillside Management Areas (HMAs) are defined as areas with 25 percent or greater natural slopes.[62] The County's GIS-NET Public map viewer reports that the Project site contains Hillside Management Area (HMA; 25 percent to 50 percent) and HMA (50 percent or greater slope); see Response 7f above. Compliance with the County's regulatory requirements for HMAS will be verified through the Project's entitlement review process. Therefore, the Project would not conflict with the General Plan goals and policies related to HMAs.

[61] Los Angeles County Department of Regional Planning – Significant Ecological Areas. Available at: https://databasin.org/datasets/59c2b2bbe6e5499abfca5d4e1a5b95c1/. Accessed August 2022.

[62] Hillside Management Area (HMA) Ordinance. Available at: https://planning.lacounty.gov/hma#:~:text=Hillside%20Management%20Areas%20(HMAs)%20are,Guidelines%20is%20optional%20but%20encouraged. Accessed August 2022.

12. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
12a) 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?	☐	☐	☐	☒
12b) 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?	☐	☐	☐	☒

The Surface Mining and Reclamation Act of 1975 (SMARA) requires classification of land into Mineral Resource Zones (MRZs) according to the area's known or inferred mineral potential. SMARA was adopted to encourage the production and conservation of mineral resources, prevent or minimize adverse effects to the environments, and protect public health and safety.

The County utilizes the California Geological Survey, to identify regionally significant aggregate resources deposits. These aggregate resource deposits are designated as MRZs. Four major MRZs are identified in, or partially within the unincorporated areas and are shown in General Plan Table 9.7: Little Rock Creek Fan, Soledad Production Area, Sun Valley Production Area, and Irwindale Production Area. The Project site is not located in an area identified as a having known mineral resources.[63] Therefore, the Project is not expected to result in the loss of a locally important mineral resource site and would have no impact concerning mineral resources.

[63] Los Angeles County. General Plan 2035, Page 150. Available at: https://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf. (accessed August 2022.)

13. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
13a) 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 County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?	☐	☐	☒	☐

Construction

Construction noise represents a short-term impact on ambient noise levels. Noise generated by equipment for demolition and construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Construction activities on the project site would expose existing noise-sensitive uses to increased noise levels. In typical construction projects such as the proposed project, the loudest noise generally occurs during demolition and grading activities because they involve the largest equipment. Typical hourly average construction-generated noise levels are approximately 74 to 88 dBA measured at a distance of 50 feet from the site during busy construction periods[64]. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

The Project could expose nearby sensitive receptors to elevated noise levels during Project construction. However, the Project would generally disperse construction noise throughout the site and would not be concentrated at the nearest point to sensitive receptors. Further, the applicant would comply with County Code § 12.08.440, Construction Noise, Section A, which prohibits construction activity between the hours of 7:00 pm and 7:00 am daily, or at any time on Sundays and legal holidays. In addition, the applicant must comply with County Code § 12.08.440, Construction Noise, Section B, Noise Restrictions at Affected Structures, and Section C, which specifies that all mobile or stationary internal-combustion-engine powered equipment or machinery be equipped with suitable exhaust and air-intake silencers in proper working order. Therefore, the Project's construction noise impacts would be less than significant, and no mitigation is required.

Operations

The noise-sensitive receptors nearest the Project site are the single-family residential uses located approximately 485 feet (148 meters) to the north. Typical noise sources associated with the Project that would potentially impact these nearby noise-sensitive receptors include stationary noise equipment (i.e., air conditioning equipment for the office and manager's residence); activities associated with loading/unloading storage items; parking areas (i.e., car door slamming, car radios, engine start-up, and car pass-by); and off-site

[64] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

traffic noise. However, given the nature of the proposed Project (a self-storage facility with infrequent on-site activity), noise levels from on-site noise sources are anticipated to be minimal and would not result in noticeable change in the ambient noise environment. In addition, based on the Inverse Square Law for sound propagation,[65] noise levels emanating from the Project site would be negligible at the nearest noise-sensitive receptors (the single-family residential uses located approximately 485 feet to the north) and intervening topographic features (e.g., a large hill/berm, elevation changes, and mature vegetation and groundcover) would further reduce the Project's noise levels. Thus, the Project's operational noise would not exceed County Code noise standards. A less than impact would occur, and no mitigation is required.

13b) Generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ ☒ ☐

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Ground-borne vibrations from construction activities rarely reach levels that damage structures. The nearest off-site structures are located over 25 feet from the Project site and would not experience vibration levels in exceedance of established vibration standards.[66] The Project would not require pile driving. Further, the Project would comply with relevant County Code standards relating to construction noise impacts; therefore, impacts would be less than significant, and no mitigation is required.

13c) 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? ☐ ☐ ☐ ☒

The Project site is approximately 9.5 miles southwest of the nearest airport- the Van Nuys Airport, and not within the Van Nuys Airport Influence Area.[67] Therefore, Project implementation would not expose people residing or working in the Project area to excessive airport-related noise levels. No impact would occur.

[65] Yamaha Corporation, *Inverse Square Law: What is it?* accessed August 8, 2022, https://uc.yamaha.com/insights/blog/2020/march/inverse-square-law-what-is-it/

[66] Per the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual* (September 2018), vibration levels beyond 25 feet would not exceed the most stringent damage criterion of 0.12 inches-per-second PPV (in/sec PPV) for buildings extremely susceptible to vibration damage.

[67] Los Angeles County Airport Land Use Commission, *Van Nuys Airport – Airport Influence Area,* May 2003.

14. POPULATION AND HOUSING

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
14a) 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)?	☐	☐	☒	☐

The Project proposes a self-storage facility with a 2,000 SF office/manager's residence, which would induce nominal population growth (approximately three persons).[68] The Project is not expected to induce substantial unplanned population growth or cause exceedances to local or regional population projections. Therefore, a less than significant impact would occur, and no mitigation is required.

14b) Displace substantial numbers of existing people or housing, especially affordable housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The Project site is vacant and undeveloped. Therefore, the Project would not displace existing people or housing or require construction of replacement housing elsewhere. No impact would occur.

[68] Assuming 2.80 persons per household (California Department of Finance. (2022). *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2021-2022. Sacramento, California, May 2022*).

15. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
15a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of 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?	☐	☐	☒	☐

The LACFD provides fire protection and paramedic services to the Project site. The LACFD has 174 fire stations that serve over 4,000,000 residents across the County.[69] The fire stations nearest the Project site are Station No. 68 located at 24130 Calabasas Road, approximately 0.38 miles to the south, and Station No. 125 located at 5215 Las Virgenes Road, approximately 2.73 miles to the west. The LACFD uses national guidelines of a five-minute response time for the first arriving unit for fire and EMS responses and eight minutes for the advanced life support unit in urban areas.

The Project site is in a VHFHSZ; see Response 9gi. The Project proposes a self-storage facility with an office/manager's residence on a currently vacant site, which would induce nominal population growth (approximately three persons); see Response 14a. Therefore, the Project would nominally increase demand for fire protection and emergency medical services. However, the Project is an infill development site surrounded by large-lot single-family residential uses to the north, light industrial/manufacturing uses to the south, light industrial and commercial uses to the east, and a pet cemetery to the west. The Project area already receives LACFD fire protection and emergency medical services. Additionally, the Project would be subject to review by the LACFD Fire Prevention Division, which would verify the Project's compliance with County Code Title 22: Fire Code and LACFD COA concerning access (e.g., building locations, fire lanes, walking paths, turning radii, and gate access) and water (e.g., required fire flow, fire hydrant locations, fire flow testing, and proving vehicular access to fire hydrants). The Project does not propose, and would not create a need for, new/physically altered fire protection facilities to maintain acceptable service ratios/response times. Therefore, the Project would not result in adverse physical impacts associated with such facilities. Given the Project's nature and scope, and requirements to comply with County regulations, a less than significant impact would occur concerning fire protection facilities, and no mitigation is required.

[69] Los Angeles County Fire Department. *2017-2021 Strategic Plan*. https://fire.lacounty.gov/wp-content/uploads/2019/09/LACoFD-Strategic-Plan-2017-2021.pdf. Accessed 6/21/22.

Sheriff protection? ☐ ☐ ☒ ☐

The Project proposes a self-storage facility with an office/manager's residence, which would induce nominal population growth (approximately three persons); see Response 14a. Therefore, the Project would nominally increase demand for police protection services. However, the Project is an infill development site surrounded by large-lot single-family residential uses to the north, light industrial/manufacturing uses to the south, light industrial and commercial uses to the east, and a pet cemetery to the west. The Project area already receives police protection services from the Sheriff's Department. Through the County's Site Plan Review process, the Project would be reviewed concerning access and other safety measures, which would enhance the Project's police protection. The Project does not propose, and would not create a need for, new/physically altered police protection facilities to maintain acceptable service ratios/response times. Therefore, the Project would not result in adverse physical impacts associated with such facilities. Given the Project's nature and scope, and requirements to comply with County regulations, a less than significant impact would occur concerning police protection facilities, and no mitigation is required.

Schools? ☐ ☐ ☒ ☐

The Project site is located within the Las Virgenes Unified School District (LVUSD) which provides educational services for students in pre-kindergarten through 12th grade. LVUSD consists of 8 elementary schools, 3 middle schools, and 2 high schools that served approximately 11,300 students during the 2021-2022 school year.[70] The Project proposes a self-storage facility with an office/manger's residence, which could induce nominal student population growth. The Project's student population growth, if any, could nominally increase the demand for school facilities/services. However, the Project would be subject to payment of school impact fees in accordance with Senate Bill 50. Pursuant to Government Code § 65995(3)(h), "payment of statutory fees is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use or development of real property…" The Project does not propose, and would not create a need for, new/physically altered school facilities to maintain acceptable service ratios/standards. Therefore, the Project would not result in adverse physical impacts associated with such facilities. Given the Project's nature and scope, a less than significant impact would occur concerning schools, and no mitigation is required.

Parks? ☐ ☐ ☒ ☐

See **Section 16: Recreation**.

Libraries? ☐ ☐ ☒ ☐

The Calabasas Library is located at 200 Civic Center Way, approximately 0.34 miles southeast of the Project site. The Project proposes a self-storage facility with an office/manager's residence, which would induce nominal population growth (approximately three persons), and could generate nominal demand for library facilities/services. Additionally, the Project does not propose, and would not create a need for, new or physically altered library facilities to maintain acceptable service ratios/standards. Therefore, the Project would not result in adverse physical impacts associated with such facilities. Given the Project's nature and scope, a less than significant impact would occur concerning libraries, and no mitigation is required.

[70] Las Virgenes Unified School District. *Get to Know LVUSD.* https://www.lvusd.org/Page/86. Accessed 6/22/22.

Other public facilities? ☐ ☐ ☐ ☒

The Project does not propose, and would not create a need for, other new or physically altered public facilities to maintain acceptable service ratios/standards. Therefore, the Project would not result in adverse physical impacts associated with such facilities. Given the Project's nature and scope, no impact would occur concerning other public facilities.

16. RECREATION

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
16a) 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?	☐	☐	☐	☒
16b) Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
16c) Would the project interfere with regional trail connectivity?	☐	☐	☐	☒

The County's standard for the provision of local parkland is 4.0 acres per 1,000 residents in unincorporated areas, and 6.0 acres of regional parkland per 1,000 residents in total County.[71] The Project proposes one self-storage facility with an office/manager's residence, which would induce nominal population growth (approximately three persons); see Response 14a. Based on the Project's nominal population growth and the County's standards for the provision of local and regional parkland, the Project would generate a very nominal demand for local parkland and regional parkland. The Project's nominal population growth could nominally increase the use of existing recreational facilities. Additionally, this nominal population growth would only nominally increase use of existing facilities and would not result in an accelerated substantial physical deterioration of an existing recreational facility. The Project does not include neighborhood or regional parks, or other recreational facilities or require the construction or expansion of such facilities. No adverse physical effect on the environment would occur in this regard. Therefore, the Project would result in a less than significant impact concerning parkland and recreational facilities, and no mitigation is required.

[71] County of Los Angeles. 2017. Park Design Guidelines and Standards. https://file.lacounty.gov/SDSInter/dpr/1029701_ParkDesignGuideline2017.pdf.

17. TRANSPORTATION

This section is based on the Trojan Calabasas Self-Storage Warehouse Project Traffic Study (RK Engineering Group, Inc., 2021), which is included in its entirety (see **Appendix F1: Traffic Study**) and was reviewed and approved by the County (see **Appendix F2: VMT County Approval**).

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
17a) Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐

Transit Facilities

Transit service to the Project area is provided by LA Metro, which serves the greater Los Angeles metropolitan area. The Project would be served by the existing transit system. The Project's population growth would be nominal (approximately three persons, see Response 14a), thus, the Project would only nominally increase the demand for public transit services. Given its nature and scope, the Project would not conflict with a program plan, ordinance, or policy addressing transit. Therefore, a less than significant impact would occur, and no mitigation is required.

Bicycle Facilities

According to LA County Bikeways Map,[72] there are no designated bike routes near the Project site. Given its nature and scope, the Project would not conflict with a program plan, ordinance, or policy addressing bicycle facilities. Therefore, a less than significant impact would occur, and no mitigation is required.

Pedestrian Facilities

An approximately 11.0-foot area with a sidewalk and landscaping with trees is provided along the Project site's Old Scandia Lane frontage. The Project would provide pedestrian access via the primary entrance proposed on Old Scandia Lane. The Project would not conflict with a program plan, ordinance, or policy addressing pedestrian facilities. Therefore, a less than significant impact would occur, and no mitigation is required.

17b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☒	☐

Project Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. The Project's trip generation is based upon the specific land uses that have been planned for this development. Trip generation is typically estimated based on the trip generation rates from the latest Institute of Transportation Engineers (ITE) Trip Generation Manual. Because the Trip Generation Manual that was used in the Traffic Study (i.e., 10th Edition, 2017) was superseded by the subsequently released version (i.e., 11th

Edition, 2021), the Project's trip generation was forecast using the trip generation rates from each edition. As shown in **Table 17-1: Project Trip Generation**, based on 10th Edition ITE trip generation rates, the Project is forecast to generate approximately 240 daily trips, which include approximately 18 AM peak hour trips and approximately 26 PM peak hour trips. As also shown in **Table 17-1**, based on 11th Edition ITE trip generation rates, the Project is forecast to generate approximately 240 daily trips, which include approximately 16 AM peak hour trips and approximately 22 PM peak hour trips. As shown in **Table 17-1**, there is no difference in the Project's forecast daily trips when using either edition of the Trip Generation Model- both would generate 240 daily trips.

TABLE 17-1: PROJECT TRIP GENERATION

LAND USE (ITE CODE)	QUANTITY	UNITS	AM PEAK HOUR			PM PEAK HOUR			DAILY
			In	Out	Total	In	Out	Total	
ITE 10TH EDITION TRIP GENERATION RATES & VOLUMES[1]									
Mini Warehouse/ Self-Storage (Code 151) Rates	-	100 Storage Units	0.71	0.68	1.39	0.98	0.98	1.95	17.96
Mini Warehouse/Self-Storage Volumes	13.34	100 Storage Units	9	9	18	13	13	26	240
ITE 11TH EDITION TRIP GENERATION RATES & VOLUMES[2]									
Mini Warehouse/ Self-Storage (Code 151) Rates	-	100 Storage Units	0.620	0.593	1.210	0.840	0.840	1.680	17.960
Mini Warehouse/ Self-Storage (Code 151) Volumes	13.34	100 Storage Units	8	8	16	11	11	22	240

Notes:
1. **Appendix F1: Traffic Study**.
2. 2021 ITE Trip Generation Manual (11th Edition).

Vehicle Miles Traveled Analysis

State CEQA Guidelines § 15064.3 codifies the change from Level of Service to vehicle miles traveled (VMT) as a metric for transportation impact analysis. Pursuant to Senate Bill (SB) 743, VMT analysis is the primary method for determining CEQA impacts. The State of California Office of Planning and Research (OPR) developed "screening thresholds" to quickly identify when a project should be expected to cause a less than significant impact without conducting a detailed study.[73] Thus, lead agencies may screen out VMT impacts using project size, whether a project site is in a low VMT area, and whether a project is in a high-quality transit area ("HQTA").

The County of Los Angles has adopted their own transportation impact analysis guidelines (Los Angeles County Public Works Transportation Impact Analysis Guidelines (Guidelines), July 23, 2020) to provide recommendations in the form of thresholds of significance and methodology for identifying VMT-related impacts. The Project is subject to a VMT analysis and is subject to compliance with the recommendations and practices described in the Guidelines.

[73] State of California Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018.

The County has developed a VMT analysis tool to evaluate VMT impacts for projects. The VMT tool has input parameters for the following land use types:

- Residential – Single Family Housing;
- Residential – Multifamily Housing;
- Residential – Affordable Housing;
- Office – General Office;
- Office – Medical Office;
- Retail – Shopping Center, Restaurant, Services;
- Industrial – Warehousing;
- Industrial – Light Industrial; and
- Custom Land Use.

Since the Project consists of self-storage use, it does not fall into any of the above categories. The use most similar to the Project is Industrial - Warehousing. However, a self-storage use is vastly different than a warehouse use, as a self-storage use does not generate significant truck traffic or many employees. For instance, the Project is anticipated to have only one employee that would be required to live onsite in the proposed manager's residence. The remainder of the Project's traffic volume would be attributed to the customer visits when bringing or removing items from the storage units. This is also reflected in the Project's relatively low trip generation, as previously shown in **Table 17-1,** which shows the Project to generate approximately 240 daily trips.

Another tool for VMT analysis is the Southern California Association of Governments (SCAG) traffic analysis model. However, use of the SCAG model may not be appropriate for a small self-storage type project generating a low number of trips since the SCAG model evaluates larger traffic analysis zones (TAZ) instead of individual parcels. Additionally, the type of the proposed land use (self-storage), is operationally much different than the generic and general land uses which the SCAG model is based on. The land uses contained in the SCAG model are broken down into general uses such as retail, residential, employment, etc. A self-storage use is considered different than a general retail or even employment use in terms of traffic generation and VMT, since it does not have many employees and the activities and traffic generation are much less than a general retail or office use. Hence, to address the Project's VMT impact, a qualitative analysis has been conducted.

The Project has been qualitatively evaluated for VMT based on two metrics: Employee VMT; and Total VMT.

Employee VMT: As previously noted, the Project is expected to have only one employee that would be required to live onsite in the manager's residence. The remainder of the Project's traffic volume would be attributed to the customer visits when bringing or removing items from the storage units. Therefore, the Project screens out for Employee VMT, since there would be zero to nominal employee-related VMT for the Project.

Total VMT: The goal of the VMT and new CEQA criteria is to promote local-serving uses and discourage uses that result in longer vehicles miles and travel routes. It is on this basis that generally local-serving retail uses are screened out of requiring a VMT analysis for most part. On the same basis, the proposed self-storage use can be expected to have very low VMT, if not actually reduce existing local VMTs due to the following:

- Self-storage uses are generally designed and built to serve the local community and hence fall into the local-serving land use type.

- As in the case of any self-storage use, the customers that would utilize this self-storage can all be expected to live nearby. Users would typically not be living in distant locations and have their items in a storage at the Project site in Calabasas. This new self-storage use would provide a better and closer alternative for nearby residents and businesses for storing their items, potentially reducing existing travel routes and trip lengths.

- **Appendix F1** Exhibit 5-1 shows the location of existing self-storage facilities in the Project area. As shown in **Appendix F1** Exhibit 5-1, currently numerous self-storage facilities operate near the Project site. Therefore, the Project is not introducing a new use in the area, which could be viewed as a destination and attract patrons from distant areas. Instead, the Project would be one of many existing self-storage facilities serving the area. Additionally, there are similar land uses surrounding the Project site.

Therefore, the Project would not conflict with State CEQA Guidelines § 15064.3(b). A less than significant transportation impact concerning VMT would occur, and no mitigation is required.

17c) Substantially increase hazards due to a road design feature (e.g., sharp curves) or incompatible uses (e.g., farm equipment)? ☐ ☐ ☒ ☐

The Project does not propose any roadway improvements. The Project's ingress and egress, interior circulation elements, and improvements would be designed in conformance with County development and design standards approved by LACFD. Project circulation would be designed and constructed to meet County requirements for minimum widths, corner radii, etc. The proposed Project does not include the use of any incompatible vehicles or equipment on-site, such as farm equipment, which would result in a potential significant traffic safety hazard. Therefore, the Project would not increase hazards due to a road design feature or incompatible uses. Impacts would be less than significant, and no mitigation is required.

17d) Result in inadequate emergency access? ☐ ☐ ☒ ☐

The Project is not anticipated to generate a large number of traffic trips as the Project does not include residential development or uses associated with inducing substantial population growth. The Project is a self-storage facility, and the property is designated for Commercial and Industrial uses. Primary vehicular access to the Project site is proposed via Old Scandia Lane. All development and site improvements would be designed to meet LACFD standards. The LACFD Fire Prevention Division has reviewed the Project and specified access requirements concerning minimum roadway width, fire apparatus access roads, fire lanes, signage, access devices and gates, and access walkways, among other requirements, which would enhance emergency access to the Project site. Following compliance with LACFD access requirements, adequate emergency access to the Project site would be provided. Impacts would be less than significant in this regard, and no mitigation is required.

18. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
18a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and 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 Resources Code § 5020.1(k), or	☐	☐	☐	☒

See also **Section 5.0: Cultural Resources**.

Topographic maps and aerial photographs reviewed as part of the records search conducted for the Project showed portions of the Project site had been subject to previous disturbances related to mechanical excavation, as well as the existence of a building that had been removed by 1985. The Project site is currently vacant and undeveloped. There are no buildings or known tribal cultural resources present on the Project site. Further, the records search indicated that one study (designated LA-2020) assessed the entire Project site for cultural resources in 1990. No cultural resources were identified within the Project site boundaries during this study. Therefore, the Project would not cause an adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. No impact would occur.

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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Chapter 532 Statutes of 2014 (i.e., AB 52) requires that lead agencies evaluate a project's potential impact on "tribal cultural resources." Such resources include "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." AB 52 also gives lead agencies the discretion to determine, based on substantial evidence, whether a resource qualifies as a "tribal cultural resource."

Native American groups may have knowledge about cultural resources in the area and may have concerns about adverse effects from development on tribal cultural resources as defined in Public Resources Code §

21074. In compliance with Public Resources Code § 21080.3.1(b), the County provided formal notification to California Native American tribal representatives identified by the California Native American Heritage Commission. The City received one request for consultation from the Gabrieleño Band of Mission Indians – Kizh Nation. Consultation was scheduled to occur on December 15, 2022, however, on December 15, 2022 the Gabrieleño Band of Mission Indians – Kizh Nation representative cancelled the scheduled meeting and deferred to the Chumash tribe for consultation; see **Appendix G**. The County attempted to contact the Chumash tribal representatives, however, no response or request to schedule tribal consultation was received. Notwithstanding the findings of the records search discussed above and extent of past site disturbance, given the anticipated excavations into native soils, the potential exists for accidental discovery of tribal cultural resources during ground-disturbing activities. Therefore, the Project could cause an adverse change in the significance of an as-yet unidentified tribal cultural resource. Therefore, the County has determined that implementation of MMs TCR-1 and TCR-2 is required. MM TCR-1 requires a tribal monitor to be present on the site during construction phases and MM TCR-2 outline instructions for unanticipated discovery of tribal cultural and archaeological resources discovery of human remains and funerary objects, and procedures for funerary remains. With implementation of MM TCR-1 and MM TCR-2, the Project's potential impacts concerning an adverse change in the significance of an as-yet unidentified tribal cultural would be reduced to less than significant.

Mitigation Program

MM TCR-1 **Retain an Archaeologist/Native American Monitor.** The Project applicant/County shall retain a qualified professional archaeologist and Native American Monitor prior to the commencement of any ground-disturbing activity for the Project at all Project locations (i.e., both on-site and any off-site locations that are included in the Project description/definition and/or required in connection with the Project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, and any cultural materials identified. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the Project applicant/lead agency upon written request. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and/or tribal archaeologist. On-site tribal monitoring shall conclude when Project site grading and excavation activities are completed, or when the Native American Monitor indicates the site has a low potential for impacting TCRs.

MM TCR-2 **Unanticipated Discovery of Tribal Cultural and Archaeological Resources.** Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the field until the find can be assessed. All tribal cultural an archaeological resources unearthed by Project construction activities shall be evaluated by the qualified archeologist and tribal monitor/consultant approved by the County. If

the resources are Native American in origin, the County shall coordinate with the NAHC to determine which tribes should be contacted regarding direction on treatment and curation of these resources. Typically, tribes request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place. If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with State CEQA Guidelines § 16054.5(f) for historical resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
19a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐

Water. See Response 19.b concerning water demand and infrastructure.

Wastewater. The Project proposes to connect to and replace the existing 8-inch sewer line, which traverses the Project site and serves offsite areas. Through the Project's entitlement review process, the applicant would coordinate with the County to address any potential service interruptions during Project construction. See Response 19.c concerning wastewater treatment.

Stormwater. See Response 10.c concerning drainage and stormwater improvements.

Dry Utilities. Electrical power to the Project site is provided by SCE and natural gas is provided by SoCalGas. Telecommunications are provided by various companies. SCE, SoCalGas, and local telecommunications companies operate and maintain transmission and distribution infrastructure in the Project area, which would serve the Project. Refer to Responses 4.6a and 4.6b for further discussions concerning electricity and natural gas usage. The Project proposes to connect to existing electrical, natural gas, and telecommunications infrastructure, and no off-site improvements are proposed.

Conclusion. The Project would require relocation/construction/replacement of water, wastewater, stormwater drainage, electric power, natural gas, and telecommunication facilities, the construction/relocation of which could cause significant environmental effects. No offsite utility improvements except lateral connections are proposed. The environmental effects associated with these proposed utility improvements are analyzed throughout this Initial Study. As concluded in this Initial Study, following compliance with the established regulatory framework, the utility improvements' environmental effects would result in no impact or less than significant impacts for all resource areas analyzed, except concerning biological resources, cultural resources, hydrology and drainage, and tribal cultural resources, which would require mitigation; see **Section 4: Biological Resources**, **Section 5: Cultural Resources**, **Section 10: Hydrology and Water Quality**, and **Section 18: Tribal Cultural Resources**, respectively. Therefore, with mitigation incorporated, the Project's proposed relocation/construction/replacement of water, wastewater, stormwater drainage, electric power, natural gas, and telecommunication facilities, would result in a less than significant environmental effect.

19b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? ☐ ☐ ☒ ☐

See Response 10b above. The LVMWD provides water (and wastewater) services to the Project site and surrounding communities. The LVMWD relies on four water supply sources: imported potable water; recycled water from the TWRF; groundwater from the Thousand Oaks Area Basin; and surface runoff into the Las Virgenes Reservoir. The 2020 LVMWD Urban Water Management Plan (UWMP) demonstrates how LVMWD will carry out its long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water. UWMP water demand forecasts are based on adopted general plans. The Project is consistent with the site's existing land use designation; thus, its demands are accounted for in the UWMP's long-term planning. Further, the Project would generate only nominal population growth (three persons, see Response 14a), thus, nominal associated water demand. According to the UWMP, water supplies are expected to exceed water demand for the next 25 years during normal, dry, and multiple dry years. Therefore, sufficient water supplies would be available to serve the proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years. A less than significant impact would occur, and no mitigation is required.

19c) 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? ☐ ☐ ☒ ☐

The Project site is within the jurisdictional boundaries of the LVMWD Sewer Service Area.[74] The Project's wastewater would be treated at the Tapia Water Reclamation Facility (TWRF). TWRF provides primary, secondary, and tertiary treatment for LVMWD wastewater and any supplemental water including groundwater. TWRF, owned by the Joint Powers Authority (JPA) of LVMWD, treats up to 10 millions of gallons per day (mgd) of wastewater for the recycled water distribution system. The current design treatment capacity of TWRF is 16 mgd (17,922 AFY). In 2020, wastewater flows to the TWRF totaled approximately 7.8 mgd (8,742 AFY) with 4.3 mgd (4,779 AFY) from customers in LVMWD service area. Approximately 0.27mgd (299 AFY) of groundwater was introduced into the wastewater system from LVMWD's two groundwater wells in 2020 to supplement recycled water during the summer months. Wastewater treatment requirements are based on adopted general plans. The Project is consistent with the site's existing land use designation; thus, its wastewater treatment requirements are accounted for in the TWRF treatment capacity. Therefore, the TWRF would have adequate capacity to serve the Project's projected demand. A less than significant impact would occur in this regard, and no mitigation is required.

19d) 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?	☐	☐	☒	☐
19e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

The Solid Waste Management Committee/Integrated Waste Management Task Force (Task Force), developed by the LACPWD, provides solid waste and recycling services for the County's residential, commercial, and industrial customers. Project implementation would increase solid waste disposal demands over existing conditions, as the Project site is vacant and the Project proposes a self-storage facility with office/manager's residence. It is anticipated the Project would be served by the Calabasas Landfill, the disposal facility nearest the Project site, which is approximately 3.5 miles to the west, at 5300 Lost Hills Road, Agoura, CA 91301. Calabasas Landfill's maximum permitted throughput is 3,500 tons per day (TPD). The facility's remaining capacity is approximately 14.5 million CY and maximum capacity is approximately 69.3 million CY, respectively.[75] Thus, the Project would be served by a landfill with sufficient remaining permitted capacity to accommodate the Project's solid waste disposal needs. Operational activities would be subject to compliance with all applicable federal, State, and local statutes and regulations for solid waste, including those identified under CALGreen and AB 939. The Project would result in less than significant impacts concerning solid waste, and no mitigation is required.

[75] California Department of Resources Recycling and Recovery (CALRecycle). (2022). *Solid Waste Information System (SWIS) Calabasas Landfill (19-AA-0056)*. Retrieved from: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3579?siteID=1041.

20. WILDFIRE

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
20a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

California Department of Forestry and Fire Protection (CalFire) Fire Hazard Severity Zone Map for the County of Los Angeles indicates the Project site is not within a State Responsibility Area.[76] The Project site is in a VHFHSZ local responsibility area. However, Project design and site access would adhere to the County of Los Angeles Municipal Code Chapter 503.4 which establishes that fire apparatus access roads would not be impeded in any manner.[77] Further, Project construction would not require the complete closure of any public or private streets or roadways during construction. Temporary construction activities would not impede use of the road for emergencies or access for emergency response vehicles. Therefore, the Project would not result in inadequate emergency, and there would be less than significant impacts. See also Response 9f.

20b) 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?	☐	☐	☒	☐

The Project is within an area classified as a VHFHSZ. Although the Project site is relatively flat, it abuts a slope to the north that could exacerbate wildfire risks. However, the Project design would include retaining walls and a rock barrier, which would reduce wildfire risk associated with the slope and serve as a buffer to slow the spread of a wildfire. The proposed Project would also be subject to fire prevention measures outlined in the County of Los Angeles Municipal Code Chapter 105.7.26.2. which requires that officials review plans and projects to ensure that fire codes are complied with.[78] Therefore, impacts would be less than significant. See also Response 9.g.i.

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[76] California Department of Forestry and Fire Protection. *California Fire Hazard Severity Zone Viewer*. https://egis.fire.ca.gov/FHSZ/. Accessed 6/22/22.

[77] County of Los Angeles. *Code of Ordinances*. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT32FICO_503.4OBFIAPACRO. Accessed 6/27/22.

[78] County of Los Angeles. *Code of Ordinances*. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT32FICO_105.7.26.2LADEPLRE. Accessed 6/23/22.

20c) 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? ☐ ☐ ☐ ☒

The Project site is not located in a State responsibility area but is within an area classified as a VHFHSZ. The Project site is in an urbanized area of the County and would connect to the existing infrastructure that currently serves the Project area. The Project would not require the construction or installation of new infrastructure beyond new points of connection to existing infrastructure along Old Scandia Lane. Project implementation would not result in the new construction, installation, or maintenance of new infrastructure, such that the Project would exacerbate fire risk or result in temporary or ongoing environmental impacts. A less than significant impact would occur in this regard, and no mitigation is required.

20d) 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? ☐ ☐ ☒ ☐

The Project site is located within an area classified as a VHFHSZ with an abutting slope to the north. According to the California Geologic Survey, the Project site is located approximately 500 feet from a landslide zone.[79] As part of the Project design, the Project would construct a north facing retaining wall adjacent to the hillside that would reduce the risk of landslides in the event of post-fire instability. A rockfall barrier would also be placed along the hillside to prevent debris and rocks from damaging the proposed structures. Additionally, a concrete V-gutter proposed around the northern and western Project boundaries would capture runoff from the hillside. Therefore, given the proposed Project design features, which would minimize downstream flooding, landslides, and post-fire slope instability risks, the Project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant, and no mitigation is required.

20e) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? ☐ ☐ ☒ ☐

See Responses 9f, and 20a through 20d above.

[79] California Geological Survey. *Geologic Hazards Data and Maps Data Viewer.* https://maps.conservation.ca.gov/geologichazards/. Accessed 6/21/22.

21. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
21a) Does the project have the potential to substantially 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, substantially 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?	☐	☐	☒	☐

As discussed throughout this Initial Study, the Project does not have the potential to degrade the environment's quality or result in significant environmental impacts that cannot be reduced to less than significant following compliance with the established regulatory framework (i.e., local, State, and federal regulations), and the recommended mitigation measures.

As concluded in **Section 4.0: Biological Resources**, with mitigation incorporated, the Project would not substantially 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.
As concluded in **Section 5.0: Cultural Resources**, the Project would not eliminate important examples of the major periods of California history. As also concluded in **Section 5**, following compliance with MM TCR-1 and TCR-2, potential impacts to archaeological resources would be reduced to less than significant.

As concluded in **Section 18.0: Tribal Cultural Resources**, the Project could cause an adverse change in the significance of a tribal cultural resource, unless mitigated. Following compliance with MM TCR-1 and TCR-2, potential impacts to tribal cultural resources would be reduced to less than significant.

21b) 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)?	☐	☐	☒	☐

The proposed Project would result in significant impacts unless mitigated for the following environmental resource areas: biological resources, cultural resources, and tribal cultural resources. The impacts associated with these resource areas are localized, thus, would not result in cumulative impacts. A Mitigation Program has been prepared for each of these environmental issue areas to reduce impacts to less than significant. The County would also impose COAs on the Project. Other development projects within the County would also be subject to these requirements, as applicable.

For all other resource areas, it was determined the Project would either have no impact or a less than significant impact following compliance with the established regulatory framework, without the need for mitigation. Cumulatively, the proposed Project would not result in any significant impacts that would substantially combine with impacts of other current or probable future impacts; see also Responses 3d and 8b. Therefore, the proposed Project, when combined with other projects, would not result in any cumulatively considerable impacts, and no mitigation is required.

21c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

As discussed in the respective sections, the proposed Project would have no potentially significant impacts. The Project would not cause substantial adverse effects on human beings directly or indirectly. Therefore, impacts concerning adverse effects on human beings would be less than significant, and no mitigation is required.

APPENDIX A

AIR QUALITY ASSESSMENT

Air Quality Assessment

Calabasas Self-Storage Project
City of Calabasas, California

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August 2022

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EXHIBITS

APPENDICES

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
AQMD	Air Quality Management District
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
Cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	Lead
LST	localized significance threshold
$\mu g/m^3$	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	Ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
sf	square foot
SO_{4-2}	Sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Calabasas Self-Storage Project ("Project"). The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the Project's level of impact on the environment.

1.1 Project Location and Setting

The Project site is located in unincorporated Los Angeles County (County), near the City of Calabasas, California (City), approximately 665 feet northwest of U.S. Highway 101 (U.S. 101); refer to **Exhibit 1: Regional Vicinity**. The Project site is located north of Old Scandia Lane, at 5050 Old Scandia Lane. Regional access to the Project site is provided via U.S. 101. Local access to the Project site is provided via Old Scandia Lane.

The Project site is comprised of a single vacant parcel (Los Angeles County Assessor Parcel Number [APN] 2049-022-040) totaling approximately 3.83 acres.

The land uses surrounding the Project site are residential uses to the north, industrial uses to the south and east, and a pet cemetery to the west; refer to **Exhibit 2: Site Vicinity**.

1.2 Project Characteristics

The Project proposes approximately 155,900 square feet (SF) of self-storage space (79,991 SF aboveground and 75,901 SF underground) with 1,334 self-storage units in three buildings, a 2,000 SF office/manager residence, and 27 parking spaces; see **Exhibit 3: Conceptual Site Plan**.

Project construction is expected to occur over approximately 18 months, beginning July 2023 and ending December 2024. Project grading would require approximately 36,240 cubic yards (CY) of exported soil.

The Project site is within the Santa Monica Mountains North Area Plan (Area Plan).[1] The Project site is designated Rural Commercial[2] and zoned M-1 (Light Manufacturing).[3] The M-1 zone allows for light industry, repair, wholesale, and packaging, including the manufacture, assembly, distribution, and storage of goods that have low nuisance impacts; therefore, the Project is a permitted use. Additionally, the Project would involve more than 5,000 CY of earthwork, thus, requires a Conditional Use Permit (CUP), per 2018 County MC Section 22.336.060(d).[4]

[1] Los Angeles County Department of Regional Planning. (2021). *Santa Monica Mountains North Area Plan, Figure 7 – Land Use Policy (Eastern Portion) Map*. Retrieved from https://planning.lacounty.gov/assets/upl/project/smmnap_final-plan.pdf

[2] Los Angeles County Department of Regional Planning. (2021). *Santa Monica Mountains North Area Plan*. Retrieved from https://planning.lacounty.gov/assets/upl/project/smmnap_final-plan.pdf

[3] Ibid.

[4] The 2018 County MC is the County MC version in effect at the time Project applications were submitted to the County.

Exhibit 1: Regional Vicinity

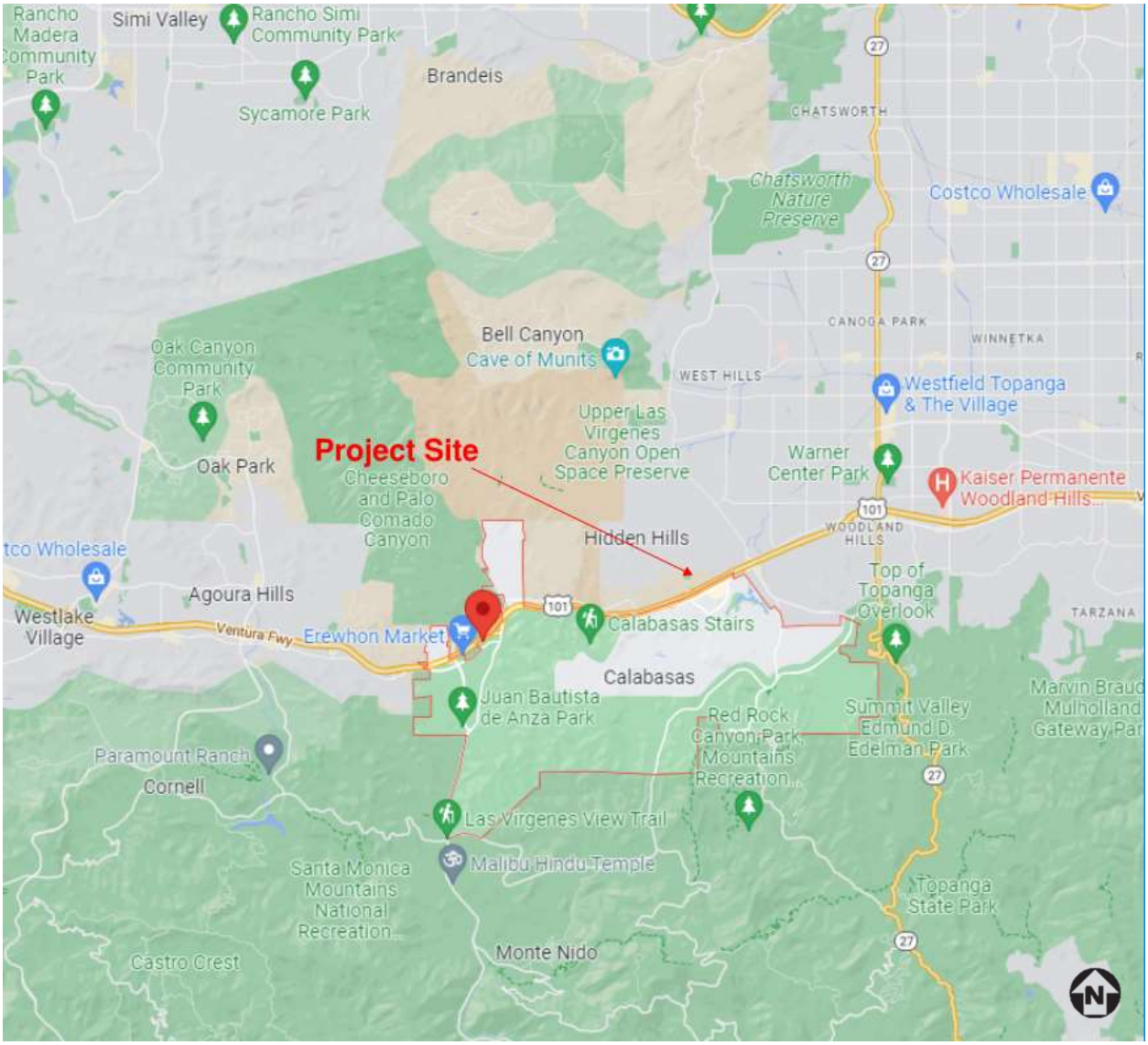


Exhibit 2: Site Vicinity

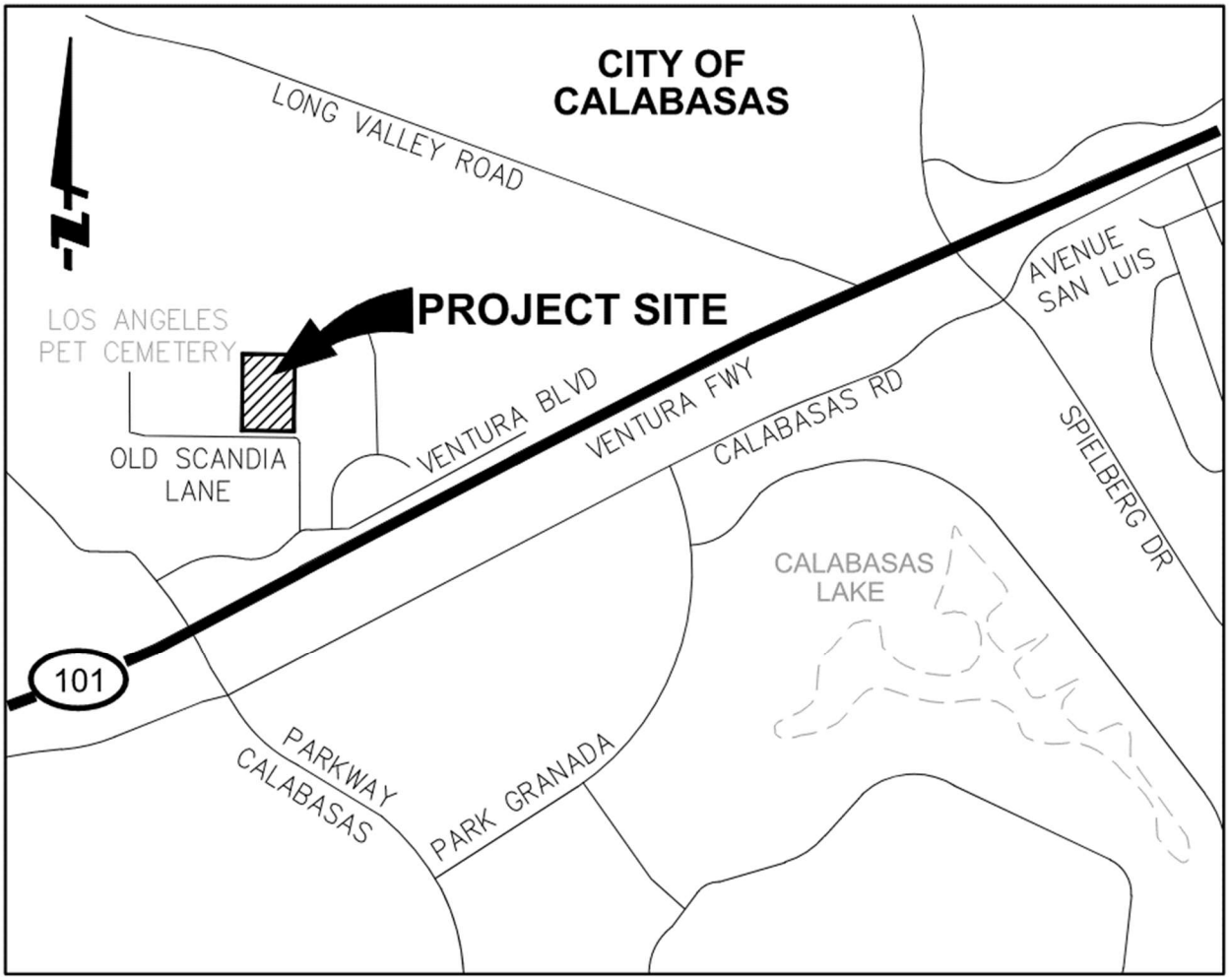
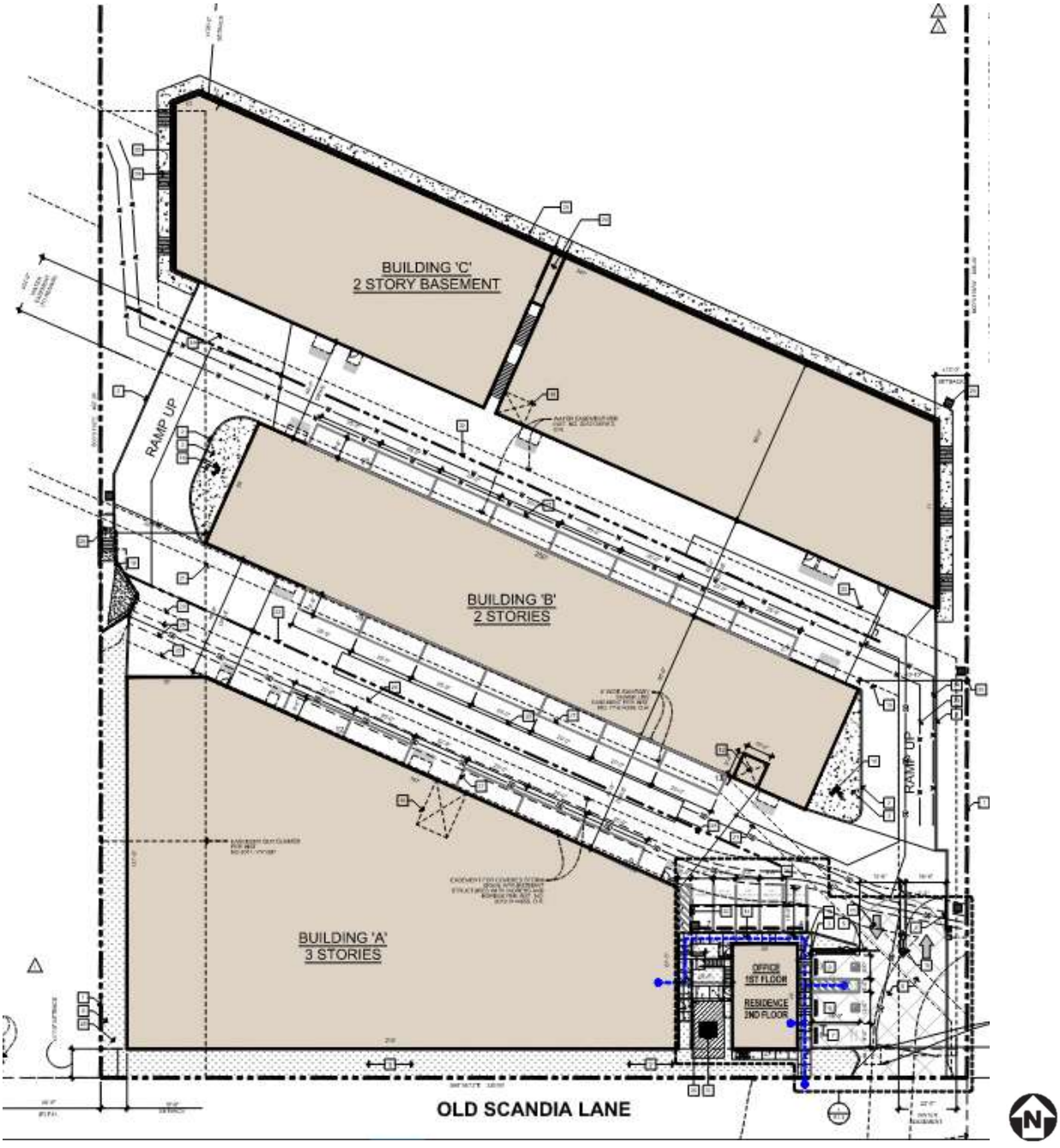


Exhibit 3: Conceptual Site Plan



2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project site is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter.[5] Air quality in this area is determined by natural factors such as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the "mixing height." The combination of winds and

[5] South Coast Air Quality Management District. (1993). *CEQA Air Quality Handbook*.

inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by State and federal laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are primary criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1: Air Contaminants and Associated Public Health Concerns**.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e., chronic, carcinogenic or cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

Notes:

1. Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA). *Health Effects*. Retrieved from http://www.capcoa.org/health-effects/.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing ambient air quality levels, historical trends, and projections near the Project site are documented by measurements made by the South Coast Air Quality Management District (South Coast AQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB are O_3, PM_{10}, and $PM_{2.5}$. The air monitoring station nearest the Project site that monitors ambient concentrations of these pollutants is the Reseda Monitoring Station (located approximately 7.4 miles northeast of the Project site). **Table 2: Ambient Air Quality Data** provides local air quality data for this Station from 2018 to 2020 and lists the monitored maximum concentrations and number of exceedances of California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS) for each year.

Table 2: Ambient Air Quality Data

Criteria Pollutant	2018	2019	2020
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.120	0.122	0.142
8-hour Maximum Concentration (ppm)	0.101	0.094	0.115
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	14	14	33
NAAQS 8-hour (>0.070 ppm)	49	34	62
Carbon Monoxide (CO) [1]			
1-hour Maximum Concentration (ppm)	2.432	2.560	2.036
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	0.057	0.064	0.050
Number of Days Standard Exceeded			
NAAQS 1-hour (>.100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10}) [1]			
National 24-hour Maximum Concentration	45.3	62.1	55.6
State 24-hour Maximum Concentration	45.1	61.8	55.5
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m^3)	0	0	2
CAAQS 24-hour (>50 µg/m^3)	0	0	2
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$) [1]			
National 24-hour Maximum Concentration	38.9	30.0	73.8
State 24-hour Maximum Concentration	63.7	120.9	80.1
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m^3)	1	0	3

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter; – = not measured; * = insufficient (or no) data available.

Notes:
1. Measurements taken at the Reseda Monitoring Station at 18330 Gault Street, Reseda, California 91335 (CARB# 70074)
2. Measurements taken at the Los Angeles-Westchester Parkway Monitoring Station at 7201 W. Westchester Parkway, Los Angeles, California 90045 (CARB# 70111)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/display.php?report=SITE31D&site=2266&year=2021&mon=08&day=10&hours=all&statistic=HVAL&ptype=aqd&param=CO).

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of decreased air quality than is the general population. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. **Table 3: Sensitive Receptors** lists the sensitive receptors nearest the Project site. As indicated in **Table 3**, the sensitive receptors nearest the Project site are the single-family residential uses located approximately 485 feet to the north.

Table 3: Sensitive Receptors

Receptor Description	Distance and Direction from Project Site[1]
Single-Family Residences	485 feet to the north
Single-Family Residences	570 feet to the northwest
Single-Family Residences	650 feet to the northeast

Notes:
1. Distances have been measured from Project construction site boundaries to nearby property lines.

Source: Google Earth, 2022.

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (EPA) developed the primary and secondary NAAQS for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable NAAQS are summarized in **Table 4: State and Federal Ambient Air Quality Standards**.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in **Table 4**, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting NAAQS for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable CAAQS are summarized in **Table 4.**

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m³)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m³	150 µg/m³
	Annual Arithmetic Mean	20 µg/m³	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m³
	Annual Arithmetic Mean	12 µg/m³	12 µg/m³
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m³	NA
	Calendar Quarter	NA	1.5 µg/m³
	Rolling 3-Month Average	NA	0.15 µg/m³
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.42 µg/m³)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m³)	NA

Notes:
ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

1. California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m$_3$. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.
3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.
4. On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.
5. The national 1-hour O3 standard was revoked by the EPA on June 15, 2005.
6. In June 2002, CARB established new annual standards for PM2.5 and PM10.
7. The 8-hour California O3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.
8. On June 2, 2010, the EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO2 NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO2 NAAQS.
9. In December 2012, EPA strengthened the annual PM2.5 NAAQS from 15.0 to 12.0 µg/m3. In December 2014, the EPA issued final area designations for the 2012 primary annual PM2.5 NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
10. CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure below which there are no adverse health effects determined.
11. National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District. (2016). *Air Quality Management Plan*; California Air Resources Board. (2016). *Ambient Air Quality Standards*.

3.3 Regional

South Coast Air Quality Management District

The South Coast AQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that CAAQS and NAAQS are attained and maintained in the SCAB. The South Coast AQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to South Coast AQMD rules and regulations in effect at the time of construction.

The South Coast AQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the South Coast AQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the South Coast AQMD's commitments towards meeting the NAAQS for 8-hour O_3. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and updated emission inventory methodologies for various source categories. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the Connect SoCal – The 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally mandated state implementation plan (SIP) for the attainment and maintenance of the NAAQS. The 2020-2045 RTP/SCS will be incorporated into the forthcoming 2022 AQMP. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The South Coast AQMD has published the CEQA Air Quality Handbook (approved by the South Coast AQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The South Coast AQMD guidance helps local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA) and provides identification of suggested significance thresholds for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the CEQA Air Quality Handbook and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The South Coast AQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The State and federal attainment status designations for the SCAB are summarized in **Table 5: South Coast Air Basin Attainment Status**. The SCAB is currently designated as a nonattainment area for CAAQS for O_3, PM_{10}, and $PM_{2.5}$, as well as the NAAQS for 8-hour O_3 and $PM_{2.5}$. The SCAB is designated as attainment or unclassified for the remaining CAAQS and FAAQS.

Table 5: South Coast Air Basin Attainment Status

Pollutant	State	Federal
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District. (2016). *Air Quality Management Plan*; United States Environmental Protection Agency. (2018). *Nonattainment Areas for Criteria Pollutants (Green Book)*.

The following is a list of South Coast AQMD rules that are required for Project construction activities:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from

crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.

b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.

e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

3.4 Local

County of Los Angeles General Plan

The County's General Plan Air Quality Element identifies goals and policies to improve the County's air quality- the following apply to the Project:

Goal AQ 1: Protection from exposure to harmful air pollutants.

Policy AQ 1.1: Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.

Policy AQ 1.2: Encourage the use of low or no volatile organic compound (VOC) emitting materials.

Policy AQ 1.3: Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.

Goal AQ3: Implementation of plans and programs to address the impacts of climate change.

Policy AQ 3.5: Policy AQ 3.5: Encourage energy conservation in new development and municipal operations.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project normally would have a significant effect on the environment if it would:

- 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 nonattainment under an applicable state or federal 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.

South Coast AQMD Thresholds

The South Coast AQMD CEQA Air Quality Handbook provides significance thresholds for volatile organic compounds (VOC) (also referred to as reactive organic gases [ROG]), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$). The significance thresholds apply to a project's construction and operations within the South Coast AQMD jurisdictional boundaries. However, ultimately the lead agency determines the significance thresholds for impacts. If a project proposes development in excess of the established significance thresholds outlined in **Table 6: South Coast Air Quality Management District Significance Thresholds**, a significant air quality impact could occur, and additional analysis is warranted to fully assess the significance of impacts.

Table 6: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors	(Maximum Pounds Per Day)	
	Construction	Operations
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55

Source: South Coast Air Quality Management District. (2019). *South Coast AQMD Air Quality Significance Thresholds*.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, the Project would also be subject to the CAAQS and NAAQs. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project site are above CAAQS and NAAQS for CO (the more stringent CAAQS are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour CAAQS and NAAQS.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the South Coast AQMD developed LSTs for NO_2, CO, PM_{10}, and $PM_{2.5}$ emissions generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to cause or substantially contribute to an exceedance of the most stringent CAAQS or NAAQS. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the South Coast AQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The Project site is located within South Coast AQMD SRA 6 (West San Fernando Valley). **Table 7: Local Significance Thresholds for Construction/Operations**, shows the LSTs for a 1.0-acre, 2.0-acre, and 5.0-acre project in SRA 6 with sensitive receptors located within 25 meters of the project site. LSTs associated with all acreage categories are provided in **Table 7** for informational purposes. **Table 7** shows that the LSTs increase as acreages increase. It is noted that LSTs are screening thresholds and are therefore conservative.

Table 7: Local Significance Thresholds for Construction/Operations

Project Size	(Maximum Pounds Per Day)			
	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
1 Acre	103/103	426/426	4/1	3/1
2 Acres	147/147	644/644	6/2	4/1
5 Acres	221/221	1,158/1,158	11/3	6/2

Source: South Coast Air Quality Management District. (2009). *Localized Significance Threshold Methodology*.

4.2 Methodology

This air quality impact analysis considers the Project's construction and operational impacts. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), which is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the South Coast AQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

Project operations would result in emissions of area sources (consumer products), energy sources (natural gas usage), and mobile sources (motor vehicles from Project generated vehicle trips). Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The Project's increased vehicle trips over existing conditions was obtained from the Project's Traffic Study prepared by RK Engineering Group, Inc. (October 2021). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use activity data.

As discussed above, the South Coast AQMD provides significance thresholds for emissions associated with Project construction and operations. The Project's construction and operational emissions are compared

to the daily criteria pollutant emissions significance thresholds to determine the significance of the Project's impact on regional air quality.

The localized effects from the Project's on-site emissions were evaluated in accordance with the South Coast AQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable NAAQS or CAAQS and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold 5.1 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Similar to a State implementation Plan described above, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the CAAQS and NAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project site is within the SCAB, which is under the jurisdiction of the South Coast AQMD. The 2016 AQMP is a regional and multi-agency effort including the South Coast AQMD, the CARB, the SCAG, and the EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's growth projections and RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the South Coast AQMD's AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1**: The 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.
- **Consistency Criterion No. 2**: The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the South Coast AQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in **Table 8** and **Table 9** below, Project construction and operational emissions would not exceed CAAQS or NAAQS. Therefore, the Project would not contribute to an existing air quality violation and is consistent with the first criterion. Here..

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project site is designated Rural Commercial and zoned M-1 (Light Manufacturing). The M-1 zone allows for light industry, repair, wholesale, and packaging, including the manufacture, assembly, distribution, and storage of goods that have low nuisance impacts; therefore, the Project is a permitted use. Additionally, the Project would involve more than 5,000 CY of earthwork, thus, requires a CUP, per 2018 County MC Section 22.336.060(d).

Given no General Plan or Zoning amendment is proposed/required, and since the Project would not generate any population growth, the Project would not exceed the population or job growth projections used by the South Coast AQMD to develop the AQMP. Thus, no impact would occur, as the Project is also consistent with the second criterion.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable state or federal ambient air quality standard?

Construction Air Pollutant Emissions

Project construction activities would generate short-term criteria air pollutant emissions. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur. Construction activities temporarily generate emissions from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Airborne particulate matter emissions are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water.

As noted above, the duration of the Project's construction activities is estimated to be approximately 18 months, beginning in April 2023, and ending December 2024. The Project's construction-generated emissions were calculated using CARB-approved California Emissions Estimator Model (CalEEMod) version 2020.4.0, which models emissions for land use development projects, based on typical construction requirements. See **Appendix A: Air Quality Modeling Data** for more information regarding the construction assumptions used in this analysis.

Table 8: Project Construction Emissions provides the Project's estimated maximum daily construction-related criteria pollutant emissions and indicates these would remain below South Coast AQMD significance thresholds. Therefore, the Project's construction-related air pollutant emissions would be less than significant, and no mitigation is required. Notwithstanding, the Project would be subject to compliance with South Coast AQMD Rules 402, 403, and 1113, which prohibit nuisances, require dust control measures, and limit VOC content in paints, respectively. Compliance with South Coast AQMD rules have been included in CalEEMod.

Table 8: Project Construction Emissions						
Construction Year	**(Maximum Pounds Per Day)**					
	Reactive Organic Gases (ROG)	**Nitrogen Oxide (NO_x)**	**Carbon Monoxide (CO)**	**Sulfur Dioxide (SO_2)**	**Coarse Particulate Matter (PM_{10})**	**Fine Particulate Matter ($PM_{2.5}$)**
2023	2.72	27.57	19.18	0.06	9.29	5.47
2024	19.79	15.93	21.20	0.04	1.74	0.93
South Coast AQMD Threshold	75	100	550	150	150	55
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Notes: South Coast AQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the South Coast AQMD CEQA Handbook (Tables XI-A through XI-E) were applied.						
Source: CalEEMod version 2020.4.0. Refer to **Appendix A: Air Quality Modeling Data** for Model Data Outputs.						

Operational Air Pollutant Emissions

Operational emissions are typically associated with three sources: mobile sources (i.e., motor vehicle use); area sources (i.e., landscape maintenance equipment, hearths, consumer products, and architectural coatings); and energy sources (i.e., electricity and natural gas (non-hearth) usage). **Table 9: Operational Emissions** provides the Project's estimated operational criteria pollutant emissions and indicates these would remain below South Coast AQMD significance thresholds. Therefore, the Project's operational air pollutant emissions would be less than significant, and no mitigation is required.

Table 9: Operational Emissions						
Source	**Emissions (pounds per day)[1]**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	3.56	0.02	0.35	<1	0.04	0.04
Energy	0.02	0.17	0.14	<1	0.01	0.01
Mobile	0.82	0.96	9.04	0.02	2.18	0.59
Total	**4.40**	**1.15**	**9.53**	**0.02**	**2.23**	**0.64**
South Coast AQMD Threshold	55	55	550	150	150	55
South Coast AQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Notes: 1. Emissions were calculated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, as recommended by the South Coast AQMD. Worst-case seasonal maximum daily emissions are reported.						

Cumulative Construction Impacts

The SCAB is designated nonattainment for CAAQS for O_3, PM_{10}, and $PM_{2.5}$ and nonattainment for NAAQS O_3 and $PM_{2.5}$. Appendix D of the South Coast AQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific South Coast AQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the South Coast AQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected SCAB emissions. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be

cumulatively considerable. As shown in **Table 8** above, Project construction-related emissions by themselves would not exceed the South Coast AQMD significance thresholds for criteria pollutants. Therefore, the Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction and impacts would be less than significant.

Cumulative Operational Impacts

The South Coast AQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The South Coast AQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, a project that exceeds the South Coast AQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

Table 9 shows that Project operational emissions would not exceed the South Coast AQMD significance thresholds for criteria pollutants. As a result, operational emissions associated with the Project would not represent. Therefore, the Project would not generate a cumulatively considerable contribution to air pollutant emissions during operations and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Construction Localized Significance Analysis

The sensitive receptors nearest the Project site are the single-family residential uses located approximately 485 feet to the north. To determine potential impacts to sensitive receptors, the South Coast AQMD recommends addressing LSTs for construction. LSTs were developed in response to South Coast AQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The South Coast AQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level analyses.

The South Coast AQMD's methodology indicates that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. As previously noted, the sensitive receptors nearest the Project site are single-family residential uses located approximately 485 feet (148 meters) to the north. LSTs are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 148 meters were utilized in this analysis.

Table 10: Localized Significance of Construction Emissions, provides the Project's estimated construction-related localized emissions on the peak day of construction and shows emissions concentrations at nearby sensitive receptors would remain below South Coast AQMD significance thresholds. Therefore, the Project would result in a less than significant impact concerning LSTs during construction and no mitigation is required.

Table 10: Localized Significance of Construction Emissions				
Source/Activity	**Emissions (pounds per day)[1]**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions				
Site Preparation 2023	27.52	18.24	9.10	5.42
Grading 2023	17.94	14.75	3.42	2.14
Building Construction 2023	14.38	16.24	0.70	0.66
Building Construction 2024	13.44	16.17	0.61	0.58
Paving 2024	8.27	12.22	0.40	0.37
Architectural Coating 2024	1.22	1.81	0.06	0.06
Maximum Daily Emissions	*27.52*	*18.24*	*9.10*	*5.42*
South Coast AQMD Localized Screening Threshold (2.5 acres of disturbance at 148 meters)	186	2,210	51	17
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to **Appendix A: Air Quality Modeling Data** for model data outputs.				

Operational Localized Significance Analysis

According to the South Coast AQMD LST methodology, operational LSTs apply to on-site sources. LSTs for receptors located at 148 meters for SRA 6 were utilized in this analysis. The 3.5-acre LST was conservatively used for the 3.83-acre Project site. The operational emissions shown in **Table 11: Localized Significance of Operational Emissions** include all on-site Project-related stationary sources (i.e., area and energy sources). **Table 11** shows the Project's maximum daily operational pollutant emissions at nearby sensitive receptors would remain below South Coast AQMD significance thresholds. Therefore, the Project would result in a less than significant impact concerning LSTs during operations and no mitigation is required.

Table 11: Localized Significance of Operational Emissions				
Activity	**(Maximum Pounds Per Day)**			
	Nitrogen Oxide (NO_x)	**Carbon Monoxide (CO)**	**Coarse Particulate Matter (PM_{10})**	**Fine Particulate Matter ($PM_{2.5}$)**
On-Site Emissions (Area and Energy)	0.19	0.49	0.05	0.05
South Coast AQMD Localized Screening Threshold (3.5 acres at 148 meters)	208	2,552	14	5
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to **Appendix A** for model data outputs.				

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The South Coast AQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the SCAB) as

emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and South Coast AQMD Rule 1303 for new or modified sources. The NSR Program[6] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the South Coast AQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

As previously discussed, Project emissions would be less than significant and would not exceed South Coast AQMD thresholds (refer to **Table 8** and **Table 9**). Localized effects of on-site Project emissions on nearby receptors were also found to be less than significant (refer to **Table 10** and **Table 11**). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. The LSTs were developed by the South Coast AQMD based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. As shown above, Project-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the ambient air quality standards or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels in excess of the health-based ambient air quality standards.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether a project's change in the level of service (LOS) at an intersection could result in exceedances of the NAAQS or CAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO vehicle emissions standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CAAQS or NAAQS for CO. An analysis prepared for CO attainment in the SCAB by the South Coast AQMD can assist in evaluating the potential for CO exceedances. CO attainment was thoroughly analyzed as part of the South Coast AQMD's 2003 Air Quality Management Plan (AQMP). The SCAB was re-designated as attainment in 2007 and is no longer addressed in the South Coast AQMD's AQMP.

The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the South Coast AQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of Southern California's most congested intersections with an average daily traffic (ADT) volume of approximately 100,000 vehicles, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 parts per million (ppm), which is well below the 35 ppm NAAQS and the CAAQS 1-hour standard

[6] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

of 20 ppm and 8-hour standard of 9 ppm. The Project is anticipated to generate 240 daily vehicle trips,[7] thus, would not produce the volume of traffic required to generate a CO hot spot in the context of South Coast AQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any intersections near the Project site, as the Project would generate only 240 daily vehicle trips. Therefore, the Project would result in a less than significant impact concerning a CO hot spot and no mitigation is required.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g., diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. Given the nature and duration of construction-related odors, the Project would result in a less than significant impact concerning the creation of objectionable odors during construction. No mitigation is required.

The South Coast AQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project proposes a self-storage development and would not include any of the land uses that have been identified by the South Coast AQMD as odor sources. Therefore, no impact concerning the creation of objectionable odors during operations would occur and no mitigation is required.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

[7] RK Engineering Group, Inc. (October 2021). Trojan Calabasas Self-Storage Project Traffic Study.

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Appendix A

Air Quality Modeling Data

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trojan Calabasas

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Unrefrigerated Warehouse-No Rail	155.90	1000sqft	3.58	155,900.00	0
Parking Lot	27.00	Space	0.17	7,315.20	0
Apartments Low Rise	1.00	Dwelling Unit	0.06	1,000.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per site plan

Construction Phase - Per Construction Questionnaire

Grading - Per Construction Questionnaire

Vehicle Trips - Trip Rates per Table 3-2, Trojan Calabasas Self-Storage Project Trip Generation, of the Traffic Study from the previous ISMND

Woodstoves - No wood burning fireplaces per SCAQMD rules

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Water Mitigation -

Waste Mitigation - per AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	18.00	82.00
tblConstructionPhase	NumDays	230.00	290.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	14.00
tblConstructionPhase	NumDays	5.00	30.00
tblFireplaces	NumberGas	0.85	0.90
tblFireplaces	NumberWood	0.05	0.00
tblGrading	AcresOfGrading	80.00	8.00
tblGrading	AcresOfGrading	45.00	7.50
tblGrading	MaterialExported	0.00	36,240.00
tblLandUse	LandUseSquareFeet	10,800.00	7,315.20
tblLandUse	LotAcreage	0.24	0.17
tblVehicleTrips	ST_TR	8.14	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	1.54
tblVehicleTrips	SU_TR	6.28	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	1.54
tblVehicleTrips	WD_TR	7.32	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	1.54

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7171	27.5644	19.1821	0.0643	18.5326	1.2672	19.7998	10.0127	1.1659	11.1785	0.0000	6,663.6458	6,663.6458	1.1971	0.5813	6,865.2206
2024	19.7716	15.8685	21.2032	0.0430	1.1119	0.6849	1.7968	0.2988	0.6478	0.9466	0.0000	4,202.8491	4,202.8491	0.6576	0.0947	4,247.5052
Maximum	**19.7716**	**27.5644**	**21.2032**	**0.0643**	**18.5326**	**1.2672**	**19.7998**	**10.0127**	**1.1659**	**11.1785**	**0.0000**	**6,663.6458**	**6,663.6458**	**1.1971**	**0.5813**	**6,865.2206**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7171	27.5644	19.1821	0.0643	8.0274	1.2672	9.2946	4.3084	1.1659	5.4742	0.0000	6,663.6457	6,663.6457	1.1971	0.5813	6,865.2206
2024	19.7716	15.8685	21.2032	0.0430	1.0555	0.6849	1.7404	0.2850	0.6478	0.9328	0.0000	4,202.8491	4,202.8491	0.6576	0.0947	4,247.5052
Maximum	**19.7716**	**27.5644**	**21.2032**	**0.0643**	**8.0274**	**1.2672**	**9.2946**	**4.3084**	**1.1659**	**5.4742**	**0.0000**	**6,663.6457**	**6,663.6457**	**1.1971**	**0.5813**	**6,865.2206**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.76**	**0.00**	**48.90**	**55.45**	**0.00**	**47.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584
Energy	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944
Mobile	0.8235	0.8866	9.0373	0.0206	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,140.4810	2,140.4810	0.1307	0.0811	2,167.9015
Total	**4.4048**	**1.0751**	**9.5302**	**0.0226**	**2.1663**	**0.0690**	**2.2353**	**0.5770**	**0.0680**	**0.6450**	**5.9016**	**2,362.1203**	**2,368.0219**	**0.1627**	**0.0851**	**2,397.4543**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584
Energy	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944
Mobile	0.8235	0.8866	9.0373	0.0206	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,140.4810	2,140.4810	0.1307	0.0811	2,167.9015
Total	**4.4048**	**1.0751**	**9.5302**	**0.0226**	**2.1663**	**0.0690**	**2.2353**	**0.5770**	**0.0680**	**0.6450**	**5.9016**	**2,362.1203**	**2,368.0219**	**0.1627**	**0.0851**	**2,397.4543**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2023	5/12/2023	5	30	
2	Grading	Grading	5/15/2023	9/1/2023	5	80	
3	Building Construction	Building Construction	9/4/2023	10/11/2024	5	290	
4	Architectural Coating	Architectural Coating	9/9/2024	12/31/2024	5	82	
5	Paving	Paving	11/18/2024	12/5/2024	5	14	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0.17

Residential Indoor: 2,025; Residential Outdoor: 675; Non-Residential Indoor: 235,350; Non-Residential Outdoor: 78,450; Striped Parking Area: 439

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,530.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	70.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.3314	0.0000	18.3314	9.9593	0.0000	9.9593			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**18.3314**	**1.2660**	**19.5974**	**9.9593**	**1.1647**	**11.1241**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		182.2703	182.2703	4.5400e-003	4.1500e-003	183.6218
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**182.2703**	**182.2703**	**4.5400e-003**	**4.1500e-003**	**183.6218**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8367	0.0000	7.8367	4.2576	0.0000	4.2576			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.8367**	**1.2660**	**9.1027**	**4.2576**	**1.1647**	**5.4223**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.1907	1.2100e-003	0.1919	0.0508	1.1200e-003	0.0519		182.2703	182.2703	4.5400e-003	4.1500e-003	183.6218
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.1907**	**1.2100e-003**	**0.1919**	**0.0508**	**1.1200e-003**	**0.0519**		**182.2703**	**182.2703**	**4.5400e-003**	**4.1500e-003**	**183.6218**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1794	0.0000	6.1794	3.3294	0.0000	3.3294			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**6.1794**	**0.7749**	**6.9543**	**3.3294**	**0.7129**	**4.0424**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1228	7.3890	1.9722	0.0331	0.9912	0.0466	1.0378	0.2718	0.0446	0.3163		3,639.0628	3,639.0628	0.2006	0.5779	3,816.2843
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.1708**	**7.4225**	**2.5157**	**0.0346**	**1.1588**	**0.0476**	**1.2065**	**0.3162**	**0.0455**	**0.3617**		**3,790.9548**	**3,790.9548**	**0.2043**	**0.5813**	**3,969.3024**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6417	0.0000	2.6417	1.4233	0.0000	1.4233			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.6417**	**0.7749**	**3.4166**	**1.4233**	**0.7129**	**2.1363**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1228	7.3890	1.9722	0.0331	0.9463	0.0466	0.9929	0.2607	0.0446	0.3053		3,639.0628	3,639.0628	0.2006	0.5779	3,816.2843
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1589	1.0100e-003	0.1599	0.0423	9.3000e-004	0.0433		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.1708**	**7.4225**	**2.5157**	**0.0346**	**1.1052**	**0.0476**	**1.1528**	**0.3031**	**0.0455**	**0.3486**		**3,790.9548**	**3,790.9548**	**0.2043**	**0.5813**	**3,969.3024**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0311	1.0364	0.4015	5.0300e-003	0.1730	5.2100e-003	0.1782	0.0498	4.9800e-003	0.0548		540.7627	540.7627	0.0181	0.0778	564.3840
Worker	0.2242	0.1563	2.5366	6.9300e-003	0.7824	4.7200e-003	0.7872	0.2075	4.3500e-003	0.2119		708.8290	708.8290	0.0177	0.0162	714.0846
Total	**0.2553**	**1.1926**	**2.9381**	**0.0120**	**0.9554**	**9.9300e-003**	**0.9653**	**0.2573**	**9.3300e-003**	**0.2666**		**1,249.5916**	**1,249.5916**	**0.0358**	**0.0939**	**1,278.4686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0311	1.0364	0.4015	5.0300e-003	0.1656	5.2100e-003	0.1708	0.0480	4.9800e-003	0.0530		540.7627	540.7627	0.0181	0.0778	564.3840
Worker	0.2242	0.1563	2.5366	6.9300e-003	0.7416	4.7200e-003	0.7463	0.1975	4.3500e-003	0.2018		708.8290	708.8290	0.0177	0.0162	714.0846
Total	**0.2553**	**1.1926**	**2.9381**	**0.0120**	**0.9072**	**9.9300e-003**	**0.9171**	**0.2455**	**9.3300e-003**	**0.2548**		**1,249.5916**	**1,249.5916**	**0.0358**	**0.0939**	**1,278.4686**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0301	1.0385	0.3929	4.9500e-003	0.1730	5.2400e-003	0.1782	0.0498	5.0200e-003	0.0548		532.6414	532.6414	0.0182	0.0767	555.9408
Worker	0.2089	0.1396	2.3611	6.7300e-003	0.7824	4.5300e-003	0.7870	0.2075	4.1700e-003	0.2117		694.2173	694.2173	0.0160	0.0150	699.0937
Total	**0.2391**	**1.1780**	**2.7540**	**0.0117**	**0.9554**	**9.7700e-003**	**0.9652**	**0.2573**	**9.1900e-003**	**0.2665**		**1,226.8587**	**1,226.8587**	**0.0342**	**0.0917**	**1,255.0346**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0301	1.0385	0.3929	4.9500e-003	0.1656	5.2400e-003	0.1708	0.0480	5.0200e-003	0.0530		532.6414	532.6414	0.0182	0.0767	555.9408
Worker	0.2089	0.1396	2.3611	6.7300e-003	0.7416	4.5300e-003	0.7462	0.1975	4.1700e-003	0.2017		694.2173	694.2173	0.0160	0.0150	699.0937
Total	**0.2391**	**1.1780**	**2.7540**	**0.0117**	**0.9072**	**9.7700e-003**	**0.9170**	**0.2455**	**9.1900e-003**	**0.2547**		**1,226.8587**	**1,226.8587**	**0.0342**	**0.0917**	**1,255.0346**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	17.8385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**18.0192**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0279	0.4722	1.3500e-003	0.1565	9.1000e-004	0.1574	0.0415	8.3000e-004	0.0423		138.8435	138.8435	3.1900e-003	3.0000e-003	139.8188
Total	**0.0418**	**0.0279**	**0.4722**	**1.3500e-003**	**0.1565**	**9.1000e-004**	**0.1574**	**0.0415**	**8.3000e-004**	**0.0423**		**138.8435**	**138.8435**	**3.1900e-003**	**3.0000e-003**	**139.8188**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	17.8385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**18.0192**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0279	0.4722	1.3500e-003	0.1483	9.1000e-004	0.1492	0.0395	8.3000e-004	0.0403		138.8435	138.8435	3.1900e-003	3.0000e-003	139.8188
Total	**0.0418**	**0.0279**	**0.4722**	**1.3500e-003**	**0.1483**	**9.1000e-004**	**0.1492**	**0.0395**	**8.3000e-004**	**0.0403**		**138.8435**	**138.8435**	**3.1900e-003**	**3.0000e-003**	**139.8188**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9132**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0399	0.6746	1.9200e-003	0.2236	1.2900e-003	0.2249	0.0593	1.1900e-003	0.0605		198.3478	198.3478	4.5600e-003	4.2900e-003	199.7411
Total	**0.0597**	**0.0399**	**0.6746**	**1.9200e-003**	**0.2236**	**1.2900e-003**	**0.2249**	**0.0593**	**1.1900e-003**	**0.0605**		**198.3478**	**198.3478**	**4.5600e-003**	**4.2900e-003**	**199.7411**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9132**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0399	0.6746	1.9200e-003	0.2119	1.2900e-003	0.2132	0.0564	1.1900e-003	0.0576		198.3478	198.3478	4.5600e-003	4.2900e-003	199.7411
Total	**0.0597**	**0.0399**	**0.6746**	**1.9200e-003**	**0.2119**	**1.2900e-003**	**0.2132**	**0.0564**	**1.1900e-003**	**0.0576**		**198.3478**	**198.3478**	**4.5600e-003**	**4.2900e-003**	**199.7411**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8235	0.8866	9.0373	0.0206	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,140.4810	2,140.4810	0.1307	0.0811	2,167.9015
Unmitigated	0.8235	0.8866	9.0373	0.0206	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,140.4810	2,140.4810	0.1307	0.0811	2,167.9015

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	240.09	240.09	240.09	1,028,941	1,028,941
Total	240.09	240.09	240.09	1,028,941	1,028,941

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
General Office Building	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Unrefrigerated Warehouse-No Rail	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944
NaturalGas Unmitigated	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	34.025	3.7000e-004	3.1400e-003	1.3300e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		4.0030	4.0030	8.0000e-005	7.0000e-005	4.0267
General Office Building	24.7945	2.7000e-004	2.4300e-003	2.0400e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		2.9170	2.9170	6.0000e-005	5.0000e-005	2.9343
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1661.51	0.0179	0.1629	0.1368	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.4717	195.4717	3.7500e-003	3.5800e-003	196.6333
Total		**0.0186**	**0.1685**	**0.1402**	**1.0100e-003**		**0.0128**	**0.0128**		**0.0128**	**0.0128**		**202.3917**	**202.3917**	**3.8900e-003**	**3.7000e-003**	**203.5944**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0.034025	3.7000e-004	3.1400e-003	1.3300e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		4.0030	4.0030	8.0000e-005	7.0000e-005	4.0267
General Office Building	0.0247945	2.7000e-004	2.4300e-003	2.0400e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		2.9170	2.9170	6.0000e-005	5.0000e-005	2.9343
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.66151	0.0179	0.1629	0.1368	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.4717	195.4717	3.7500e-003	3.5800e-003	196.6333
Total		**0.0186**	**0.1685**	**0.1402**	**1.0100e-003**		**0.0128**	**0.0128**		**0.0128**	**0.0128**		**202.3917**	**202.3917**	**3.8900e-003**	**3.7000e-003**	**203.5944**

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584
Unmitigated	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0287	0.0189	0.2515	8.9000e-004		0.0412	0.0412		0.0412	0.0412	5.9016	19.0588	24.9605	0.0280	3.5000e-004	25.7634
Landscaping	4.2100e-003	1.1200e-003	0.1012	1.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004		0.1888	0.1888	2.5000e-004		0.1950
Total	**3.5627**	**0.0201**	**0.3527**	**9.0000e-004**		**0.0417**	**0.0417**		**0.0417**	**0.0417**	**5.9016**	**19.2476**	**25.1493**	**0.0282**	**3.5000e-004**	**25.9584**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0287	0.0189	0.2515	8.9000e-004		0.0412	0.0412		0.0412	0.0412	5.9016	19.0588	24.9605	0.0280	3.5000e-004	25.7634
Landscaping	4.2100e-003	1.1200e-003	0.1012	1.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004		0.1888	0.1888	2.5000e-004		0.1950
Total	**3.5627**	**0.0201**	**0.3527**	**9.0000e-004**		**0.0417**	**0.0417**		**0.0417**	**0.0417**	**5.9016**	**19.2476**	**25.1493**	**0.0282**	**3.5000e-004**	**25.9584**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Trojan Calabasas - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trojan Calabasas

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Unrefrigerated Warehouse-No Rail	155.90	1000sqft	3.58	155,900.00	0
Parking Lot	27.00	Space	0.17	7,315.20	0
Apartments Low Rise	1.00	Dwelling Unit	0.06	1,000.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per site plan

Construction Phase - Per Construction Questionnaire

Grading - Per Construction Questionnaire

Vehicle Trips - Trip Rates per Table 3-2, Trojan Calabasas Self-Storage Project Trip Generation, of the Traffic Study from the previous ISMND

Woodstoves - No wood burning fireplaces per SCAQMD rules

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Water Mitigation -

Waste Mitigation - per AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	18.00	82.00
tblConstructionPhase	NumDays	230.00	290.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	14.00
tblConstructionPhase	NumDays	5.00	30.00
tblFireplaces	NumberGas	0.85	0.90
tblFireplaces	NumberWood	0.05	0.00
tblGrading	AcresOfGrading	80.00	8.00
tblGrading	AcresOfGrading	45.00	7.50
tblGrading	MaterialExported	0.00	36,240.00
tblLandUse	LandUseSquareFeet	10,800.00	7,315.20
tblLandUse	LotAcreage	0.24	0.17
tblVehicleTrips	ST_TR	8.14	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	1.54
tblVehicleTrips	SU_TR	6.28	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	1.54
tblVehicleTrips	WD_TR	7.32	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	1.54

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7214	27.5686	18.9897	0.0642	18.5326	1.2672	19.7998	10.0127	1.1659	11.1785	0.0000	6,659.4736	6,659.4736	1.1972	0.5822	6,861.2955
2024	19.7901	15.9348	20.9889	0.0425	1.1119	0.6849	1.7968	0.2988	0.6479	0.9467	0.0000	4,159.9191	4,159.9191	0.6578	0.0961	4,205.0045
Maximum	**19.7901**	**27.5686**	**20.9889**	**0.0642**	**18.5326**	**1.2672**	**19.7998**	**10.0127**	**1.1659**	**11.1785**	**0.0000**	**6,659.4736**	**6,659.4736**	**1.1972**	**0.5822**	**6,861.2955**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7214	27.5686	18.9897	0.0642	8.0274	1.2672	9.2946	4.3084	1.1659	5.4742	0.0000	6,659.4736	6,659.4736	1.1972	0.5822	6,861.2955
2024	19.7901	15.9348	20.9889	0.0425	1.0555	0.6849	1.7404	0.2850	0.6479	0.9328	0.0000	4,159.9191	4,159.9191	0.6578	0.0961	4,205.0045
Maximum	**19.7901**	**27.5686**	**20.9889**	**0.0642**	**8.0274**	**1.2672**	**9.2946**	**4.3084**	**1.1659**	**5.4742**	**0.0000**	**6,659.4736**	**6,659.4736**	**1.1972**	**0.5822**	**6,861.2955**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.76**	**0.00**	**48.90**	**55.45**	**0.00**	**47.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584
Energy	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944
Mobile	0.8119	0.9573	8.7748	0.0198	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,048.9760	2,048.9760	0.1335	0.0846	2,077.5133
Total	**4.3931**	**1.1458**	**9.2677**	**0.0217**	**2.1663**	**0.0690**	**2.2353**	**0.5770**	**0.0680**	**0.6450**	**5.9016**	**2,270.6152**	**2,276.5169**	**0.1656**	**0.0886**	**2,307.0661**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584
Energy	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944
Mobile	0.8119	0.9573	8.7748	0.0198	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,048.9760	2,048.9760	0.1335	0.0846	2,077.5133
Total	**4.3931**	**1.1458**	**9.2677**	**0.0217**	**2.1663**	**0.0690**	**2.2353**	**0.5770**	**0.0680**	**0.6450**	**5.9016**	**2,270.6152**	**2,276.5169**	**0.1656**	**0.0886**	**2,307.0661**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2023	5/12/2023	5	30	
2	Grading	Grading	5/15/2023	9/1/2023	5	80	
3	Building Construction	Building Construction	9/4/2023	10/11/2024	5	290	
4	Architectural Coating	Architectural Coating	9/9/2024	12/31/2024	5	82	
5	Paving	Paving	11/18/2024	12/5/2024	5	14	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0.17

Residential Indoor: 2,025; Residential Outdoor: 675; Non-Residential Indoor: 235,350; Non-Residential Outdoor: 78,450; Striped Parking Area: 439

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,530.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	70.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.3314	0.0000	18.3314	9.9593	0.0000	9.9593			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**18.3314**	**1.2660**	**19.5974**	**9.9593**	**1.1647**	**11.1241**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		172.6608	172.6608	4.6000e-003	4.4400e-003	174.0982
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**172.6608**	**172.6608**	**4.6000e-003**	**4.4400e-003**	**174.0982**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8367	0.0000	7.8367	4.2576	0.0000	4.2576			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.8367**	**1.2660**	**9.1027**	**4.2576**	**1.1647**	**5.4223**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.1907	1.2100e-003	0.1919	0.0508	1.1200e-003	0.0519		172.6608	172.6608	4.6000e-003	4.4400e-003	174.0982
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.1907**	**1.2100e-003**	**0.1919**	**0.0508**	**1.1200e-003**	**0.0519**		**172.6608**	**172.6608**	**4.6000e-003**	**4.4400e-003**	**174.0982**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1794	0.0000	6.1794	3.3294	0.0000	3.3294			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**6.1794**	**0.7749**	**6.9543**	**3.3294**	**0.7129**	**4.0424**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1149	7.7147	1.9993	0.0332	0.9912	0.0467	1.0379	0.2718	0.0447	0.3165		3,642.8986	3,642.8986	0.2001	0.5785	3,820.2955
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.1665**	**7.7517**	**2.4989**	**0.0346**	**1.1588**	**0.0477**	**1.2066**	**0.3162**	**0.0456**	**0.3619**		**3,786.7826**	**3,786.7826**	**0.2040**	**0.5822**	**3,965.3774**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6417	0.0000	2.6417	1.4233	0.0000	1.4233			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.6417**	**0.7749**	**3.4166**	**1.4233**	**0.7129**	**2.1363**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1149	7.7147	1.9993	0.0332	0.9463	0.0467	0.9930	0.2607	0.0447	0.3054		3,642.8986	3,642.8986	0.2001	0.5785	3,820.2955
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1589	1.0100e-003	0.1599	0.0423	9.3000e-004	0.0433		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.1665**	**7.7517**	**2.4989**	**0.0346**	**1.1052**	**0.0477**	**1.1529**	**0.3031**	**0.0456**	**0.3487**		**3,786.7826**	**3,786.7826**	**0.2040**	**0.5822**	**3,965.3774**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0300	1.0851	0.4141	5.0300e-003	0.1730	5.2400e-003	0.1782	0.0498	5.0100e-003	0.0548		541.6748	541.6748	0.0180	0.0780	565.3560
Worker	0.2408	0.1726	2.3316	6.5600e-003	0.7824	4.7200e-003	0.7872	0.2075	4.3500e-003	0.2119		671.4587	671.4587	0.0179	0.0173	677.0485
Total	**0.2709**	**1.2577**	**2.7457**	**0.0116**	**0.9554**	**9.9600e-003**	**0.9654**	**0.2573**	**9.3600e-003**	**0.2667**		**1,213.1335**	**1,213.1335**	**0.0359**	**0.0952**	**1,242.4045**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0300	1.0851	0.4141	5.0300e-003	0.1656	5.2400e-003	0.1708	0.0480	5.0100e-003	0.0530		541.6748	541.6748	0.0180	0.0780	565.3560
Worker	0.2408	0.1726	2.3316	6.5600e-003	0.7416	4.7200e-003	0.7463	0.1975	4.3500e-003	0.2018		671.4587	671.4587	0.0179	0.0173	677.0485
Total	**0.2709**	**1.2577**	**2.7457**	**0.0116**	**0.9072**	**9.9600e-003**	**0.9171**	**0.2455**	**9.3600e-003**	**0.2548**		**1,213.1335**	**1,213.1335**	**0.0359**	**0.0952**	**1,242.4045**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0290	1.0873	0.4054	4.9500e-003	0.1730	5.2800e-003	0.1782	0.0498	5.0500e-003	0.0548		533.5587	533.5587	0.0181	0.0769	556.9161
Worker	0.2252	0.1541	2.1722	6.3800e-003	0.7824	4.5300e-003	0.7870	0.2075	4.1700e-003	0.2117		657.6779	657.6779	0.0162	0.0160	662.8637
Total	**0.2542**	**1.2414**	**2.5776**	**0.0113**	**0.9554**	**9.8100e-003**	**0.9652**	**0.2573**	**9.2200e-003**	**0.2665**		**1,191.2366**	**1,191.2366**	**0.0343**	**0.0929**	**1,219.7798**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0290	1.0873	0.4054	4.9500e-003	0.1656	5.2800e-003	0.1708	0.0480	5.0500e-003	0.0530		533.5587	533.5587	0.0181	0.0769	556.9161
Worker	0.2252	0.1541	2.1722	6.3800e-003	0.7416	4.5300e-003	0.7462	0.1975	4.1700e-003	0.2017		657.6779	657.6779	0.0162	0.0160	662.8637
Total	**0.2542**	**1.2414**	**2.5776**	**0.0113**	**0.9072**	**9.8100e-003**	**0.9170**	**0.2455**	**9.2200e-003**	**0.2547**		**1,191.2366**	**1,191.2366**	**0.0343**	**0.0929**	**1,219.7798**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	17.8385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**18.0192**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0308	0.4344	1.2800e-003	0.1565	9.1000e-004	0.1574	0.0415	8.3000e-004	0.0423		131.5356	131.5356	3.2400e-003	3.2100e-003	132.5727
Total	**0.0450**	**0.0308**	**0.4344**	**1.2800e-003**	**0.1565**	**9.1000e-004**	**0.1574**	**0.0415**	**8.3000e-004**	**0.0423**		**131.5356**	**131.5356**	**3.2400e-003**	**3.2100e-003**	**132.5727**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	17.8385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**18.0192**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0308	0.4344	1.2800e-003	0.1483	9.1000e-004	0.1492	0.0395	8.3000e-004	0.0403		131.5356	131.5356	3.2400e-003	3.2100e-003	132.5727
Total	**0.0450**	**0.0308**	**0.4344**	**1.2800e-003**	**0.1483**	**9.1000e-004**	**0.1492**	**0.0395**	**8.3000e-004**	**0.0403**		**131.5356**	**131.5356**	**3.2400e-003**	**3.2100e-003**	**132.5727**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9132**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0644	0.0440	0.6206	1.8200e-003	0.2236	1.2900e-003	0.2249	0.0593	1.1900e-003	0.0605		187.9080	187.9080	4.6300e-003	4.5800e-003	189.3896
Total	**0.0644**	**0.0440**	**0.6206**	**1.8200e-003**	**0.2236**	**1.2900e-003**	**0.2249**	**0.0593**	**1.1900e-003**	**0.0605**		**187.9080**	**187.9080**	**4.6300e-003**	**4.5800e-003**	**189.3896**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9132**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

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Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0644	0.0440	0.6206	1.8200e-003	0.2119	1.2900e-003	0.2132	0.0564	1.1900e-003	0.0576		187.9080	187.9080	4.6300e-003	4.5800e-003	189.3896
Total	**0.0644**	**0.0440**	**0.6206**	**1.8200e-003**	**0.2119**	**1.2900e-003**	**0.2132**	**0.0564**	**1.1900e-003**	**0.0576**		**187.9080**	**187.9080**	**4.6300e-003**	**4.5800e-003**	**189.3896**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8119	0.9573	8.7748	0.0198	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,048.9760	2,048.9760	0.1335	0.0846	2,077.5133
Unmitigated	0.8119	0.9573	8.7748	0.0198	2.1663	0.0145	2.1808	0.5770	0.0135	0.5905		2,048.9760	2,048.9760	0.1335	0.0846	2,077.5133

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	240.09	240.09	240.09	1,028,941	1,028,941
Total	240.09	240.09	240.09	1,028,941	1,028,941

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
General Office Building	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Unrefrigerated Warehouse-No Rail	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944
NaturalGas Unmitigated	0.0186	0.1685	0.1402	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.3917	202.3917	3.8800e-003	3.7100e-003	203.5944

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	34.025	3.7000e-004	3.1400e-003	1.3300e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		4.0030	4.0030	8.0000e-005	7.0000e-005	4.0267
General Office Building	24.7945	2.7000e-004	2.4300e-003	2.0400e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		2.9170	2.9170	6.0000e-005	5.0000e-005	2.9343
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1661.51	0.0179	0.1629	0.1368	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.4717	195.4717	3.7500e-003	3.5800e-003	196.6333
Total		**0.0186**	**0.1685**	**0.1402**	**1.0100e-003**		**0.0128**	**0.0128**		**0.0128**	**0.0128**		**202.3917**	**202.3917**	**3.8900e-003**	**3.7000e-003**	**203.5944**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0.034025	3.7000e-004	3.1400e-003	1.3300e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		4.0030	4.0030	8.0000e-005	7.0000e-005	4.0267
General Office Building	0.0247945	2.7000e-004	2.4300e-003	2.0400e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		2.9170	2.9170	6.0000e-005	5.0000e-005	2.9343
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.66151	0.0179	0.1629	0.1368	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.4717	195.4717	3.7500e-003	3.5800e-003	196.6333
Total		**0.0186**	**0.1685**	**0.1402**	**1.0100e-003**		**0.0128**	**0.0128**		**0.0128**	**0.0128**		**202.3917**	**202.3917**	**3.8900e-003**	**3.7000e-003**	**203.5944**

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584
Unmitigated	3.5627	0.0201	0.3527	9.0000e-004		0.0417	0.0417		0.0417	0.0417	5.9016	19.2476	25.1493	0.0282	3.5000e-004	25.9584

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0287	0.0189	0.2515	8.9000e-004		0.0412	0.0412		0.0412	0.0412	5.9016	19.0588	24.9605	0.0280	3.5000e-004	25.7634
Landscaping	4.2100e-003	1.1200e-003	0.1012	1.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004		0.1888	0.1888	2.5000e-004		0.1950
Total	**3.5627**	**0.0201**	**0.3527**	**9.0000e-004**		**0.0417**	**0.0417**		**0.0417**	**0.0417**	**5.9016**	**19.2476**	**25.1493**	**0.0282**	**3.5000e-004**	**25.9584**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0287	0.0189	0.2515	8.9000e-004		0.0412	0.0412		0.0412	0.0412	5.9016	19.0588	24.9605	0.0280	3.5000e-004	25.7634
Landscaping	4.2100e-003	1.1200e-003	0.1012	1.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004		0.1888	0.1888	2.5000e-004		0.1950
Total	**3.5627**	**0.0201**	**0.3527**	**9.0000e-004**		**0.0417**	**0.0417**		**0.0417**	**0.0417**	**5.9016**	**19.2476**	**25.1493**	**0.0282**	**3.5000e-004**	**25.9584**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Trojan Calabasas - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Greenhouse Gas Emissions Assessment

Calabasas Self-Storage Project
City of Calabasas, California

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August 2022

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LIST OF ABBREVIATED TERMS

AQMD	Air Quality Management District
AB	Assembly Bill
CARB	California Air Resource Board
CCR	California Code of Regulations
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CFC	Chlorofluorocarbon
CPP	Clean Power Plan
CCSP	Climate Change Scoping Plan
cy	cubic yard
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
LCFS	Low Carbon Fuel Standard
CH_4	Methane
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	metric tons of carbon dioxide equivalent
NHTSA	National Highway Traffic Safety Administration
NF_3	nitrogen trifluoride
N_2O	nitrous oxide
PFC	Perfluorocarbon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Government
Sf	square foot
SF_6	sulfur hexafluoride
TAC	toxic air contaminants

1 INTRODUCTION

This report documents the results of a Greenhouse Gas Emissions Assessment completed for the Calabasas Self-Storage Project ("Project"). The purpose of this GHG Emissions Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the Project's level of impact on the environment.

1.1 Project Location and Setting

The Project site is located in unincorporated Los Angeles County (County), near the City of Calabasas, California (City), approximately 665 feet northwest of U.S. Highway 101 (U.S. 101); refer to **Exhibit 1: Regional Vicinity**. The Project site is located north of Old Scandia Lane, at 5050 Old Scandia Lane. Regional access to the Project site is provided via U.S. 101. Local access to the Project site is provided via Old Scandia Lane.

The Project site is comprised of a single vacant parcel (Los Angeles County Assessor Parcel Number [APN] 2049-022-040) totaling approximately 3.83 acres.

The land uses surrounding the Project site are residential uses to the north, industrial uses to the south and east, and a pet cemetery to the west; refer to **Exhibit 2: Site Vicinity**.

1.2 Project Characteristics

The Project proposes approximately 155,900 square feet (SF) of self-storage space (79,991 SF aboveground and 75,901 SF underground) with 1,334 self-storage units in three buildings, a 2,000 SF office/manager residence, and 27 parking spaces; see **Exhibit 3: Conceptual Site Plan**.

Project construction is expected to occur over approximately 18 months, beginning July 2023 and ending December 2024. Project grading would require approximately 36,240 cubic yards (CY) of exported soil.

The Project site is within the Santa Monica Mountains North Area Plan (Area Plan).[1] The Project site is designated Rural Commercial[2] and zoned M-1 (Light Manufacturing).[3] The M-1 zone allows for light industry, repair, wholesale, and packaging, including the manufacture, assembly, distribution, and storage of goods that have low nuisance impacts. Additionally, the Project would involve more than 5,000 CY of earthwork, thus, requires a Conditional Use Permit (CUP), per 2018 County MC Section 22.336.060(d).

[1] Los Angeles County Department of Regional Planning. (2021). *Santa Monica Mountains North Area Plan, Figure 7 – Land Use Policy (Eastern Portion) Map*. Retrieved from https://planning.lacounty.gov/assets/upl/project/smmnap_final-plan.pdf

[2] Los Angeles County Department of Regional Planning. (2021). *Santa Monica Mountains North Area Plan*. Retrieved from https://planning.lacounty.gov/assets/upl/project/smmnap_final-plan.pdf

[3] Ibid.

Exhibit 1: Regional Vicinity

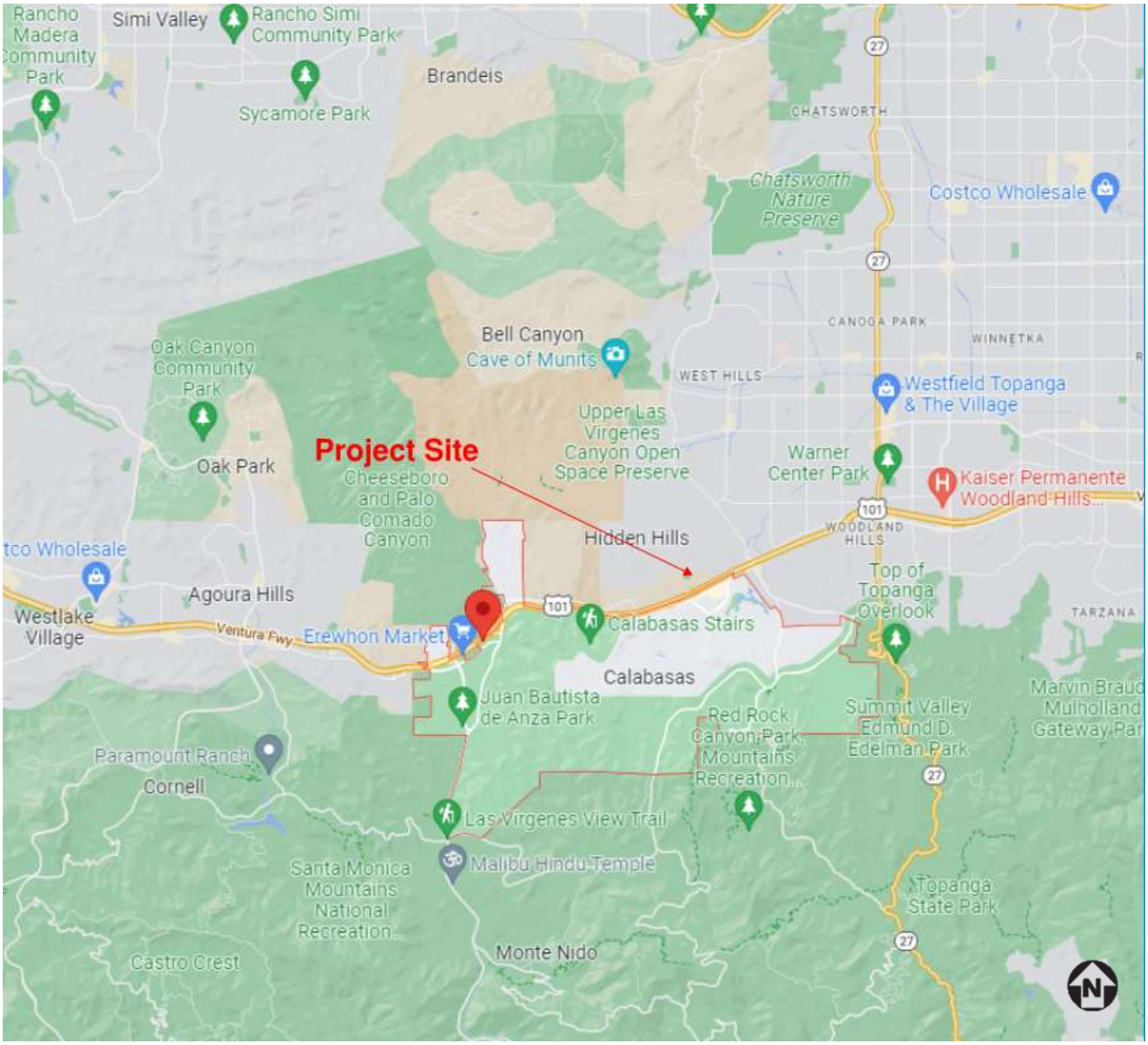


Exhibit 2: Site Vicinity

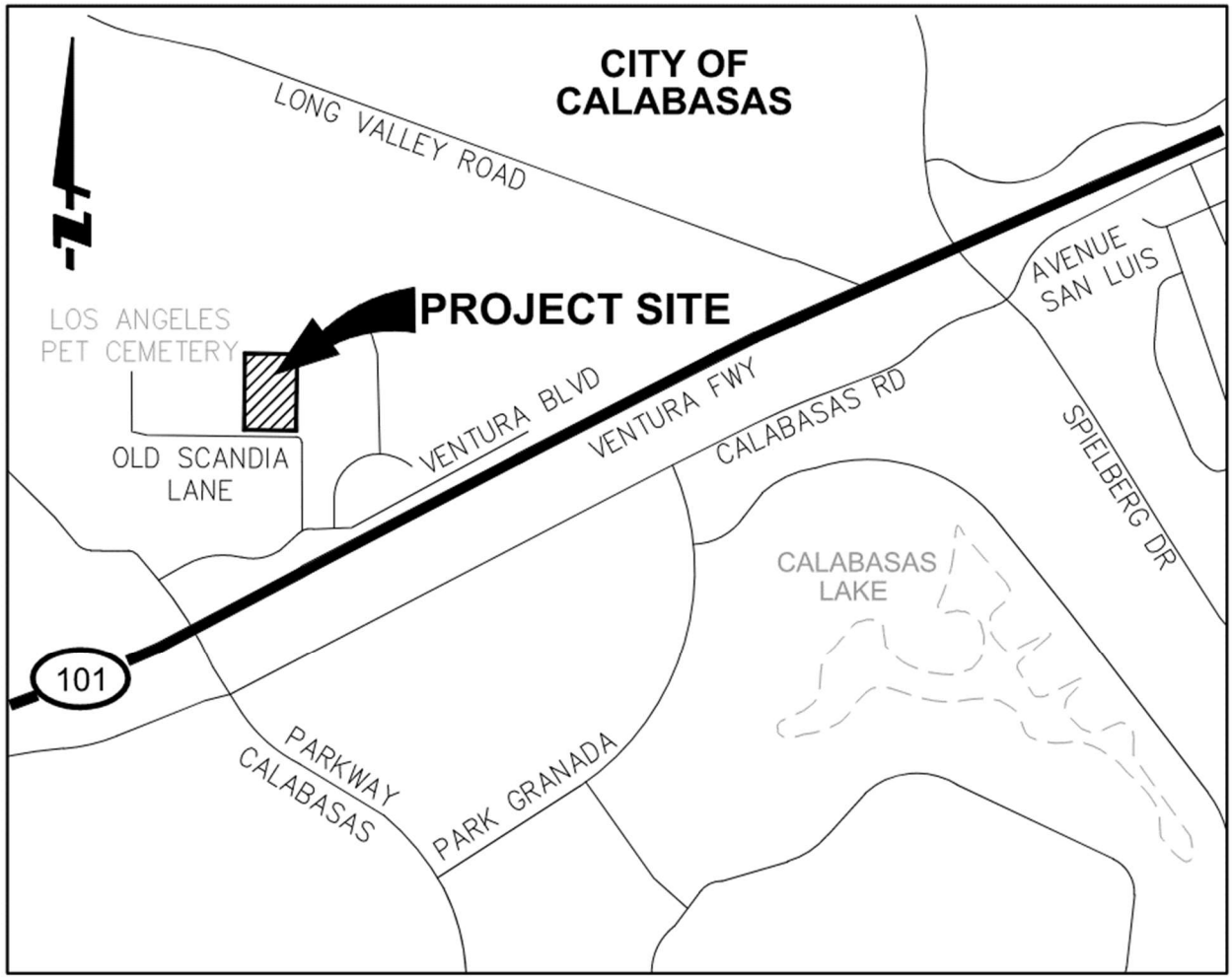
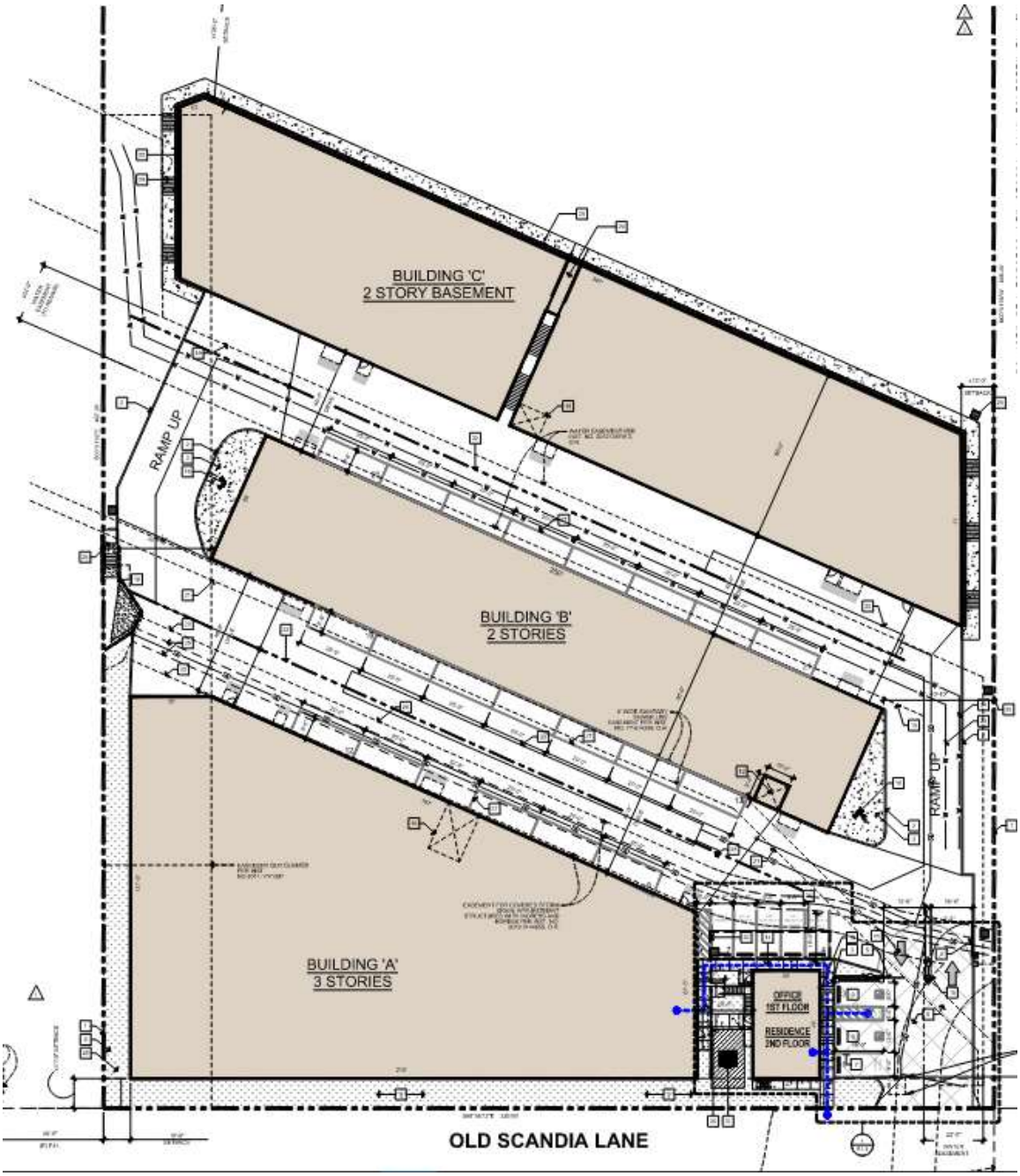


Exhibit 3: Conceptual Site Plan



2 ENVIRONMENTAL SETTING

2.1 Greenhouse Gases and Climate Change

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.[4] **Table 1: Description of Greenhouse Gases** describes the primary GHGs attributed to global climate change, including their physical properties.

[4] Intergovernmental Panel on Climate Change. (2013). *Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis*, *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Retrieved from http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction,

clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency.

In 2018, the President and the EPA stated their intent to halt various federal regulatory activities to reduce GHG emission, including the phase two program. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. On September 27, 2019, the EPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.) The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO_2 emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration has repealed SAFE Rule Part One, effective January 28, 2022, and is reconsidering Part Two pursuant to Presidential Executive Order 13390 issued on January 20, 2021 as discussed below.

Presidential Executive Orders 13990 and 14008

On January 20, 2021, President Biden issued Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis". Executive Order 13990 directs Federal agencies to immediately review and take action to address the promulgation of Federal regulations and other actions that conflict with these important national objectives and to immediately commence work to confront the climate crisis. Executive Order 13990 directs the Council on Environmental Quality (CEQ) to review CEQ's 2020 regulations implementing the procedural requirements of the National Environmental Policy Act (NEPA) and identify necessary changes or actions to meet the objectives of Executive Order 13990.

Executive Order 13390 also directs the EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under the "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks," promulgated in April 2020.

On January 27, 2021, President Biden signed Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad," to declare the Administration's policy to move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories. In line with these Executive Order directives, CEQ is reviewing the 2020 NEPA regulations and plans to publish a notice of proposed rulemaking (NPRM) to identify necessary revisions in order to comply with the law; meet the environmental, climate change, and environmental justice objectives of Executive Orders 13990 and 14008; ensure full and fair public involvement in the NEPA process; provide regulatory certainty to stakeholders; and promote better decision making consistent with NEPA's statutory requirements. This phase 1 rulemaking will propose a narrow set of changes to the 2020 NEPA regulations to address these goals.

3.2 State of California

California Air Resources Board

The California Air Resources Board (CARB) is responsible for coordination and oversight of State and local air pollution control programs. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 459 gross million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2013. The transportation sector is the State's largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State's 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 Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the legislation's major provisions.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan

CARB adopted the Scoping Plan to achieve AB 32 goals. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual").[5] The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program.[6] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key Scoping Plan elements include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.

[5] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[6] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

- Achieving a statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.
- The California Sustainable Freight Action Plan was developed in 2016 and provides a vision for California's transition to a more efficient, more economically competitive, and less polluting freight transport system. This transition of California's freight transport system is essential to supporting the State's economic development in coming decades while reducing pollution.
- CARB's Mobile Source Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The mobile Source Strategy includes increasing ZEV buses and trucks.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 $MMTCO_2e$ to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017, CARB adopted a

second update to the Scoping Plan.[7] The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other Federal actions.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet AB 32's GHG reduction goals. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

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. 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 by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for passenger vehicle and light duty truck model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new passenger vehicles are anticipated to emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions. In 2019, the EPA published the SAFE Rule that revoked California's waiver. However, the EPA is currently reconsidering the SAFE rule pursuant to Presidential Executive Order 13390.

SB 1368 (Emission Performance Standards)

SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

[7] California Air Resources Board. (2017). *California's 2017 Climate Change Scoping Plan.* Retrieved from https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

SB 1078 and SBX1-2 (Renewable Electricity Standards)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 1078 changed the due date to 2010 instead of 2017. On November 17, 2008, then Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2 codified the 33 percent by 2020 target.

SB 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements Executive Order B-30-15's goals. The SB 350 objectives are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

AB 398 (Market-Based Compliance Mechanisms)

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

SB 150 (Regional Transportation Plans)

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

SB 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)

Signed into law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales are required to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.

- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will 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. Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. 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 S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. Executive Order B-30-15 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. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions to 40 percent below 1990 levels by 2030.

Executive Order B-55-18. Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

Executive Order N-79-20. Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

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 Appliance Efficiency Regulations. The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards**.** California's Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) 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. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and went into effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards. The Project is subject to the 2019 Energy Code, assuming the permit applications are applied for prior to January 1, 2023. Should the Project's permit applications be applied for on or after January 1, 2023, the Project would be subject to the 2022 Energy Code;[8] see the following discussion.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards such as new electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores; the promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity; and the expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers). Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.

Title 24 California Green Building Standards Code. The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency,

[8] California Energy Commission. (2022). *2022 Building Energy Efficiency Standards*. Retrieved from https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency

water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017. Updates to the 2016 CALGreen Code took take effect on January 1, 2020 (2019 CALGreen). The 2019 CALGreen standards will continue to improve upon the existing standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

3.3 Regional

Southern California Association of Governments

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy [2020 RTP/SCS]). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals.

The RTP/SCS contains over 4,000 transportation projects, ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs and replacement bridges. These future investments were included in county plans developed by the six county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices for everyone. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding.

The plan accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve state GHG emissions reduction goals and Federal Clean Air Act (FCAA) requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently.

3.4 Local

Unincorporated Los Angeles County Community Climate Action Plan 2020

The County adopted the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (Los Angeles County CAP) in October 2015, which serves as a long-term plan for achieving sustainability by utilizing resources effectively and reducing GHG emissions in the County's unincorporated areas.[9] The Los Angeles County CAP sets emissions reduction goals, and applies policies, programs, and initiatives to reach

[9] County of Los Angeles. (2015). *Final Unincorporated Los Angeles County Community Climate Action Plan 2022*. Retrieved from https://planning.lacounty.gov/assets/upl/project/ccap_final-august2015.pdf

them. The CAP identifies several opportunities to reduce GHG emissions through upgrading existing structures, incorporating efficiencies into new buildings, and utilizing alternative modes of transportation.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Thresholds and Significance Criteria

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. Amendments to the State California Environmental Quality Act (CEQA) Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions[10].

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project normally would have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

South Coast Air Quality Management District Thresholds

The South Coast Air Quality Management District (South Coast AQMD) formed a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting #15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency.

With the tiered approach, a project is compared with each tier's requirements sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold.

The South Coast AQMD has adopted a threshold of 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year for industrial projects. During Working Group Meeting #7, it was explained that the industrial projects' threshold was derived using a 90 percent capture rate of a large sampling of industrial facilities. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). A threshold of 3,000 $MTCO_2e$ per year for non-industrial projects was proposed but has not been adopted. The South Coast AQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact. As previously noted, the Project site is within the Santa Monica Mountains North Area Plan (Area Plan). The Project site is designated Rural Commercial and zoned M-1 (Light Manufacturing). The M-1 zone allows for light industry, repair, wholesale, and packaging, including the

[10] 14 California Code of Regulations, Section 15064.4a

manufacture, assembly, distribution, and storage of goods that have low nuisance impacts. Additionally, the Project would involve more than 5,000 CY of earthwork, thus, requires a CUP, per 2018 County MC Section 22.336.060(d).

Although the Project is a light industrial use, this analysis conservatively utilizes the 3,000 $MTCO_2e$ per year threshold to evaluate the Project's potential GHG emissions impacts.

4.2 Methodology

The Project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod). Details of the modeling assumptions and emission factors are provided in **Appendix A: Greenhouse Gas Emissions Data**. The Project would include direct and indirect GHG emissions from Project construction and operations. Construction activities are considered a direct source of GHG emissions since they would occur at the Project site. Direct operational GHG emissions would generally occur from area and mobile sources, while indirect operational emissions would occur from energy consumption, water demand, and solid waste.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Greenhouse Gas Emissions

Threshold 5.1 Would the Project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

Project construction activities would generate direct CO_2, N_2O, and CH_4 emissions from construction equipment, transport of materials, and construction workers commuting to and from the Project site. Construction GHG emissions are typically summed and amortized over a 30-year period.[11] Total GHG emissions generated during all construction phases were combined and are presented in **Table 2: Construction Greenhouse Gas Emissions**. The CalEEMod outputs are contained within **Appendix A.** As shown in **Table 2**, Project construction-related GHG emissions would total 830.93 $MTCO_2e$ (approximately 27.70 $MTCO_2e$/year when amortized over 30 years). Once construction is complete, construction-related GHG emissions would cease.

Table 2: Construction Greenhouse Gas Emissions

Category	$MTCO_2e$
2023	449.33
2024	381.60
Total GHG Emission (2023 and 2024)	*830.93*
30-Year Amortized Construction	27.70

Source: CalEEMod version 2020.4.0. Refer to **Appendix A: Greenhouse Gas Emissions Data** for model outputs.

Long-Term Operational Greenhouse Gas Emissions

Operational long-term emissions would occur over the life of the Project. Direct operational GHG emissions would occur from mobile sources (i.e., Project-generated vehicular traffic), and area sources (e.g., on-site natural gas combustion and landscaping equipment operations). Indirect operational GHG emissions would occur from energy sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, and emissions associated with Project-generated solid waste and any fugitive refrigerants from air conditioning or refrigerators. The Project's operational GHG emissions are summarized in **Table 3: Project Greenhouse Gas Emissions**. As shown in **Table 3**, Project operational GHG emissions would total 642.62 $MTCO_2e$ annually.

Table 3 also indicates the Project's construction and operational GHG emissions combined would total approximately 670.32 $MTCO_2e$ annually, which would remain below the 3,000 $MTCO_2e$ per year threshold. Therefore, the Project's construction and operational GHG emissions would be less than significant, and no mitigation is required.

[11] The standard 30-year period is based on the South Coast AQMD (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 3: Project Greenhouse Gas Emissions	
Emissions Source	**CO_2e Emissions, metric tons/year**
Operational Emissions	
Area	0.31
Energy	151.23
Mobile	346.68
Waste	37.20
Water	107.20
Subtotal Operational Emissions	*642.62*
Amortized Construction Emissions	*27.70*
Total GHG Emissions	**670.32**
Threshold	3,000
Exceeds Threshold?	**No**
Source: CalEEMod version 2020.4.0. Refer to **Appendix A: Greenhouse Gas Emissions Data** for model outputs.	

Mitigation Measures: No mitigation required.

Level of Significance: Less than significant impact.

5.2 Greenhouse Gas Reduction Plan Compliance

Threshold 5.2 Would the Project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions?

SCAG RTP/SCS Consistency

SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15.

GHG emissions resulting from development-related mobile sources are the most potent emissions source, and therefore Project comparison to the RTP/SCS is an appropriate indicator of whether the Project would inhibit post-2020 GHG reduction goals promulgated by the State. RTP/SCS goals are used to determine a project's consistency with the planning efforts discussed above. The Project's consistency with the RTP/SCS goals is analyzed in **Table 4: Project Consistency with the Regional Transportation Plan/Sustainable Communities Strategy**. As indicated in **Table 4**, the Project would comply with the applicable RTP/SCS goals. Further, compliance with applicable State standards would ensure consistency with State and regional GHG reduction planning efforts. Therefore, the Project would not interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets. A less than significant impact would occur in this regard, and no mitigation is required.

Table 4: Project Consistency with the Regional Transportation Plan/Sustainable Communities Strategy

SCAG Goals		Compliance	
GOAL 1:	Encourage regional economic prosperity and global competitiveness.	Not Applicable:	This is not a project-specific goal. Notwithstanding, the Project would develop a vacant site, which would contribute to regional economic prosperity.
GOAL 2:	Improve mobility, accessibility, reliability, and travel safety for people and goods.	Not Applicable:	The Project is not a transportation improvement project.
GOAL 3:	Enhance the preservation, security, and resilience of the regional transportation system.	Not Applicable:	The Project is not a transportation improvement project.
GOAL 4:	Increase person and goods movement and travel choices within the transportation system.	Not Applicable:	The Project is not a transportation improvement project.
GOAL 5:	Reduce greenhouse gas emissions and improve air quality.	Consistent:	The Project site is in an urban area near existing freeways. The Project's location within an urbanized area would reduce trip lengths, which would reduce GHG and air quality emissions.
GOAL 6:	Support healthy and equitable communities	Consistent:	The Project does not exceed the South Coast AQMD's regional or localized thresholds. Based on the Friant Ranch decision, projects that do not exceed the South Coast AQMD's LSTs would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and result in no criteria pollutant health impacts.
GOAL 7:	Adapt to a changing climate and support an integrated regional development pattern and transportation network.	Not Applicable:	This is not a project-specific goal.
GOAL 8:	Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	Not Applicable:	This is not a project-specific goal.
GOAL 9:	Encourage development of diverse housing types in areas that are supported by multiple transportation options.	Not Applicable:	The Project involves development of a self-storage facility and does not include housing.
GOAL 10:	Promote conservation of natural and agricultural lands and restoration of habitats.	Not Applicable:	The Project is not on agricultural lands and does not contain native habitat.

Source: Southern California Association of Governments. (2020). *Connect SoCal – The Regional Transportation Plan/Sustainable Communities Strategy*.

Consistency with the CARB Scoping Plan

Pursuant to the requirements in AB 32, CARB adopted the *Climate Change Scoping Plan* (Scoping Plan) in 2008, which provides a range of GHG reduction actions. The 2017 Scoping Plan Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the Scoping Plan's first update in 2013.

The Project's consistency with the CARB Scoping Plan is analyzed in detail in **Table 5: Project Consistency with Applicable CARB Scoping Plan Measures**. As indicated in **Table 5**, the Project would comply with the applicable measures. As such, impacts related to consistency with the Scoping Plan would be less than significant, and no mitigation is required.

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on GHG Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, 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 combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Project would not conflict with implementation of the Cap-and-Trade Program and would indirectly be consistent with regard to the use of electricity and fuel.
	California Light-Duty Vehicle GHG Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles	**Consistent**. This measure applies to all new vehicles starting with model year 2012. The Project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California.
		2012 LEV III California GHG and Criteria Pollutant Exhaust and Evaporative Emission Standards	**Consistent.** The LEV III amendments provide reductions from new vehicles sold in California between 2017 and 2025. The Project would not conflict with implementation of this measure, as it would apply to all new passenger vehicles purchased in California between 2017 and 2025.
	Low Carbon Fuel Standard	2009 readopted in 2015. Regulations to Achieve GHG Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The Project would not conflict with implementation of this measure. Motor vehicles associated with Project construction and operations would utilize low carbon transportation fuels, as required under this measure.
	Regional Transportation-Related GHG Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	**Consistent**. The Project is a self-storage development, which would not induce unplanned population growth in the region. Therefore, the Project would not conflict with RTP/SCS growth projections.
	Goods Movement	Goods Movement Action Plan January 2007	**Not Applicable**. The Project would not conflict with this measure, as the Project does not propose any

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
			changes to maritime, rail, or intermodal facilities or other transportation modes.
	Medium/Heavy-Duty Vehicle	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer GHG Regulation	**Consistent**. This measure applies to medium and heavy-duty vehicles that operate in the State. The Project would not conflict with this measure. Medium and heavy-duty vehicles associated with Project construction and operations would be required to comply with this regulation.
	High Speed Rail	Funded under SB 862	**Not Applicable**. This is a statewide measure that cannot be implemented by a project applicant or Lead Agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	**Consistent.** The Project would not conflict with this measure, as the Project would be subject to compliance with the latest energy efficiency standards.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)	**Consistent**. The Project would obtain electricity from the electric utility, Southern California Edison (SCE). SCE obtained 35 percent of its power supply from renewable sources in 2019. The utility would provide power to the Project that would be comprised of a greater percentage of renewable sources. Therefore, the Project would not conflict with this measure.
	Million Solar Roofs Program	SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	
	Million Solar Roofs Program	Tax Incentive Program	**Consistent.** This measure involves increasing solar use throughout California, which is being accomplished by various electricity providers and existing solar programs. The program provides incentives that are in place at the time of construction. The Project would obtain electricity from the electric utility, Southern California Edison (SCE). SCE obtained 35 percent of its power supply from renewable sources in 2019. Further, the solar incentive programs would be available to the Project. Therefore, the Project would not conflict with this measure.
Water	Water	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The Project would comply with the CalGreen standards, which require a 20 percent reduction in indoor water use. The Project would also comply with Los Angeles County Municipal Code Chapter 20.09: Maintaining Existing Water-Efficient Landscapes, which prohibits any person, firm or corporation from wasting water through inefficient and inappropriate landscape irrigation. Therefore, the Project would not conflict with this measure.
		SBX 7-7—The Water Conservation Act of 2009	
		Model Water Efficient Landscape Ordinance	
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The State is required to increase use of green building practices. The Project would implement required green building strategies through existing regulations that require the Project to comply with

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
			various CalGreen standards. Therefore, the Project would not conflict with this measure.
Industry	Industrial Emissions	2010 CARB Mandatory Reporting Regulation	**Consistent.** The Project proposes a light industrial use (i.e., self-storage facility), however, would not generate industrial emissions. Therefore, the Project would not conflict with this measure.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The Project is required to achieve the recycling mandates via compliance with the CALGreen code. Therefore, the Project would not conflict with these measures.
		AB 341 Statewide 75 Percent Diversion Goal	
Forests	Sustainable Forests	Cap and Trade Offset Projects	**Not Applicable.** The Project is not located in a forested area.
High Global Warming Potential	High Global Warming Potential Gases	CARB Refrigerant Management Program CCR 95380	**Not Applicable**. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The Project proposes a self-storage facility that would not involve these types of equipment.
Agriculture	Agriculture	Cap and Trade Offset Projects for Livestock and Rice Cultivation	**Not Applicable**. No grazing, feedlot, or other agricultural activities that generate manure occur currently on-site or are proposed by the Project.

Source: California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017 and CARB, *Climate Change Scoping Plan*, December 2008.

Consistency with the Unincorporated Los Angeles County Community Climate Action Plan 2020

The Los Angeles County CAP sets emissions reduction goals, and applies policies, programs, and initiatives to reach them. The CAP identifies several opportunities to reduce GHG emissions through upgrading existing structures, incorporating efficiencies into new buildings, and utilizing alternative modes of transportation. The Project would be consistent with the Los Angeles County CAP by incorporating efficiencies into the proposed buildings through compliance with applicable energy efficiency standards.

The Project would be subject to compliance with all building codes in effect at the time of construction, which include energy conservation measures mandated by Title 24 of the California Building Standards Code – Energy Efficiency Standards and the California Green Building Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water-conserving plumbing fixtures), these standards indirectly regulate and reduce GHG emissions. California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The most recent 2019 standards went into effect January 1, 2020.

Further, the Project would be subject to compliance with State Building Code provisions and the County's Climate Action Plan policies, which are intended to reduce GHG emissions. The Project would also be subject to compliance with all applicable South Coast AQMD rules and regulations during construction and operations and would not impede achieving statewide 2030 and 2050 GHG emission reduction targets. Therefore, the Project would not conflict with any applicable GHG reductions plans or policies, and a less than significant impact would occur.

Mitigation Measures: No mitigation required.

Level of Significance: Less than significant impact.

5.3 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts

It is generally the case that an individual project of the proposed Project's size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. As discussed above, the Project-related GHG emissions would not exceed the 3,000 $MTCO_2e$ threshold and would not impede achievement of statewide 2030 and 2050 GHG emission reduction targets. As such, the Project's GHG emissions would not be cumulatively considerable, and impacts would be less than significant.

Mitigation Measures: No mitigation required.

Level of Significance: Less than significant impact.

6 REFERENCES

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Appendix A

Greenhouse Gas Emissions Data

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trojan Calabasas

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Unrefrigerated Warehouse-No Rail	155.90	1000sqft	3.58	155,900.00	0
Parking Lot	27.00	Space	0.17	7,315.20	0
Apartments Low Rise	1.00	Dwelling Unit	0.06	1,000.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per site plan

Construction Phase - Per Construction Questionnaire

Grading - Per Construction Questionnaire

Vehicle Trips - Trip Rates per Table 3-2, Trojan Calabasas Self-Storage Project Trip Generation, of the Traffic Study from the previous ISMND

Woodstoves - No wood burning fireplaces per SCAQMD rules

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Water Mitigation -

Waste Mitigation - per AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	18.00	82.00
tblConstructionPhase	NumDays	230.00	290.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	14.00
tblConstructionPhase	NumDays	5.00	30.00
tblFireplaces	NumberGas	0.85	0.90
tblFireplaces	NumberWood	0.05	0.00
tblGrading	AcresOfGrading	80.00	8.00
tblGrading	AcresOfGrading	45.00	7.50
tblGrading	MaterialExported	0.00	36,240.00
tblLandUse	LandUseSquareFeet	10,800.00	7,315.20
tblLandUse	LotAcreage	0.24	0.17
tblVehicleTrips	ST_TR	8.14	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	1.54
tblVehicleTrips	SU_TR	6.28	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	1.54
tblVehicleTrips	WD_TR	7.32	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	1.54

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1935	2.1091	1.7820	4.8100e-003	0.6105	0.0821	0.6926	0.3066	0.0762	0.3828	0.0000	439.8683	439.8683	0.0822	0.0249	449.3312
2024	0.9224	1.6154	2.1088	4.2500e-003	0.1039	0.0692	0.1731	0.0280	0.0652	0.0932	0.0000	377.3865	377.3865	0.0637	8.8000e-003	381.6037
Maximum	**0.9224**	**2.1091**	**2.1088**	**4.8100e-003**	**0.6105**	**0.0821**	**0.6926**	**0.3066**	**0.0762**	**0.3828**	**0.0000**	**439.8683**	**439.8683**	**0.0822**	**0.0249**	**449.3312**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1935	2.1090	1.7820	4.8100e-003	0.3073	0.0821	0.3894	0.1437	0.0762	0.2199	0.0000	439.8680	439.8680	0.0822	0.0249	449.3309
2024	0.9224	1.6154	2.1088	4.2500e-003	0.0987	0.0692	0.1679	0.0267	0.0652	0.0919	0.0000	377.3862	377.3862	0.0637	8.8000e-003	381.6033
Maximum	**0.9224**	**2.1090**	**2.1088**	**4.8100e-003**	**0.3073**	**0.0821**	**0.3894**	**0.1437**	**0.0762**	**0.2199**	**0.0000**	**439.8680**	**439.8680**	**0.0822**	**0.0249**	**449.3309**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**43.17**	**0.00**	**35.63**	**49.05**	**0.00**	**34.48**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-3-2023**	**7-2-2023**	0.9093	0.9093
2	**7-3-2023**	**10-2-2023**	0.7738	0.7738
3	**10-3-2023**	**1-2-2024**	0.5738	0.5738
4	**1-3-2024**	**4-2-2024**	0.5333	0.5333
5	**4-3-2024**	**7-2-2024**	0.5308	0.5308
6	**7-3-2024**	**9-30-2024**	0.6767	0.6767
		Highest	0.9093	0.9093

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6451	3.8000e-004	0.0158	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0669	0.2375	0.3045	3.5000e-004	0.0000	0.3143
Energy	3.3900e-003	0.0307	0.0256	1.8000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	150.4252	150.4252	0.0105	1.8100e-003	151.2275
Mobile	0.1457	0.1770	1.6140	3.6300e-003	0.3866	2.6400e-003	0.3892	0.1031	2.4500e-003	0.1056	0.0000	341.9428	341.9428	0.0220	0.0141	346.6827
Waste						0.0000	0.0000		0.0000	0.0000	30.0305	0.0000	30.0305	1.7748	0.0000	74.3993
Water						0.0000	0.0000		0.0000	0.0000	11.5147	84.1080	95.6227	1.1898	0.0288	133.9450
Total	**0.7941**	**0.2081**	**1.6554**	**3.8200e-003**	**0.3866**	**5.5600e-003**	**0.3921**	**0.1031**	**5.3700e-003**	**0.1085**	**41.6121**	**576.7136**	**618.3257**	**2.9973**	**0.0447**	**706.5686**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6451	3.8000e-004	0.0158	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0669	0.2375	0.3045	3.5000e-004	0.0000	0.3143
Energy	3.3900e-003	0.0307	0.0256	1.8000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	150.4252	150.4252	0.0105	1.8100e-003	151.2275
Mobile	0.1457	0.1770	1.6140	3.6300e-003	0.3866	2.6400e-003	0.3892	0.1031	2.4500e-003	0.1056	0.0000	341.9428	341.9428	0.0220	0.0141	346.6827
Waste						0.0000	0.0000		0.0000	0.0000	15.0152	0.0000	15.0152	0.8874	0.0000	37.1996
Water						0.0000	0.0000		0.0000	0.0000	9.2117	67.3275	76.5392	0.9518	0.0230	107.1973
Total	**0.7941**	**0.2081**	**1.6554**	**3.8200e-003**	**0.3866**	**5.5600e-003**	**0.3921**	**0.1031**	**5.3700e-003**	**0.1085**	**24.2939**	**559.9331**	**584.2270**	**1.8720**	**0.0389**	**642.6213**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**41.62**	**2.91**	**5.51**	**37.54**	**12.90**	**9.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2023	5/12/2023	5	30	
2	Grading	Grading	5/15/2023	9/1/2023	5	80	
3	Building Construction	Building Construction	9/4/2023	10/11/2024	5	290	
4	Architectural Coating	Architectural Coating	9/9/2024	12/31/2024	5	82	
5	Paving	Paving	11/18/2024	12/5/2024	5	14	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0.17

Residential Indoor: 2,025; Residential Outdoor: 675; Non-Residential Indoor: 235,350; Non-Residential Outdoor: 78,450; Striped Parking Area: 439

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,530.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	70.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2750	0.0000	0.2750	0.1494	0.0000	0.1494	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.2750**	**0.0190**	**0.2940**	**0.1494**	**0.0175**	**0.1669**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.8000e-004	9.2200e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3846	2.3846	6.0000e-005	6.0000e-005	2.4044
Total	**8.6000e-004**	**6.8000e-004**	**9.2200e-003**	**3.0000e-005**	**2.9600e-003**	**2.0000e-005**	**2.9800e-003**	**7.9000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3846**	**2.3846**	**6.0000e-005**	**6.0000e-005**	**2.4044**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1176	0.0000	0.1176	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.1176**	**0.0190**	**0.1365**	**0.0639**	**0.0175**	**0.0813**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.8000e-004	9.2200e-003	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.3846	2.3846	6.0000e-005	6.0000e-005	2.4044
Total	**8.6000e-004**	**6.8000e-004**	**9.2200e-003**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.5000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.3846**	**2.3846**	**6.0000e-005**	**6.0000e-005**	**2.4044**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2472	0.0000	0.2472	0.1332	0.0000	0.1332	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0684	0.7174	0.5900	1.1900e-003		0.0310	0.0310		0.0285	0.0285	0.0000	104.2425	104.2425	0.0337	0.0000	105.0853
Total	**0.0684**	**0.7174**	**0.5900**	**1.1900e-003**	**0.2472**	**0.0310**	**0.2782**	**0.1332**	**0.0285**	**0.1617**	**0.0000**	**104.2425**	**104.2425**	**0.0337**	**0.0000**	**105.0853**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7800e-003	0.3115	0.0793	1.3300e-003	0.0390	1.8700e-003	0.0408	0.0107	1.7900e-003	0.0125	0.0000	132.1105	132.1105	7.2700e-003	0.0210	138.5443
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.5100e-003	0.0205	6.0000e-005	6.5700e-003	4.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7800e-003	0.0000	5.2991	5.2991	1.4000e-004	1.4000e-004	5.3431
Total	**6.6800e-003**	**0.3130**	**0.0998**	**1.3900e-003**	**0.0455**	**1.9100e-003**	**0.0475**	**0.0125**	**1.8300e-003**	**0.0143**	**0.0000**	**137.4096**	**137.4096**	**7.4100e-003**	**0.0211**	**143.8874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1057	0.0000	0.1057	0.0569	0.0000	0.0569	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0684	0.7174	0.5900	1.1900e-003		0.0310	0.0310		0.0285	0.0285	0.0000	104.2423	104.2423	0.0337	0.0000	105.0852
Total	**0.0684**	**0.7174**	**0.5900**	**1.1900e-003**	**0.1057**	**0.0310**	**0.1367**	**0.0569**	**0.0285**	**0.0855**	**0.0000**	**104.2423**	**104.2423**	**0.0337**	**0.0000**	**105.0852**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7800e-003	0.3115	0.0793	1.3300e-003	0.0372	1.8700e-003	0.0391	0.0103	1.7900e-003	0.0121	0.0000	132.1105	132.1105	7.2700e-003	0.0210	138.5443
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.5100e-003	0.0205	6.0000e-005	6.2300e-003	4.0000e-005	6.2700e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.2991	5.2991	1.4000e-004	1.4000e-004	5.3431
Total	**6.6800e-003**	**0.3130**	**0.0998**	**1.3900e-003**	**0.0434**	**1.9100e-003**	**0.0454**	**0.0119**	**1.8300e-003**	**0.0138**	**0.0000**	**137.4096**	**137.4096**	**7.4100e-003**	**0.0211**	**143.8874**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0668	0.6114	0.6904	1.1500e-003		0.0297	0.0297		0.0280	0.0280	0.0000	98.5170	98.5170	0.0234	0.0000	99.1029
Total	**0.0668**	**0.6114**	**0.6904**	**1.1500e-003**		**0.0297**	**0.0297**		**0.0280**	**0.0280**	**0.0000**	**98.5170**	**98.5170**	**0.0234**	**0.0000**	**99.1029**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-003	0.0462	0.0173	2.1000e-004	7.2300e-003	2.2000e-004	7.4500e-003	2.0900e-003	2.1000e-004	2.3000e-003	0.0000	20.8641	20.8641	7.0000e-004	3.0000e-003	21.7763
Worker	9.4500e-003	7.5000e-003	0.1016	2.8000e-004	0.0326	2.0000e-004	0.0328	8.6600e-003	1.8000e-004	8.8400e-003	0.0000	26.2745	26.2745	6.9000e-004	6.8000e-004	26.4930
Total	**0.0108**	**0.0537**	**0.1189**	**4.9000e-004**	**0.0398**	**4.2000e-004**	**0.0403**	**0.0108**	**3.9000e-004**	**0.0111**	**0.0000**	**47.1386**	**47.1386**	**1.3900e-003**	**3.6800e-003**	**48.2694**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0668	0.6114	0.6904	1.1500e-003		0.0297	0.0297		0.0280	0.0280	0.0000	98.5169	98.5169	0.0234	0.0000	99.1028
Total	**0.0668**	**0.6114**	**0.6904**	**1.1500e-003**		**0.0297**	**0.0297**		**0.0280**	**0.0280**	**0.0000**	**98.5169**	**98.5169**	**0.0234**	**0.0000**	**99.1028**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-003	0.0462	0.0173	2.1000e-004	6.9200e-003	2.2000e-004	7.1500e-003	2.0100e-003	2.1000e-004	2.2200e-003	0.0000	20.8641	20.8641	7.0000e-004	3.0000e-003	21.7763
Worker	9.4500e-003	7.5000e-003	0.1016	2.8000e-004	0.0309	2.0000e-004	0.0311	8.2400e-003	1.8000e-004	8.4300e-003	0.0000	26.2745	26.2745	6.9000e-004	6.8000e-004	26.4930
Total	**0.0108**	**0.0537**	**0.1189**	**4.9000e-004**	**0.0378**	**4.2000e-004**	**0.0383**	**0.0103**	**3.9000e-004**	**0.0107**	**0.0000**	**47.1386**	**47.1386**	**1.3900e-003**	**3.6800e-003**	**48.2694**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1508	1.3780	1.6571	2.7600e-003		0.0629	0.0629		0.0591	0.0591	0.0000	237.6453	237.6453	0.0562	0.0000	239.0502
Total	**0.1508**	**1.3780**	**1.6571**	**2.7600e-003**		**0.0629**	**0.0629**		**0.0591**	**0.0591**	**0.0000**	**237.6453**	**237.6453**	**0.0562**	**0.0000**	**239.0502**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0300e-003	0.1118	0.0409	5.1000e-004	0.0174	5.4000e-004	0.0180	5.0300e-003	5.2000e-004	5.5500e-003	0.0000	49.5643	49.5643	1.6900e-003	7.1400e-003	51.7343
Worker	0.0213	0.0161	0.2283	6.6000e-004	0.0786	4.6000e-004	0.0791	0.0209	4.3000e-004	0.0213	0.0000	62.0659	62.0659	1.5100e-003	1.5100e-003	62.5548
Total	**0.0243**	**0.1279**	**0.2692**	**1.1700e-003**	**0.0961**	**1.0000e-003**	**0.0971**	**0.0259**	**9.5000e-004**	**0.0269**	**0.0000**	**111.6303**	**111.6303**	**3.2000e-003**	**8.6500e-003**	**114.2891**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1508	1.3780	1.6571	2.7600e-003		0.0629	0.0629		0.0591	0.0591	0.0000	237.6451	237.6451	0.0562	0.0000	239.0500
Total	**0.1508**	**1.3780**	**1.6571**	**2.7600e-003**		**0.0629**	**0.0629**		**0.0591**	**0.0591**	**0.0000**	**237.6451**	**237.6451**	**0.0562**	**0.0000**	**239.0500**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0300e-003	0.1118	0.0409	5.1000e-004	0.0167	5.4000e-004	0.0172	4.8500e-003	5.2000e-004	5.3700e-003	0.0000	49.5643	49.5643	1.6900e-003	7.1400e-003	51.7343
Worker	0.0213	0.0161	0.2283	6.6000e-004	0.0745	4.6000e-004	0.0750	0.0199	4.3000e-004	0.0203	0.0000	62.0659	62.0659	1.5100e-003	1.5100e-003	62.5548
Total	**0.0243**	**0.1279**	**0.2692**	**1.1700e-003**	**0.0912**	**1.0000e-003**	**0.0922**	**0.0247**	**9.5000e-004**	**0.0257**	**0.0000**	**111.6303**	**111.6303**	**3.2000e-003**	**8.6500e-003**	**114.2891**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7314					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4100e-003	0.0500	0.0742	1.2000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003	0.0000	10.4683	10.4683	5.9000e-004	0.0000	10.4831
Total	**0.7388**	**0.0500**	**0.0742**	**1.2000e-004**		**2.5000e-003**	**2.5000e-003**		**2.5000e-003**	**2.5000e-003**	**0.0000**	**10.4683**	**10.4683**	**5.9000e-004**	**0.0000**	**10.4831**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-003	1.2900e-003	0.0183	5.0000e-005	6.2900e-003	4.0000e-005	6.3300e-003	1.6700e-003	3.0000e-005	1.7000e-003	0.0000	4.9653	4.9653	1.2000e-004	1.2000e-004	5.0044
Total	**1.7000e-003**	**1.2900e-003**	**0.0183**	**5.0000e-005**	**6.2900e-003**	**4.0000e-005**	**6.3300e-003**	**1.6700e-003**	**3.0000e-005**	**1.7000e-003**	**0.0000**	**4.9653**	**4.9653**	**1.2000e-004**	**1.2000e-004**	**5.0044**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7314					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4100e-003	0.0500	0.0742	1.2000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003	0.0000	10.4683	10.4683	5.9000e-004	0.0000	10.4831
Total	**0.7388**	**0.0500**	**0.0742**	**1.2000e-004**		**2.5000e-003**	**2.5000e-003**		**2.5000e-003**	**2.5000e-003**	**0.0000**	**10.4683**	**10.4683**	**5.9000e-004**	**0.0000**	**10.4831**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-003	1.2900e-003	0.0183	5.0000e-005	5.9600e-003	4.0000e-005	6.0000e-003	1.5900e-003	3.0000e-005	1.6200e-003	0.0000	4.9653	4.9653	1.2000e-004	1.2000e-004	5.0044
Total	**1.7000e-003**	**1.2900e-003**	**0.0183**	**5.0000e-005**	**5.9600e-003**	**4.0000e-005**	**6.0000e-003**	**1.5900e-003**	**3.0000e-005**	**1.6200e-003**	**0.0000**	**4.9653**	**4.9653**	**1.2000e-004**	**1.2000e-004**	**5.0044**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1700e-003	0.0579	0.0856	1.3000e-004		2.7900e-003	2.7900e-003		2.5800e-003	2.5800e-003	0.0000	11.4662	11.4662	3.6000e-003	0.0000	11.5563
Paving	2.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3900e-003**	**0.0579**	**0.0856**	**1.3000e-004**		**2.7900e-003**	**2.7900e-003**		**2.5800e-003**	**2.5800e-003**	**0.0000**	**11.4662**	**11.4662**	**3.6000e-003**	**0.0000**	**11.5563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.2000e-004	4.4500e-003	1.0000e-005	1.5300e-003	1.0000e-005	1.5400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2110	1.2110	3.0000e-005	3.0000e-005	1.2206
Total	**4.1000e-004**	**3.2000e-004**	**4.4500e-003**	**1.0000e-005**	**1.5300e-003**	**1.0000e-005**	**1.5400e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.2110**	**1.2110**	**3.0000e-005**	**3.0000e-005**	**1.2206**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1700e-003	0.0579	0.0856	1.3000e-004		2.7900e-003	2.7900e-003		2.5800e-003	2.5800e-003	0.0000	11.4662	11.4662	3.6000e-003	0.0000	11.5563
Paving	2.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3900e-003**	**0.0579**	**0.0856**	**1.3000e-004**		**2.7900e-003**	**2.7900e-003**		**2.5800e-003**	**2.5800e-003**	**0.0000**	**11.4662**	**11.4662**	**3.6000e-003**	**0.0000**	**11.5563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.2000e-004	4.4500e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.2110	1.2110	3.0000e-005	3.0000e-005	1.2206
Total	**4.1000e-004**	**3.2000e-004**	**4.4500e-003**	**1.0000e-005**	**1.4500e-003**	**1.0000e-005**	**1.4600e-003**	**3.9000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**1.2110**	**1.2110**	**3.0000e-005**	**3.0000e-005**	**1.2206**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1457	0.1770	1.6140	3.6300e-003	0.3866	2.6400e-003	0.3892	0.1031	2.4500e-003	0.1056	0.0000	341.9428	341.9428	0.0220	0.0141	346.6827
Unmitigated	0.1457	0.1770	1.6140	3.6300e-003	0.3866	2.6400e-003	0.3892	0.1031	2.4500e-003	0.1056	0.0000	341.9428	341.9428	0.0220	0.0141	346.6827

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4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	240.09	240.09	240.09	1,028,941	1,028,941
Total	240.09	240.09	240.09	1,028,941	1,028,941

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
General Office Building	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Unrefrigerated Warehouse-No Rail	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	116.9170	116.9170	9.8700e-003	1.2000e-003	117.5202
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	116.9170	116.9170	9.8700e-003	1.2000e-003	117.5202
NaturalGas Mitigated	3.3900e-003	0.0307	0.0256	1.8000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	33.5082	33.5082	6.4000e-004	6.1000e-004	33.7073
NaturalGas Unmitigated	3.3900e-003	0.0307	0.0256	1.8000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	33.5082	33.5082	6.4000e-004	6.1000e-004	33.7073

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	12419.1	7.0000e-005	5.7000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6627	0.6627	1.0000e-005	1.0000e-005	0.6667
General Office Building	9050	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4829	0.4829	1.0000e-005	1.0000e-005	0.4858
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	606451	3.2700e-003	0.0297	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.3625	32.3625	6.2000e-004	5.9000e-004	32.5549
Total		**3.3900e-003**	**0.0307**	**0.0256**	**1.8000e-004**		**2.3400e-003**	**2.3400e-003**		**2.3400e-003**	**2.3400e-003**	**0.0000**	**33.5082**	**33.5082**	**6.4000e-004**	**6.1000e-004**	**33.7073**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	12419.1	7.0000e-005	5.7000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6627	0.6627	1.0000e-005	1.0000e-005	0.6667
General Office Building	9050	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4829	0.4829	1.0000e-005	1.0000e-005	0.4858
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	606451	3.2700e-003	0.0297	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.3625	32.3625	6.2000e-004	5.9000e-004	32.5549
Total		**3.3900e-003**	**0.0307**	**0.0256**	**1.8000e-004**		**2.3400e-003**	**2.3400e-003**		**2.3400e-003**	**2.3400e-003**	**0.0000**	**33.5082**	**33.5082**	**6.4000e-004**	**6.1000e-004**	**33.7073**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4020.82	0.7131	6.0000e-005	1.0000e-005	0.7168
General Office Building	13490	2.3924	2.0000e-004	2.0000e-005	2.4047
Parking Lot	2560.32	0.4541	4.0000e-005	0.0000	0.4564
Unrefrigerated Warehouse-No	639190	113.3575	9.5700e-003	1.1600e-003	113.9423
Total		**116.9170**	**9.8700e-003**	**1.1900e-003**	**117.5202**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4020.82	0.7131	6.0000e-005	1.0000e-005	0.7168
General Office Building	13490	2.3924	2.0000e-004	2.0000e-005	2.4047
Parking Lot	2560.32	0.4541	4.0000e-005	0.0000	0.4564
Unrefrigerated Warehouse-No	639190	113.3575	9.5700e-003	1.1600e-003	113.9423
Total		**116.9170**	**9.8700e-003**	**1.1900e-003**	**117.5202**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6451	3.8000e-004	0.0158	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0669	0.2375	0.3045	3.5000e-004	0.0000	0.3143
Unmitigated	0.6451	3.8000e-004	0.0158	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0669	0.2375	0.3045	3.5000e-004	0.0000	0.3143

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0731					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5710					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.6000e-004	2.4000e-004	3.1400e-003	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0669	0.2161	0.2831	3.2000e-004	0.0000	0.2922
Landscaping	5.3000e-004	1.4000e-004	0.0127	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0214	0.0214	3.0000e-005	0.0000	0.0221
Total	**0.6451**	**3.8000e-004**	**0.0158**	**1.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.8000e-004**	**5.8000e-004**	**0.0669**	**0.2375**	**0.3045**	**3.5000e-004**	**0.0000**	**0.3143**

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Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0731					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5710					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.6000e-004	2.4000e-004	3.1400e-003	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0669	0.2161	0.2831	3.2000e-004	0.0000	0.2922
Landscaping	5.3000e-004	1.4000e-004	0.0127	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0214	0.0214	3.0000e-005	0.0000	0.0221
Total	**0.6451**	**3.8000e-004**	**0.0158**	**1.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.8000e-004**	**5.8000e-004**	**0.0669**	**0.2375**	**0.3045**	**3.5000e-004**	**0.0000**	**0.3143**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	76.5392	0.9518	0.0230	107.1973
Unmitigated	95.6227	1.1898	0.0288	133.9450

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.065154 / 0.0410754	0.2521	2.1400e-003	5.0000e-005	0.3213
General Office Building	0.177734 / 0.108934	0.6815	5.8400e-003	1.4000e-004	0.8702
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	36.0519 / 0	94.6892	1.1818	0.0286	132.7535
Total		**95.6227**	**1.1898**	**0.0288**	**133.9450**

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Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.0521232 /	0.2129	1.7200e-003	4.0000e-005	0.2683
General Office Building	0.142187 / 0.102289	0.5750	4.6800e-003	1.1000e-004	0.7262
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	28.8415 / 0	75.7513	0.9454	0.0229	106.2028
Total		**76.5392**	**0.9518**	**0.0230**	**107.1973**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.0152	0.8874	0.0000	37.1996
Unmitigated	30.0305	1.7748	0.0000	74.3993

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	0.46	0.0934	5.5200e-003	0.0000	0.2313
General Office Building	0.93	0.1888	0.0112	0.0000	0.4677
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	146.55	29.7483	1.7581	0.0000	73.7002
Total		**30.0305**	**1.7748**	**0.0000**	**74.3993**

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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	0.23	0.0467	2.7600e-003	0.0000	0.1157
General Office Building	0.465	0.0944	5.5800e-003	0.0000	0.2339
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	73.275	14.8742	0.8790	0.0000	36.8501
Total		**15.0152**	**0.8874**	**0.0000**	**37.1996**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BIOLOGICAL RESOURCES ASSESSMENT

TROJAN STORAGE PROJECT

CALABASAS, LOS ANGELES COUNTY, CALIFORNIA

(AIN 2049 – 022-040)

LSA

September 2022

BIOLOGICAL RESOURCES ASSESSMENT

TROJAN STORAGE PROJECT

CALABASAS, LOS ANGELES COUNTY, CALIFORNIA

(AIN 2049 – 022-040)

Submitted to:

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Project No. KHA2208

LSA

September 2022

EXECUTIVE SUMMARY

Kimley-Horn retained LSA to conduct a Biological Resources Assessment for the Trojan Storage Project (project) on Assessor's Identification Number 2049-022-040 in Calabasas, Los Angeles County, California. The County of Los Angeles is the lead agency for the project, and this study is part of the environmental review process to comply with the California Environmental Quality Act. The assessment included a literature review, a field survey, and this report.

The project would have no effects to special-status species, including threatened and endangered species and critical habitat. The project site contains one potential jurisdictional drainage feature that project activities must avoid. The project site does not contain wildlife corridors, nursery sites, or natural communities of concern. The project will not conflict with any local policies or ordinances and is not within an adopted habitat conservation plan area.

The project site does provide suitable habitat for nesting birds protected under the California Fish and Game Code and the Migratory Bird Treaty Act. A pre-construction survey would be required to avoid project effects to nesting birds.

TABLE OF CONTENTS

TABLE

APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

CEQA	California Endangered Species Act
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CWA	Clean Water Act
JDSA	jurisdictional delineation study area
project	Trojan Storage Project
RWQCB	Regional Water Quality Control Board
SEA	Significant Ecological Area
SMMNAP	Santa Monica Mountains North Area Plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

BIOLOGICAL RESOURCES ASSESSMENT

INTRODUCTION

Kimley-Horn retained LSA to conduct a Biological Resources Assessment for the Trojan Storage Project (project) (Assessor's Identification Number 2049-022-040). The 3.8-acre project site is at 5050 Old Scandia Lane, 550 feet northwest of the intersection of Old Scandia Lane and Ventura Boulevard in Calabasas, Los Angeles County, California, as depicted on the United States Geological Survey (USGS) *Calabasas, California* topographic quadrangle map in Section 22, Township 1 North, Range 17 West, (USGS 1967) (see Figure 1; all figures are provided in Appendix A).

The proposed project consists of 155,900 square feet of storage uses across three separate buildings and a total of 27 parking spaces (Figure 2).

METHODS

Literature Review

LSA conducted a literature review to assist in determining the existence or potential occurrence of special-status plant and animal species within a 1-mile radius of the project site. Database records for the *Calabasas,* and *Los Angeles,* USGS 7.5-minute quadrangles were searched on August 16, 2022, using the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) application *Rarefind 5* online edition (version 5.2.14 [CDFW 2022a). United States Fish and Wildlife Service (USFWS) listed species and designated critical habitat information were searched using the USFWS Information for Planning and Consultation system (accessed on August 16, 2022). Aerial photographs (Google Earth 2022) were also reviewed. Soil types were determined using the WebSoil Survey (Natural Resources Conservation Service Web Soil Survey, version 3.4.0 [n.d.]).

Reconnaissance Field Survey

LSA Biologist Heather Monteleone conducted a general reconnaissance-level, pedestrian field survey on August 16, 2022, between the hours of 3:00 p.m. and 4:00 p.m. Weather conditions during the survey consisted of clear skies, with a temperature of 85 degrees Fahrenheit, and mild winds. Ms. Monteleone recorded observations on general site conditions, vegetation, and suitability of habitat for various special-status elements. Plant and animal species observed or otherwise detected are listed in Appendix B. The reconnaissance field survey was conducted concurrently with the jurisdictional delineation, as described below.

The 3.8-acre project site was the focus of the survey. A 500-foot buffer around the parcel was used to map vegetation/land cover using public access points and/or advantageous viewpoints. A jurisdictional delineation was completed and focused on the parcel. Access to the northern portion of the parcel was restricted due to the presence of gates/fences that prevented entry. Access to adjacent private parcels was restricted due to a lack of permission to enter.

Jurisdictional Delineation

LSA Biologist Heather Monteleone conducted the fieldwork for a jurisdictional delineation on August 16, 2022 (Appendix C). LSA Biologist Jeremy Rosenthal conducted a follow-up site visit on August 24, 2022. Ms. Monteleone visually surveyed the jurisdictional delineation study area (JDSA), which is the parcel limit, on foot. All drainage features within the JDSA were mapped using aerial photographs and were evaluated according to the most current federal and/or State regulatory criteria and guidance. This included the State wetland definition and delineation procedures recently enacted by the State Water Resources Control Board (SWRCB) and the current United States Army Corps of Engineers (USACE) regulations pertaining to jurisdictional waters of the United States. In addition, Ms. Monteleone noted and photographed the general conditions and characteristics associated with each drainage feature.

The boundaries of drainage features observed within the JDSA during the fieldwork were mapped on a recent, high-resolution aerial photograph (on a scale of 1 inch = approximately 100 feet) showing the JDSA. The widths and lengths of these drainage features mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Features within the JDSA that are generally excluded from federal and/or State jurisdiction under current regulatory definitions and guidance were evaluated and mapped as "non-jurisdictional features." Because one drainage feature in the JDSA exhibited characteristics indicative of wetlands (e.g., areas dominated by hydrophytic vegetation or hydric soils), wetland delineation procedures described in the Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region and those recently enacted by the SWRCB were implemented.

RESULTS

Existing Site Conditions

The project site is undeveloped but is entirely disturbed by pre-existing land uses and surrounding development. The project site is in an area of primarily commercial development.

The project site is bordered by partially developed and graded land and residential developments to the north, commercial development to the east and west, and Old Scandia Lane and commercial development to the south. The following discusses topography and soils, vegetation, and wildlife within the project site.

Topography and Soils

The topography of the project site contains moderate to steep slopes increasing in elevation in a northern direction. The site elevation ranges from 945 to 1,050 feet above mean sea level.

Soils on the project site are mapped as Cropley-Urban land complex, 2 to 9 percent slopes, Gazos silty clay loam, 30 to 50 percent slopes, and Xerorthents-Urban land-Gazos complex, 5 to 15 percent slopes.

The existing soils are highly compacted, which is indicative of long-term disturbance of the soils and vegetation and is consistent with the current site conditions.

Vegetation/Land Cover

The project site is entirely disturbed, as detailed above, and has several pepper trees bordering the project site. The vegetation communities were classified using *A Manual of California Vegetation*, (Sawyer et al. 2009). Based on that manual, the dominant plant community on site is best described as ruderal/disturbed vegetation, which is present throughout the majority of the project site. Large ornamental Peruvian pepper trees (*Schinus molle)* occur on the northeastern and southwestern portion of the project site.

Ruderal/disturbed plant species identified (an asterisk notes nonnative species) include black mustard* (*Brassica nigra*), lamb's quarters* (*Chenopodium album*), prickly lettuce* (*Lactuca serriola),* tumble pigweed (*Amaranthus albus*), Russian thistle* (*Salsola tragus*), petty spurge (*Euphorbia peplus*), castor bean* (*Ricinus communis*), white horehound* (*Marrubium vulgare*), slender wild oat* (*Avena barbata*), ripgut brome* (*Bromus diandrus*), red brome* (*Bromus madritensis ssp. rubens*), and smilo grass (*Stipa miliacea var. miliacea*). A complete plant list can be found in Appendix B. Figure 3 shows vegetation/land cover and photograph locations, and Figure 4 provides site photographs.

Wildlife

Wildlife species observed during the field survey (an asterisk notes nonnative species) include cabbage white butterfly* (*Pieris rapae*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), rock pigeon* (*Columba livia*), house sparrow* (*Passer domesticus*), European starling* (*Sturnus vulgaris*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), western fence lizard (*Sceloporus occidentalis*), Audubon's cottontail (*Sylvilagus audubonii*), and ground squirrel (*Otospermophilus beecheyi*).

Special-Status Species

This section discusses special-status species observed or potentially occurring within the limits of the project site. Legal protection for special-status species varies widely, from the comprehensive protection extended to listed threatened/endangered species, to no legal status at present. The CDFW, USFWS, local agencies, and special-status groups publish watch lists of declining species.

Species on watch lists can be included as part of the special-status species assessment. Species that are candidates for State and/or federal listing and species on watch lists are included in the special-status species list. Inclusion of species described in the special-status species analysis is based on the following criteria:

- Direct observation of the species or its sign on the project site or immediate vicinity during previous biological studies;
- Sighting by other qualified observers;
- Records reported by the CNDDB, published by the CDFW;
- Presence or location information for specific species provided by private groups; and/or
- Project site lies within known distribution of a given species and contains appropriate habitat.

Table A, below, summarizes special-status species known to occur in the region and which have records within 1-mile radius of the project site as identified during the literature review, along with their status, habitat and distribution, activity/bloom period, and probability of occurrence at the project site.

Table A: Special-Status Species Occurrence Probability

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Reptiles				
Phrynosoma blainvillii **coast horned lizard**	US: – CA: SSC	Primarily in sandy soil in open areas, especially washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs west of the deserts from northern Baja California north to Shasta County below 2,400 meters (8,000 feet) elevation.	April through July with reduced activity August through October	**Absent.** Site is highly disturbed and lacks suitable soils for this species. No suitable washes and floodplains present. Site is within an urban environment with associated predators, and isolated from better habitat.

Source: Compiled by LSA (2022).
US: Federal Classifications
FE Listed as Endangered.
CA: State Classifications
SSC Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.
SA Special Animal. Refers to any other animal monitored by the Natural Diversity Database, regardless of its legal or rarity status.
1B California Native Plant Society Rare Plant Rank 1B – rare, threatened or endangered in California and elsewhere.

Threatened and Endangered Species

Under provisions of Section 7(a)(2) of the federal Endangered Species Act, a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with the USFWS to ensure that its actions would not jeopardize the continued existence of any listed threatened or endangered species or destroy or adversely modify critical habitat. The USFWS designates as threatened or endangered species that are at risk of extinction and may also adopt recovery plans that identify specific areas that are essential to the conservation of a listed species. Critical habitat areas that may require special management considerations or protections can also be designated.

The California Endangered Species Act (CESA) is administered by the CDFW and prohibits the "take" of plant and animal species identified as either threatened or endangered in the State of California by the Fish and Game Commission (Fish and Game Code Sections 2050 to 2097). "Take" is defined as to hunt, pursue, catch, capture, or kill. Sections 2091 and 2081 of CESA allow the CDFW to authorize exceptions to the prohibition of "take" of State-listed threatened or endangered plant and animal species for purposes such as public and private development. The CDFW requires formal consultation to ensure that a proposed project's actions would not jeopardize the continued existence of any listed species or destroy or adversely affect listed species' habitats.

As identified in Table A, no federally or State-listed species have the potential to occur on the project site. Therefore, the project would have no effects to threatened and endangered species.

No USFWS designated critical habitat is present on the project site. Therefore, the project would have no effects to designated critical habitat.

Non-Listed Special-Status Species

The only non-listed special-status species identified in Table A, coast horned lizard (*Phrynosoma blainvillii*), is considered absent due to a lack of suitable habitat resulting from disturbed site conditions. These species have a limited population distribution in Southern California and development is further reducing their ranges and numbers. Coast horned lizard has no official State or federal protection status but requires consideration under the California Environmental Quality Act. No other non-listed special-status species are anticipated to occur on the project site. The project would have no effects to non-listed special-status species.

Nesting Birds

The project site contains suitable habitat (ruderal vegetation and a pine tree) for nesting bird species. Nesting birds are protected by California Fish and Game Code Sections 3503, 3503.5, and 3800, and by the Migratory Bird Treaty Act (16 United States Code 703–711). These laws regulate the take, possession, or destruction of the nest or eggs of any migratory bird or bird of prey.

To avoid potential effects to nesting birds, implementation of the following measure is recommended:

- Project activities should be avoided during the nesting bird season (February 1 through August 31), if possible. If unable, prior to construction activities, including vegetation removal, a pre-construction nesting bird survey will be conducted by a qualified biologist no more than 3 days prior to any construction activities and vegetation removal. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. The buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist. No construction activities will be allowed within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.

Jurisdictional Waters

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. The USACE regulatory jurisdiction pursuant to Section 404 of the federal Clean Water Act (CWA) is founded on a connection, or nexus, between the waterbody in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce), or it may be indirect (through a nexus identified in the USACE regulations). To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics, each with its unique set of mandatory wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology.

The CDFW, under Sections 1600 through 1616 of the California Fish and Game Code, regulates alterations to lakes, rivers, and streams (defined by the presence of a channel bed and banks, and at least an intermittent flow of water) where fish or wildlife resources may be adversely affected.

The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA. Typically, the areas subject to jurisdiction of the RWQCB coincide with those of the USACE (i.e., waters of the United States, including any wetlands). The RWQCB may also assert authority over "waters of the State" under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

There is one drainage feature within the site that is likely jurisdictional as a non-wetland waters of the United States/waters of the State and CDFW jurisdictional area (see Table B below). The drainage feature originates offsite to the west of the site and flows onto the site briefly before entering a concrete box culvert. The culvert remains underground through a majority of the site and continues underground offsite before entering Arroyo Calabasas to the east of the site. However, the project is anticipated to avoid impacts to the drainage feature and associated culvert structure. Therefore, the project would have no effects to potential jurisdictional waters.

Table B: Total Acreages of Potential Jurisdictional Areas for USACE, RWQCB, and CDFW

Feature	Waters of the United States/Waters of the State (USACE/RWQCB) (acres)		CDFW Jurisdictional Area (acres)
	Non-Wetland	Wetland	
Drainage 1	0.005	0	0.007
Total	0.005	0	0.007

Source: Compiled by LSA (2022).
CDFW = California Department of Fish and Wildlife
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers

To avoid potential effects to jurisdictional waters, implementation of the following measure is recommended:

- Prior to the start of project activities, signs shall be installed in upland areas adjacent to the culvert structure associated with the drainage feature. The signs shall note that the area is an environmentally sensitive area and that entry is prohibited.

Wildlife Movement, Corridors, and Nursery Sites

The project site does not support regional wildlife movement, wildlife corridors, or nursery sites.

Therefore, the project would have no impacts to regional wildlife movement or nursery sites.

Natural Communities of Concern

The CDFW's CNDDB lists California Walnut Woodland as occurring within 1 mile of the project site. California Walnut Woodland is a sensitive natural community occurring in California that has a rank of S2.1 (S ranks 1-3 are considered sensitive).

The field visit conducted on August 16, 2022 verified that California Walnut Woodland or other sensitive natural communities, including those that have a state rank of S1-S3, are absent from the project site, as vegetation was limited to ruderal/disturbed and ornamental landscaping.

No natural communities of concern are present. Therefore, the project would have no impacts to natural communities of concern.

Local Policies and Ordinances

City and County General Plans and development ordinances may include regulations or policies governing biological resources. For example, policies may require tree preservation or designate local species survey areas, species of interest, or significant ecological areas.

The City of Calabasas' Oak Tree Preservation and Protection Guidelines establish regulations to "ensure that proper consideration is given to oak trees and their habitat in connection with development and other requests." No oak trees were observed within the project site during the site visit on August 16, 2022. Thus, project implementation would not conflict with any local policies or ordinances related to biological resources.

Adopted Habitat Conservation Plans

Santa Monica Mountains North Area Plan

The project is within an area governed by the Santa Monica Mountains North Area Plan (SMMNAP). SMMNAP is a component of the Los Angeles County General Plan that was first adopted in October 2000. The plan covers an unincorporated portion of the Santa Monica Mountains, west of the city of Los Angeles, and north of the Coastal Zone boundary and provides focused policies for the regulation of development and protection of biological resources within the SMMNAP.

"Chapter 2: Conservation and Natural Resources Element" of the plan discusses guidelines on how to address several natural resources found within the SMMNAP boundaries. The categories addressing biological resources in this chapter include open space, biological resources, and tree protection. These categories and how they pertain to the project site are discussed below.

Open Space. This section states that "large areas of privately-owned undeveloped lands that exist throughout the region function as contiguous wildlife habitat areas when not fenced." Three types of open space are described in this section as: 1. Open space for the protection of natural resources 2. Open space for the protection of public health and safety 3. Open space for public recreation.

The project site does not fit into any of the descriptions of open space described in this section. Furthermore, the parcel is a privately-owned that is undeveloped and that contains a chain-link fence on all sides of the property. None of the guidelines for open space would apply to this parcel.

Biological Resources. The biological resources section discusses the large variety of wildlife, plants, landscapes, and features that occur within the Santa Monica Mountains. The SMMNAP emphasizes that areas included in the SMMNAP's boundaries are substantial in size and undisturbed, the goal being to keep these areas mostly intact. This section goes on to discuss and describe the significance of habitat categories S1, S2, S3, and S4. Habitat category S1 is described as an area with the highest biological significance, supporting the most sensitive resources where development is highly restricted. Habitat category S4 is described as supporting existing residential or commercial development, other facilities, or agricultural practices where development is least restricted.

Using the Santa Monica Mountains North Area Resources' geographic information system (GIS) web mapping application, the project site has been assigned a vegetation sensitivity of S1 and S3.

The S1 habitat category was designated to most of the southern portion of the site, from across the southwestern portion to the southeastern portion around a wetland feature present on site. As noted above in the jurisdictional waters section, one jurisdictional drainage feature was observed within the parcel and is limited to the very edge of a small portion of the southwestern boundary. This section mentions, "the precise boundaries and existence of the various habitat categories shall be determined on a site-specific basis based on substantial evidence and a site-specific biological inventory and/or assessment." To adjust the habitat category given to the site, an independent review will need to be conducted by the County Biologist.

Based on the SMMNAP habitat category assigned to most of the southern portion of the parcel, strict land use protections and regulations related to development within this area are warranted. Development in this area should avoid or minimize impacts to S1 habitat in the form of "measures, including but not limited to signage, placement of boardwalks, utilizing established trail corridors, following natural contours to minimize grading, and limited fencing shall be implemented as necessary to protect S1 and S2 habitat."

Additional restrictions are given to wetlands, in a way that restricts development within wetland areas to three specific uses. Approved uses for wetland include (1) wetlands-related scientific research and educational uses; (2) incidental public service purposes, including burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines; (3) and wetland restoration projects. The jurisdictional delineation conducted on August 16, 2022 determined that the area noted at habitat category S1 is not a wetland and will be avoided by project activities; therefore, restrictions outlined in this guideline do not apply (Appendix C).

In the event that impacts to habitat category S1 cannot be avoided, guidelines indicate that habitat impacts should be mitigated. This can be done through preservation mechanisms including permanent on-site deed restriction, dedication of land to a State or federal conservation agency, conservation easement, restrictive covenant, or habitat mitigation fees. The S3 habitat category given to the majority of the site is fitting for the project site and is described as disturbed, nonnative, and cleared. Furthermore, while an S3 habitat category does not constitute a biological

resource area, it still warrants specific development standards. Since priority for siting new developments within S4 habitats is not possible due to the lack of S4 habitat within the parcel, priority can be given to the S3 habitat within the parcel to meet the goals and policies of this section.

Tree Protection. The SMMNAP details the important role that all trees play for various plants and animals. Protection that is granted to trees within the SMMNAP boundaries includes required monitoring during removal of the trees within the project site to reduce the spread of infectious diseases and pests. Since the trees are nonnative Peruvian pepper trees and do not have high habitat or historical value, no additional policies will need to be implemented.

Significant Ecological Area Program

The Significant Ecological Area (SEA) Program is a component of the Los Angeles County Conservation/Open Space Element. The program is a resource identification tool that indicates the existence of important biological resources. SEAs are not preserves but are areas where the County of Los Angeles deems it important to facilitate a balance between limited development and resource conservation. Limited development activities are reviewed closely in these areas where site design is a key element in conserving fragile resources such as streams, oak woodlands, and threatened or endangered species and their habitat.

The project site is within Los Angeles County, but it is not within a SEA. Thus, the project will not require SEA counseling.

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United States Geological Survey (USGS). 1967. *Calabasas* and *Los Angeles, California* topographic quadrangle map.

APPENDIX A

FIGURES 1–4

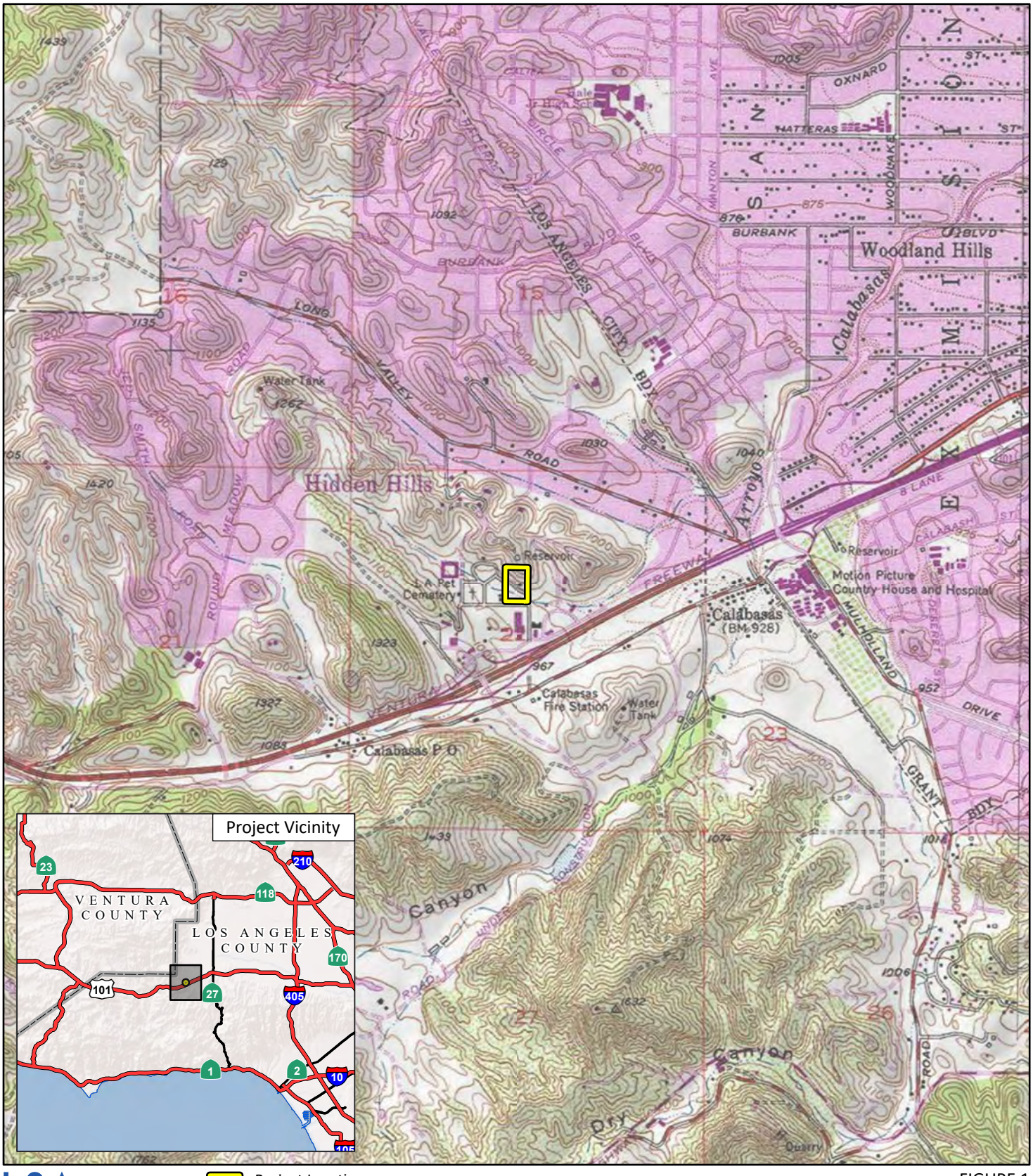


FIGURE 1

N

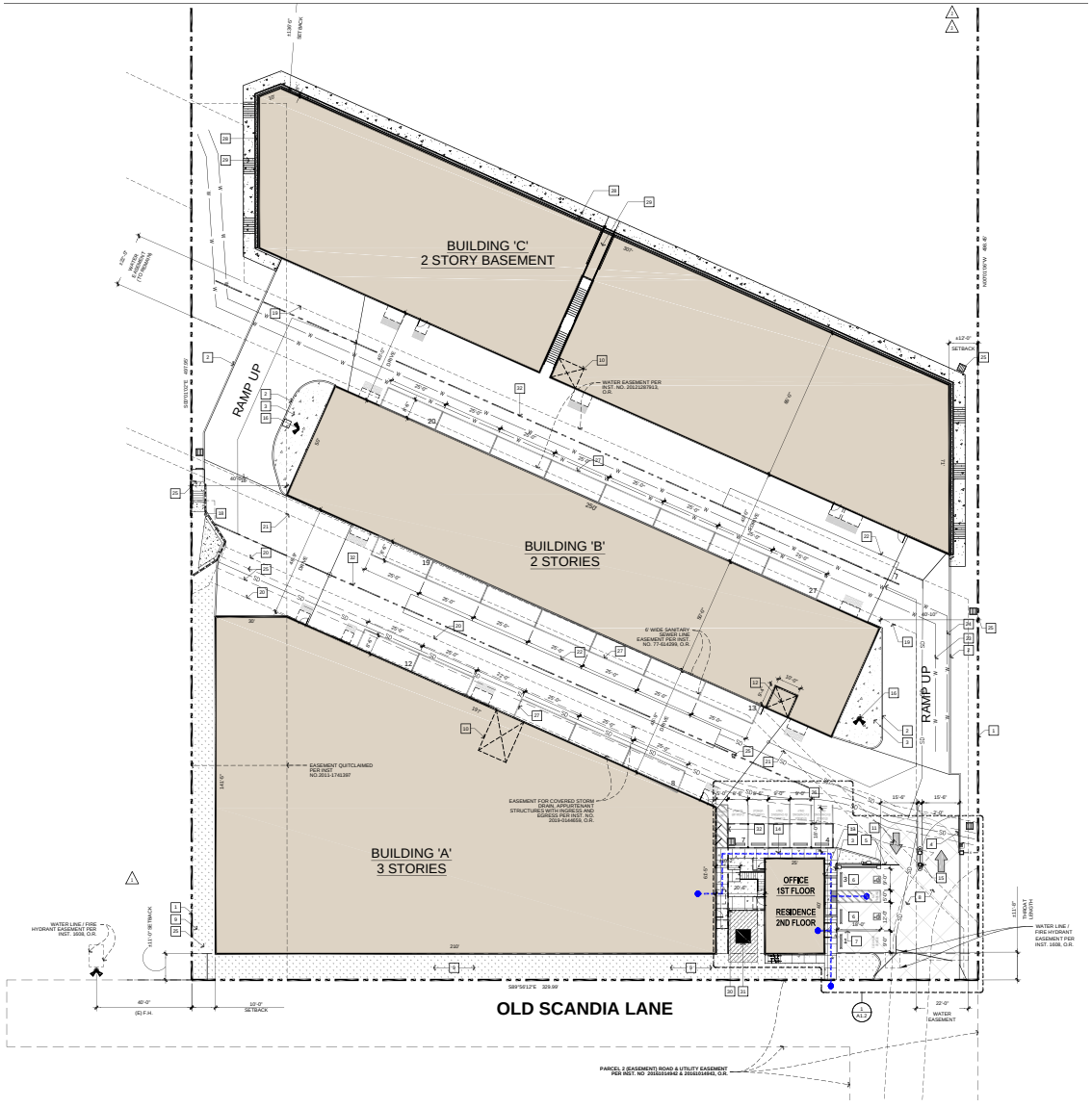
0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - *Calabasas (1967)*, CA

Trojan Storage Project

Regional and Project Location

I:\KHA2208\GIS\Pro\Trojan Storage Project\Trojan Storage Project.aprx (8/17/2022)



LSA

FIGURE 2

0 40 80

FEET

SOURCE: Bruce Jordan Architect

I:\KHA2208\G\Site_Plan.ai (8/17/2022)

Trojan Storage Project

Site Plan

LSA

LEGEND

Project Location

Photo Points

Vegetation/Land Use Type

Ornamental Landscaping

Ruderal/Disturbed

N

0 50 100

FEET

SOURCE: Nearmap Aerial Imagery (May 2022)

I:\KHA2208\GIS\MXD\Veg.mxd (8/29/2022)

FIGURE 3

Trojan Storage Project

Vegetation, Land Use, and Photo Locations

Photo 1: View from northwestern corner facing south.

Photo 2: View from southeastern corner facing west.

Photo 3: View from southeastern corner facing west.

Photo 4: View from southeastern corner facing north.

LSA

FIGURE 4

Trojan Storage Project
Site Photographs

I:\KHA2208\G\Photos_BRA.cdr (8/24/2022)

Photo 5: View from west side facing south towards a culvert.

Photo 6: View from west side looking northeast.

LSA

FIGURE 4

Trojan Storage Project
Site Photographs

APPENDIX B

PLANT AND ANIMAL SPECIES OBSERVED

PLANT SPECIES OBSERVED

LSA biologists observed the following vascular plant species in the specified study area.

* Introduced species not native to California
** Observed outside the project parcel but within the BSA

GYMNOSPERMS

Cupressaceae		**Cypress Family**
*	*Cupressus sempervirens*	Italian cypress
**	*Sequoia sempervirens*	Coast redwood
Pinaceae		**Pine Family**
*	*Pinus* sp.	Pine

MAGNOLIIDS

Lauraceae		**Laurel Family**
*	*Persea americana*	Avocado

EUDICOTS

Aizoaceae		**Iceplant Family**
*	*Carpobrotus edulis*	Hottentot-fig
Amaranthaceae		**Amaranth Family**
*, **	*Amaranthus albus*	Tumble pigweed
Amaryllidaceae		**Amaryllis Family**
*	*Agapanthus africanus*	African lily
Anacardiaceae		**Sumac Family**
*, **	*Schinus molle*	Peruvian pepper tree
Apocynaceae		**Dogbane Family**
*	*Mandevilla sanderi*	Mandevilla
*	*Carissa macrocarpa*	Natal plum
*	*Nerium oleander*	Oleander
*	*Thevetia peruviana*	Yellow oleander
*	*Trachelospermum jasminoides*	Star jasmine
*	*Vinca major*	Blue periwinkle
Araliaceae		**Ginseng Family**
*	*Hedera helix*	English ivy

Asparagaceae		**Asparagus Family**
*	*Asparagus densiflorus*	Asparagus fern
Asteraceae		**Sunflower Family**
*	*Baccharis pilularis* ssp. *consaguinea*	Coyote brush
*, **	*Centaurea melitensis*	Tocalote
*	*Erigeron canadensis*	Common horseweed
**	*Heterotheca grandiflora*	Telegraph weed
*, **	*Lactuca serriola*	Prickly lettuce
**	*Stephanomeria diegensis*	San Diego wreath-plant
	Xanthium strumarium	Common cocklebur
Bignoniaceae		**Trumpet–Creeper Family**
	Chilopsis linearis	Desert willow
*	*Jacaranda mimosifolia*	Jacaranda
Boraginaceae		**Borage Family**
**	*Phacelia distans*	Common phacelia
Brassicaceae		**Mustard Family**
*, **	*Brassica nigra*	Black mustard
Cactaceae		**Cactus Family**
	Opuntia littoralis	Coastal prickly pear
Chenopodiaceae		**Goosefoot Family**
*, **	*Chenopodium album*	Lamb's quarters
*, **	*Salsola tragus*	Russian-thistle
Euphorbiaceae		**Spurge Family**
*, **	*Euphorbia peplus*	Petty spurge
*, **	*Ricinus communis*	Castor bean
Fabaceae		**Legume Family**
*	*Albizia julibrissin*	Persian silk tree
*	*Ceratonia siliqua*	Carob
*	*Tipuana tipu*	Tipu tree
Geraniaceae		**Geranium Family**
*	*Erodium cicutarium*	Redstem filaree
*	*Pelargonium zonale*	Zonal geranium
Hamamelidaceae		**Witch-hazel Family**
*	*Liquidambar styraciflua*	Sweetgum
Lamiaceae		**Mint Family**
*, **	*Marrubium vulgare*	Horehound
*	*Rosmarinus officinalis*	Prostrate rosemary
Lauraceae		**Laurel Family**

*	*Cinnamomum camphora*	Camphor tree
Lythraceae		**Loosestrife Family**
*	*Lagerstroemia indica*	Crape myrtle
Malvaceae		**Mallow Family**
*	*Brachychiton populneus*	Kurrajong
	Meliaceae	**Mahogany Family**
*	*Melia azedarach*	Chinaberry
Myrtaceae		**Myrtle Family**
*	*Callistemon* sp.	Bottlebrush
*	*Eucalyptus* sp.	Eucalyptus
Nyctaginaceae		**Four O'clock Family**
*	*Bougainvillea* sp.	Bougainvillea
Oleaceae		**Olive Family**
	Fraxinus sp.	Ash
*	*Fraxinus uhdei*	Shamel ash
Plantaginaceae		**Plantain Family**
*	*Bacopa monnieri*	Waterhyssop/herb of grace
Polygonaceae		**Buckwheat Family**
*	*Rumex crispus*	Curly dock
Rosaceae		**Rose Family**
*	*Prunus cerasifera*	Flowering plum
*	*Pyrus calleryana*	Callery pear
*	*Rhaphiolepis indica*	Indian Hawthorn
*	*Rosa 'Korbin'*	Iceberg rose
Salicaceae		**Willow Family**
	Salix lasiolepis	Arroyo willow
Scrophulariaceae		**Figwort Family**
*	*Leucophyllum frutescens*	Texas ranger
Solanaceae		**Nightshade Family**
	Datura wrightii	Jimsonweed
Tamaricaceae		**Tamarisk Family**
*	*Tamarix* sp.	Tamarisk
Verbenaceae		**Vervain Family**
*	*Lantana camara*	Lantana
Zygophyllaceae		**Caltrop Family**
*, **	*Tribulus terrestris*	Puncture vine

MONOCOTS

Agavaceae		**Century Plant Family**
*	*Agave americana*	American century plant
	Hesperoyucca whipplei	Our Lord's candle
Arecaceae		**Palm Family**
*	*Phoenix canariensis*	Canary Island palm
*	*Phoenix roebelenii*	Pygmy date palm
*	*Washingtonia robusta*	Mexican fan palm
Iridaceae		**Iris Family**
*	*Dietes iridioides*	African iris
Poaceae		**Grass Family**
*, **	*Avena barbata*	Slender wild oat
*, **	*Bromus diandrus*	Ripgut grass
*, **	*Bromus madritensis* ssp. *rubens*	Red brome
*	*Pennisetum setaceum*	Crimson fountain grass
*	*Polypogon monspeliensis*	Rabbitfoot grass
*, **	*Stipa miliacea* var. *miliacea*	Smilo grass
Typhaceae		**Cattail Family**
	Typha latifolia	Broad-leaved cattail

Taxonomy and scientific nomenclature generally conform to Baldwin, B.G., D.H. Goldman et al., eds. (2012; The Jepson Manual: Vascular Plants of California, 2nd edition; University of California Press, Berkeley and Los Angeles, California).

Common names for each taxa generally conform to Roberts, F.M., Jr. (2008; The Vascular Plants of Orange County, California: An Annotated Checklist; F.M. Roberts Publications, San Luis Rey, California) except where Abrams, L. (1923, 1944, and 1951; Illustrated Flora of the Pacific States: Washington, Oregon, and California, vols. I–III; Stanford University Press, Stanford, California) and Abrams, L. and Ferris, R.S. (1960; Illustrated Flora of the Pacific States: Washington, Oregon, and California, vol. IV; Stanford University Press, Stanford, California) were used, particularly when species-specific common names were not identified in Roberts, F.M., Jr. (2008).

ANIMAL SPECIES OBSERVED

LSA biologists observed the following animal species in the specified study area.

INVERTEBRATES

Pieridae	**White and Sulphurs**
Pieris rapae	Cabbage white butterfly

REPTILES

Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard

BIRDS

Columbidae	**Pigeons and Doves**
Columba livia (non-native species)	Rock pigeon
Zenaida macroura	Mourning dove
Cathartidae	**American Vultures**
Cathartes aura	Turkey vulture
Accipitridae	**Hawks and Eagles**
Buteo jamaicensis	Red-tailed hawk
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	Black phoebe
Corvidae	**Crows, Jays and Magpies**
Corvus brachyrhynchos	American crow
Sturnidae	**Starlings**
Sturnus vulgaris (non-native species)	European starling
Passeridae	**Old World Sparrows**
Passer domesticus (non-native species)	House sparrow

MAMMALS

Sciuridae	**Squirrels**
Spermophilus beecheyi	California ground squirrel
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Audubon's cottontail

APPENDIX C

JURISDICTIONAL DELINEATION REPORT

JURISDICTIONAL DELINEATION REPORT

TROJAN STORAGE PROJECT

CALABASAS, LOS ANGELES COUNTY, CALIFORNIA

LSA

August 2022

JURISDICTIONAL DELINEATION REPORT

TROJAN STORAGE PROJECT

CALABASAS, LOS ANGELES COUNTY, CALIFORNIA

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LSA

August 2022

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LIST OF ABBREVIATIONS AND ACRONYMS

1987 Manual	*Corps of Engineers 1987 Wetland Delineation Manual*
°F	degrees Fahrenheit
ac	acres
amsl	above mean sea level
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
FAC	Facultative
FACW	Facultative Wetland
ft	foot/feet
JDSA	Jurisdictional Delineation Study Area
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate Wetland
OHWM	ordinary high water mark
Porter-Cologne Act	California Porter-Cologne Water Quality Control Act
Procedures	*State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*
Project	Trojan Storage Project
Rapanos	the 2006 United States Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States*
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region
RWQCB	Santa Ana Regional Water Quality Control Board
sf	square feet
SWRCB	State Water Resources Control Board
TNW	traditionally navigable water
USACE	United States Army Corps of Engineers

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTS	waters of the State
WOTUS	waters of the United States

INTRODUCTION

This Jurisdictional Delineation Report presents the results of a delineation of aquatic resources and drainage features conducted for the Trojan Storage Project (project) located at 5050 Old Scandia Lane, 550 feet (ft) northwest of the intersection of Old Scandia Lane and Ventura Boulevard in Calabasas, Los Angeles County, California. Kimbley-Horn proposes the construction of a 155,900-square-foot (sf) storage unit facility across three separate buildings as well as a total of 27 parking spaces located on one parcel (Assessor's Parcel Number 2049-022-040), totaling approximately 3.8 acres (ac).

The Jurisdictional Delineation Study Area (JDSA) discussed herein extends across the entire project site. This Jurisdictional Delineation aims to determine the extent of the State of California and federal jurisdiction within the JDSA. This potential jurisdiction includes the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and/or the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code. This report has been prepared to inform the environmental planning and review process. All referenced figures are included in Appendix A.

SITE DESCRIPTION AND SETTING

The JDSA is located at 5050 Old Scandia Lane, 550 ft northwest of the intersection of Old Scandia Lane and Ventura Boulevard, in the City of Calabasas, Los Angeles County, California, California, as depicted on the United States Geological Survey (USGS) *Calabasas, California* 7.5-minute series topographic quadrangle (refer to Figure 1). Elevations in the JDSA range from 945 ft above mean sea level (amsl) to 1,050 ft amsl. The topography within the JDSA contains moderate to steep slopes that increase in elevation in a northerly direction. The JDSA is undeveloped and bordered by a partially developed and graded land with residential developments to the north, commercial developments to the east and west, and Old Scandia Lane and commercial development to the south. The surrounding project vicinity is comprised of commercial development. The vegetation within the JDSA consists of ruderal/disturbed vegetation and ornamental landscaping.

The JDSA is located within the Bell Creek Watershed, which is 94.74 square miles and encompasses Bell Canyon and several tributaries/canals that connect to the Los Angeles River. All surface waters within the JDSA are ultimately conveyed through a concrete box culvert and an underground drainage that connects to Arroyo Calabasas. Arroyo Calabasas then connects and discharges into the Los Angeles River, which is a tributary to the Pacific Ocean.

Based on a review of historic aerial photographs of the project area extending back to the late 1940s (NETR 2022), there appears to have been a naturally occurring ephemeral drainage within the southern portion of the JDSA. However, based on an analysis of current aerial imagery, a majority of the unnamed drainage was undergrounded between 2019 and 2020 into a concrete box culvert on the western side of the JDSA. Because the unnamed drainage was placed underground, an extremely small portion of the unnamed drainage remains within the JSDA, while the remainder flows underground through the concrete box culvert. Further, the unnamed drainage feature does appear as a blue-line stream on the USGS *Calabasas, California* 7.5-minute series topographic maps in 1928 and is mapped within the CDFW Biogeographic Information and Observation System (CDFW n.d.).

The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The average annual precipitation is 10 inches. Although most of the precipitation occurs from November through May, thunderstorms may occur at other times of the year that can result in heavy precipitation. Temperatures typically range between 48 and 98 degrees Fahrenheit (°F).

REGULATORY BACKGROUND

UNITED STATES ARMY CORPS OF ENGINEERS

The USACE regulates discharges of dredged or fill material into waters of the United States (WOTUS). These waters include wetland and non-wetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the federal CWA is founded on a connection, or nexus, between the waterbody in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditionally navigable waters [TNWs] used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

For several decades, the operable definition of WOTUS was provided at 33 Code of Federal Regulations (CFR) 328.3, but implementation of this definition has been shaped by the courts and subsequent guidance over the years, most substantially by the 2001 United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers,* No. 99-1178 and the 2006 Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are "waters of the United States" if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. However, the involved Supreme Court justices were not able to agree on a single, underlying standard that would govern future jurisdictional disputes. Instead, a four-justice plurality opinion, authored by Justice Antonin Scalia, and an opinion by Justice Anthony M. Kennedy, proposed two alternative tests for evaluating jurisdictional waters:

1. Relative permanence and continuous surface connection.
2. Significant nexus – a nexus exists when the feature (whether an adjacent wetland or tributary) significantly affects the chemical, physical, and biological integrity of other covered waters.

Following the *Rapanos* decision, the lower courts immediately struggled to determine which "test" should be used, which led to inconsistency in CWA implementation across the states. On June 5, 2007, the USACE issued guidance regarding the *Rapanos* decision. After consideration of public comments and agencies' experience, revised guidance was issued on December 2, 2008. This guidance states that the USACE will assert jurisdiction over TNWs, wetlands adjacent to TNWs, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries. Under the 2008 *Rapanos* guidance, the USACE determined that a significant nexus was required for its jurisdiction to extend to waters that are nonnavigable tributaries that are not relatively permanent waters and wetlands adjacent to nonnavigable tributaries that are not relatively permanent waters. The USACE generally did not assert jurisdiction over swales or erosional features, or ditches excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water. However, the USACE reserved the right to regulate these waters on a case-by-case basis.

Several recent attempts have been made to clarify the scope of WOTUS. Based, in part, on the *Rapanos* decision and the opinions authored by Justice Kennedy and Justice Scalia, new rules

defining WOTUS were promulgated under the Obama and the Trump administrations. The 2015 "Clean Water Rule" and the 2020 "Navigable Waters Protection Rule" set forth different definitions for WOTUS (ranging from relatively broad federal jurisdiction under the 2015 rule to relatively limited federal jurisdiction under the 2020 rule). Each of these new rules prompted a series of legal challenges and court decisions. On August 30, 2021, the United States District Court for Arizona vacated the 2020 Navigable Waters Protection Rule, which reinstated federal wetland regulations and definitions originally adopted by the federal government in the 1980s. In light of this order, the United States Environmental Protection Agency (EPA) and the USACE (collectively referred to as "agencies") have halted implementation of the 2020 Navigable Waters Protection Rule and are interpreting WOTUS consistent with the pre-2015 regulatory regime (and 2008 *Rapanos* guidance) until further notice.

While litigation continues, on November 18, 2021, the agencies announced plans for new WOTUS rulemaking. The current definition of WOTUS (EPA n.d.) is as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (1) through (4) of this section;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section;

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 423.11(m), which also meet the criteria of this definition) are not WOTUS.

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Nonnavigable tributaries that are not relatively permanent
- Wetlands adjacent to nonnavigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent nonnavigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)

- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The 2008 *Rapanos* guidance and 2021 revised definition of "waters of the United States" proposed rules that acknowledge certain ephemeral waters, especially in the arid West, are distinguishable from the geographic features described above where such ephemeral waters are tributaries and have a significant nexus to downstream traditional navigable waters. In such cases, the agencies will decide CWA jurisdiction on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable waters.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters.

- A significant nexus includes consideration of hydrologic and ecologic factors.

Given the substantial changes in operable definitions that have taken place and are likely to continue considering recent regulatory revisions and court actions, it is impossible to predict the regulations that will be in place at the time of a particular jurisdictional determination by the USACE. Therefore, this Jurisdictional Delineation focuses on identifying the boundaries of potentially jurisdictional waterbodies using methods for determining the locations of the ordinary high water mark (OHWM) and wetland boundaries as described below. These methods for determining the boundaries of waterbodies in general have not substantially changed over the years and are not likely to change with any revised regulations. This delineation can then be used in combination with a companion jurisdictional analysis to determine which of the identified waterbodies are actually

jurisdictional, based on the definition that is in effect at the time of a jurisdictional determination by the USACE.

The USACE typically considers any body of water displaying an OHWM for designation as WOTUS, subject to the applicable definition of WOTUS. USACE jurisdiction over non-tidal WOTUS extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present.

The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

Waters found to be isolated and not subject to CWA regulation may still be regulated by the RWQCB under the Porter-Cologne Act.

Wetland Waters of the United States

Wetland delineations for Section 404 purposes must be conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (Regional Supplement) (USACE 2008) and the 1987 *Corps of Engineers Wetland Delineation Manual* (1987 Manual) (USACE 1987). Where there are differences between the two documents, the *Regional Supplement* takes precedence over the *1987 Manual*.

The USACE and EPA define wetlands as:

> Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.

To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

Hydrophytic vegetation and hydric soil indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years, but do not confirm that an episode has occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not provide evidence that episodes lasted more than a few days or occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal circumstances, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding, highly ephemeral stream systems, or in areas recently altered by anthropogenic activities. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas.

Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into nonwetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience and extensive knowledge of local ecological conditions comes into play in delineating wetlands. The Regional Supplement provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation

Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are those included on the National Wetland Plant List published by the USACE (2018). Each species on the list is rated according to a wetland indicator category, as shown below in Table A.

Table A: Hydrophytic Vegetation Ratings

Category	Rating	Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability greater than 99%)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67–99%)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34–66%)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67–99 %)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability greater than 99%)

Source: United States Army Corps of Engineers (2008).

To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated Obligate Wetland [OBL], Facultative Wetland [FACW], or Facultative [FAC]).

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately). When more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the USACE recommends the use of the "50/20" rule (also known as the dominance test) from the *Regional Supplement* for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present, but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a

sampling point. The prevalence index is particularly useful when communities only have one or two dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, USACE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (USACE 2008). If the plant community passes either the dominance test or prevalence index after reconsidering the indicator status of any plant species that exhibits morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils

Hydric soils[1] are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.[2] Soils are considered likely to meet the definition of a hydric soil when they meet one or more of the following criteria:

1. All Histels except Folistels and Histosols except Folists;

2. Soils that are frequently ponded for a long duration or very long duration[3] during the growing season; or

3. Soils that are frequently flooded for a long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. Although saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 50 centimeters (19.7 inches), below which the growth and function of locally adapted plants are negligible). Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria and on information gathered from the National Soil Information System database, the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) created a Soil Data Access Hydric Soils List that is updated annually.

The *Regional Supplement* has a number of field indicators that may be used to identify hydric soils. The NRCS (USDA 2016) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, accumulation of organic matter, and the reduction, translocation, and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

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1 The hydric soils definition and criteria included in the *1987 Manual* are obsolete. Users of the *1987 Manual* are directed to the United States Department of Agriculture's Natural Resources Conservation Service website for the most current information on hydric soils.

2 Current definition as of 1994 (*Federal Register*, July 13).

3 "Long duration" is defined as a single event ranging from 7 to 30 days. "Very long duration" is defined as a single event that lasts longer than 30 days.

Wetland Hydrology

Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (USACE 1987). The wetland hydrology criterion is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (USACE 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW, through provisions of the California Fish and Game Code (Section 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least a periodic or intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

In obtaining CDFW agreements, the limits of wetlands are not typically determined. This is because the CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, mule fat, and other vegetation typically associated with the banks of a stream or lake shorelines and may not be consistent with USACE definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream, away from frequently saturated soils).

REGIONAL WATER QUALITY CONTROL BOARD

The Porter-Cologne Act of the California Water Code (Section 13000 et seq.) established nine RWQCBs to oversee water quality on a day-to-day basis at the local and/or regional level. Their duties include preparing and updating water quality control plans and associated requirements and issuing water quality certifications under Section 401 of the CWA. The CWA grants ultimate authority to the State Water Resources Control Board (SWRCB) over State water rights and water quality policy. Under the Porter-Cologne Act, the RWQCBs (or the SWRCB for projects that cross multiple RWQCB jurisdictions) are responsible for issuing National Pollutant Discharge Elimination System (NPDES) permits for point-source discharges and waste discharge requirements for non-point source discharges into jurisdictional waters of the State (WOTS).

The definition of waters under the jurisdiction of the State is broad and includes any surface water or groundwater, including saline waters within the boundaries of the State. Waters that meet the definition of WOTUS are also considered WOTS, but the jurisdictional limits of WOTS may extend beyond the limits of WOTUS. Isolated waters that may not be subject to regulations under federal law are considered to be WOTS and regulated accordingly.

Although there is no formal statewide guidance for the delineation of nonwetland WOTS, jurisdiction generally corresponds to the surface area of aquatic features that are at least seasonally inundated, and all areas within the banks of defined rivers, streams, washes, and channels, including associated riparian vegetation. Currently, each RWQCB reserves the right to establish criteria for the regulation of nonwetland WOTS.

Wetland Waters of the State

On August 28, 2019, the California Office of Administrative Law approved the SWRCB-proposed *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures).* The *Procedures*, effective May 28, 2020, apply to discharges of dredged or fill material to WOTS. The *Procedures* consist of four major elements: (1) a wetland definition, (2) a framework for determining whether a feature that meets the wetland definition is a water of the State, (3) wetland delineation procedures, and (4) procedures for the submission, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

The SWRCB and RWQCBs define a wetland as:

> An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The RWQCB will rely on the final aquatic resource report verified by the USACE for determining the extent of wetland WOTUS. However, if it is not delineated in a final aquatic report, the procedures will use the USACE *1987 Manual* and the *Regional Supplement* to determine whether the area meets the State definition of a wetland. As described in the *1987 Manual* and the *Regional Supplement*, an area "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not prevent the determination of such an area that meets the State definition of wetland.

METHODOLOGY

Prior to conducting delineation fieldwork, LSA reviewed the following literature and materials:

- Historic and current aerial photographic imagery (NETR 2022)
- Historic and current USGS topographic maps (USGS 2022)
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) wetland mapper (USFWS 2022)
- NRCS Web Soil Survey (USDA 2022)

LSA Biologists Heather Monteleone and Jeremy Rosenthal conducted the fieldwork for this Jurisdictional Delineation on August 16 and 25, 2022. The JDSA was visually surveyed on foot. All jurisdictional features within the JDSA were evaluated according to the most current federal and/or State regulatory criteria and guidance and mapped using aerial photographs. This included the State wetland definition and delineation procedures recently enacted by the SWRCB and the current USACE regulations pertaining to jurisdictional WOTUS, which are consistent with the pre-2015 regulatory regime until further notice. In addition, Ms. Monteleone noted and photographed the general conditions and characteristics associated with the JDSA.

The boundaries of the jurisdictional features observed within the JDSA during the fieldwork were mapped on a recent, high-resolution aerial photograph (on a scale of 1 inch = approximately 100 ft) showing the JDSA. The widths and lengths of these drainage features mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Features within the JDSA that are generally excluded from federal and/or State jurisdiction under current regulatory definitions and guidance were evaluated and mapped as “non-jurisdictional features.” Because none of the drainage features in the JDSA exhibited characteristics indicative of wetlands (e.g., areas dominated by hydrophytic vegetation or hydric soils), the wetland delineation procedures described in the *Regional Supplement* and those recently enacted by the SWRCB were not implemented.

RESULTS

DATABASE SEARCHES

National Wetlands Inventory

Based on the NWI query, a riverine intermittent streambed was mapped within the JDSA as shown on Figure 2.

USDA Soil Survey

The soils mapped on the site include Cropley-Urban land complex, 2 to 9 percent slopes, Gazos silty clay loam, 30 to 50 percent slopes, and Xerorthents-Urban land-Gazos complex, 5 to 15 percent slopes (USDA 2022) (Figure 3). Soil observed throughout the site appears to be consistent with this designation. None of the mapped soils are considered hydric soils and have a well-drained drainage class (Table B).

Table B: Mapped Soils Classifications

Soil	Drainage Class	Frequency of Flooding	Frequency of Ponding	Hydric Soil Rating
Cropley-Urban land complex, 2–9% slopes	Well drained	None	None	No
Gazos silty clay loam, 30–50% slopes	Well drained	None	None	No
Xerorthents-Urban land-Gazos complex, 5–15% slopes	Well drained	None	None	No

Source: Web Soil Survey (USDA 2022).

DESCRIPTIONS OF DELINEATED FEATURES

A brief description of the delineated feature is provided below. Figure 4 shows the location of the jurisdictional feature, and Figure 5 provides representative photographs of the JDSA.

One concrete box culvert and a small portion of an unnamed drainage are located on the western border of the JDSA. The drainage is considered perennial because it was observed carrying surface flows during the middle of summer in the absence of recent rain events. The concrete box culvert is comprised of two wingwalls and a metal grate measuring approximately 40 ft long. This culvert carries perennial stormwater and urban runoff from the adjacent properties to the west underneath the majority of the JDSA through the underground drainage in a southeastern direction. The drainage previously entered the JDSA from the western side, approximately where the concrete box culvert is located, and ran on the surface across nearly the entire width of the JDSA in a southeast direction. The drainage terminated at the culvert located on the eastern side where the drainage began to flow underground. Based on historical aerial imagery, the culvert was removed and the drainage placed in an underground culvert between November 2018 and August 2019. The underground drainage flows off site and into Arroyo Calabasas, a tributary to the Los Angeles River, which in turn is tributary to the Pacific Ocean. The portion of the ephemeral drainage that enters the culvert does contain a defined channel bed and bank and visible, albeit slight, indicators of flow and OHWM indicators that include bed and banks and a natural line impressed on the bank. Furthermore, standing water was present at the time of the field survey, and several cattails (*Typha*

latifolia, OBL) and rough cocklebur (*Xanthium strumarium*, FAC) were located within the drainage near the opening of the concrete box culvert. Refer to Appendix B for a complete list of vascular plant species observed.

Paired soil pits were dug within and along the drainage to determine if it met wetland criteria. One soil pit (SP-1) was placed within the middle of the drainage where hydrophytic vegetation and saturated soils were present. The second soil pit (SP-2) was placed along the embankment of the drainage where vegetation was dominated by pine tree (*Pinus* sp.) and low cover of cattails, annual beard grass (*Polypogon monspeliensis*), and bristly ox tongue (*Helminthotheca echioides*). Furthermore, soils displayed no sign of recent saturation in the second soil pit. Although vegetation and hydrology met wetland criteria in SP-1, hydric soils were absent. SP-2 did not meet any of the three wetland criteria.

No other potentially jurisdictional features were observed within the JDSA.

JURISDICTIONAL CONCLUSIONS

One unnamed perennial drainage was identified within the JDSA (refer to Figure 4) and, in this case, was determined to be jurisdictional. The basis for whether a particular waterbody (or feature) is jurisdictional or non-jurisdictional is described below under the applicable regulatory agency.

UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Jurisdictional 404 Waters of the United States

The unnamed perennial drainage contained an OWHM and contributes flow to Arroyo Calabasas, a tributary to the Los Angeles River, which in turn is a tributary to the Pacific Ocean, a traditional navigable water. There are no jurisdictional wetlands within or adjacent to the delineated drainage. Because the unnamed perennial drainage has OHWM indicators and a significant nexus to a traditional navigable waterway but failed to meet wetland WOTUS criteria, the drainage should be considered a non-wetland WOTUS subject to regulation under Section 404 of the CWA. This feature ranged from approximately 6 ft in width and comprises 0.005 ac of potential non-wetland WOTUS within the JDSA.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE JURISDICTION

Jurisdictional 1602 Streambeds and Associated Riparian Habitat

In accordance with Section 1602 of the California Fish and Game Code, the CDFW asserts jurisdiction over rivers, streams, and lakes as well as any riparian vegetation associated with those features. There are no rivers or lakes within or immediately adjacent to the project limits, but a concrete box culvert and perennial drainage are present as shown on Figure 4. The perennial drainage, however, lacks any associated riparian habitat; therefore, CDFW jurisdiction extends to the top of the banks. This feature is approximately 16 ft in width and comprises 0.007 ac of CDFW streambed jurisdiction within the JDSA.

REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION

Jurisdictional 401 Waters of the State

All the areas on site determined to be non-wetland WOTUS under both current and historic USACE definitions and guidelines are also considered to be non-wetland WOTS. The unnamed perennial drainage is potentially considered jurisdictional under Section 401 of the CWA because it conveys perennial surface flows but does not meet the definition of wetland WOTS. This feature comprises 0.005 ac of potential non-wetland WOTS within the JDSA.

DISCLAIMER

The findings and conclusions presented in this report, including the locations and extents of features subject to regulatory jurisdiction (or lack thereof), represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the appropriate regulatory agencies.

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APPENDIX A

FIGURES

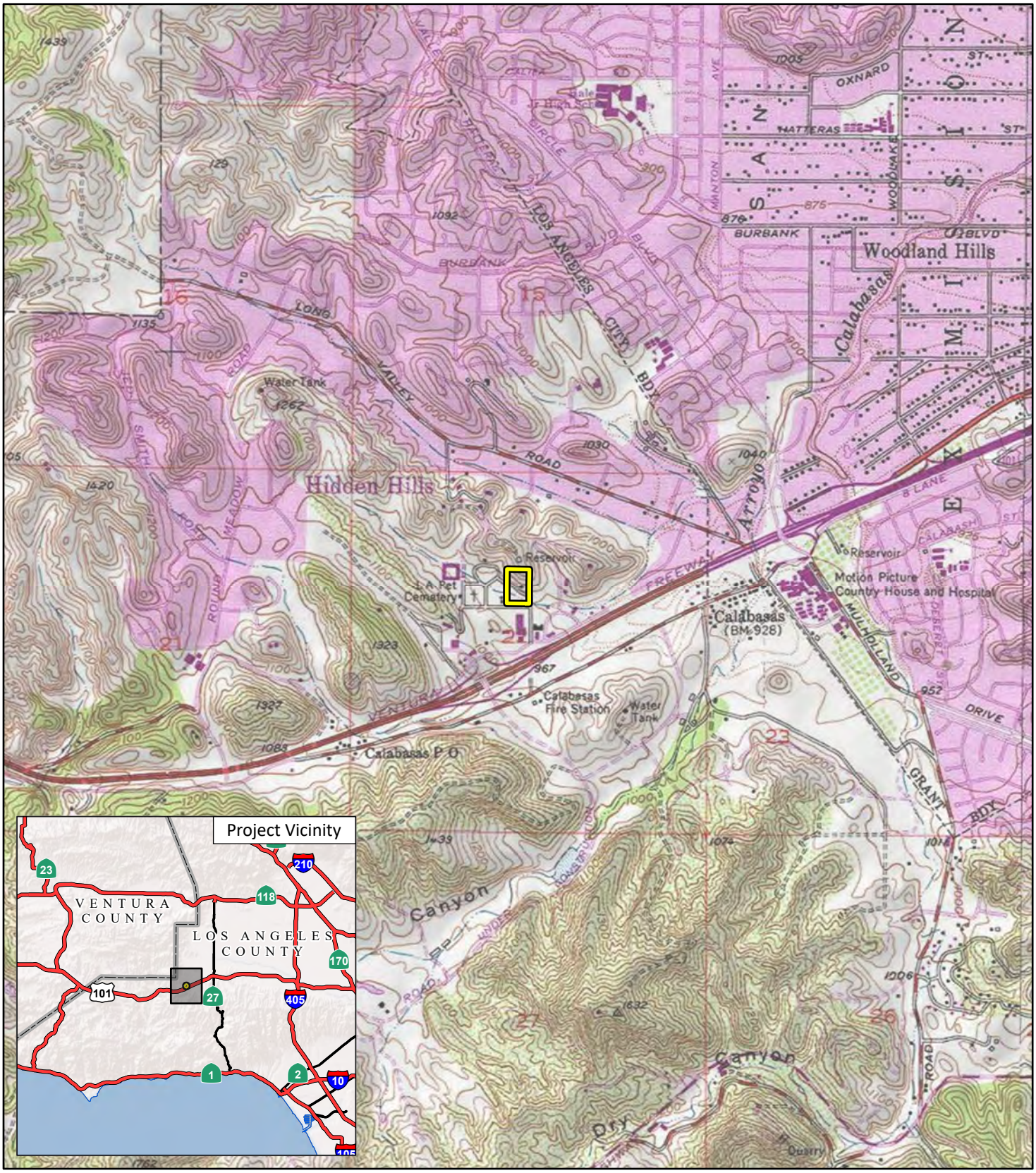

FIGURE 1

N

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - *Calabasas (1967)*, CA

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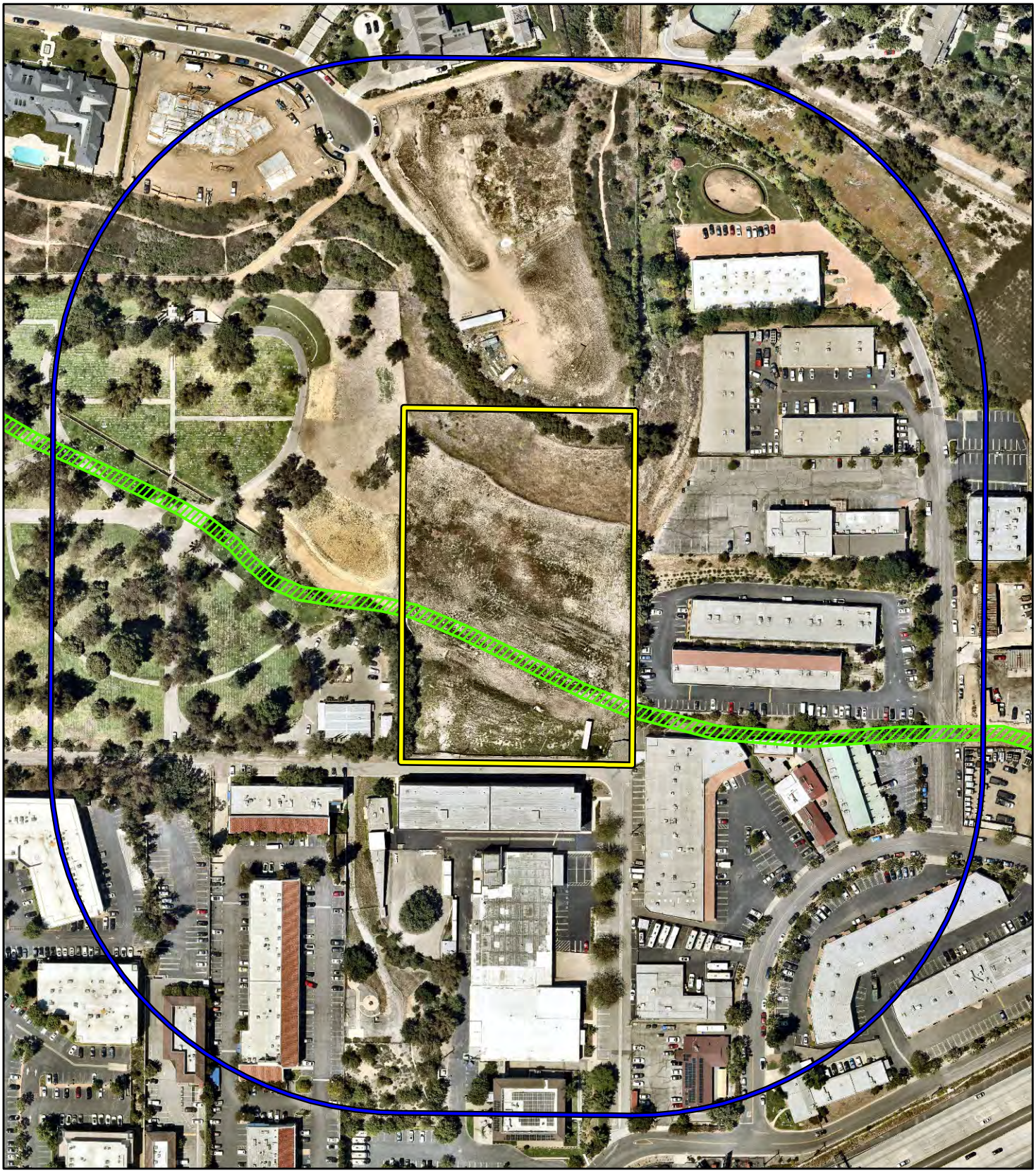
Trojan Storage Project

Project Location



LSA

LEGEND

Project Location

Biological Study Area

National Wetland Inventory

Wetland - Riverine

N

0 100 200

FEET

FIGURE 2

Trojan Storage Project

National Wetland Inventory

SOURCE: Nearmap (5/11/2022); National Wetland Inventory (2020)

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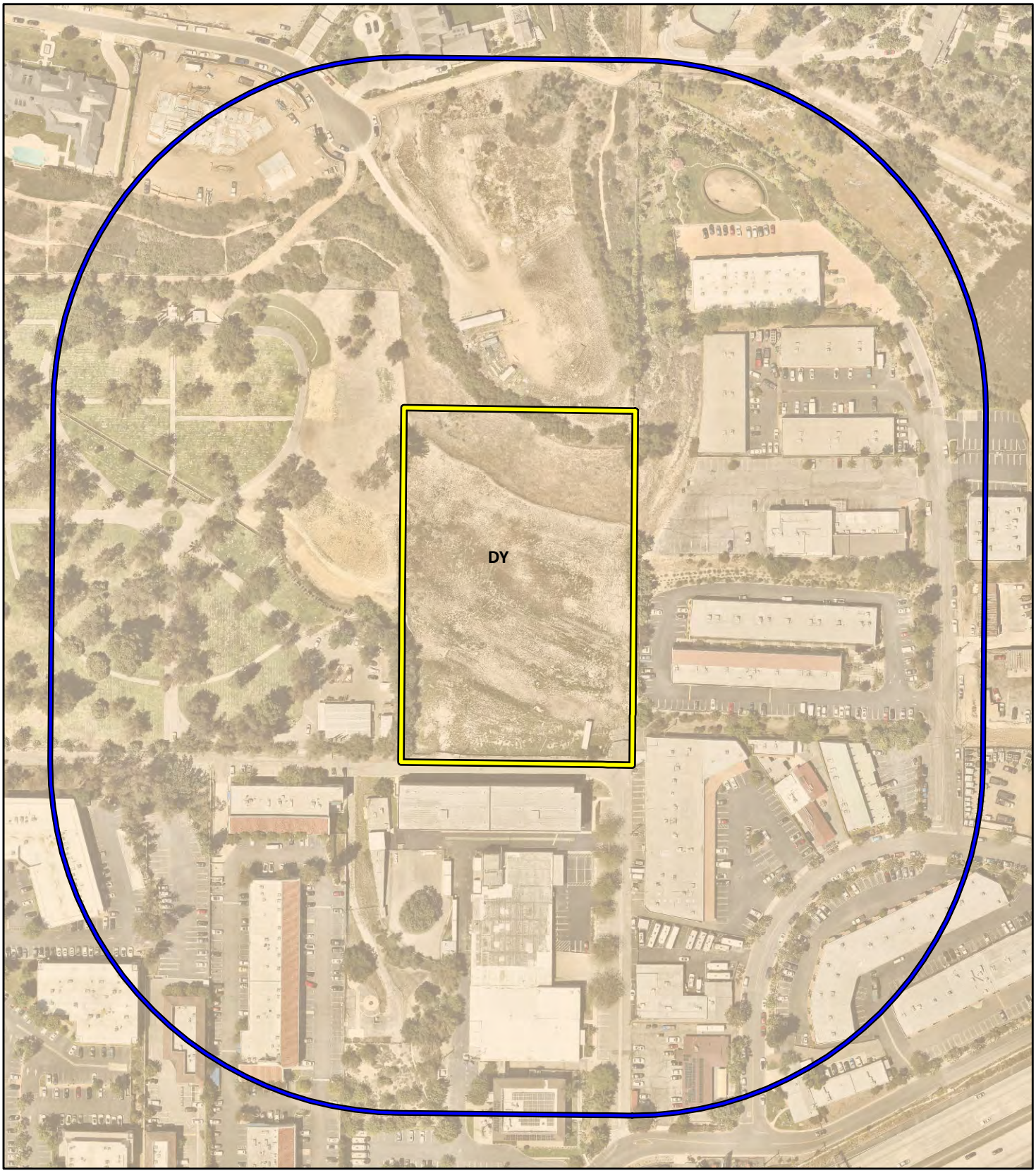

LSA

LEGEND

Project Location

Biological Study Area

Soils

(DY) Diablo Clay Loam

0 100 200

FEET

FIGURE 3

Trojan Storage Project

Soils

SOURCE: Nearmap (5/11/2022); LADWP (2004)

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LSA

LEGEND

- Project Location
- Biological Study Area
- Photo Points
- Sample Points
- Culvert
- Potentially Jurisdiction Feature
- WOTUS/WOTS (0.005 acre)
- CDFW (0.007 acre)

N

0 100 200
FEET

SOURCE: Nearmap (5/11/2022); National Wetland Inventory (2020)

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FIGURE 4

Trojan Storage Project

Jurisdictional Delineation Map

Photo 1: View of the ruderal habitat and overview of the JDSA.

Photo 2: View of the box culvert located on the western side of the JDSA.

Photo 3: View looking into the box culvert and ephemeral drainage.

Photo 4: View of the ruderal habitat within the JDSA.

LSA

FIGURE 5

Trojan Storage Project
Representative Site Photographs

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APPENDIX B

VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed in the Jurisdictional Delineation Study Area (JDSA) by LSA biologists.

* Introduced species not native to California
** Observed outside the project parcel but within the JDSA

GYMNOSPERMS

Cupressaceae		**Cypress Family**
*	*Cupressus sempervirens*	Italian cypress
	Sequoia sempervirens	Coast redwood
Pinaceae		**Pine Family**
*	*Pinus* sp.	Pine

MAGNOLIIDS

Lauraceae		**Laurel Family**
*	*Persea americana*	Avocado

EUDICOTS

Aizoaceae		**Iceplant Family**
*	*Carpobrotus edulis*	Hottentot-fig
Amaranthaceae		**Amaranth Family**
*, **	*Amaranthus albus*	Tumbling pigweed
Amaryllidaceae		**Amaryllis Family**
*	*Agapanthus africanus*	African lily
Anacardiaceae		**Sumac Family**
*, **	*Schinus molle*	Peruvian pepper tree
Apocynaceae		**Dogbane Family**
*	*Mandevilla sanderi*	Mandevilla
*	*Carissa macrocarpa*	Natal plum
*	*Nerium oleander*	Oleander
*	*Thevetia peruviana*	Yellow oleander
*	*Trachelospermum jasminoides*	Star jasmine
*	*Vinca major*	Blue periwinkle
Araliaceae		**Ginseng Family**
*	*Hedera helix*	English ivy

Asparagaceae			**Asparagus Family**
*	*Asparagus densiflorus*	Asparagus fern	
Asteraceae			**Sunflower Family**
**	*Baccharis pilularis* ssp. *consaguinea*	Coyote brush	
*, **	*Centaurea melitensis*	Tocalote	
**	*Erigeron canadensis*	Common horseweed	
*	*Helminthotheca echioides*	Bristly ox tongue	
**	*Heterotheca grandiflora*	Telegraph weed	
*, **	*Lactuca serriola*	Prickly lettuce	
*	*Sonchus asper*	Spiny sow thistle	
**	*Stephanomeria diegensis*	San Diego wreath-plant	
	Xanthium strumarium	Common cocklebur	
Bignoniaceae			**Trumpet–Creeper Family**
	Chilopsis linearis	Desert willow	
*	*Jacaranda mimosifolia*	Jacaranda	
Boraginaceae			**Borage Family**
**	*Phacelia distans*	Common phacelia	
Brassicaceae			**Mustard Family**
*, **	*Brassica nigra*	Black mustard	
Cactaceae			**Cactus Family**
	Opuntia littoralis	Coastal prickly pear	
Chenopodiaceae			**Goosefoot Family**
*, **	*Chenopodium album*	Lamb's quarters	
*, **	*Salsola tragus*	Russian-thistle	
Euphorbiaceae			**Spurge Family**
*, **	*Euphorbia peplus*	Petty spurge	
*, **	*Ricinus communis*	Castor bean	
Fabaceae			**Legume Family**
*	*Albizia julibrissin*	Persian silk tree	
*	*Ceratonia siliqua*	Carob	
*	*Tipuana tipu*	Tipu tree	
Geraniaceae			**Geranium Family**
*	*Erodium cicutarium*	Redstem filaree	
*	*Pelargonium zonale*	Zonal geranium	
Hamamelidaceae			**Witch-hazel Family**
*	*Liquidambar styraciflua*	Sweetgum	
Lamiaceae			**Mint Family**
*, **	*Marrubium vulgare*	Horehound	
*	*Rosmarinus officinalis*	Prostrate rosemary	

Lauraceae		**Laurel Family**
*	*Cinnamomum camphora*	Camphor tree
Lythraceae		**Loosestrife Family**
*	*Lagerstroemia indica*	Crape myrtle
Malvaceae		**Mallow Family**
*	*Brachychiton populneus*	Kurrajong
*	*Malva parviflora*	Cheeseweed mallow
Meliaceae		**Mahogany Family**
*	*Melia azedarach*	Chinaberry
Myrtaceae		**Myrtle Family**
*	*Callistemon* sp.	Bottlebrush
*	*Eucalyptus* sp.	Eucalyptus
Nyctaginaceae		**Four O'clock Family**
*	*Bougainvillea* sp.	Bougainvillea
Oleaceae		**Olive Family**
	Fraxinus sp.	Ash
*	*Fraxinus uhdei*	Shamel ash
Plantaginaceae		**Plantain Family**
*	*Bacopa monnieri*	Waterhyssop/herb of grace
Polygonaceae		**Buckwheat Family**
*	*Rumex crispus*	Curly dock
Rosaceae		**Rose Family**
*	*Prunus cerasifera*	Flowering plum
*	*Pyrus calleryana*	Callery pear
*	*Rhaphiolepis indica*	Indian Hawthorn
*	*Rosa 'Korbin'*	Iceberg rose
Salicaceae		**Willow Family**
	Salix lasiolepis	Arroyo willow
Scrophulariaceae		**Figwort Family**
*	*Leucophyllum frutescens*	Texas ranger
Solanaceae		**Nightshade Family**
	Datura wrightii	Jimsonweed
Tamaricaceae		**Tamarisk Family**
*	*Tamarix* sp.	Tamarisk
Verbenaceae		**Vervain Family**
*	*Lantana camara*	Lantana

Zygophyllaceae		**Caltrop Family**
*, **	*Tribulus terrestris*	Puncture vine
MONOCOTS		
Agavaceae		**Century Plant Family**
*	*Agave americana*	American century plant
	Hesperoyucca whipplei	Our Lord's candle
Arecaceae		**Palm Family**
*	*Phoenix canariensis*	Canary Island palm
*	*Phoenix roebelenii*	Pygmy date palm
*	*Washingtonia robusta*	Mexican fan palm
Iridaceae		**Iris Family**
*	Dietes iridioides	African iris
Poaceae		**Grass Family**
*, **	*Avena barbata*	Slender wild oat
*, **	*Bromus diandrus*	Ripgut grass
*, **	*Bromus madritensis* ssp. *rubens*	Red brome
*	*Pennisetum setaceum*	Crimson fountain grass
*	*Polypogon monspeliensis*	Rabbitfoot grass
*, **	*Stipa miliacea* var. *miliacea*	Smilo grass
Typhaceae		**Cattail Family**
	Typha latifolia	Broad-leaved cattail

Taxonomy and scientific nomenclature generally conform to B.G. Baldwin and D.H. Goldman et al., eds. (2012; The Jepson Manual: Vascular Plants of California, 2nd edition; University of California Press, Berkeley and Los Angeles, California).

Common names for each taxa generally conform to Roberts, F.M., Jr. (2008; The Vascular Plants of Orange County, California: An Annotated Checklist; F.M. Roberts Publications, San Luis Rey, California) except where Abrams, L. (1923, 1944, and 1951; Illustrated Flora of the Pacific States: Washington, Oregon, and California, vols. I–III; Stanford University Press, Stanford, California) and Abrams, L. and Ferris, R.S. (1960; Illustrated Flora of the Pacific States: Washington, Oregon, and California, vol. IV; Stanford University Press, Stanford, California) were used, particularly when species-specific common names were not identified in Roberts, F.M., Jr. (2008).

APPENDIX C

WETLAND DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Trojan storage City/County: Calabasas, LA Sampling Date: 8-25-2022

Applicant/Owner: Kimley Horn State: CA Sampling Point: S-1

Investigator(s): Seremy Rosenthal Section, Township, Range: S22 T1N R17W

Landform (hillslope, terrace, etc.): stream bed Local relief (concave, convex, none): Concave Slope (%): <5%

Subregion (LRR): C Lat: 34°9'25.20"N Long: 118°39'3.86"W Datum: WGS84

Soil Map Unit Name: Cropley-urban land complex, 2 to 9 percent slopes NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus Sp.	50	Y	FACU
2.			
3.			
4.			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 10')			
1. —			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 10')			
1. Typha latifolia	20%	Y	OBL
2. Xanthium strumonium	15%	Y	FAC
3. Rumex crispus	10%	N	FAC
4. polypogon monspeliensis	5%	N	FACW
5. Helminthotheca echioides	15%	Y	FAC
6. Sonchus asper	1%	N	FAC
7.			
8.			
	66%	= Total Cover	

Woody Vine Stratum (Plot size: 10')			
1. —			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 34% % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of		Multiply by:	
OBL species	20	x 1 =	20
FACW species	5	x 2 =	10
FAC species	41	x 3 =	123
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	116 (A)		353 (B)

Prevalence Index = B/A = 3.043

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: S-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 3/2	100					Sandy	pebbles & cobbles
2-16"	2.5YR 3/2	99%	2.5YR 3/6	1	C	M	Loamy clay	roots present, consistent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 16"-0"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Trojan storage City/County: Calabasas, LA Sampling Date: 8-25-2022

Applicant/Owner: Kimley Horn State: CA Sampling Point: S-2

Investigator(s): Jeremy Roscuthal Section, Township, Range: S22 T1N R17W

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): _____ Slope (%): 35

Subregion (LRR): C Lat: 34°9'25.14" N Long: 118°39'3.87" W Datum: WGS 84

Soil Map Unit Name: cropley-urban land complex, 2 to 9 percent slopes NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	Is the Sampled Area within a Wetland? Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus sp.	60%	Y	FACU
2.			
3.			
4.			
	60 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10')			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10')			
1. Typha latifolia	15%	Y	OBL
2. Xanthium strumarium	15%	Y	FAC
3. Rumex crispus	2%	N	FAC
4. Sonchus asper	2%	N	FAC
5. Helminthotheca echioides	10%	N	FAC
6. Malva parviflora	2%	N	FAC
7.			
8.			
	46 = Total Cover		
Woody Vine Stratum (Plot size: 10')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 54 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 15	x 1 = 15
FACW species 0	x 2 = 0
FAC species 31	x 3 = 93
FACU species 60	x 4 = 240
UPL species 0	x 5 = 0
Column Totals: 106 (A)	345 (B)

Prevalence Index = B/A = 3.253

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: S-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	7.5 YR 3/2	100					Clayey Sand	contains pebbles
8-13"	7.5 YR 3/2	100					Loamy Clay	slight saturation
13" Refusal								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: unknown -> Rock?

Depth (inches): 13"

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 8-13"

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil at 8-13" appeared to have some indicators of moisture but I do not believe it meets the A3 requirement

DRAFT

JURISDICTIONAL DELINEATION REPORT

TROJAN STORAGE PROJECT

CALABASAS, LOS ANGELES COUNTY, CALIFORNIA

LSA

August 2022

DRAFT

JURISDICTIONAL DELINEATION REPORT

TROJAN STORAGE PROJECT

CALABASAS, LOS ANGELES COUNTY, CALIFORNIA

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LSA Project No. KHA2208

LSA

August 2022

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LIST OF ABBREVIATIONS AND ACRONYMS

1987 Manual	*Corps of Engineers 1987 Wetland Delineation Manual*
°F	degrees Fahrenheit
ac	acres
amsl	above mean sea level
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
FAC	Facultative
FACW	Facultative Wetland
ft	foot/feet
JDSA	Jurisdictional Delineation Study Area
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate Wetland
OHWM	ordinary high water mark
Porter-Cologne Act	California Porter-Cologne Water Quality Control Act
Procedures	*State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*
Project	Trojan Storage Project
Rapanos	the 2006 United States Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States*
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region
RWQCB	Santa Ana Regional Water Quality Control Board
sf	square feet
SWRCB	State Water Resources Control Board
TNW	traditionally navigable water
USACE	United States Army Corps of Engineers

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTS	waters of the State
WOTUS	waters of the United States

INTRODUCTION

This Jurisdictional Delineation Report presents the results of a delineation of aquatic resources and drainage features conducted for the Trojan Storage Project (project) located at 5050 Old Scandia Lane, 550 feet (ft) northwest of the intersection of Old Scandia Lane and Ventura Boulevard in Calabasas, Los Angeles County, California. Kimbley-Horn proposes the construction of a 155,900-square-foot (sf) storage unit facility across three separate buildings as well as a total of 27 parking spaces located on one parcel (Assessor's Parcel Number 2049-022-040), totaling approximately 3.8 acres (ac).

The Jurisdictional Delineation Study Area (JDSA) discussed herein extends across the entire project site. This Jurisdictional Delineation aims to determine the extent of the State of California and federal jurisdiction within the JDSA. This potential jurisdiction includes the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and/or the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code. This report has been prepared to inform the environmental planning and review process. All referenced figures are included in Appendix A.

SITE DESCRIPTION AND SETTING

The JDSA is located at 5050 Old Scandia Lane, 550 ft northwest of the intersection of Old Scandia Lane and Ventura Boulevard, in the City of Calabasas, Los Angeles County, California, California, as depicted on the United States Geological Survey (USGS) *Calabasas, California* 7.5-minute series topographic quadrangle (refer to Figure 1). Elevations in the JDSA range from 945 ft above mean sea level (amsl) to 1,050 ft amsl. The topography within the JDSA contains moderate to steep slopes that increase in elevation in a northerly direction. The JDSA is undeveloped and bordered by a partially developed and graded land with residential developments to the north, commercial developments to the east and west, and Old Scandia Lane and commercial development to the south. The surrounding project vicinity is comprised of commercial development. The vegetation within the JDSA consists of ruderal/disturbed vegetation and ornamental landscaping.

The JDSA is located within the Bell Creek Watershed, which is 94.74 square miles and encompasses Bell Canyon and several tributaries/canals that connect to the Los Angeles River. All surface waters within the JDSA are ultimately conveyed through a concrete box culvert and an underground drainage that connects to Arroyo Calabasas. Arroyo Calabasas then connects and discharges into the Los Angeles River, which is a tributary to the Pacific Ocean.

Based on a review of historic aerial photographs of the project area extending back to the late 1940s (NETR 2022), there appears to have been a naturally occurring ephemeral drainage within the southern portion of the JDSA. However, based on an analysis of current aerial imagery, a majority of the unnamed drainage was undergrounded between 2019 and 2020 into a concrete box culvert on the western side of the JDSA. Because the unnamed drainage was placed underground, an extremely small portion of the unnamed drainage remains within the JSDA, while the remainder flows underground through the concrete box culvert. Further, the unnamed drainage feature does appear as a blue-line stream on the USGS *Calabasas, California* 7.5-minute series topographic maps in 1928 and is mapped within the CDFW Biogeographic Information and Observation System (CDFW n.d.).

The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The average annual precipitation is 10 inches. Although most of the precipitation occurs from November through May, thunderstorms may occur at other times of the year that can result in heavy precipitation. Temperatures typically range between 48 and 98 degrees Fahrenheit (°F).

REGULATORY BACKGROUND

UNITED STATES ARMY CORPS OF ENGINEERS

The USACE regulates discharges of dredged or fill material into waters of the United States (WOTUS). These waters include wetland and non-wetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the federal CWA is founded on a connection, or nexus, between the waterbody in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditionally navigable waters [TNWs] used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

For several decades, the operable definition of WOTUS was provided at 33 Code of Federal Regulations (CFR) 328.3, but implementation of this definition has been shaped by the courts and subsequent guidance over the years, most substantially by the 2001 United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers,* No. 99-1178 and the 2006 Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are "waters of the United States" if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. However, the involved Supreme Court justices were not able to agree on a single, underlying standard that would govern future jurisdictional disputes. Instead, a four-justice plurality opinion, authored by Justice Antonin Scalia, and an opinion by Justice Anthony M. Kennedy, proposed two alternative tests for evaluating jurisdictional waters:

1. Relative permanence and continuous surface connection.
2. Significant nexus – a nexus exists when the feature (whether an adjacent wetland or tributary) significantly affects the chemical, physical, and biological integrity of other covered waters.

Following the *Rapanos* decision, the lower courts immediately struggled to determine which "test" should be used, which led to inconsistency in CWA implementation across the states. On June 5, 2007, the USACE issued guidance regarding the *Rapanos* decision. After consideration of public comments and agencies' experience, revised guidance was issued on December 2, 2008. This guidance states that the USACE will assert jurisdiction over TNWs, wetlands adjacent to TNWs, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries. Under the 2008 *Rapanos* guidance, the USACE determined that a significant nexus was required for its jurisdiction to extend to waters that are nonnavigable tributaries that are not relatively permanent waters and wetlands adjacent to nonnavigable tributaries that are not relatively permanent waters. The USACE generally did not assert jurisdiction over swales or erosional features, or ditches excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water. However, the USACE reserved the right to regulate these waters on a case-by-case basis.

Several recent attempts have been made to clarify the scope of WOTUS. Based, in part, on the *Rapanos* decision and the opinions authored by Justice Kennedy and Justice Scalia, new rules

defining WOTUS were promulgated under the Obama and the Trump administrations. The 2015 "Clean Water Rule" and the 2020 "Navigable Waters Protection Rule" set forth different definitions for WOTUS (ranging from relatively broad federal jurisdiction under the 2015 rule to relatively limited federal jurisdiction under the 2020 rule). Each of these new rules prompted a series of legal challenges and court decisions. On August 30, 2021, the United States District Court for Arizona vacated the 2020 Navigable Waters Protection Rule, which reinstated federal wetland regulations and definitions originally adopted by the federal government in the 1980s. In light of this order, the United States Environmental Protection Agency (EPA) and the USACE (collectively referred to as "agencies") have halted implementation of the 2020 Navigable Waters Protection Rule and are interpreting WOTUS consistent with the pre-2015 regulatory regime (and 2008 *Rapanos* guidance) until further notice.

While litigation continues, on November 18, 2021, the agencies announced plans for new WOTUS rulemaking. The current definition of WOTUS (EPA n.d.) is as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (1) through (4) of this section;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section;

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 423.11(m), which also meet the criteria of this definition) are not WOTUS.

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Nonnavigable tributaries that are not relatively permanent
- Wetlands adjacent to nonnavigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent nonnavigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)

- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The 2008 *Rapanos* guidance and 2021 revised definition of "waters of the United States" proposed rules that acknowledge certain ephemeral waters, especially in the arid West, are distinguishable from the geographic features described above where such ephemeral waters are tributaries and have a significant nexus to downstream traditional navigable waters. In such cases, the agencies will decide CWA jurisdiction on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable waters.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters.

- A significant nexus includes consideration of hydrologic and ecologic factors.

Given the substantial changes in operable definitions that have taken place and are likely to continue considering recent regulatory revisions and court actions, it is impossible to predict the regulations that will be in place at the time of a particular jurisdictional determination by the USACE. Therefore, this Jurisdictional Delineation focuses on identifying the boundaries of potentially jurisdictional waterbodies using methods for determining the locations of the ordinary high water mark (OHWM) and wetland boundaries as described below. These methods for determining the boundaries of waterbodies in general have not substantially changed over the years and are not likely to change with any revised regulations. This delineation can then be used in combination with a companion jurisdictional analysis to determine which of the identified waterbodies are actually

jurisdictional, based on the definition that is in effect at the time of a jurisdictional determination by the USACE.

The USACE typically considers any body of water displaying an OHWM for designation as WOTUS, subject to the applicable definition of WOTUS. USACE jurisdiction over non-tidal WOTUS extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present.

The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

Waters found to be isolated and not subject to CWA regulation may still be regulated by the RWQCB under the Porter-Cologne Act.

Wetland Waters of the United States

Wetland delineations for Section 404 purposes must be conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (Regional Supplement) (USACE 2008) and the 1987 *Corps of Engineers Wetland Delineation Manual* (1987 Manual) (USACE 1987). Where there are differences between the two documents, the *Regional Supplement* takes precedence over the *1987 Manual*.

The USACE and EPA define wetlands as:

> Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.

To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

Hydrophytic vegetation and hydric soil indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years, but do not confirm that an episode has occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not provide evidence that episodes lasted more than a few days or occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal circumstances, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding, highly ephemeral stream systems, or in areas recently altered by anthropogenic activities. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas.

Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into nonwetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience and extensive knowledge of local ecological conditions comes into play in delineating wetlands. The Regional Supplement provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation

Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are those included on the National Wetland Plant List published by the USACE (2018). Each species on the list is rated according to a wetland indicator category, as shown below in Table A.

Table A: Hydrophytic Vegetation Ratings

Category	Rating	Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability greater than 99%)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67–99%)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34–66%)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67–99 %)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability greater than 99%)

Source: United States Army Corps of Engineers (2008).

To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated Obligate Wetland [OBL], Facultative Wetland [FACW], or Facultative [FAC]).

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately). When more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the USACE recommends the use of the "50/20" rule (also known as the dominance test) from the *Regional Supplement* for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present, but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a

sampling point. The prevalence index is particularly useful when communities only have one or two dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, USACE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (USACE 2008). If the plant community passes either the dominance test or prevalence index after reconsidering the indicator status of any plant species that exhibits morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils

Hydric soils[1] are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.[2] Soils are considered likely to meet the definition of a hydric soil when they meet one or more of the following criteria:

1. All Histels except Folistels and Histosols except Folists;

2. Soils that are frequently ponded for a long duration or very long duration[3] during the growing season; or

3. Soils that are frequently flooded for a long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. Although saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 50 centimeters (19.7 inches), below which the growth and function of locally adapted plants are negligible). Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria and on information gathered from the National Soil Information System database, the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) created a Soil Data Access Hydric Soils List that is updated annually.

The *Regional Supplement* has a number of field indicators that may be used to identify hydric soils. The NRCS (USDA 2016) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, accumulation of organic matter, and the reduction, translocation, and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

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1 The hydric soils definition and criteria included in the *1987 Manual* are obsolete. Users of the *1987 Manual* are directed to the United States Department of Agriculture's Natural Resources Conservation Service website for the most current information on hydric soils.

2 Current definition as of 1994 (*Federal Register*, July 13).

3 "Long duration" is defined as a single event ranging from 7 to 30 days. "Very long duration" is defined as a single event that lasts longer than 30 days.

Wetland Hydrology

Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (USACE 1987). The wetland hydrology criterion is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (USACE 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW, through provisions of the California Fish and Game Code (Section 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least a periodic or intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

In obtaining CDFW agreements, the limits of wetlands are not typically determined. This is because the CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, mule fat, and other vegetation typically associated with the banks of a stream or lake shorelines and may not be consistent with USACE definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream, away from frequently saturated soils).

REGIONAL WATER QUALITY CONTROL BOARD

The Porter-Cologne Act of the California Water Code (Section 13000 et seq.) established nine RWQCBs to oversee water quality on a day-to-day basis at the local and/or regional level. Their duties include preparing and updating water quality control plans and associated requirements and issuing water quality certifications under Section 401 of the CWA. The CWA grants ultimate authority to the State Water Resources Control Board (SWRCB) over State water rights and water quality policy. Under the Porter-Cologne Act, the RWQCBs (or the SWRCB for projects that cross multiple RWQCB jurisdictions) are responsible for issuing National Pollutant Discharge Elimination System (NPDES) permits for point-source discharges and waste discharge requirements for non-point source discharges into jurisdictional waters of the State (WOTS).

The definition of waters under the jurisdiction of the State is broad and includes any surface water or groundwater, including saline waters within the boundaries of the State. Waters that meet the definition of WOTUS are also considered WOTS, but the jurisdictional limits of WOTS may extend beyond the limits of WOTUS. Isolated waters that may not be subject to regulations under federal law are considered to be WOTS and regulated accordingly.

Although there is no formal statewide guidance for the delineation of nonwetland WOTS, jurisdiction generally corresponds to the surface area of aquatic features that are at least seasonally inundated, and all areas within the banks of defined rivers, streams, washes, and channels, including associated riparian vegetation. Currently, each RWQCB reserves the right to establish criteria for the regulation of nonwetland WOTS.

Wetland Waters of the State

On August 28, 2019, the California Office of Administrative Law approved the SWRCB-proposed *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures).* The *Procedures*, effective May 28, 2020, apply to discharges of dredged or fill material to WOTS. The *Procedures* consist of four major elements: (1) a wetland definition, (2) a framework for determining whether a feature that meets the wetland definition is a water of the State, (3) wetland delineation procedures, and (4) procedures for the submission, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

The SWRCB and RWQCBs define a wetland as:

> An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The RWQCB will rely on the final aquatic resource report verified by the USACE for determining the extent of wetland WOTUS. However, if it is not delineated in a final aquatic report, the procedures will use the USACE *1987 Manual* and the *Regional Supplement* to determine whether the area meets the State definition of a wetland. As described in the *1987 Manual* and the *Regional Supplement*, an area "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not prevent the determination of such an area that meets the State definition of wetland.

METHODOLOGY

Prior to conducting delineation fieldwork, LSA reviewed the following literature and materials:

- Historic and current aerial photographic imagery (NETR 2022)
- Historic and current USGS topographic maps (USGS 2022)
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) wetland mapper (USFWS 2022)
- NRCS Web Soil Survey (USDA 2022)

LSA Biologists Heather Monteleone and Jeremy Rosenthal conducted the fieldwork for this Jurisdictional Delineation on August 16 and 25, 2022. The JDSA was visually surveyed on foot. All jurisdictional features within the JDSA were evaluated according to the most current federal and/or State regulatory criteria and guidance and mapped using aerial photographs. This included the State wetland definition and delineation procedures recently enacted by the SWRCB and the current USACE regulations pertaining to jurisdictional WOTUS, which are consistent with the pre-2015 regulatory regime until further notice. In addition, Ms. Monteleone noted and photographed the general conditions and characteristics associated with the JDSA.

The boundaries of the jurisdictional features observed within the JDSA during the fieldwork were mapped on a recent, high-resolution aerial photograph (on a scale of 1 inch = approximately 100 ft) showing the JDSA. The widths and lengths of these drainage features mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Features within the JDSA that are generally excluded from federal and/or State jurisdiction under current regulatory definitions and guidance were evaluated and mapped as “non-jurisdictional features.” Because none of the drainage features in the JDSA exhibited characteristics indicative of wetlands (e.g., areas dominated by hydrophytic vegetation or hydric soils), the wetland delineation procedures described in the *Regional Supplement* and those recently enacted by the SWRCB were not implemented.

RESULTS

DATABASE SEARCHES

National Wetlands Inventory

Based on the NWI query, a riverine intermittent streambed was mapped within the JDSA as shown on Figure 2.

USDA Soil Survey

The soils mapped on the site include Cropley-Urban land complex, 2 to 9 percent slopes, Gazos silty clay loam, 30 to 50 percent slopes, and Xerorthents-Urban land-Gazos complex, 5 to 15 percent slopes (USDA 2022) (Figure 3). Soil observed throughout the site appears to be consistent with this designation. None of the mapped soils are considered hydric soils and have a well-drained drainage class (Table B).

Table B: Mapped Soils Classifications

Soil	Drainage Class	Frequency of Flooding	Frequency of Ponding	Hydric Soil Rating
Cropley-Urban land complex, 2–9% slopes	Well drained	None	None	No
Gazos silty clay loam, 30–50% slopes	Well drained	None	None	No
Xerorthents-Urban land-Gazos complex, 5–15% slopes	Well drained	None	None	No

Source: Web Soil Survey (USDA 2022).

DESCRIPTIONS OF DELINEATED FEATURES

A brief description of the delineated feature is provided below. Figure 4 shows the location of the jurisdictional feature, and Figure 5 provides representative photographs of the JDSA.

One concrete box culvert and a small portion of an unnamed drainage are located on the western border of the JDSA. The drainage is considered perennial because it was observed carrying surface flows during the middle of summer in the absence of recent rain events. The concrete box culvert is comprised of two wingwalls and a metal grate measuring approximately 40 ft long. This culvert carries perennial stormwater and urban runoff from the adjacent properties to the west underneath the majority of the JDSA through the underground drainage in a southeastern direction. The drainage previously entered the JDSA from the western side, approximately where the concrete box culvert is located, and ran on the surface across nearly the entire width of the JDSA in a southeast direction. The drainage terminated at the culvert located on the eastern side where the drainage began to flow underground. Based on historical aerial imagery, the culvert was removed and the drainage placed in an underground culvert between November 2018 and August 2019. The underground drainage flows off site and into Arroyo Calabasas, a tributary to the Los Angeles River, which in turn is tributary to the Pacific Ocean. The portion of the ephemeral drainage that enters the culvert does contain a defined channel bed and bank and visible, albeit slight, indicators of flow and OHWM indicators that include bed and banks and a natural line impressed on the bank. Furthermore, standing water was present at the time of the field survey, and several cattails (*Typha*

latifolia, OBL) and rough cocklebur (*Xanthium strumarium*, FAC) were located within the drainage near the opening of the concrete box culvert. Refer to Appendix B for a complete list of vascular plant species observed.

Paired soil pits were dug within and along the drainage to determine if it met wetland criteria. One soil pit (SP-1) was placed within the middle of the drainage where hydrophytic vegetation and saturated soils were present. The second soil pit (SP-2) was placed along the embankment of the drainage where vegetation was dominated by pine tree (*Pinus* sp.) and low cover of cattails, annual beard grass (*Polypogon monspeliensis*), and bristly ox tongue (*Helminthotheca echioides*). Furthermore, soils displayed no sign of recent saturation in the second soil pit. Although vegetation and hydrology met wetland criteria in SP-1, hydric soils were absent. SP-2 did not meet any of the three wetland criteria.

No other potentially jurisdictional features were observed within the JDSA.

JURISDICTIONAL CONCLUSIONS

One unnamed perennial drainage was identified within the JDSA (refer to Figure 4) and, in this case, was determined to be jurisdictional. The basis for whether a particular waterbody (or feature) is jurisdictional or non-jurisdictional is described below under the applicable regulatory agency.

UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Jurisdictional 404 Waters of the United States

The unnamed perennial drainage contained an OWHM and contributes flow to Arroyo Calabasas, a tributary to the Los Angeles River, which in turn is a tributary to the Pacific Ocean, a traditional navigable water. There are no jurisdictional wetlands within or adjacent to the delineated drainage. Because the unnamed perennial drainage has OHWM indicators and a significant nexus to a traditional navigable waterway but failed to meet wetland WOTUS criteria, the drainage should be considered a non-wetland WOTUS subject to regulation under Section 404 of the CWA. This feature ranged from approximately 6 ft in width and comprises 0.005 ac of potential non-wetland WOTUS within the JDSA.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE JURISDICTION

Jurisdictional 1602 Streambeds and Associated Riparian Habitat

In accordance with Section 1602 of the California Fish and Game Code, the CDFW asserts jurisdiction over rivers, streams, and lakes as well as any riparian vegetation associated with those features. There are no rivers or lakes within or immediately adjacent to the project limits, but a concrete box culvert and perennial drainage are present as shown on Figure 4. The perennial drainage, however, lacks any associated riparian habitat; therefore, CDFW jurisdiction extends to the top of the banks. This feature is approximately 16 ft in width and comprises 0.007 ac of CDFW streambed jurisdiction within the JDSA.

REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION

Jurisdictional 401 Waters of the State

All the areas on site determined to be non-wetland WOTUS under both current and historic USACE definitions and guidelines are also considered to be non-wetland WOTS. The unnamed perennial drainage is potentially considered jurisdictional under Section 401 of the CWA because it conveys perennial surface flows but does not meet the definition of wetland WOTS. This feature comprises 0.005 ac of potential non-wetland WOTS within the JDSA.

DISCLAIMER

The findings and conclusions presented in this report, including the locations and extents of features subject to regulatory jurisdiction (or lack thereof), represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the appropriate regulatory agencies.

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APPENDIX A

FIGURES

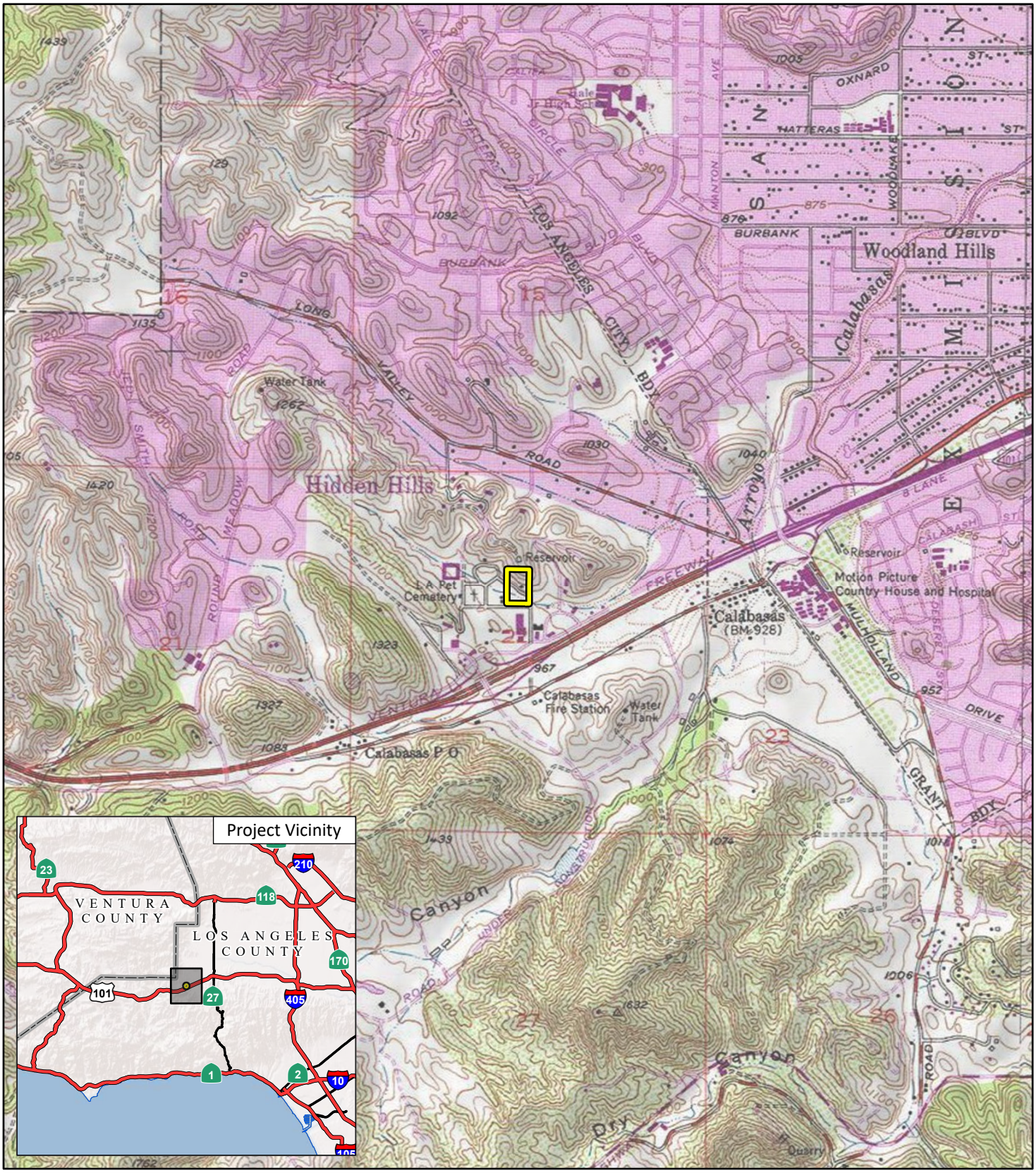

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - *Calabasas (1967)*, CA

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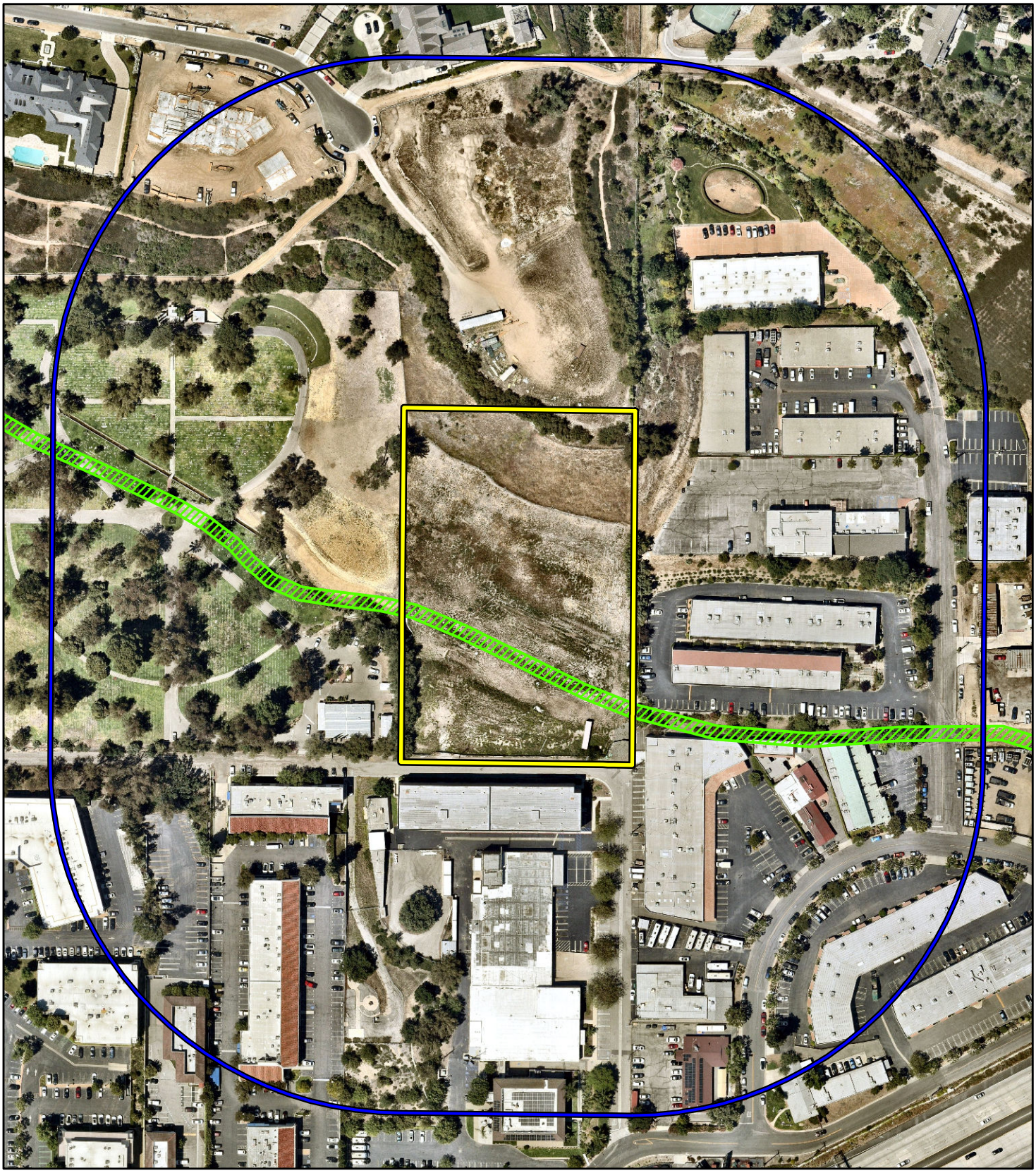
Trojan Storage Project

Project Location



LSA

LEGEND

Project Location

Biological Study Area

National Wetland Inventory

Wetland - Riverine

N

0 100 200

FEET

FIGURE 2

Trojan Storage Project

National Wetland Inventory

SOURCE: Nearmap (5/11/2022); National Wetland Inventory (2020)

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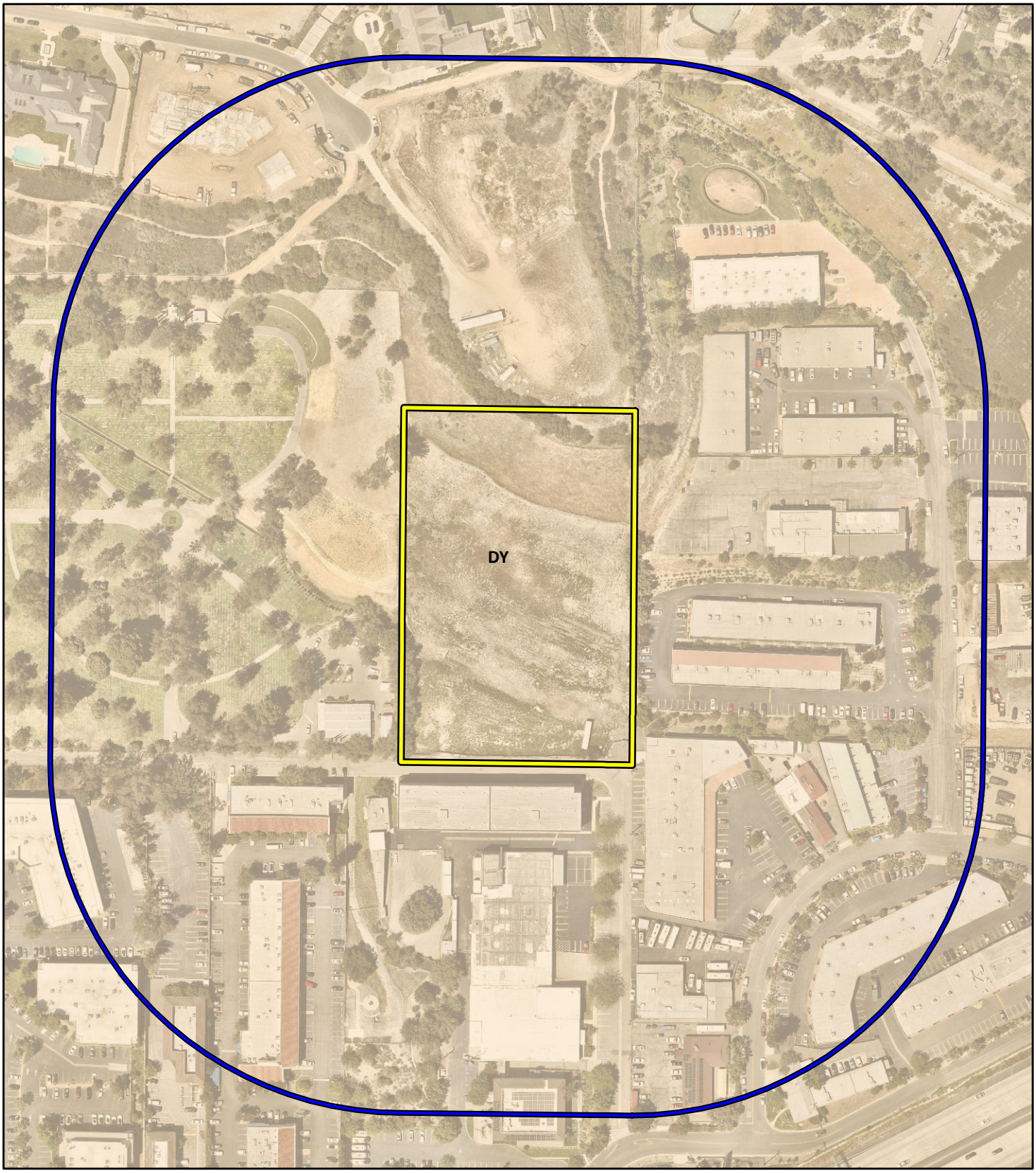

LSA

LEGEND

Project Location

Biological Study Area

Soils

(DY) Diablo Clay Loam

0 100 200

FEET

SOURCE: Nearmap (5/11/2022); LADWP (2004)

I:\KHA2208\GIS\MXD\Soils.mxd (8/29/2022)

FIGURE 3

Trojan Storage Project

Soils

LSA

FIGURE 4

LEGEND

- Project Location
- Biological Study Area
- Photo Points
- Sample Points
- Culvert
- Potentially Jurisdiction Feature
- WOTUS/WOTS (0.005 acre)
- CDFW (0.007 acre)

N

0 100 200
FEET

SOURCE: Nearmap (5/11/2022); National Wetland Inventory (2020)

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Trojan Storage Project

Jurisdictional Delineation Map

Photo 1: View of the ruderal habitat and overview of the JDSA.

Photo 2: View of the box culvert located on the western side of the JDSA.

Photo 3: View looking into the box culvert and ephemeral drainage.

Photo 4: View of the ruderal habitat within the JDSA.

LSA

FIGURE 5

Trojan Storage Project
Representative Site Photographs

APPENDIX B

VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed in the Jurisdictional Delineation Study Area (JDSA) by LSA biologists.

* Introduced species not native to California
** Observed outside the project parcel but within the JDSA

GYMNOSPERMS

Cupressaceae		**Cypress Family**
*	*Cupressus sempervirens*	Italian cypress
	Sequoia sempervirens	Coast redwood
Pinaceae		**Pine Family**
*	*Pinus* sp.	Pine

MAGNOLIIDS

Lauraceae		**Laurel Family**
*	*Persea americana*	Avocado

EUDICOTS

Aizoaceae		**Iceplant Family**
*	*Carpobrotus edulis*	Hottentot-fig
Amaranthaceae		**Amaranth Family**
*, **	*Amaranthus albus*	Tumbling pigweed
Amaryllidaceae		**Amaryllis Family**
*	*Agapanthus africanus*	African lily
Anacardiaceae		**Sumac Family**
*, **	*Schinus molle*	Peruvian pepper tree
Apocynaceae		**Dogbane Family**
*	*Mandevilla sanderi*	Mandevilla
*	*Carissa macrocarpa*	Natal plum
*	*Nerium oleander*	Oleander
*	*Thevetia peruviana*	Yellow oleander
*	*Trachelospermum jasminoides*	Star jasmine
*	*Vinca major*	Blue periwinkle
Araliaceae		**Ginseng Family**
*	*Hedera helix*	English ivy

Asparagaceae		**Asparagus Family**
*	*Asparagus densiflorus*	Asparagus fern
Asteraceae		**Sunflower Family**
**	*Baccharis pilularis* ssp. *consaguinea*	Coyote brush
*, **	*Centaurea melitensis*	Tocalote
**	*Erigeron canadensis*	Common horseweed
*	*Helminthotheca echioides*	Bristly ox tongue
**	*Heterotheca grandiflora*	Telegraph weed
*, **	*Lactuca serriola*	Prickly lettuce
*	*Sonchus asper*	Spiny sow thistle
**	*Stephanomeria diegensis*	San Diego wreath-plant
	Xanthium strumarium	Common cocklebur
Bignoniaceae		**Trumpet–Creeper Family**
	Chilopsis linearis	Desert willow
*	*Jacaranda mimosifolia*	Jacaranda
Boraginaceae		**Borage Family**
**	*Phacelia distans*	Common phacelia
Brassicaceae		**Mustard Family**
*, **	*Brassica nigra*	Black mustard
Cactaceae		**Cactus Family**
	Opuntia littoralis	Coastal prickly pear
Chenopodiaceae		**Goosefoot Family**
*, **	*Chenopodium album*	Lamb's quarters
*, **	*Salsola tragus*	Russian-thistle
Euphorbiaceae		**Spurge Family**
*, **	*Euphorbia peplus*	Petty spurge
*, **	*Ricinus communis*	Castor bean
Fabaceae		**Legume Family**
*	*Albizia julibrissin*	Persian silk tree
*	*Ceratonia siliqua*	Carob
*	*Tipuana tipu*	Tipu tree
Geraniaceae		**Geranium Family**
*	*Erodium cicutarium*	Redstem filaree
*	*Pelargonium zonale*	Zonal geranium
Hamamelidaceae		**Witch-hazel Family**
*	*Liquidambar styraciflua*	Sweetgum
Lamiaceae		**Mint Family**
*, **	*Marrubium vulgare*	Horehound
*	*Rosmarinus officinalis*	Prostrate rosemary

Lauraceae		**Laurel Family**
*	*Cinnamomum camphora*	Camphor tree
Lythraceae		**Loosestrife Family**
*	*Lagerstroemia indica*	Crape myrtle
Malvaceae		**Mallow Family**
*	*Brachychiton populneus*	Kurrajong
*	*Malva parviflora*	Cheeseweed mallow
Meliaceae		**Mahogany Family**
*	*Melia azedarach*	Chinaberry
Myrtaceae		**Myrtle Family**
*	*Callistemon* sp.	Bottlebrush
*	*Eucalyptus* sp.	Eucalyptus
Nyctaginaceae		**Four O'clock Family**
*	*Bougainvillea* sp.	Bougainvillea
Oleaceae		**Olive Family**
	Fraxinus sp.	Ash
*	*Fraxinus uhdei*	Shamel ash
Plantaginaceae		**Plantain Family**
*	*Bacopa monnieri*	Waterhyssop/herb of grace
Polygonaceae		**Buckwheat Family**
*	*Rumex crispus*	Curly dock
Rosaceae		**Rose Family**
*	*Prunus cerasifera*	Flowering plum
*	*Pyrus calleryana*	Callery pear
*	*Rhaphiolepis indica*	Indian Hawthorn
*	*Rosa 'Korbin'*	Iceberg rose
Salicaceae		**Willow Family**
	Salix lasiolepis	Arroyo willow
Scrophulariaceae		**Figwort Family**
*	*Leucophyllum frutescens*	Texas ranger
Solanaceae		**Nightshade Family**
	Datura wrightii	Jimsonweed
Tamaricaceae		**Tamarisk Family**
*	*Tamarix* sp.	Tamarisk
Verbenaceae		**Vervain Family**
*	*Lantana camara*	Lantana

Zygophyllaceae		**Caltrop Family**
*, **	*Tribulus terrestris*	Puncture vine
MONOCOTS		
Agavaceae		**Century Plant Family**
*	*Agave americana*	American century plant
	Hesperoyucca whipplei	Our Lord's candle
Arecaceae		**Palm Family**
*	*Phoenix canariensis*	Canary Island palm
*	*Phoenix roebelenii*	Pygmy date palm
*	*Washingtonia robusta*	Mexican fan palm
Iridaceae		**Iris Family**
*	Dietes iridioides	African iris
Poaceae		**Grass Family**
*, **	*Avena barbata*	Slender wild oat
*, **	*Bromus diandrus*	Ripgut grass
*, **	*Bromus madritensis* ssp. *rubens*	Red brome
*	*Pennisetum setaceum*	Crimson fountain grass
*	*Polypogon monspeliensis*	Rabbitfoot grass
*, **	*Stipa miliacea* var. *miliacea*	Smilo grass
Typhaceae		**Cattail Family**
	Typha latifolia	Broad-leaved cattail

Taxonomy and scientific nomenclature generally conform to B.G. Baldwin and D.H. Goldman et al., eds. (2012; The Jepson Manual: Vascular Plants of California, 2nd edition; University of California Press, Berkeley and Los Angeles, California).

Common names for each taxa generally conform to Roberts, F.M., Jr. (2008; The Vascular Plants of Orange County, California: An Annotated Checklist; F.M. Roberts Publications, San Luis Rey, California) except where Abrams, L. (1923, 1944, and 1951; Illustrated Flora of the Pacific States: Washington, Oregon, and California, vols. I–III; Stanford University Press, Stanford, California) and Abrams, L. and Ferris, R.S. (1960; Illustrated Flora of the Pacific States: Washington, Oregon, and California, vol. IV; Stanford University Press, Stanford, California) were used, particularly when species-specific common names were not identified in Roberts, F.M., Jr. (2008).

APPENDIX C

WETLAND DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Trojan storage City/County: Calabasas, LA Sampling Date: 8-25-2022

Applicant/Owner: Kimley Horn State: CA Sampling Point: S-1

Investigator(s): Seremy Rosenthal Section, Township, Range: S22 T1N R17W

Landform (hillslope, terrace, etc.): stream bed Local relief (concave, convex, none): Concave Slope (%): <5%

Subregion (LRR): C Lat: 34°9'25.20"N Long: 118°39'3.86"W Datum: WGS84

Soil Map Unit Name: Cropley-urban land complex, 2 to 9 percent slopes NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus Sp.	50	Y	FACU
2.			
3.			
4.			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 10')			
1. —			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 10')			
1. Typha latifolia	20%	Y	OBL
2. Xanthium strumonium	15%	Y	FAC
3. Rumex crispus	10%	N	FAC
4. polypogon monspeliensis	5%	N	FACW
5. Helminthotheca echioides	15%	Y	FAC
6. Sonchus asper	1%	N	FAC
7.			
8.			
	66%	= Total Cover	

Woody Vine Stratum (Plot size: 10')			
1. —			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 34% % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	5	x 2 =	10
FAC species	41	x 3 =	123
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	116 (A)		353 (B)

Prevalence Index = B/A = 3.043

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: S-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2"	10 YR 3/2	100					Sandy	pebbles & cobbles
2-16"	2.5 YR 3/2	99%	2.5YR 3/6	1	C	M	Loamy clay	roots present, consistent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 16"-0"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Trojan storage City/County: Calabasas, LA Sampling Date: 8-25-2022

Applicant/Owner: Kimley Horn State: CA Sampling Point: S-2

Investigator(s): Jeremy Rosenthal Section, Township, Range: S22 T1N R17W

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): _____ Slope (%): 35

Subregion (LRR): C Lat: 34°9'25.14" N Long: 118°39'3.87" W Datum: WGS 84

Soil Map Unit Name: cropley-urban land complex, 2 to 9 percent slopes NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	Is the Sampled Area within a Wetland? Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus sp.	60%	Y	FACU
2.			
3.			
4.			
	60 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10')			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10')			
1. Typha latifolia	15%	Y	OBL
2. Xanthium strumarium	15%	Y	FAC
3. Rumex crispus	2%	N	FAC
4. Sonchus asper	2%	N	FAC
5. Helminthotheca echioides	10%	N	FAC
6. Malva parviflora	2%	N	FAC
7.			
8.			
	46 = Total Cover		
Woody Vine Stratum (Plot size: 10')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 54 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 15	x 1 = 15
FACW species 0	x 2 = 0
FAC species 31	x 3 = 93
FACU species 60	x 4 = 240
UPL species 0	x 5 = 0
Column Totals: 106 (A)	345 (B)

Prevalence Index = B/A = 3.253

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: S-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	7.5 YR 3/2	100					Clayey Sand	contains pebbles
8-13"	7.5 YR 3/2	100					Loamy Clay	slight saturation
13" Refusal								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Unknown -> Rock?

Depth (inches): 13"

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 8-13"

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil at 8-13" appeared to have some indicators of moisture but I do not believe it meets the A3 requirement

APPENDIX D

CULTURAL RESOURCES RECORDS SEARCH

August 24, 2022

James Thomas
Kimley-Horn
3880 Lemon Street, Suite 420
Riverside, California 92501

Subject: Cultural Resources Records Search Results for the Trojan Storage Project, Calabasas, Los Angeles County, California (BCR Consulting Project No. KIM2215)

Dear James:

BCR Consulting, LLC (BCR Consulting) was retained by Kimley-Horn to complete a cultural resources records search for the Trojan Storage Project (the project) located in the City of Calabasas, Los Angeles County, California. The project site is located in Section 22 of Township 1 North, Range 17 West, San Bernardino Baseline and Meridian. It is depicted on the United States Geological Survey (USGS) 7.5-Minute *Calabasas* (1967) topographic quadrangle (Attachment A). The purpose of this study was to identify potential for prehistoric or historic-period resources within project site boundaries.

Research

BCR Consulting Principal Archaeologist David Brunzell, M.A., RPA completed a cultural resources records search at the South Central Coastal Information Center (SCCIC) in Fullerton, California on August 23, 2022. Mr. Brunzell consulted records from all previously-recorded historic and prehistoric archaeological sites, as well as built environment resources (including historic districts) within one half-mile of the project site. The results have revealed that 17 previous studies have been completed resulting in one cultural resource (a prehistoric habitation site designated P-19-1127) recorded within one half-mile of the project site. One study (designated LA-2020) assessed the entire project site for cultural resources in 1990. No cultural resources were identified within the project boundaries during this study. A complete records search bibliography is provided as Attachment B.

Table A. Cultural Resources and Reports Within One Half-Mile of the Project Site

USGS Quad	Cultural Resources	Studies
Calabasas, California (1967)	P-19-1127: Prehistoric Habitation Site (1/2 Mile SE)	LA-136, 1197, 1198, 1207, 2020*, 2977, 3078, 3546, 4601, 5042, 5043, 8113, 8116, 10208, 10401, 12700, 13167

A review of topographic maps and aerial photographs at historicaerials.com has shown that the northern portion of the project site has been recently graded flat for vehicle storage. Some of the project has been subject to previous disturbances related to mechanical excavation. A building was located on the project site by 1947 but had been removed by 1985.

Recommendations

Although the project site has been subject to a previous cultural resources assessment, it took place over 30 years ago. Studies that exceed five years in age are usually not considered valid due to changing conditions in the field. Furthermore, while aerial photographs indicated previous disturbances within the project site boundaries, the extent and severity of the disturbances are not known. Based on these results, BCR Consulting recommends that a full cultural resources assessment be completed for the subject property. The assessment should include a summary of the current records search results, a systematic pedestrian field survey of the entire project site, and presentation of the results in a technical report. These tasks should be completed under the supervision of an individual that meets the U.S. Secretary of the Interior's Professional Qualification Standards for Prehistoric and Historic Archaeology.

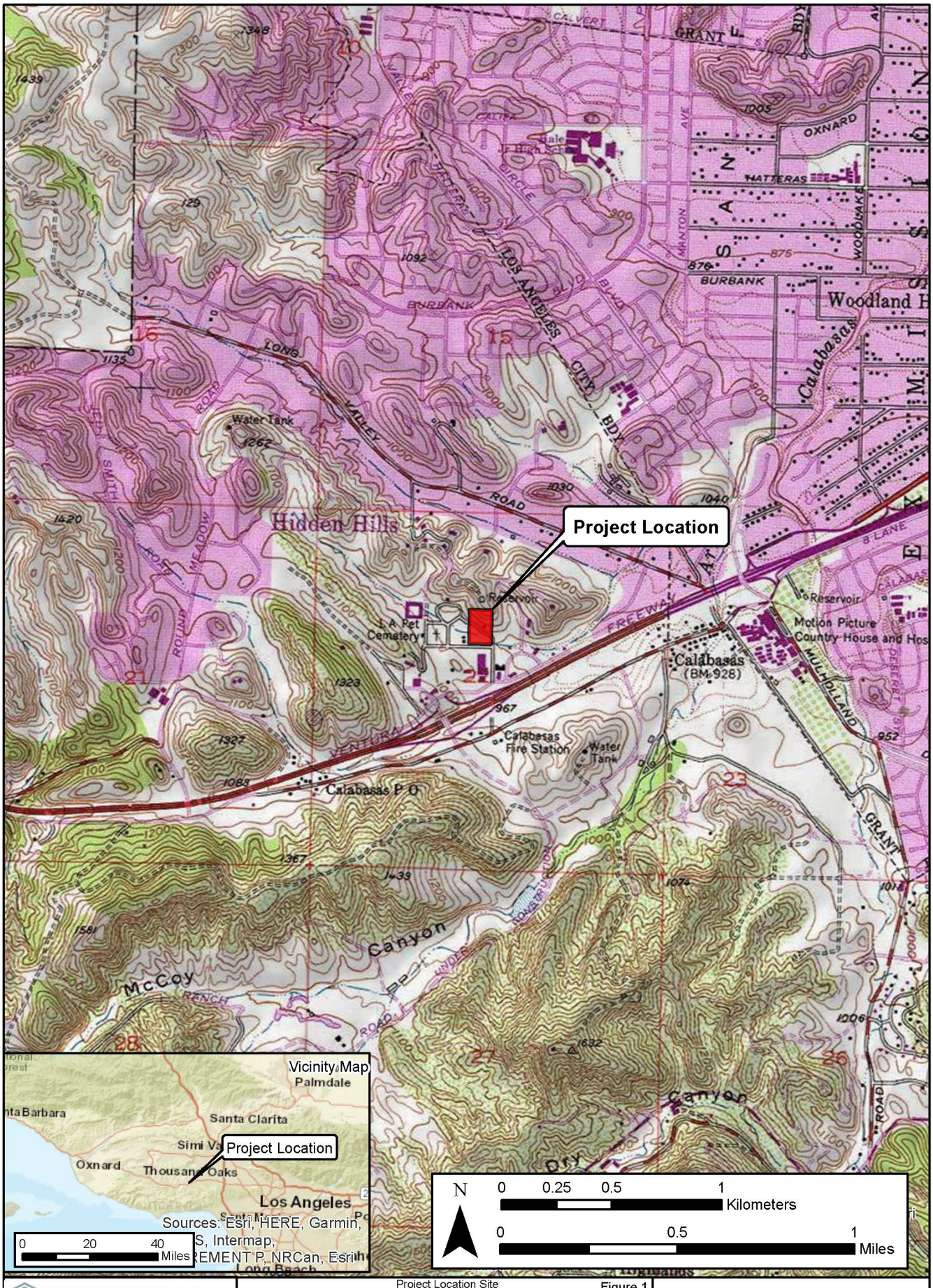
If human remains are encountered during activities associated with the proposed project, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

Please contact me by phone at 909/525-7078 or e-mail at david.brunzell@yahoo.com with any questions or comments.

Sincerely,

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment A: Project Location Map on USGS 7.5-Minute Topographic
Attachment B: SCCIC Records Search Bibliography



BCRCONSULTING LLC
Claremont Nepa Tehachapi
www.bcrconsulting.net
909-525-7078

Project Location Site
Calabasas Self Storage

Figure 1

Reference: ESRI; USGS Quad: Calabasas(1967), California

Kimley-Horn

Report List

KIM2215

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-00136		1984	Wlodarski, Robert J.	Negative Archaeological Survey Report for Mulholland Drive/valley Circle Overcrossing	John Romani and Robert Wlodarski	
LA-01197		1979	Wlodarski, Robert J. and Robert L. Pence	An Evaluation of the Impact Upon Cultural Resources by the Proposed Development of Tentative Tract No. 37824, Calabasas, Ca	Pence Archaeological Consulting	
LA-01198		1979	Wlodarski, Robert J. and Robert L. Pence	An Evaluation of the Impact Upon Cultural Resources by the Proposed Development of the Tentative Tract No. 32268, Calabasas		
LA-01207		1982	Padon, Beth	An Archaeological Assessment of Tentative Tract No. 37531 Zone Change Case No. 82-035-(5) Calabasas, California		19-001127
LA-02020		1990	McKenna, Jeanette A.	Phase I Historical and Archaeological Investigations of Tentative Tract 44494, Hidden Hills, Los Angeles County, California	McKenna et al.	
LA-02977		1994	Singer, Clay A., John E. Atwood, Shelley Gomes, and Mercy Leithem	A Preliminary Cultural Resources Report for the Old Town Calabasas Master Plan, Los Angeles County, California.	C.A. Singer & Associates, Inc.	19-000964
LA-03078		1994	Wlodarski, Robert J.	A Phase 1 Archaeological Study for Parcel Map 24002, Calabasas Road, City of Calabasas, Los Angeles County, California	Historical, Environmental, Archaeological, Research, Team	
LA-03546		1996	Wlodarski, Robert J.	A Phase 1 Archaeological Study Bikeway Gap Closure Project Cities of Calabasas, Agoura Hills, Westlake Village and Unincorporated Los Angeles County, California	Historical, Environmental, Archaeological, Research, Team	19-000041, 19-000042, 19-000229, 19-000238, 19-000243, 19-000315, 19-000320, 19-000413, 19-000420, 19-000463, 19-000467, 19-000669, 19-000842, 19-000862, 19-000890, 19-000972, 19-001021, 19-001027, 19-001099, 19-001352, 56-000071, 56-000095, 56-000096, 56-000179, 56-000186, 56-000242, 56-000261, 56-000341, 56-000342, 56-000737, 56-000865
LA-04601		1999	Duke, Curt	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 797-02, County of Los Angeles, California	LSA Associates, Inc.	
LA-05042		1999	Duke, Curt	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 332-05, County of Los Angeles, Ca	LSA Associates, Inc.	
LA-05043		1999	McKenna, Jeanette A.	Updated Cultural Resources Survey for the Proposed Office Project at 24400 Calabasas Road	McKenna et al.	

Report List

KIM2215

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-08113		1984	Webb, Lois M. et al.	Historic Property Survey Report 01-la-101, P.m. 26.9/27.4, Mulholland/valley Circle O/c, Los Angeles County, California, 07204-018740	Caltrans District 7	19-187331, 19-187332, 56-000101, 56-000154
LA-08116		2003	Whitley, David S.	Phase I Archaeological Survey of the Tentative Tracts 54063 & 54064 Study Area. Hidden Hills, Los Angeles County, California	W & S Consultants	
LA-10208		2001	Sylvia, Barbara	Negative Archaeological Survey Report: Metal Beam Guardrail (MBGR) Along Sections of Route 101 From Route 134 to the Ventura County Line.	Caltrans District 7	
LA-10401		2009	Romani, Gwen	Archaeological Survey Report: Southern California Edison Proposed Fibr Optic Moorpark East Copper Cable Replacement Project, Los Angeles and Ventura Counties, California	Compass Rose Archaeological, Inc.	19-000129, 19-000315, 19-000413, 19-000862, 19-000900, 19-001099, 19-003095, 19-150252, 56-000678, 56-000851, 56-000964, 56-001072, 56-001302, 56-001303, 56-001775, 56-100202
LA-12700		2011	Simon, Joseph	Phase II Archaeological Test Excavation and Determination of Significance at the Bank of America Fuel Cell Project Site, City of Calabasas Los Angeles County, California	W & S Consultants	19-001127
LA-13167		2015	Tartaglia, Louis James	A PHASE 1 CULTURAL RESOURCES SURVEY REPORT, Conditional Use Permit, Marriott Courtyard 24400 Calabasas Road, Calabasas, California 91365		

Resource List

KIM2215

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-001127	CA-LAN-001127	Resource Name - P-1	Site	Prehistoric	AP02; AP15	1982 (Beth Padon & Bob Wlodarski)	LA-01207, LA-12700

APPENDIX B2

GREENHOUSE GAS EMISSIONS MODEL DATA

December 6, 2019 Project No. 19153-01

Ms. Maggie Xu
Trojan Storage
1732 Aviation Boulevard, Suite 217
Redondo Beach, California 92078

Subject: ***Supplemental Geotechnical Evaluation, Proposed Self Storage Facility, 5050 Old Scandia Lane, Calabasas, California***

Introduction

In accordance with your request, LGC Geotechnical, Inc. has prepared this supplemental geotechnical evaluation for the proposed Self Storage Facility development to be located at 5050 Old Scandia lane in Calabasas, California. The development has been updated to include the addition of basements below the proposed self-storage buildings.

LGC Geotechnical, Inc. has assumed responsibility as geotechnical consultant of record for the proposed Self Storage Facility development. We have reviewed the referenced project geotechnical reports prepared by the previous geotechnical consultant (see References). Except where superseded herein, we are in general agreement with the geotechnical findings, conclusions and recommendations provided in those reports.

This supplemental report should be considered as part of the project design documents in conjunction with previous geotechnical reports (see references). In the case of conflict, the recommendations contained herein should supersede those provided in the previous project geotechnical reports. The remaining recommendations provided in the previous geotechnical reports (see references) remain valid and applicable.

Background

Earth Systems Southern California (ESSC) prepared a geotechnical investigation report for the site in January of 2016. The field evaluation consisted of four test pits ranging in depth from approximately 5 to 19 feet below existing grade (ESSC, 2016a). The test pits indicated fill depths ranging from approximately 7 to 10 feet below existing grade at the excavation locations. Groundwater seepage was encountered in Test Pit 3 at a depth of approximately 18.5 feet below existing grade and groundwater was not encountered in the remaining test pits. Laboratory testing of a near surface bulk sample from Test Pit 1 indicated “medium” potential for expansion. ESSC reported that since the site is underlain at shallow depths by Modelo Formation bedrock which is sufficiently dense to prevent liquefaction even if saturated, it does not appear liquefaction poses a hazard to the proposed development. ESSC

reported that the approximate lower two-thirds of the site consists of undocumented fill in the near surface. ESSC recommended that existing undocumented fill be removed and replaced with properly placed compacted fill for support of the proposed building structures. ESSC recommended that isolated pad footings be connected in both directions with a grade beam, structural slab, or other approved method (ESSC, 2016a).

ESSC provided a response to County review comments in January of 2017 (ESSC, 2017a). The major review comments were debris flow potential, thickness of alluvium below southern proposed building, shear strength of colluvial soils that mantle the northern ascending slope above the proposed development and slope stability analysis of the northern ascending slope. In order to respond to review comments, three hollow-stem, auger borings and two hang-augers were performed along with data (e.g., exploratory logs, laboratory test results, etc.) by other consultants from nearby sites was cited. The hollow-stem borings ranged in depth from approximately 19.5 to 26 feet below existing grade. Previously placed fill was encountered at depths of approximately 10 feet below existing grade in each of the borings. Minor groundwater seepage was encountered in B-1 at depth of approximately 19.5 feet below existing grade and groundwater was not encountered in the remaining two borings. In addition, two hand-augers were performed in the northern portion of the site to estimate the depth of alluvium/colluvium over bedrock. The depth of alluvium/colluvium was approximately 3.5 feet and 2 feet below existing grade for HA-1 and HA-2, respectively.

ESSC provided a response to County review comments in May of 2018 regarding the proposed 60-inch diameter storm drain (ESSC, 2018a). The County requested a separate geotechnical report be prepared addressing the proposed 60-inch diameter storm drain (ESSC, 2018b). In consideration that geotechnical explorations were not performed within the existing drainage channel, ESSC recommended that all alluvial deposits be removed to bedrock. ESSC estimated the depth of alluvium below the proposed storm drain invert ranging from approximately 7 feet at the east end and approximately 12 feet at the west end with actual required removals to be determined during grading based on observed conditions.

ESSC provided a geotechnical report addressing surficial slope stability of the northern ascending slope in November of 2018 (ESSC, 2018c). The purpose was to obtain additional site-specific data and potentially refine the recommendations for the debris barrier system (ESSC, 2017a). Twelve hand-auger borings were excavated along the slope in order to estimate the thickness of colluvium over bedrock. The hand-auger borings were excavated to bedrock. The depth to bedrock ranged from approximately 1.5 to 5.6 feet below existing grade. Laboratory testing consisted of in-situ dry density, moisture content, gradation, Atterberg Limits, and direct shear. Surficial stability factors of safety ranged from approximately 1.0 to 2.7. Based on analyses and review of historical aerial photographs, ESSC concluded that that a reduction in the limits of debris flow barrier and elimination of the 3-foot high earth berm above the proposed development that was previously recommended was acceptable provided a debris barrier was installed along the Elevation 1,000-foot contour and that the proposed retaining wall above the parking stalls west of proposed Building “C” is increased 3 feet in height and designed as an impact wall or a second debris flow barrier is installed at the Elevation 984-foot contour as depicted on the Map of Proposed Mitigation Measures (Attachment D of ESSC, 2018c).

Proposed Development

The proposed development will consist of grading for and construction of three self-storage buildings (Buildings "A" through "C"). Building "A" will be four stories including one subterranean level. Buildings "B" will be two stories which includes one subterranean level. Building "C" will include two stories; one subterranean and one partially subterranean, notched into the ascending hillside. A two story, at-grade office building will be located near Building "A". A parking lot will be located in the southeast corner.

Supplemental Geotechnical Evaluation & Laboratory Testing

A supplemental geotechnical evaluation was recently performed by LGC Geotechnical. This program consisted of the excavation of two bucket-auger borings and five hollow-stem auger borings.

Two large-diameter borings (BA-1 and BA-2) were each drilled to a depth of approximately 38 feet below existing grade. The borings were excavated to evaluate the geologic structure of the bedrock materials and to obtain samples for laboratory testing. The borings were surface logged during excavation and downhole logged by an engineering geologist in order to obtain structural geologic information. The borings were subsequently backfilled with soils cuttings and tamped.

Five hollow-stem auger borings (HS-1 through HS-5) were drilled to depths ranging from approximately 20 to 50 feet below existing grade. A representative of LGC Geotechnical observed the drilling operations, logged the borings, and collected soil samples for laboratory testing. The borings were excavated using a truck-mounted drill rig equipped with hollow-stem augers. Driven soil samples were collected by means of the Standard Penetration Test (SPT) and Modified California Drive (MCD) sampler. Samples were generally obtained at 2.5 to 5-foot vertical increments. The MCD is a split-barrel sampler with a tapered cutting tip and lined with a series of 1-inch-tall brass rings. The SPT sampler and MCD sampler were driven using a 140-pound automatic hammer falling 30 inches to advance the sampler a total depth of 18 inches or until refusal. The raw blow counts for each 6-inch increment of penetration were recorded on the boring logs. Bulk samples were also collected and logged at select depths for laboratory testing. At the completion of drilling the borings were backfilled with cuttings and tamped.

The approximate locations of borings performed by LGC Geotechnical are presented on the Geotechnical Map (Sheet 1). Excavation logs are presented in Appendix A.

Representative bulk and driven samples were obtained for laboratory testing during our field evaluation. Laboratory testing included in-situ dry density and moisture content, Atterberg Limits, consolidation, direct shear, expansion index, and corrosion (sulfate, chloride, pH, and minimum resistivity). A summary of the laboratory test results is presented in Appendix C.

The following is a summary of the laboratory test results.

- Dry density values ranged from approximately 73 pounds per cubic foot (pcf) to 115 pcf with an average of 90 pcf. Field moisture contents ranged from approximately 12 percent to 48 percent with an average of approximately 29 percent.

- Six Atterberg Limit (liquid limit and plastic limit) tests were performed. Results indicated Plasticity Index (PI) values ranging from 25 to 44.
- Two Expansion Index (EI) tests were performed. The result was EI values were 91 and 113, corresponding to "High" expansion potential.
- Three consolidation tests were performed. The deformation versus vertical stress plots are provided in Appendix C.
- Two direct shear tests were performed. The plots are provided in Appendix C.
- Corrosion testing indicated soluble sulfate contents of approximately 0.40 and 0.32 percent, chloride contents of 291 and 107 parts per million (ppm), pH values of 7.5 and 7.1, and minimum resistivity values of 310 and 750 ohm-centimeters.

Dry density and moisture content values are provided on the boring logs. Laboratory test results are provided in Appendix C.

Groundwater

Groundwater was encountered at depths ranging from approximately 20 feet (approximate elevation of 941 feet) to 37 feet (approximate elevation of 935 feet) below existing grade during our recent field evaluation.

It should be noted that higher localized and seasonal perched groundwater conditions may accumulate below the surface and should be expected throughout the design life of the proposed improvements. In general, groundwater conditions below any given site may vary over time depending on numerous factors including seasonal rainfall and local irrigation among others.

Conclusions

The following is a summary of site geotechnical conclusions, which may affect future development of the site.

- Groundwater was encountered at depths ranging from approximately 20 feet (approximate elevation of 941 feet) to 37 feet (approximate elevation of 935 feet) below existing grade during our recent field evaluation. Groundwater is anticipated to be at an approximate elevation of 941 to 945 feet and may be encountered at higher elevations. Dewatering should be anticipated during construction, especially for Building "A". The need for water proofing of basements should be anticipated.
- If adequate lateral distance is not available for the use of temporary slopes due to property line constraints or existing structures, temporary shoring may be required for construction of basement structures. Where applicable, temporary shoring should incorporate adequate height for required earthwork removals.
- This statement is made in accordance with Section 111 of the County of Los Angeles Building Code. Based on our field evaluation, and provided our recommendations are properly implemented and maintained, it is the opinion of LGC Geotechnical that the proposed development will be safe for its intended use against hazard from landslide, settlement or slippage and the proposed development will have no adverse effect on the stability of the site or adjoining properties.

Recommendations

The following recommendations are to be considered preliminary, and should be confirmed upon completion of earthwork operations. In addition, they should be considered minimal from a geotechnical viewpoint, as there may be more restrictive requirements from the architect, structural engineer, building codes, governing agencies, or the County of Los Angeles. It is the responsibility of the builder to ensure these recommendations are provided to the appropriate parties.

Site Earthwork – General

We recommend that earthwork onsite be performed in accordance with the following recommendations, the 2016 CBC/2017 County of Los Angeles Building Code requirements and the General Earthwork and Grading Specifications included in Appendix D. In case of conflict, the following recommendations shall supersede previous recommendations and those included as part of Appendix D.

Site Preparation

Prior to grading of areas to receive structural fill, engineered structures or improvements, should be demolished and the area should be cleared of existing vegetation (grass, etc.), surface obstructions, existing debris and potentially compressible or otherwise unsuitable material. Debris should be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions, which extend below proposed removal bottoms, should be replaced with suitable compacted fill material. Any abandoned utility lines should be completely removed and replaced with properly compacted fill.

If cesspools or septic systems are encountered, they should be removed in their entirety. The resulting excavation should be backfilled with properly compacted fill soils. As an alternative, cesspools can be backfilled with lean sand-cement slurry. Any encountered wells should be properly abandoned in accordance with regulatory requirements. At the conclusion of the clearing operations, a representative of LGC Geotechnical should observe and accept the site prior to further grading.

Removal Depths and Limits

Per County requirements, we recommend undocumented fill be completely removed from beneath proposed structures and structural improvements.

In order to provide a relatively uniform bearing condition for the planned improvements, undocumented fill soils and the loose/compressible upper portion of native soils are to be removed and replaced as properly compacted fills. For preliminary planning purposes, the depth of required removals may be estimated as indicated below. It should be noted that updated recommendations may be required based on the actual conditions encountered during grading, changes to building layouts and/or structural loads.

Building Structures "A" and "B": Building Structures "A" and "B" will be constructed in areas underlain by undocumented fill and alluvium. It is anticipated that required excavations for the basement structures will remove the majority of previously placed undocumented fill soils and the upper portion of alluvial soils. If not removed during basement excavation, remaining undocumented fil soils and the upper approximately 3 feet of alluvial soils should be removed to suitable alluvium or bedrock material. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundations, equal to the removal depth below the foundation.

Building Structure "C": Excavation for the proposed basement portion of Building Structure "C" is anticipated to be excavated to at least 10 feet below existing grade. It is anticipated that bedrock materials will be suitable (i.e., firm and relatively unyielding) at this depth for foundation construction. However, if soft or yielding soils are encountered, they should be completely removed and replaced with properly compacted fill and/or sand-cement slurry. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundation, equal to the removal depth below the foundation.

Office/Managers Residence: The proposed Office/Managers Residence will be constructed in areas underlain by undocumented fill and alluvium. It is anticipated that required excavations for the proposed foundation will remove the majority of previously placed undocumented fill soils. If not removed during grading, remaining undocumented fil soils and the upper approximately 3 feet of alluvial soils should be removed to suitable alluvium or bedrock material. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundations, equal to the removal depth below the foundation.

Retaining/Free-Standing Wall Structures: Where not achieved by planned grading or remedial grading, we recommend planned wall footings be over-excavated so that they are underlain by at least 2 feet of compacted fill below proposed footings. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance of 2 feet beyond the edges of the proposed footings.

Pavement and Hardscape Areas: Where not achieved by planned grading or remedial grading, we recommend that proposed pavement and hardscape areas be over-excavated so that they are underlain by at least 1-foot of compacted fill below the proposed finished subgrade (i.e., below planned aggregate base/asphalt concrete). Where practical, the envelope for pavement and hardscape over-excavation should extend laterally a minimum lateral distance of 1-foot beyond the edges of the proposed improvements.

Local conditions may be encountered during excavation that could require additional over-excavation beyond the above-noted minimum in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading will be determined by the geotechnical consultant, based on subsurface conditions encountered during grading.

Temporary Excavations

Based on the proposed grading plan, excavations up to approximately 20 feet are anticipated. Generally, excavations should be sloped back to 1:1 inclination or flatter or be properly shored.

Flatter excavations may be prudent where groundwater is present or as the site conditions dictate. Temporary excavations should be performed in accordance with project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations should be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter. Based on our field investigation, the majority of site soils are anticipated to be OSHA Type "B" soils (Refer to the attached boring logs, Appendix B). Soils below groundwater should be considered OSHA type "C" soils. Soil conditions should be regularly evaluated during construction to verify conditions are as anticipated. The contractor shall be responsible for providing the "competent person", required by OSHA standards, to evaluate soil conditions. Close coordination with the geotechnical consultant should be maintained to facilitate construction while providing safe excavations. Excavation safety is the sole responsibility of the contractor.

Vehicular traffic, stockpiles, and equipment storage should be set back from the perimeter of excavations a distance equivalent to a 1:1 projection from the bottom of the excavation, or 5 feet whichever is greater. Once an excavation has been initiated, it should be backfilled as soon as practical. Prolonged exposure of temporary excavations may result in some localized instability. Excavations should be planned so that they are not initiated without sufficient time to shore/fill them prior to weekends, holidays, or forecasted rain.

Groundwater is anticipated to be at an approximate elevation of 941 to 945 feet and may be encountered at higher elevations.

Dewatering and Wet Removals

In order to perform the recommended removals, stabilize the subgrade (if needed) and allow for construction of the mat slab, temporary dewatering may be required, especially for Building "A". In general, soils encountered near the proposed finish floor elevation of Building "A" were fine-grained (i.e., silts and clays). A significant quantity of water could enter the excavation. Actual quantities of groundwater in each excavation will likely vary across the site. The means and methods of dewatering, whether pumping from sumps, installation of dewatering wells or other methods, should be determined by the contractor.

Removal Bottoms

In general, removal bottom areas and any areas to receive compacted fill should be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition, and re-compacted per project requirements. However, scarification is generally not required when the removal bottom is near (within about 2 feet above) groundwater. Pumping of the subgrade should be anticipated for removal bottoms excavated near site groundwater. For these conditions, stabilization of the subgrade may be required prior to placing compacted fill. In general, stabilization should be anticipated to consist of a minimum of 12 inches of aggregate base; however, the actual thickness of stabilization aggregate will have to be determined during earthwork based on field conditions. Stabilization aggregate should be placed in layers and compacted. It should be anticipated that the first lift of crushed aggregate will be worked into the pumping subgrade. Subsequent lifts will help bridge the pumping conditions. Thickness of

required aggregate base stabilization may be reduced by placing a layer of biaxial geogrid reinforcement (Tensar TX140 or acceptable equivalent) directly on the subgrade prior to aggregate base placement. Contractor may have to minimize construction traffic on the removal bottom to reduce disturbance. Soft and yielding subgrade should be evaluated on a case-by-case basis during earthwork operations.

Material for Fill

From a geotechnical perspective, the onsite soils are generally considered suitable for use as general compacted fill, provided they are screened of organic materials, construction debris and any oversize material (8 inches in greatest dimension). Significant moisture conditioning of site soils should be anticipated, refer to below Section "Placement and Compaction of Fills."

From a geotechnical viewpoint, required import soils for general fill (i.e., non-retaining wall backfill) should consist of clean, granular soils of very low to low expansion potential (expansion index 50 or less based on ASTM D 4829). Import for retaining wall backfill should meet the criteria outlined in the paragraph below. Source samples should be provided to the geotechnical consultant for laboratory testing a minimum of three working days prior to any planned importation.

Basement/retaining wall backfill should consist of sandy soils with a maximum of 35 percent fines (passing the No. 200 sieve) per American Society for Testing and Materials (ASTM) Test Method D1140 (or ASTM D6913/D422) and a very low expansion potential (EI of 20 or less per ASTM D4829). Soils should also be screened of organic materials, construction debris, and any material greater than 3 inches. The site contains some soils that are not suitable for retaining wall backfill due to their clay content and expansion potential, therefore import or select grading and stockpiling will be required by contractor for obtaining suitable retaining wall backfill soil. Contractor should anticipate required import of soils for retaining wall backfill.

Aggregate base (crushed aggregate base or crushed miscellaneous base) should conform to the requirements of Section 200-2 of the Standard Specifications for Public Works Construction ("Greenbook") for untreated base materials (except processed miscellaneous base) or Caltrans Class 2 aggregate base.

Placement and Compaction of Fills

Material to be placed as fill should be brought to near optimum moisture content (generally within optimum and 2 percent above optimum moisture content) and recompacted to at least 90 percent relative compaction (per ASTM D1557). Significant moisture conditioning of site soils will be required in order to achieve adequate compaction. The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill should be placed in uniform lifts not exceeding 8 inches in compacted thickness. Each lift should be thoroughly compacted and accepted prior to subsequent lifts. Generally, placement and compaction of fill should be performed in accordance with local grading ordinances and with observation and testing by the geotechnical consultant. Oversized material as previously defined should be removed from site fills.

The moisture content of soils within portions of the site is anticipated to be very moist. Significant moisture conditioning will likely be necessary to achieve the required degree of compaction. Drying and/or mixing the very moist soils will be required prior to reusing the materials in compacted fills. Soils are also present that will require additional moisture in order to achieve the required compaction.

During backfill of excavations, the fill should be properly benched into firm and competent soils of temporary backcut slopes as it is placed in lifts.

Aggregate base material should be compacted to a minimum of 95 percent relative compaction at or slightly above optimum moisture content per ASTM D1557. Subgrade below aggregate base should be compacted to a minimum of 90 percent relative compaction per ASTM D1557 at or slightly above optimum moisture content.

If gap-graded ¾-inch rock is used for backfill (around storm drain storage chambers, retaining wall backfill, etc.) it will require compaction. Rock shall be placed in thin lifts (typically not exceeding 6 inches) and mechanically compacted with observation by the geotechnical consultant. Backfill rock shall meet the requirements of ASTM D2321. Gap-graded rock is required to be wrapped in filter fabric to prevent the migration of fines into the rock backfill.

Trench and Retaining Wall Backfill and Compaction

The onsite soils may generally be suitable as trench backfill, provided the soils are screened of rocks and other material greater than 6 inches in diameter and organic matter. If trenches are shallow or the use of conventional equipment may result in damage to the utilities, sand having a sand equivalent (SE) of 30 or greater (per California Test Method [CTM] 217) may be used to bed and shade the pipes. Sand backfill within the pipe bedding zone may be densified by jetting or flooding and then tamping to ensure adequate compaction. Subsequent trench backfill should be compacted in uniform thin lifts by mechanical means to at least 90 percent relative compaction (per ASTM D1557).

Basement/Retaining wall backfill should consist of predominately granular, sandy soils as outlined in above Section "Material for Fill." For subterranean/basement walls the select sandy zone should extend a minimum of a 1:1 (horizontal to vertical) upward projection from the bottom of the basement wall subdrain (refer to Figure 1). For conventional retaining walls the limits of select sandy backfill should extend at minimum ½ the height of the retaining wall or the width of the heel (if applicable), whichever is greater (refer to Figure 2). Retaining wall backfill soils should be compacted in relatively uniform thin lifts to a minimum of 90 percent relative compaction (per ASTM D1557). Jetting or flooding of retaining wall backfill materials should not be permitted.

In backfill areas where mechanical compaction of soil backfill is impractical due to space constraints, typically sand-cement slurry may be substituted for compacted backfill. The slurry should contain about one sack of cement per cubic yard. When set, such a mix typically has the consistency of compacted soil. Sand cement slurry placed near the surface within landscape areas should be evaluated for potential impacts on planned improvements.

A representative from LGC Geotechnical should observe, probe, and test backfill to verify compliance with the project recommendations.

Oversized Material

Generation of a surplus of oversized material (material greater than 8 inches in maximum dimension) is generally not anticipated during site grading. However, some oversized material may be encountered, which may result in excavation difficulty for narrow excavations. Recommendations are provided for appropriate handling of oversized materials in Appendix D.

Preliminary Foundation Recommendations

Please note that the following foundation recommendations are preliminary and must be confirmed by LGC Geotechnical at the completion of project plans (i.e., grading and site layout plans) as well as completion of earthwork.

A mat foundation can be used for support of the proposed building structures to distribute structural loads, to span local irregularities in the supporting capacity of the foundation soils, and to reduce the magnitude of differential settlements between adjacent columns and load bearing walls. The magnitude of total and differential settlements of the mat foundation will be a function of the structural design and stiffness of the mat. The mat foundation should be placed on suitable material as outlined above.

Provided our earthwork recommendations are appropriately implemented, the mat foundation may be designed using an allowable soil bearing pressure of 1,500 psf. Bearing values indicated above are for total dead loads and frequently applied live loads. The above vertical bearing may be increased by one-third for short durations of loading which will include the effect of wind or seismic forces. A preliminary vertical modulus of subgrade reaction (k) of 10 pounds per cubic inch (pci) may be used for design.

The following preliminary soil parameters may be used for the WRI procedure for slab-on-ground foundations per Section 1808 of the 2016 CBC to resist expansive soils:

- Effective Plasticity Index: 45
- Climatic Rating: Cw = 15
- Reinforcement: Per structural designer
- Minimum Perimeter Embedment Depth: 24 inches below lowest adjacent grade.
- Minimum Slab Thickness: 6 inches
- Minimum Slab Reinforcement: per the structural designer
- Moisture-condition (presoak) slab subgrade of at-grade structures to 140% of optimum moisture content to a minimum depth of 24 inches prior to trenching.

In utilizing these parameters, the foundation engineer should design the foundation system in accordance with the allowable deflection criteria of applicable codes and the requirements of the structural designer/architect. Other types of stiff slabs may be used in place of the CBC slab design provided that, in the opinion of the foundation structural designer, the alternative type

of slab is at least as stiff and strong as that designed by the CBC method. Increasing the stiffness of the foundation system in excess of the minimum parameters provided herein will decrease the potential of post-construction movement. It should be noted that minimum embedment depth and slab thicknesses and reinforcement provided above are due to site expansive soils and additional reinforcement may be required due to structural considerations and should be evaluated by the structural designer.

For minor site free standing/retaining walls an allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 18 inches and minimum embedment of 24 inches below lowest adjacent ground surface. This value may be increased by 300 psf for each additional foot of foundation width to a maximum value of 2,500 psf. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5 horizontal feet to 1-foot vertical) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads). The increase of bearing capacity is based on a reduced factor of safety (seismic factor of safety equal to three-fourths of the static factor of safety) for short duration loading.

Resistance to lateral loads can be provided by friction acting at the base of foundations and by passive earth pressure. For concrete/soil frictional resistance, an allowable coefficient of friction of 0.35 may be assumed with dead-load forces. An allowable passive lateral earth pressure of 230 psf per foot of depth (or pcf) to a maximum of 2,300 psf may be used for lateral resistance. This passive pressure is applicable for level (ground slope equal to or flatter than 5 horizontal feet to 1-foot vertical) conditions only. Frictional resistance and passive pressure may be used in combination without reduction. We recommend that the upper foot of passive resistance be neglected if finished grade will not be covered with concrete or asphalt concrete. The provided allowable passive pressure is based on a factor of safety of 1.5 and may be increased by one-third for short duration wind or seismic loading. The increase of passive pressure is based on a reduced factor of safety (seismic factor of safety equal to three-fourths of the static factor of safety) for short duration loading

Building Slab Underlayment Guidelines

The following is for informational purposes only since slab underlayment (e.g., moisture retarder, sand or gravel layers for concrete curing and/or capillary break) is unrelated to the geotechnical performance of the foundation and thereby not the purview of the geotechnical consultant. Post-construction moisture migration should be expected below the foundation. The foundation engineer/architect should determine whether the use of a capillary break (sand or gravel layer), in conjunction with the vapor retarder, is necessary or required by code. Sand layer thickness and location (above and/or below vapor retarder) should also be determined by the foundation engineer/architect.

Lateral Earth Pressures for Basement/Retaining Walls

Based on the preliminary project plans, basement walls up to about 20 feet in height are planned at the site. Lateral earth pressures for approved native sandy soils meeting indicated

project requirements are provided below. Lateral earth pressures are provided as equivalent fluid unit weights, in psf per foot of depth (or pcf). These values do not contain an appreciable factor of safety, so the retaining wall designer should apply the applicable factors of safety and/or load factors during design. A soil unit weight of 115 pcf may be assumed for calculating the actual weight of soil over the wall footing.

If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the shear strength of the soil cannot be mobilized and the earth pressure will be higher. Such walls should be designed for "at-rest" conditions. If a structure moves toward the soils, the resulting resistance developed by the soil is the "passive" resistance. The equivalent fluid pressure values assume free-draining conditions and a drainage system will be installed and maintained to prevent the build-up of hydrostatic pressures. Typically, a basement wall constructed directly against temporary shoring is provided with a composite drainage mat (e.g., Miradrain, etc.) placed over the lagging and collected at the wall bottom by a manifold pipe system properly outletted to a suitable discharge point. Basement walls not requiring shoring due to adequate horizontal distance for temporary slopes are subsequently backfilled with sandy soils and a subdrain pipe is wrapped in drainage aggregate and filter fabric (e.g., "burrito" subdrain) and properly outletted to a suitable discharge point (Refer to Figure 1). If a sump pump is required to outlet accumulated water behind retaining/basement walls, the owner and any subsequent owners must be made aware that it will be their responsibility to ensure the sump pump continues to perform properly for the life of the project. Basement/retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. Please note that waterproofing and specification of the drainage mat and outlet system are not the purview of the geotechnical consultant. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values should be provided on an individual-case basis by the geotechnical consultant. Refer to Figure 1 and 2.

The following lateral earth pressures are presented on Table 1A for design of site basement/retaining walls constructed against the shoring wall (i.e., cut condition not requiring backfill).

TABLE 1A

Lateral Earth Pressures – Cut Condition

Condition	**Equivalent Fluid Unit Weight (pcf)**	
	Cut Condition w/Shoring Wall	
	Level Backfill	**2:1 Upward Sloping Backfill**
Active	45	65
At-Rest	70	90

The following lateral earth pressures are presented on Table 1B are for backfilled basement/retaining walls using approved select granular soils with a maximum of 35 percent

fines (passing the No. 200 sieve per ASTM D-421/422) and a maximum Expansion Index of 20 (per ASTM D-4829). The retaining wall designer should clearly indicate on the retaining wall plans the required sandy soil backfill criteria. If the limits of select sandy backfill indicated on Figure 1 cannot be extended due to property line constraints, the lateral earth pressures provided in Table 1A should be used.

TABLE 1B

Lateral Earth Pressures – Conventional Backfilled Basement/Retaining Wall - Drained

Condition	Equivalent Fluid Unit Weight (pcf)	
	Approved Sandy Backfill Material	
	Drained Backfill	
	Level Backfill	2:1 Upward Sloping Backfill
Active	35	55
At-Rest	55	80

Surcharge loading effects from any adjacent structures should be evaluated by the basement/retaining wall designer. In general, structural loads within a 1:1 (horizontal to vertical) upward projection from the bottom of the proposed basement/retaining wall footing will surcharge the proposed retaining structure. In addition to the recommended earth pressure, basement/retaining walls adjacent to streets should be designed to resist vehicular traffic if applicable. Uniform surcharges may be estimated using the applicable coefficient of lateral earth pressure using a rectangular distribution. For a level backfill, a factor of 0.5 and 0.33 may be used for at-rest and active conditions, respectively. The vertical traffic surcharge may be determined by the structural designer. Estimated surcharge loads on the retaining wall may be provided on a case-by-case basis based on the proposed layout (i.e., retaining wall height and corresponding horizontal distance and extent of surcharge). The retaining wall designer should contact the geotechnical consultant for any required geotechnical assistance in estimating any applicable surcharge loads

If required, the retaining wall designer may use a seismic lateral earth pressure increment of 35 pcf. This increment should be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2016 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Categories D through F for retaining wall structures supporting more than 6 feet of backfill height. This seismic lateral earth pressure is estimated using the general procedure outlined by Agusti and Sitar, 2013.

Allowable soil bearing and lateral resistance (friction coefficient and passive resistance) are

provided in above Section "Preliminary Foundation Recommendations."

Lateral Earth Pressures for Basement Walls for Building A

Due to the proximity of anticipated groundwater table to the proposed foundation depth of Building "A", it may not be practical to permanently dewater the surrounding site soils. Therefore, the option of designing the basement walls for hydro-static pressures are provided in Table 2 below.

TABLE 2

Lateral Earth Pressures – Conventional Backfilled Basement/Retaining Wall –Not Drained

Condition	Equivalent Fluid Unit Weight (pcf)
	Sandy Backfill Material
	Includes Hydrostatic
	Level Backfill
Active	80
At-Rest	90

Permanent Soldier Pile Wall

The following lateral earth pressures presented below in Table 3 may be used for design of permanent soldier pile wall which may be constructed in the northern portion of the site adjacent to Building "C". The provided equivalent fluid pressures do not include any hydrostatic pressures.

TABLE 3

Lateral Earth Pressures for Soldier Pile Wall

Condition	Equivalent Fluid Unit Weight (pcf)	
	Level Backfill	2:1 Upward Sloping Backfill
Active	45	65

Retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. Typically, a soldier pile wall is provided with a composite drainage mat (e.g.,

Miradrain, etc.) placed between the soldier piles and collected at the wall bottom and properly outletted to a suitable discharge point.

In general, any building, equipment or traffic loads located within a 1:1 (horizontal to vertical) projection from the base of the shoring should be added to the applicable lateral earth pressure. In addition to the recommended earth pressure, basement/retaining walls adjacent to streets should be designed to resist vehicular traffic if applicable. Refer to the discussion regarding surcharge loading provided in above Section "Lateral Earth Pressures for Basement/Retaining Walls." The retaining wall designer should contact the geotechnical consultant for any required geotechnical assistance in estimating any applicable surcharge loads.

For drilled piers spaced a minimum of three pile diameters on-center, an allowable passive pressure of 460 pcf may be used for passive resistance. The passive pressure incorporates an arching factor of 2 (e.g., 230 pcf x 2) and should be limited to a maximum of 12 times the value provided above (e.g., 460 pcf to a maximum of 4,600 psf). Passive pressure should be reduced for any piers extending below site groundwater at an elevation of 945 feet above msl. Below groundwater, an allowable passive pressure of 210 pcf (e.g., 105 pcf x 2) to a maximum of 12 times (e.g., 210 pcf to a maximum of 2,520 psf) may be used for passive resistance. Passive pressure values are only applicable for level (5 horizontal feet to 1-foot vertical or flatter) soil conditions. The upper foot of passive resistance should be neglected if finish grade is not covered with asphalt or concrete. To develop the full lateral value, provisions should be made to assure firm contact between the soldier piles and the undisturbed soils. The concrete placed in the soldier pile borehole excavation below the excavated level should be of adequate strength to transfer the imposed loads to the surrounding soils. The provided allowable passive pressure values are based on a factor of safety of 1.5. Basement/Retaining wall designer should incorporate appropriate factors of safety in design.

Continuous lagging will be required between the soldier piles. Lagging should be placed in a timely manner during excavation in order to minimize potential spalling and sloughing. Due to the presence of sand layers encountered in explorations, spalling and sloughing should be anticipated and shorter excavation lifts may be required. Careful installation of the lagging will be necessary to achieve bearing against the retained earth. The backfill of the lagging should consist of one sack sand-cement slurry. The contractor should ensure full bearing of retained earth to the lagging. Means and methods are per the contractor in order to ultimately ensure full bearing of retained earth to the lagging. The soldier piles should be designed for the full anticipated lateral earth pressure. However, the pressure on the lagging will be less because of arching of the soils between piles. We recommend that the lagging be designed for the recommended lateral earth pressure but may be limited to a maximum value of 400 psf. Lagging placed behind the back flange of the solider piles will negate the soil arching effect thereby increasing the lateral earth pressure on the lagging.

If required, the retaining wall designer may use a seismic lateral earth pressure increment of 35 pcf. This increment should be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2016 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Categories D through F for retaining wall structures supporting more than 6 feet of backfill height. This

seismic lateral earth pressure is estimated using the general procedure outlined by Agusti and Sitar, 2013.

Temporary Shoring

Temporary shoring will likely be required for portions of the site due to planned excavation depths and proximity to property lines. The earth pressures provided below are only for temporary shoring conditions and assume a fully drained condition and do not include any hydrostatic pressures.

Typical cantilever temporary shoring, where deflection of the shoring will not impact the performance of adjacent structures, may be designed using the active equivalent fluid pressures provided in Table 4A.

TABLE 4A

Lateral Earth Pressures – Cantilever Temporary Shoring

Condition	Equivalent Fluid Unit Weight (pcf)	
	Level Backfill	**2:1 Upward Sloping Backfill**
Active	35	55

Braced or tied-back shoring may be used in areas where the shoring will be located close to existing structures in order to limit shoring defections or required due to the proposed depth of excavation. Uniform soil pressures for braced shoring where H is equal to the depth in feet of the excavation being shored are provided in Table 4B.

TABLE 4B

Lateral Earth Pressures – Braced Temporary Shoring

Condition	Uniform Pressure (psf)	
	Level Backfill	**2:1 Upward Sloping Backfill**
Braced	23H	36H

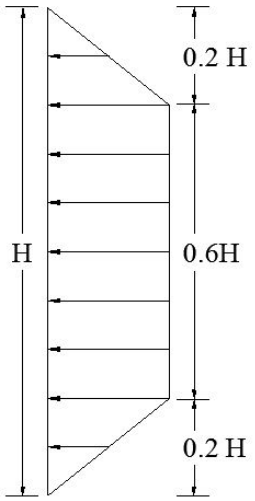
For tied-back shoring, a trapezoidal apparent earth pressure distribution (0.2H/0.6H/0.2H) may be used. The magnitude of the maximum pressure is provided in Table 4C in psf where H is equal to the depth in feet of the excavation being shored.

TABLE 4C

Lateral Earth Pressures – Tied-Back Temporary Shoring

Condition	Trapezoidal Pressure (psf)	
	Level Backfill	**2:1 Upward Sloping Backfill**
Tied-Back	29H	45H

Trapezoidal Distribution of Pressure



Surcharge loading effects from any adjacent structures should be evaluated by the retaining wall designer. In general, any slopes, building, equipment or traffic loads located within a 1:1 (horizontal to vertical) projection from the base of the shoring will surcharge the proposed shoring structure. If applicable, in addition to the recommended earth pressure a minimum additional uniform lateral pressure of 80 psf for the upper 10 feet should be added to the appropriate lateral earth pressures to account for typical vehicle traffic loading. The retaining wall designer should contact the geotechnical consultant for any required geotechnical assistance in estimating any applicable surcharge loads.

For piers spaced a minimum of 2.5 pile diameters on-center, an allowable passive pressure of 520 pcf may be used for passive resistance. The passive pressure incorporates an arching factor of 2 (e.g., 260 pcf x 2) and should be limited to a maximum of 12 times the value provided above (e.g., 520 pcf to a maximum of 6,240 psf). Passive pressure should be reduced for any piers

extending below site groundwater at an elevation of 945 feet above msl. Below groundwater, an allowable passive pressure of 240 pcf (e.g., 120 pcf x 2) to a maximum of 12 times (e.g., 240 pcf to a maximum of 2,880 psf) may be used for passive resistance. Passive pressure values are only applicable for level (5 horizontal feet to 1-foot vertical or flatter) soil conditions. To develop the full lateral value, provisions should be made to assure firm contact between the soldier piles and the undisturbed soils. The concrete placed in the soldier pile borehole excavation below the excavated level should be of adequate strength to transfer the imposed loads to the surrounding soils. The provided allowable passive pressure values are based on a factor of safety of 1.3. Shoring designer should incorporate appropriate factors of safety in design.

Continuous lagging should be provided between the soldier piles. Lagging should be placed in a timely manner during excavation in order to minimize potential spalling and sloughing. Careful installation of the lagging will be necessary to achieve bearing against the retained earth. The backfill of the lagging should consist of sand-cement slurry or compacted moistened granular soil. Means and methods are per the contractor in order to ultimately ensure full bearing of retained earth to the lagging. The soldier piles should be designed for the full anticipated lateral pressure, however, the pressure on the lagging will be less due to soil arching between the piles. We recommend that the lagging be designed for the recommended earth pressure but may be limited to a maximum value of 400 psf if surcharge loads are not present. Lagging placed behind the solider piles will negate the soil arching effect, therefore increased lateral earth pressures on the lagging should be anticipated.

If required, tie-back friction anchors may be used to resist lateral loads. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn at 45 degrees from the vertical through the bottom of the excavation. Only the frictional resistance developed beyond this plane would be effective in resisting lateral loads. The capacities of anchors should be determined by testing of the initial anchors. For preliminary design purposes, it may be estimated that the drilled friction gravity grouted anchors will develop an average allowable bond stress of 500 psf. Pressure grouted/post-grouted anchors typically obtain much greater capacities compared to gravity grouted anchors. In general, the obtained capacity of post-grouted tie-back anchors is primarily a function of construction methods and experience of the specialty contractor along with local site conditions. The capacity of tie-back anchors may ultimately be determined through a performance specification. It is the contractor's responsibility to obtain the required pullout capacity, which may require extensive post grouting and/or field modifications. If the anchors are spaced at least 6 feet on-centers, no group action reduction in the capacity of the anchors need be considered.

The frictional resistance between the soldier piles and the retained earth may be used in resisting the downward component of the anchor load. The coefficient of friction between the soldier pile and the retained earth may be taken as 0.25. This value is based on the assumption that uniform full bearing will be developed between the steel soldier beam and the lean-mix concrete and between the lean mix concrete and the retained earth. In addition, provided the portion of the soldier piles below the excavated level is backfilled with structural concrete, the soldier piles below the excavated level may be used to resist downward loads. The skin friction between the concrete soldier piles and the soils below the excavated level may be taken as 400 psf.

At least 10 percent of the total anchors should be selected for quick 200 percent tests and at least one anchor should be tested for 24 hours. The purpose of the 200 percent tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained. The remaining anchors should be proof tested to at least 150 percent of the design load.

Anchor testing should be performed by the contractor and observed by the geotechnical consultant. The contractor shall provide all necessary test equipment, including an independent fixed reference point (i.e., tripod) for placement of the dial gauge for measuring anchor deflections during tensioning. Dial gauge measuring anchor deflections should read to 0.001-inch and have sufficient travel distance required for the entire test. A minimum of one working day prior to testing, the contractor shall supply current (i.e., within the last 9 months) calibration records from an approved testing laboratory of the hydraulic jack and gauges to be used for anchor tensioning/testing. Calibration certificates and graphs should be available at the job site at all times.

It is difficult to accurately predict the amount of deflection of the shoring system. It should be realized, however, that some deflection will occur. The shoring should be designed to limit deflection to within tolerable limits. If greater deflection occurs during construction, additional bracing may be necessary. In areas where less deflection is desired, such as adjacent to existing settlement sensitive improvements, the shoring should be designed for higher lateral earth pressures.

Caving of the anchor holes should be prevented with the installation method selected. The contractor should evaluate the potential drilling conditions when planning the installation methods, refer to below Section "CIDH Pier Construction."

Soil Nail Wall Geotechnical Design Parameters

Based on our findings of our study, soil nail walls may be designed using the following preliminary geotechnical parameters:

- Soil Friction Angle: 28 degrees
- Soil Cohesion: 400 pounds per square foot (psf)
- Soil Unit Weight: 115 pounds per cubic foot (pcf)
- Preliminary Allowable Pullout Bond Stress: 500 psf

The design Peak Ground Acceleration (PGA) per the 2016 CBC for nail wall design may be taken as 0.433g. Surcharge loading effects from the adjacent structure should be evaluated by the nail wall designer. The nail wall designer should contact the geotechnical engineer for any required geotechnical input in estimating surcharge loads.

Field pullout testing should be performed during construction to verify the estimated pullout resistance used in the design. Ultimately, it is the contractor's responsibility to obtain the required pullout capacity, which may require alternate construction techniques.

Retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. Typically, a nail wall is provided with a composite drainage mat (e.g., Miradrain, etc.) installed between the temporary facing and the excavation and collected at the wall bottom and properly outletted to a suitable discharge point per the project civil engineer.

Design Considerations due to Site Geotechnical Conditions

The following should be considered by the soil nail wall designer and owner:

- Soil borings and laboratory test results indicate primarily fine-grained soils (i.e., silts and clays) with high plasticity. These soils, especially high plasticity clays, are generally prone to creep.
- With respect to corrosion, site soils are considered "aggressive" based on FHWA guidelines and "corrosive" per Caltrans guidelines.

Construction of Soil Nails

It should be noted that the subject site may contain isolated sandy soils susceptible to caving (refer to attached boring logs and previous boring logs provided in referenced previous geotechnical reports). Lower angled borings for installation of the proposed soil nails will inherently have a higher potential for caving than the vertical exploratory excavations that experienced some caving. The contractor should consider these factors prior to construction and, if necessary, should conduct a test drilling program to evaluate the potential for caving of the proposed drill holes. The contractor may also consider installing the soil nails with temporary casing in the drill holes or alternative techniques.

Soil nail verification, proof and creep testing should be performed by the contractor and observed by a representative of LGC Geotechnical. Location of test nails should be reviewed by LGC Geotechnical prior to construction. The contractor shall provide all necessary test equipment, including an independent fixed reference point (i.e., tripod) for the placement of dial gauges used to measure nail deflections during tensioning/testing. Dial gauges measuring nail deflections should read to 0.001-inch. A minimum of one working day prior to testing, the contractor shall supply current (i.e., within the last 9 months) calibration records from an approved testing laboratory of the hydraulic jack to be used for nail testing. Calibration certificates and graphs should be available at the job site at all times.

CIDH Pier Construction

Boreholes for soldier piles should be plumb and free of loose or softened material. Extreme care in drilling, placement of reinforcement steel, and the pouring of concrete will be essential to avoid excessive disturbance of pile boring walls. The soldier pile steel section or reinforcing cage should be installed and the concrete pumped immediately after drilling is completed. Where applicable, concrete placement by pumping or tremie tube to the bottom of Cast-In-Drilled Hole (CIDH) excavations is recommended. No soldier pile borehole should be left open overnight. We recommend that pile borings not be drilled immediately adjacent to another pile

until the concrete in the other pile has attained its initial set. A representative from LGC Geotechnical should be onsite during the drilling of piers to verify the assumptions made during the design stages.

The contractor should anticipate difficult drilling conditions. Groundwater should be anticipated for any piers constructed below an approximate elevation of 945 feet. In addition, isolated sandy soils are present at the site and these materials are generally susceptible to caving, refer to the boring logs in Appendix B. The contractor should anticipate that any borehole left open for any extended period of time will likely experience additional caving and groundwater conditions. Refer to the attached boring logs provided in Appendix B. If caving occurs during CIDH pile construction, a temporary casing may be required.

Corrosivity of Soils

Although not corrosion engineers (LGC Geotechnical is not a corrosion consultant), several governing agencies in Southern California require the geotechnical consultant to determine the corrosion potential of soils to buried concrete and metal facilities. We therefore present the results of our testing with regard to corrosion for the use of the client and other consultants, as they determine necessary.

Corrosion testing (pH, resistivity, soluble sulfate, and chloride content) was performed on representative samples from our recent supplemental field evaluation to estimate the corrosion potential of onsite soils. Test results indicated soluble sulfate contents of approximately 0.40 and 0.32 percent, chloride contents of 291 and 107 ppm, pH values of 7.5 and 7.1, and minimum resistivity values of 310 and 750 ohm-centimeters. Previous corrosion testing indicated a soluble sulfate content of approximately 0.071 percent, a chloride content of 50 ppm, pH of 7.6, and a minimum resistivity of 1,970 ohm-cm (ESSC, 2016).

The Federal Highway Administration (FHWA) defines an "aggressive" soil with respect to corrosion where any of the following conditions exist: the soil contains more than 0.02 percent of sulfates, more than 100 ppm of chlorides, a pH less than 5.0 (or greater than 10), organic content greater than 1 percent, or a minimum resistivity of less than 3,000 ohm-cm (FHWA, 2015). Based on sulfate, chloride and minimum resistivity test results, site soils are considered "aggressive" with respect to FHWA guidelines.

Based on preliminary laboratory sulfate test results, site soils should be considered to have an exposure class of "S2" per ACI 318-14, Table 19.3.1.1 with respect to sulfates (ACI, 2014). This must be verified based on as-graded conditions.

Subsurface Water Infiltration

Recent regulatory changes mandate that storm water be infiltrated rather than discharged via conventional storm drainage systems. It should be noted that intentionally infiltrating storm water conflicts with the geotechnical engineering objective of directing surface water away from structures and improvements. The geotechnical stability and integrity of the project site is reliant upon appropriately handling surface water.

In general, the vast majority of geotechnical distress issues are directly related to improper drainage. Distress in the form of movement of foundations and other improvements could occur as a result of soil saturation and loss of soil support of foundations and pavements, settlement, collapse, internal soil erosion, and/or expansion. Additionally, off-site properties and improvements may be subjected to seeps, springs, slope instability, movements of foundations or other impacts as a result of water infiltration and migration. Infiltrated water may enter underground utility pipe zones and migrate along the pipe backfill, potentially impacting other improvements located far away from the point of infiltration.

Geotechnical stability and integrity of the project site is reliant upon appropriate handling of surface water. Due to the site consisting primarily of fine-grained soils (i.e., silts and clays) and relatively shallow groundwater, the intentional infiltration of storm water is not recommended.

Slope Maintenance Guidelines

Irrigated slopes must not be overwatered. Irrigation levels should be kept to the minimum level necessary to establish a healthy plant growth. If automatic sprinklers are used, they must be adjusted during periods of rainfall. Continuous erosion control, rodent control, and maintenance are essential to the long-term stability of slopes. A program for the elimination of burrowing animals in slope areas must be established to protect slope stability by reducing the potential for surface water to penetrate into the slope face. Trenches excavated on a slope face for utility or irrigation lines and/or for any purpose must be properly backfilled and compacted (as outlined in earthwork section) to the slope face. Observation/testing and acceptance by the geotechnical consultant during trench backfill are recommended. V-ditches should be inspected and cleared of loose soil and/or debris on a routine basis, especially prior to and during the rainy season.

Geotechnical Plan Review

Project plans (e.g., grading foundation basement/retaining wall, shoring, etc.) should be reviewed by this office prior to construction to verify that our geotechnical recommendations, provided herein, have been appropriately incorporated. Additional or modified geotechnical recommendations may be required based on the proposed layout.

Geotechnical Observation and Testing During Construction

The interpolated subsurface conditions should be checked in the field during construction by a representative of LGC Geotechnical. Geotechnical observation and testing are required per Section 1705 of the California Building Code (CBC).

Observation and/or testing should be performed by LGC Geotechnical at the following stages:

- During grading (i.e., removal bottoms, fill placement, etc.);
- During installation of temporary shoring and permanent shoring;

- After excavation of building and wall foundations and prior to placement of steel reinforcement;
- During backfill of site basement/retaining walls;
- During backfill of utility trenches;
- After presoaking at-grade building pads and other concrete-flatwork subgrades and prior to placement of concrete;
- During preparation of subgrade and placing of aggregate base; and
- When any unusual soil conditions are encountered during any construction operation subsequent to issuance of this report.

Closure

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report. The samples taken and submitted for laboratory testing, the observations made and the in-situ field testing performed are believed representative of the entire project; however, soil and geologic conditions revealed by excavation may be different than our preliminary findings. If this occurs, the changed conditions must be evaluated by the project soils engineer and geologist and design(s) adjusted as required or alternate design(s) recommended.

This report is issued with the understanding that it is the responsibility of the owner, or of his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and/or project engineer and incorporated into the plans, and the necessary steps are taken to see that the contractor and/or subcontractor properly implements the recommendations in the field. The contractor and/or subcontractor should notify the owner if they consider any of the recommendations presented herein to be unsafe.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can and do occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. Therefore, the findings, conclusions, and recommendations presented in this report can be relied upon only if LGC Geotechnical has the opportunity to observe the subsurface conditions during grading and construction of the project, in order to confirm that our preliminary findings are representative for the site.

In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and modification, and should not be relied upon after a period of 3 years.

Should you have any questions regarding this report, please do not hesitate to contact this office.

Sincerely,

LGC Geotechnical, Inc.

Brad Zellmer, GE 2618
Project Engineer

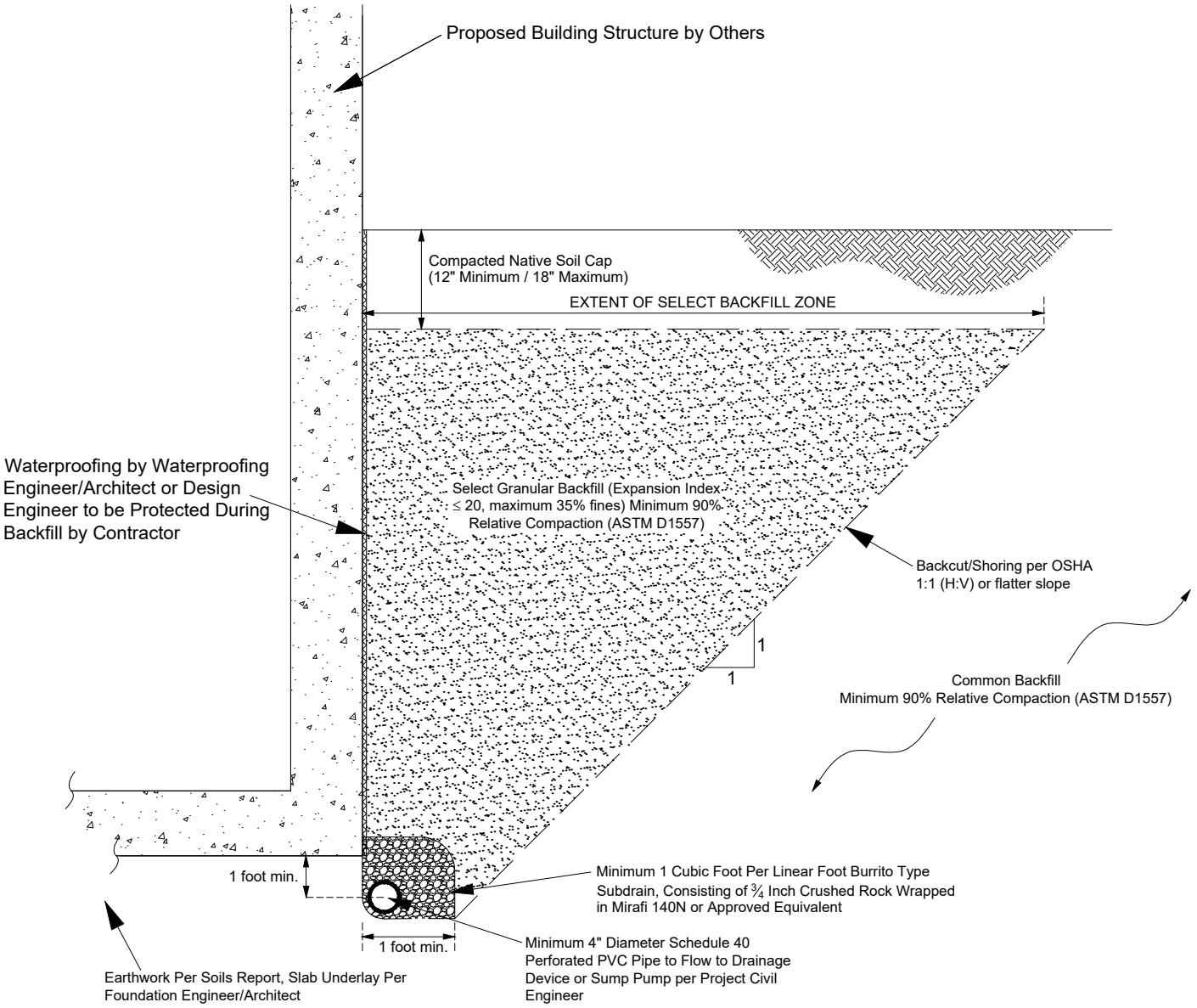
Kevin B. Colson, CEG 2210
Vice President

KBC/BTZ/amm

Attachments:

Figure 1 – Basement Subterranean Structure Backfill/Subdrain Detail (Rear of Text)
Figure 2 – Retaining Wall Backfill Detail (Rear of Text)
Appendix A – References
Appendix B – Boring Logs
Appendix C – Laboratory Test Results
Appendix D – General Earthwork and Grading Specifications
Sheet 1 – Geotechnical Map & Geotechnical Cross Section A-A'

Distribution: (1) Addressee (electronic copy)
(1) Streeter Civil Engineers (electronic copy)
Attn: Mr. Felix Gonzalez
(4) Jordan Architects (3 wet-signed copies and 1 electronic copy)
Attn: Mr. Bruce Jordan



NOTE : Granular backfill may be substituted with 3/4 inch crushed compacted rock wrapped in filter fabric. Geotechnical drainage detail will not prevent water seepage into structure, it is only to prevent build up of water pressure against wall.

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FIGURE 1
Basement Subterranean Structure Backfill/Subdrain Detail

PROJECT NAME	Trojan Calabasas
PROJECT NO.	19153-01
ENG. / GEOL.	BTZ / KBC
SCALE	Not to Scale
DATE	December 2019

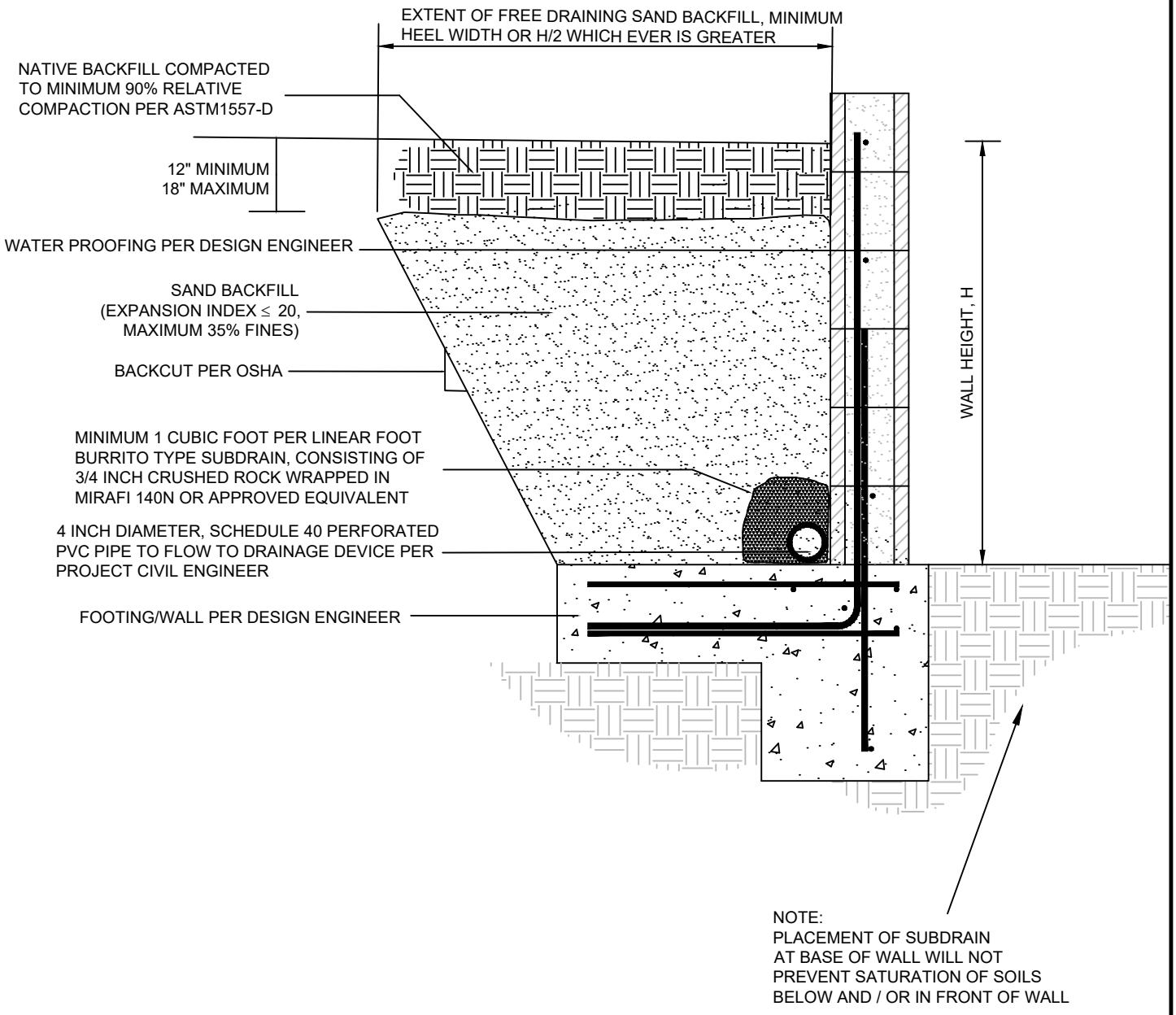

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FIGURE 2
Retaining Wall Backfill Detail

PROJECT NAME	Trojan Calabasas
PROJECT NO.	19153-01
ENG. / GEOL.	BTZ / KBC
SCALE	Not to Scale
DATE	December 2019

Appendix A
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Appendix B
Boring Logs

Geotechnical Boring Log BA-1

Date : 9/16/2019 Page 1 of 2

Drilling Company : Roy Brothers Drilling

Project Name : Trojan - Calabasas

Type of Rig : Track Mounted 'LoDril' Flight Auger

Project Number : 19153-01

Drop : 12" **Hole Diameter :** 24"

Elevation of Top of Hole : ~ 972' MSL

Drive Weight : 0' to 15' - 1767lbs, 15' to 30'- 1182lbs, 30' to 45' - 757lbs, 45' to 60' 489lbs

Hole Location : See Geotechnical Map

Logged by KTM

Sampled by KTM

Elevation (ft)	Depth (ft)	Graphic Log	Attitudes	Sample Number	Blow Count	Dry Density(pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	0							ML	**0' to T.D. - Tertiary Modelo Formation (Tm):** @0' - Colluvium, SILT: light brown, dry to slightly moist, very stiff; sandstone clasts, chaotic; 'popcorn' clasts; krotovina	
970									@3' - Grades to formational material; vitreous sandstone clast	
	5		Jt: N40W, 83SW Jt: N5W, 25SW						@5' - SILTSTONE and SILTSTONE with Clay: light brown, slightly moist to moist, slightly hard; attitudes on joints	CR EI
965				B-1						
	10			R-1	10	77.0	24.2	CH	@10' - SILTSTONE: light variable brown, dry to slightly moist, very stiff to slightly hard; weak to moderate cementation; structurally fractured; iron oxide and manganese oxide stained joints; very competent; greenish clayey vertical joints with oxidation; foraminifera @12' - Soft sediment deformation with concretionary beds; 2-inch thick off-white vitreous sandstone bed, slightly offset, subhorizontal; few strong roots penetrating formation	AL DS
960										
	15		Jt: N82W, Vertical						@15' - Clayey SILTSTONE: fractured and healed, tight; iron oxide and faint green clayey lining on joints @16' - Attitude on joint	
955										
	20		Jt: N85W, Vertical	R-2	25	79.8	29.5		@20' - SILTSTONE and Sandy SILTSTONE: moderate brown with orange staining, slightly moist, hard; attitude on joint @21' - Zone of cemented siltstone; soft sediment deformation	
950										
	25								@23' - Sandy SILTSTONE with few poorly defined sand lenses; grades to siltstone with clay	
945			GB: N50E, 10SW						@27' - General bedding attitude on siltstone laminations; vague; near subhorizontal. Grades to sandy siltstone; clasts of concretions; gypsum stringers to 1/16-inch	

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THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE
G	GRAB SAMPLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE

Geotechnical Boring Log BA-1

Date : 9/16/2019 Page 2 of 2	**Drilling Company :** Roy Brothers Drilling
Project Name : Trojan - Calabasas	**Type of Rig :** Track Mounted 'LoDril' Flight Auger
Project Number : 19153-01	**Drop :** 12" **Hole Diameter :** 24"
Elevation of Top of Hole : ~ 972' MSL	**Drive Weight :** 0' to 15' - 1767lbs, 15' to 30'- 1182lbs, 30' to 45' - 757lbs, 45' to 60' 489lbs
Hole Location : See Geotechnical Map	

Logged by KTM

Sampled by KTM

Elevation (ft)	Depth (ft)	Graphic Log	Attitudes	Sample Number	Blow Count	Dry Density(pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
940	30			R-3	35	80.1	35.1	ML	@30' - SILTSTONE with Clay: brown with zones of light brown grading to dark gray, moist to wet with depth, hard to very hard; weak cementation; scattered gypsum; grading to unoxidized material @33' - SILTSTONE with Clay: dark brown, very moist, free water and wet spoils with depth	
935	35		Jt: N10W, 23NE	B-2					@36' - Attitude on gypsum lined joint; approximately $\frac{1}{4}$-inch thick @37' - Standing water	
930	40								**Total Depth = 38'** **Seepage at approximately 31 feet** **Ground Water Encountered at approximately 37 feet** **Backfilled with Cuttings on 9/16/2019**	
925	45									
920	50									
915	55									
	60									

LGC Geotechnical, Inc.

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE
G	GRAB SAMPLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE

Geotechnical Boring Log BA-2

Date : 9/16/2019 Page 1 of 2

Drilling Company : Roy Brothers Drilling

Project Name : Trojan - Calabasas

Type of Rig : Track Mounted 'LoDril' Flight Auger

Project Number : 19153-01

Drop : 12" **Hole Diameter :** 24"

Elevation of Top of Hole : ~ 977' MSL

Drive Weight : 0' to 15' - 1767lbs, 15' to 30'- 1182lbs, 30' to 45' - 757lbs, 45' to 60' 489lbs

Logged by KTM

Sampled by KTM

Elevation (ft)	Depth (ft)	Attitudes	Sample Number	Blow Count	Dry Density(pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
977	0						ML	**0' to T.D. - Tertiary Modelo Formation (Tm):** @0' - SILTSTONE and SANDSTONE: light brown, dry to slightly moist, slightly hard; weakly cemented; wavy bedding; soft sediment deformation; extremely weathered in upper few feet	
974		GB: N45W, 3NE						@4.5' - General bedding attitude on soft sediment deformed bed lined with iron oxide	
	5	Jt: N74W, 55SW						@6' - Attitude on iron oxide lined joint; planar; approximately 2 feet long; minor gypsum; competent; increasing clay content with depth	
969			B-1						
	10		R-1	12	73.2	26.6		@10' - SILTSTONE with trace Clay and fine Sand: light brown, slightly moist, very stiff to slightly hard; gypsum	
964								@14' - SANDSTONE bed (2 inches thick): off-white, vitreous, dense; very fine sand with soft sediment deformation; cemented zone. Below is Clayey SILTSTONE with fine SANDSTONE interbeds: very moist, slightly hard; iron oxide and manganese oxide staining; moderately weathered	
	15								
959		Jt: N70W, 50SW						@18' - Attitude on joint	
	20		R-2	20	78.6	36.6	MH	@20' - SILTSTONE: medium reddish brown to brown, slightly moist to moist, slightly hard; iron oxide and manganese oxide staining; zones of ancient soft sediment deformation; increased density and decreased weathering with depth	AL DS
954		Jt: N8W, 58SW						@22' - Attitude on joint	
	25	GB: N60W, 5NE						@25' - General bedding attitude on white and orange sandstone bed; approximately 1-2 inches thick. Siltstone with sand laminations and clayey zones; discontinuous/intermittent around boring	
949								@27' - 1-inch zone of foraminifera	

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THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE
G	GRAB SAMPLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE

Geotechnical Boring Log BA-2

Date : 9/16/2019 Page 2 of 2	**Drilling Company :** Roy Brothers Drilling
Project Name : Trojan - Calabasas	**Type of Rig :** Track Mounted 'LoDril' Flight Auger
Project Number : 19153-01	**Drop :** 12" **Hole Diameter :** 24"
Elevation of Top of Hole : ~ 977' MSL	**Drive Weight :** 0' to 15' - 1767lbs, 15' to 30'- 1182lbs, 30' to 45' - 757lbs, 45' to 60' 489lbs

Logged by KTM

Sampled by KTM

Elevation (ft)	Depth (ft)	Graphic Log	Attitudes	Sample Number	Blow Count	Dry Density(pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
944	30			R-3	30	80.6	37.7	ML	@30' - SILTSTONE: moderate reddish brown, moist, hard; well faintly concreted bed just below; rock-hard; mottled texture @32' Clayey Siltstone: dark gray; grades to unoxidized; fresh @35' - Zone of sandstone blebs within siltstone; orange fine sand; 1-foot thick	
939	35									
934	40								**Total Depth = 38'** **Seep Encountered at approximately 37 feet** **Backfilled with Cuttings on 9/16/2019**	
929	45									
924	50									
919	55									

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE
G	GRAB SAMPLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE

Geotechnical Boring Log Borehole HS-1

Date: 9/16/2019 | **Drilling Company:** 2R Drilling

Project Name: Trojan - Calabasas | **Type of Rig:** CME 75

Project Number: 19153-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~959' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By ARN
Sampled By ARN
Checked By KTM

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	0	B-1					CL	**@0' to 10' - Undocumented Artificial Fill (afu)**	
			R-1	5 8 8	100.4	23.4		@0' - Silty CLAY: medium to dark brown, moist; scattered surficial gravel @2.5' - Silty CLAY: gray brown, very moist, stiff; scattered graded sand; some gravel	
955									
	5		SPT-1	4 6 6		23.5		@5' - Sandy CLAY: brown, very moist, very stiff; some gravel	
			R-2	3 6 9	95.5	26.0		@7.5' Silty CLAY: dark gray, very moist, stiff; iron oxide; white mineralization; mottled color	
950								**@10' to 20' - Quaternary Alluvium (Qal)**	
	10		SPT-2	2 4 4		27.0	CL	@10' - CLAY: dark gray, very moist, stiff; abundant white mineralization	
945									
	15		R-3	3 8 11	87.0	33.7	CH	@15' - CLAY: dark olive brown, very moist, stiff; jarosite mottle; white mineralization	AL CN
940								**@20' to T.D.' - Tertiary Modelo Formation (Tm)**	
	20		SPT-3	3 7 6		44.5	ML	@20' - Sandy SILTSTONE: dark gray brown, very moist, very stiff	
935									
	25		R-4	50/5"	79.3	22.7	ML	@25' -Sandy SILTSTONE: dark gray, hard, very moist; generally fine-grained sand	
		▽							
930									
	30								

LGC Geotechnical, Inc.

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 10/9/2019

Geotechnical Boring Log Borehole HS-1

Date: 9/16/2019	**Drilling Company:** 2R Drilling
Project Name: Trojan - Calabasas	**Type of Rig:** CME 75
Project Number: 19153-01	**Drop:** 30" **Hole Diameter:** 8"
Elevation of Top of Hole: ~959' MSL	**Drive Weight:** 140 pounds
Hole Location: See Geotechnical Map	Page 2 of 2

Logged By ARN
Sampled By ARN
Checked By KTM

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	30		SPT-4	16 21 42		33.8	ML	@30' - Sandy SILTSTONE: dark gray brown, wet, hard; abundant foraminifera	
925									
	35		R-5	40 50/2.5"	90.1	29.5		@35' - Sandy SILTSTONE: dark gray, wet, hard; abundant foraminifera; plumose structure	
920									
	40		SPT-5	20 21 42		30.8	SP/ML	@40' - SILTSTONE and SANDSTONE: dark gray brown, wet, hard; abundant foraminifera	
915									
	45								
910									
	50		R-6	50/6"	77.3	32.6	ML	@50' - Sandy SILTSTONE: dark gray, wet, hard; thin clay interbeds	
								Total Depth = 50.5' Groundwater Encountered at Approximately 27' Backfilled with Cuttings on 9/16/2019	
905									
	55								
900									
	60								

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Geotechnical Boring Log Borehole HS-2

Date: 9/16/2019 | **Drilling Company:** 2R Drilling

Project Name: Trojan - Calabasas | **Type of Rig:** CME 75

Project Number: 19153-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~961' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By ARN
Sampled By ARN
Checked By KTM

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
960	0						CL	**@0' to 10' - Undocumented Artificial Fill (afu)** @0' - Silty CLAY: brown, slightly moist	
			SPT-1	5 7 6		15.4		@2.5' - Sandy CLAY: dark brown, moist, very stiff; scattered gravel and sand; mottled texture	
955	5		R-2	6 8 10	104.2	20.6		@5' - CLAY: brown, moist, very stiff; scattered gravel/sand; dark brown mottle	
			SPT-2	2 3 4		26.7		@7.5' CLAY: dark brown, very moist, stiff	
950	10	B-1	R-3	6 8 10	92.4	29.1	CH	**@10' to 15' - Quaternary Alluvium (Qal)** @10' - CLAY: dark gray, very moist, stiff; iron oxide mottle; white mineralization	AL EI CR
945	15		SPT-3	3 5 6		30.2	CL/ML	**@15' to T.D.' - Tertiary Modelo Formation (Tm)** @15' - SILTSTONE: orangish yellowish brown, moist, stiff; sample taken on contact - includes some alluvial clay in sampler	
940	20	▽	R-4	21 28 29	73.3	46.5	ML	@20' - SILTSTONE: rusty brown, wet, hard; moderately discernable bedding; abundant formainifera; iron oxide staining	
935	25							Total Depth = 21.5' Groundwater Encountered at Approximately 20.9' Backfilled with Cuttings on 9/16/2019	
	30								

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 10/9/2019

Geotechnical Boring Log Borehole HS-3

Date: 9/16/2019 | **Drilling Company:** 2R Drilling

Project Name: Trojan - Calabasas | **Type of Rig:** CME 75

Project Number: 19153-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~957' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By ARN
Sampled By ARN
Checked By KTM

Elevation (ft)	Depth (ft)	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
955	0					CL	**@0' to 10' - Undocumented Artificial Fill (afu)** @0' - Silty CLAY: brown, slightly moist	
		R-1	7 12 16	110.2	18.7		@2.5' - CLAY: brown, very moist, very stiff; scattered gravel; mottled texture	
	5	SPT-1	2 3 2		28.5		@5' - Sandy CLAY:brown with dark brown, very moist, medium stiff; minor iron oxide staining, scarce gravel	
950							**@7.5' to 20' - Quaternary Alluvium (Qal)**	
		R-2	4 9 9	94.4	26.7	CH	@7.5' CLAY: dark olive brown, very moist, stiff; iron oxide staining	AL CN
	10	SPT-2	4 4 5		28.1	CL	@10' - Sandy CLAY: dark brown, very moist, stiff; abundant white mineralization	
945								
	15	R-3	6 12 14	96.7	29.7		@15' - CLAY: gray brown and light gray mottled, very moist, very stiff; abundant white mineralization; scarce gravel - bedrock derived	
940								
	20	SPT-3	14 11 20		43.0	ML	**@20' to T.D.' - Tertiary Modelo Formation (Tm)** @20' - SILTSTONE: rusty brown, very moist, hard; moderately discernable bedding; abundant formainifera; iron oxide staining	
935								
	25	R-4	19 50/4"	79.2	37.1		@25' SILTSTONE: dark gray, wet, hard; abundant foraminifera	
930							Total Depth = 26' Groundwater Encountered at Approximately 21.8' Backfilled with Cuttings on 9/16/2019	
	30							

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 10/9/2019

Geotechnical Boring Log Borehole HS-4

Date: 9/16/2019 | **Drilling Company:** 2R Drilling

Project Name: Trojan - Calabasas | **Type of Rig:** CME 75

Project Number: 19153-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~957' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By ARN
Sampled By ARN
Checked By KTM

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
955	0	B-1					CL	**@0' to 10' - Undocumented Artificial Fill (afu)** @0' - Silty CLAY: brown, slightly moist	
			SPT-1	3 4 6		18.9		@2.5' - Sandy CLAY: brown, very moist, stiff; some sandy blebs; iron oxide mottle	
	5		R-2	5 12 15	18.9	24.5	CL	**@5' to 7.5' - Quaternary Alluvium (Qal)** @5' - CLAY: black, moist, very stiff; scattered sand	
950			SPT-2	9 16 32		15.5	ML	**@7.5' to T.D.' - Tertiary Modelo Formation (Tm)** @7.5' - Sandy SILT: gray, very moist, very dense	
	10		R-3	50/3"	93.3	12.6	SM	@10' - Silty SANDSTONE: gray brown, moist, hard; iron oxide staining	
945									
	15		SPT-3	1 8 8		48.2	ML	@15' - Sandy SILTSTONE: rusty brown, very moist, very stiff; abundant foraminifera; iron oxide staining	
940									
	20		R-4	50/3"	84.1	32.4		@20' - Sandy SILTSTONE: brown, very moist, hard; moderately discernable bedding; iron oxide staining; thin clay interbeds	
935								Total Depth = 20' Groundwater Not Encountered Backfilled with Cuttings on 9/16/2019	
	25								
930									
	30								

LGC Geotechnical, Inc.

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 10/9/2019

Geotechnical Boring Log Borehole HS-5

Date: 9/16/2019 | **Drilling Company:** 2R Drilling

Project Name: Trojan - Calabasas | **Type of Rig:** CME 75

Project Number: 19153-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~963' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By ARN
Sampled By ARN
Checked By KTM

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	0						CL	**@0' to 10' - Undocumented Artificial Fill (afu)** @0' - Silty CLAY: brown, slightly moist	
960			R-1	4 7 11	109.0	19.4		@2.5' - CLAY: brown, very moist, stiff; scattered gravel; mottled texture	
	5		SPT-1	3 3 5		22.6		@5' - CLAY: dark brown, very moist, stiff	
955			R-2	4 7 7	114.7	11.6	SC	@7.5' - Clayey SAND: rusty brown, very moist, medium dense; scattered gravel; red brick pieces	
	10	B-1	SPT-2	3 4 5		32.0	CL	**@10' to 20' - Quaternary Alluvium (Qal)** @10' - CLAY: dark brown, very moist, stiff; abundant white mineralization	
950									
	15		R-3	7 11 12	90.9	30.7	CH	@15' - CLAY: olive brown, very moist, very stiff; abundant white mineralization; scattered iron oxide staining	AL CN
945									
	20		SPT-3	3 5 11		47.7	ML	**@20' to T.D.' - Tertiary Modelo Formation (Tm)** @20' - SILTSTONE: rusty brown, wet, very stiff; some sand; iron oxide staining	
940									
	25		R-4	22 50/3"				@15' - SILTSTONE: gray brown, very moist, hard	
935								Total Depth = 26' Groundwater Not Encountered Backfilled with Cuttings on 9/16/2019	
	30								

LGC Geotechnical, Inc.

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 10/9/2019

Appendix C
Laboratory Test Results

APPENDIX C

Laboratory Test Results

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of site conditions were tested in general accordance with American Society for Testing and Materials (ASTM) procedure and/or California Test Methods (CTM), where applicable. The following summary is a brief outline of the test type and a table summarizing the test results.

Moisture and Density Determination Tests: Moisture content (ASTM D2216) and dry density determinations (ASTM D2937) were performed on driven samples obtained from the test borings. The results of these tests are presented in the boring logs. Where applicable, only moisture content was determined from undisturbed or disturbed samples.

Atterberg Limits: The liquid and plastic limits ("Atterberg Limits") were determined per ASTM D4318 for engineering classification of fine-grained material and presented in the table below. The USCS soil classification indicated in the table below is based on the portion of sample passing the No. 40 sieve and may not necessarily be representative of the entire sample. The plots are provided in this Appendix.

Sample Location	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	USCS Soil Classification
HS-1 @ 15 ft	70	26	44	CH
HS-2 @ 10-15 ft	61	19	42	CH
HS-3 @ 7.5 ft	57	21	36	CH
HS-5 @ 15 ft	60	24	36	CH
BA-1 @ 10 ft	54	29	25	CH
BA-2 @ 20 ft	63	33	30	MH

Expansion Index: The expansion potential of selected representative samples was evaluated by the Expansion Index Test per ASTM D4829. The results are presented in the table below.

Sample Location	Expansion Index	Expansion Potential*
HS-2 @ 10-15 ft	91	High
BA-1 @ 5-10 ft	113	High

* Per ASTM D4829

Laboratory Test Results

Direct Shear: Direct shear tests were performed on selected driven samples, which were soaked for a minimum of 24 hours prior to testing. The samples were tested under various normal loads using a motor-driven, strain-controlled, direct-shear testing apparatus (ASTM D3080). The plots are provided in this Appendix.

Consolidation: Consolidation tests were performed per ASTM D2435. Samples (2.4 inches in diameter and 1 inch in height) were placed in a consolidometer and increasing loads were applied. The samples were allowed to consolidate under "double drainage" and total deformation for each loading step was recorded. The percent consolidation for each load step was recorded as the ratio of the amount of vertical compression to the original sample height. The consolidation pressure curves are provided in this Appendix.

Soluble Sulfates: The soluble sulfate contents of selected samples were determined by standard geochemical methods (CTM 417). The test results are presented in the table below.

Sample Location	Sulfate Content (%)
BA-1 @ 5-10 ft	0.32

Chloride Content: Chloride content was tested per CTM 422. The results are presented below.

Sample Location	Chloride Content (ppm)
BA-1 @ 5-10 ft	107

Minimum Resistivity and pH Tests: Minimum resistivity and pH tests were performed in general accordance with CTM 643 and standard geochemical methods. The results are presented in the table below.

Sample Location	pH	Minimum Resistivity (ohms-cm)
BA-1 @ 5-10 ft	7.5	750

ATTERBERG LIMITS

ASTM D 4318

Project Name:	Calabasas	Tested By:	R. Manning	Date:	09/24/19
Project No. :	19153-01	Input By:	G. Bathala	Date:	09/27/19
Boring No.:	HS-1	Checked By:	J. Ward		
Sample No.:	R-3	Depth (ft.)	15.0		
Soil Identification:	Dark olive brown fat clay (CH), gypsum noted				

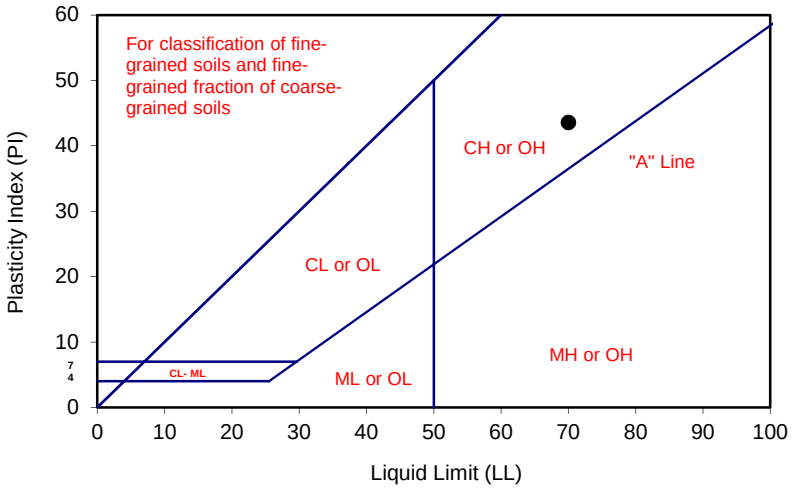
TEST	PLASTIC LIMIT		LIQUID LIMIT			
NO.	1	2	1	2	3	4
Number of Blows [N]			35	24	16	
Wet Wt. of Soil + Cont. (g)	17.70	17.76	23.96	22.35	22.83	
Dry Wt. of Soil + Cont. (g)	16.31	16.36	19.71	18.70	18.96	
Wt. of Container (g)	11.08	11.03	13.42	13.52	13.61	
Moisture Content (%) [Wn]	26.58	26.27	67.57	70.46	72.34	

Liquid Limit	**70**
Plastic Limit	**26**
Plasticity Index	**44**
Classification	**CH**

PI at "A" - Line = 0.73(LL-20) 36.5

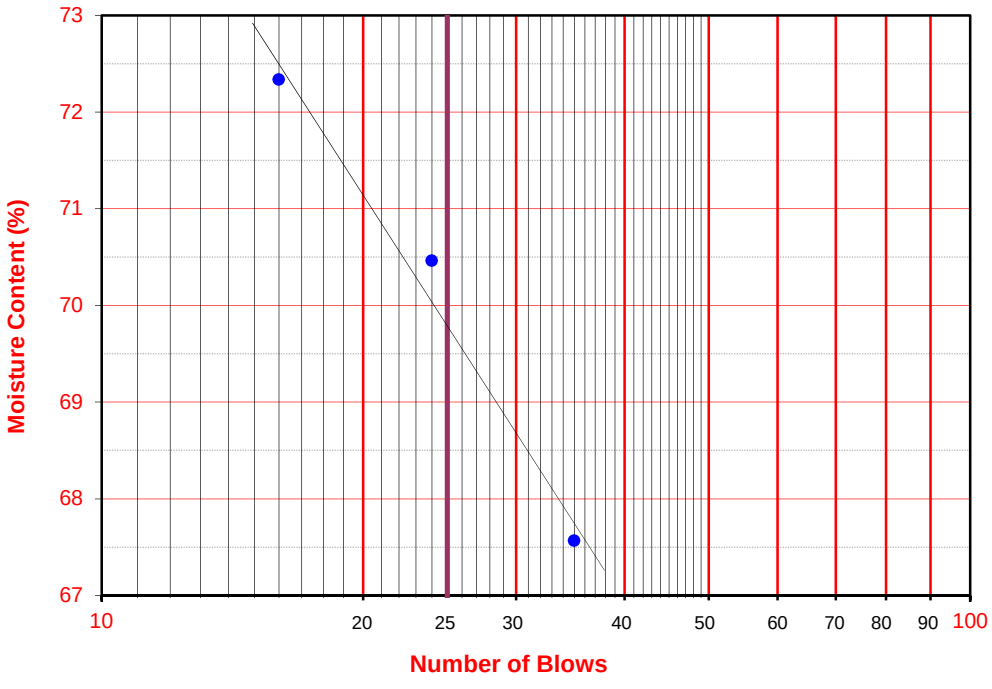
One - Point Liquid Limit Calculation

$LL = Wn(N/25)^{0.121}$



PROCEDURES USED

	Wet Preparation
	Multipoint - Wet
X	Dry Preparation
	Multipoint - Dry
X	Procedure A
	Multipoint Test
	Procedure B
	One-point Test



ATTERBERG LIMITS

ASTM D 4318

Project Name:	Calabasas	Tested By:	R. Manning	Date:	09/25/19
Project No. :	19153-01	Input By:	G. Bathala	Date:	09/27/19
Boring No.:	HS-3	Checked By:	J. Ward		
Sample No.:	R-2	Depth (ft.)	7.5		
Soil Identification:	Dark olive brown fat clay (CH)				

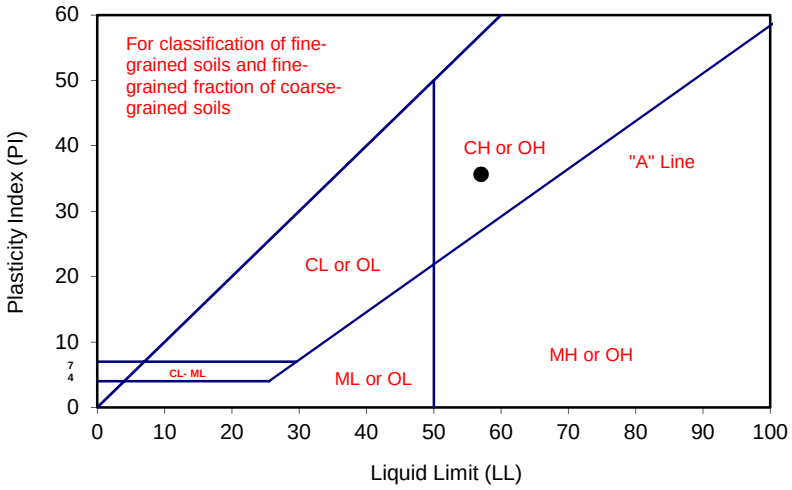
TEST	PLASTIC LIMIT		LIQUID LIMIT			
NO.	1	2	1	2	3	4
Number of Blows [N]			35	27	20	
Wet Wt. of Soil + Cont. (g)	17.73	17.94	23.41	23.69	22.70	
Dry Wt. of Soil + Cont. (g)	16.63	16.84	19.89	20.02	19.29	
Wt. of Container (g)	11.46	11.71	13.44	13.53	13.47	
Moisture Content (%) [Wn]	21.28	21.44	54.57	56.55	58.59	

Liquid Limit	**57**
Plastic Limit	**21**
Plasticity Index	**36**
Classification	**CH**

PI at "A" - Line = 0.73(LL-20) 27.01

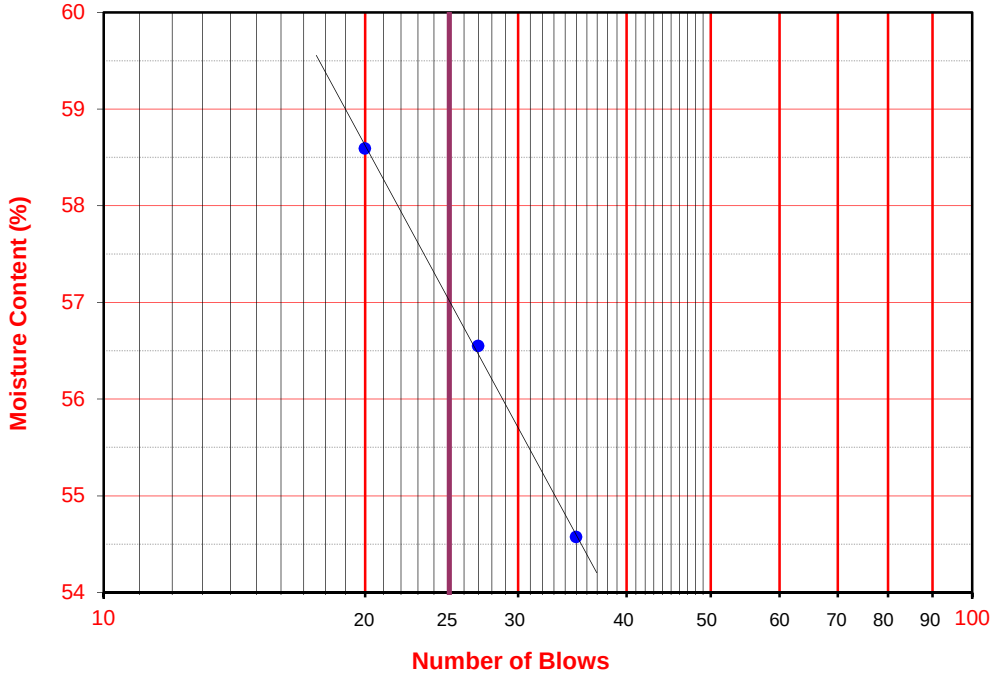
One - Point Liquid Limit Calculation

$LL = Wn(N/25)^{0.121}$



PROCEDURES USED

	Wet Preparation
	Multipoint - Wet
X	Dry Preparation
	Multipoint - Dry
X	Procedure A
	Multipoint Test
	Procedure B
	One-point Test



ATTERBERG LIMITS

ASTM D 4318

Project Name:	Calabasas	Tested By:	R. Manning	Date:	09/25/19
Project No. :	19153-01	Input By:	G. Bathala	Date:	09/27/19
Boring No.:	HS-5	Checked By:	J. Ward		
Sample No.:	R-3	Depth (ft.)	15.0		
Soil Identification:	Olive brown fat clay (CH)				

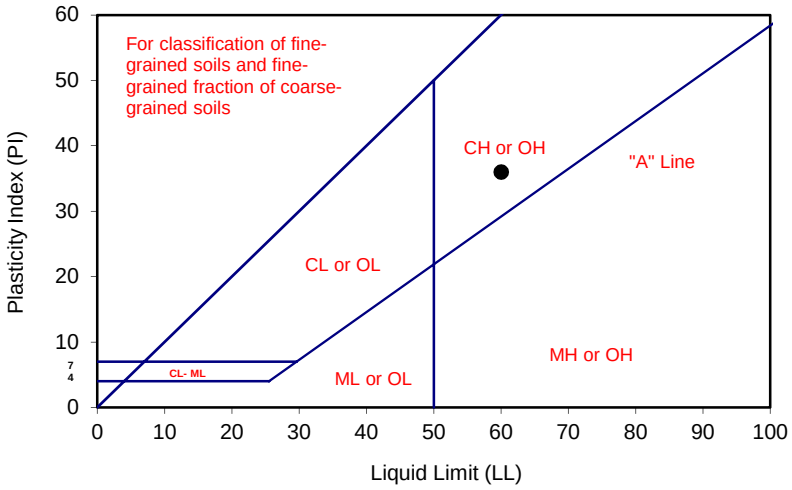
TEST	PLASTIC LIMIT		LIQUID LIMIT			
NO.	1	2	1	2	3	4
Number of Blows [N]			35	28	20	
Wet Wt. of Soil + Cont. (g)	18.30	17.31	22.84	23.58	23.95	
Dry Wt. of Soil + Cont. (g)	17.03	16.11	19.37	19.84	20.06	
Wt. of Container (g)	11.75	11.11	13.45	13.59	13.71	
Moisture Content (%) [Wn]	24.05	24.00	58.61	59.84	61.26	

Liquid Limit	**60**
Plastic Limit	**24**
Plasticity Index	**36**
Classification	**CH**

PI at "A" - Line = 0.73(LL-20) 29.2

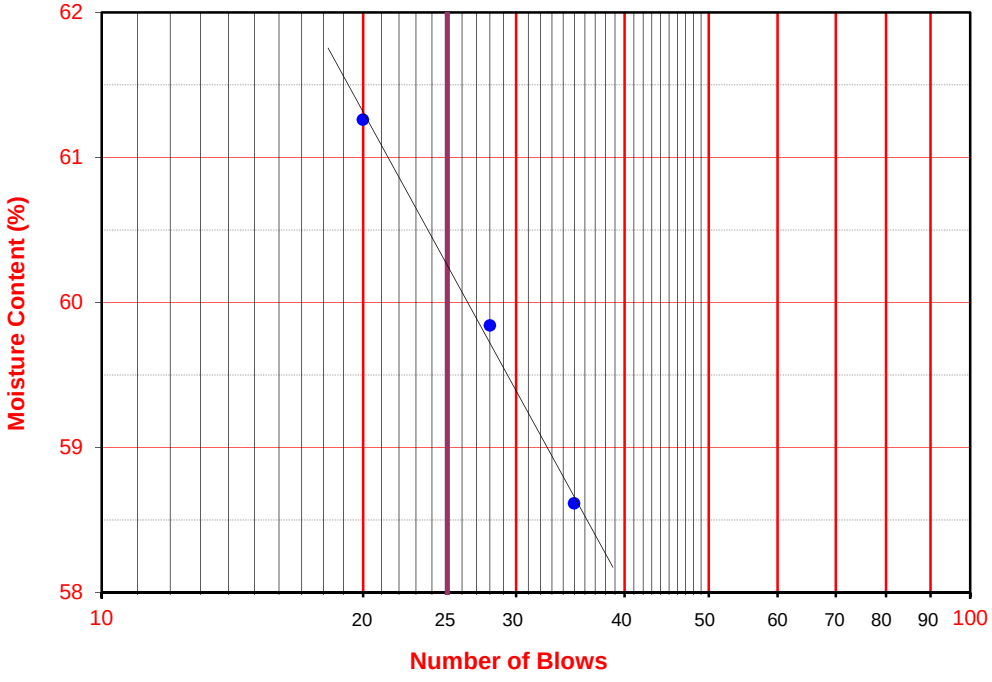
One - Point Liquid Limit Calculation

$LL = Wn(N/25)^{0.121}$

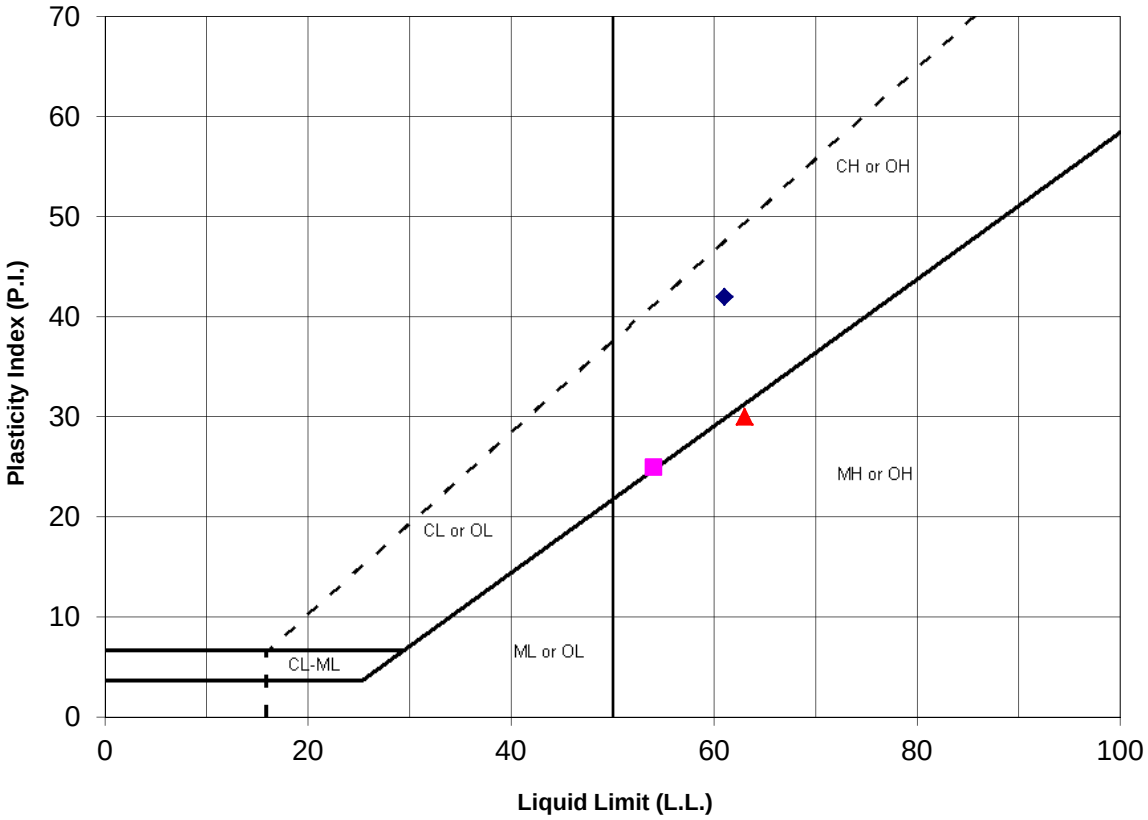


PROCEDURES USED

	Wet Preparation
	Multipoint - Wet
X	Dry Preparation
	Multipoint - Dry
X	Procedure A
	Multipoint Test
	Procedure B
	One-point Test



PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-2	B-1	10-15	-	61	19	42	CH
■	BA-1	R-1	10	-	54	29	25	CH
▲	BA-2	R-2	20	-	63	33	30	MH

LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 19153-01
Date: Oct-19

Trojan - Calabasas

Location	Sample No.	Depth (ft)	Molding Moisture Content (%)	Initial Dry Density (pcf)	Final Moisture Content (%)	Expansion Index	Expansion Classification[1]
HS-2	B-1	10-15	21.4	78.1	48.1	91	High
BA-1	B-1	5-10	12.9	99.5	33.3	113	High

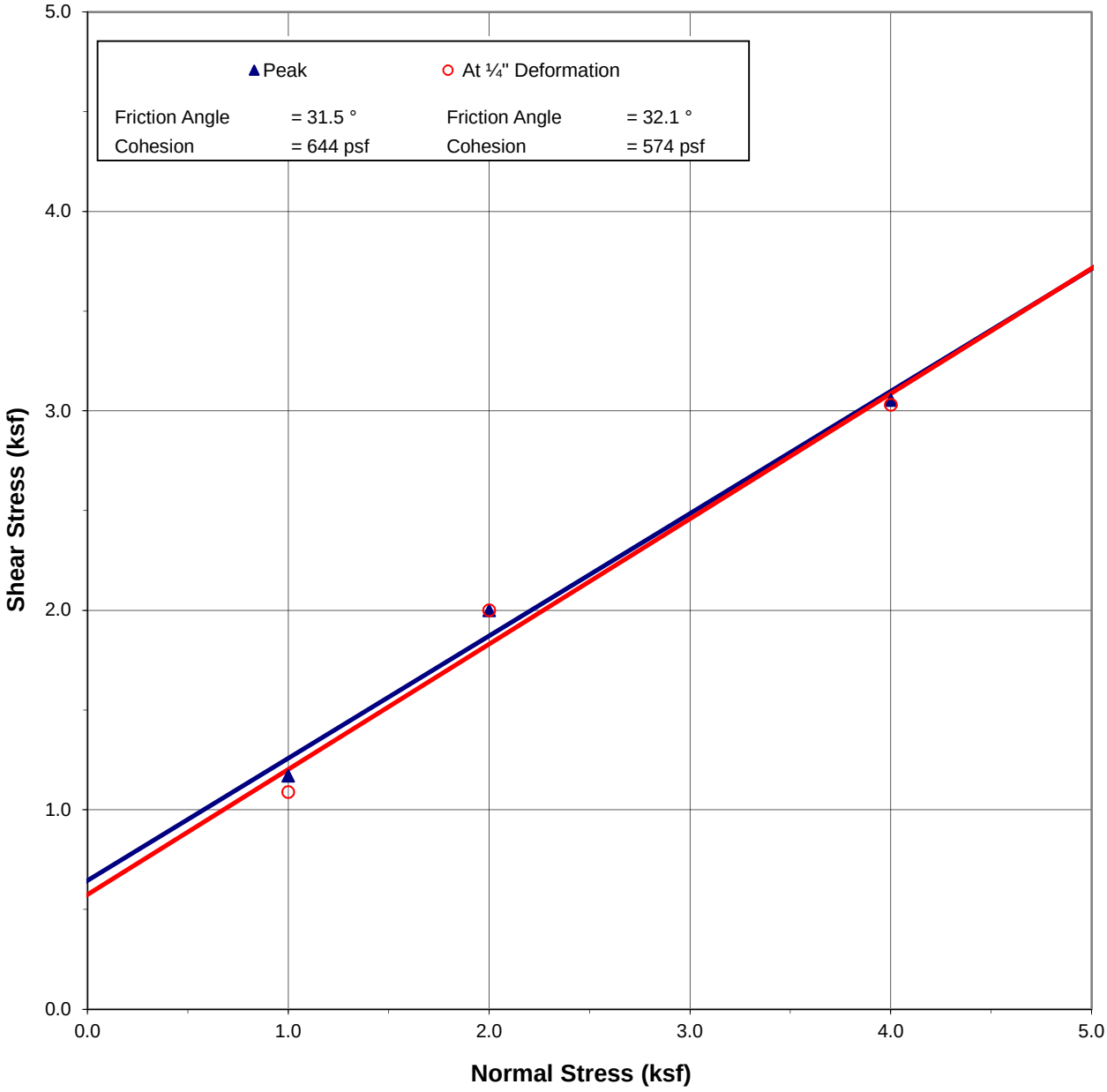
[1] Per ASTM D4829

LGC Geotechnical, Inc.

EXPANSION INDEX
(ASTM D 4829)

Project Number: 19153-01
Date: Oct-19

Trojan - Calabasas



Location:	Sample No.:	Depth (ft)	Sample Type	Shear Rate (inch/min)	Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Content (%)
BA-1	**R-1**	**10**	**Ring**	**0.002**	**77.0**	**24.2**	**46.0**

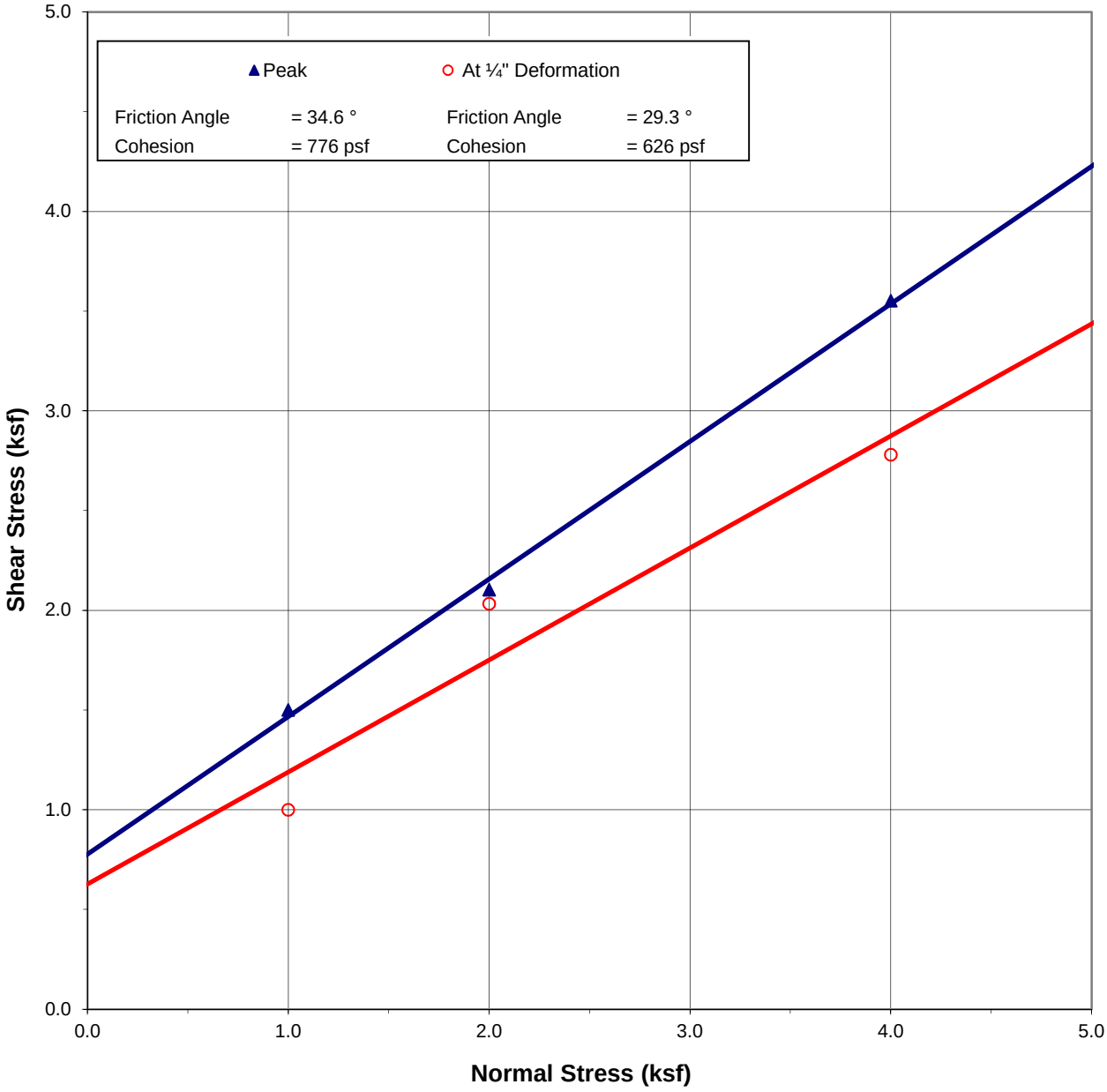
Sample Description: Light Brown Clay (CH)

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 19153-01
Date: Oct-19

Trojan - Calabasas



Location:	Sample No.:	Depth (ft)	Sample Type	Shear Rate (inch/min)	Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Content (%)
BA-2	**R-2**	**20**	**Ring**	**0.002**	**78.6**	**36.5**	**50.0**

Sample Description: Reddish Brown Silt (MH)

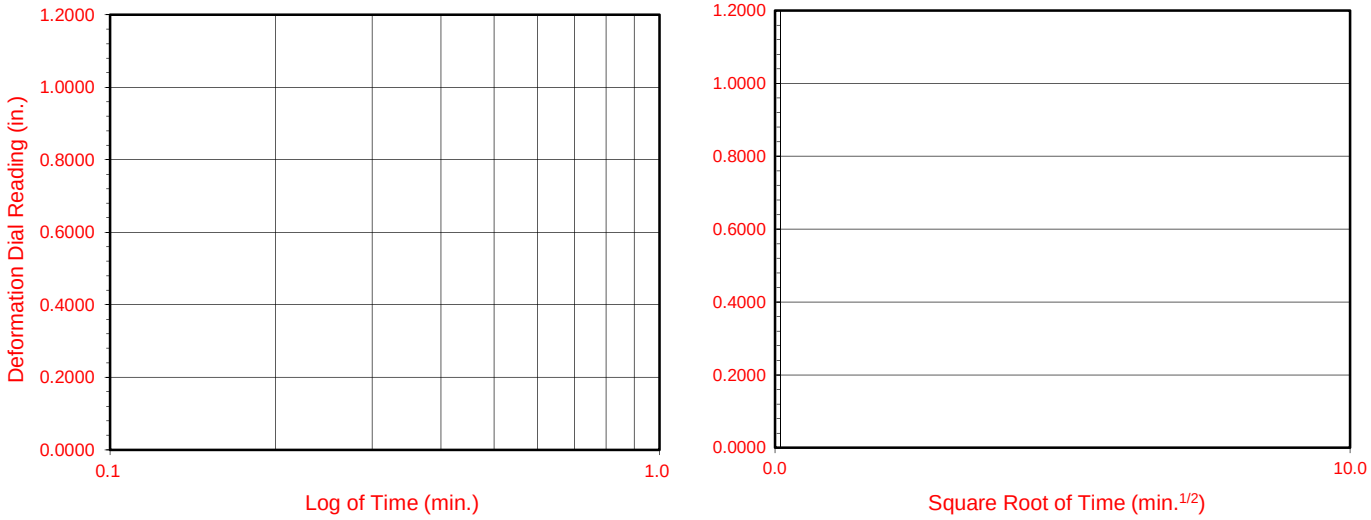
LGC Geotechnical, Inc.

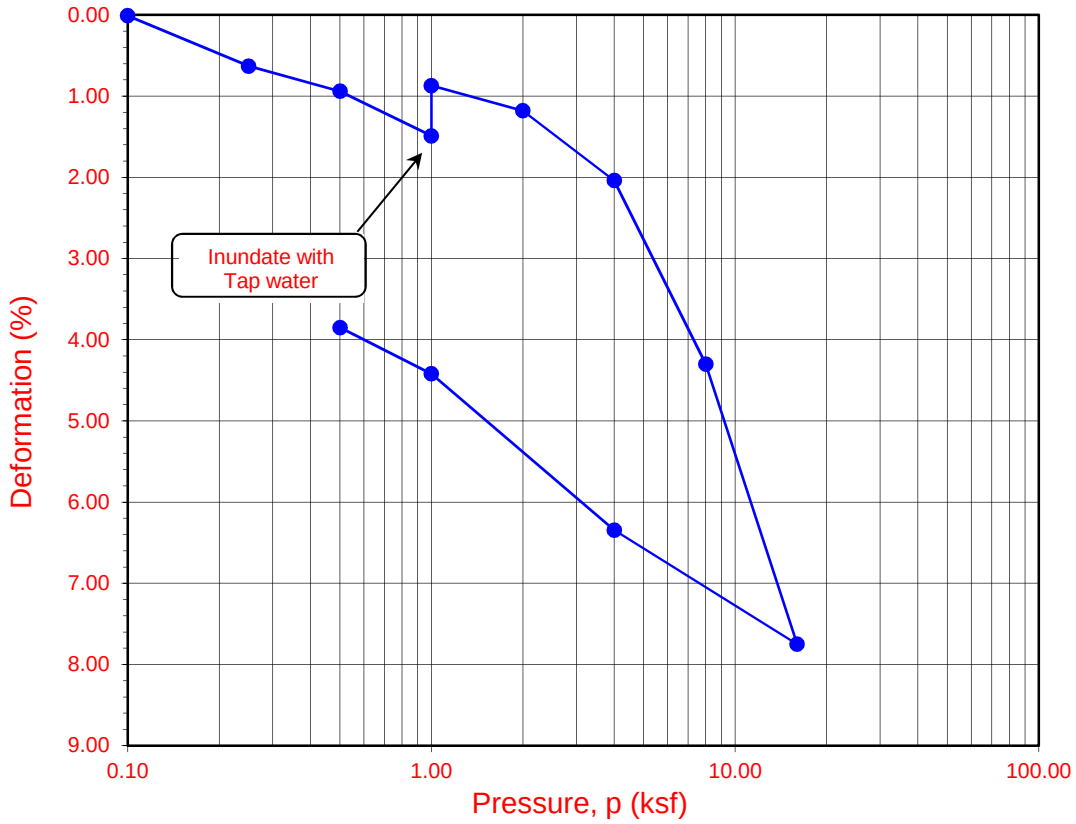
DIRECT SHEAR PLOT

Project Number: 19153-01
Date: Oct-19

Trojan - Calabasas

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-1	**R-3**	**15.0**	**33.7**	**32.0**	**87.0**	**90.6**	**0.938**	**0.863**	**97**	**100**

Soil Identification: Dark olive brown fat clay (CH), gypsum noted

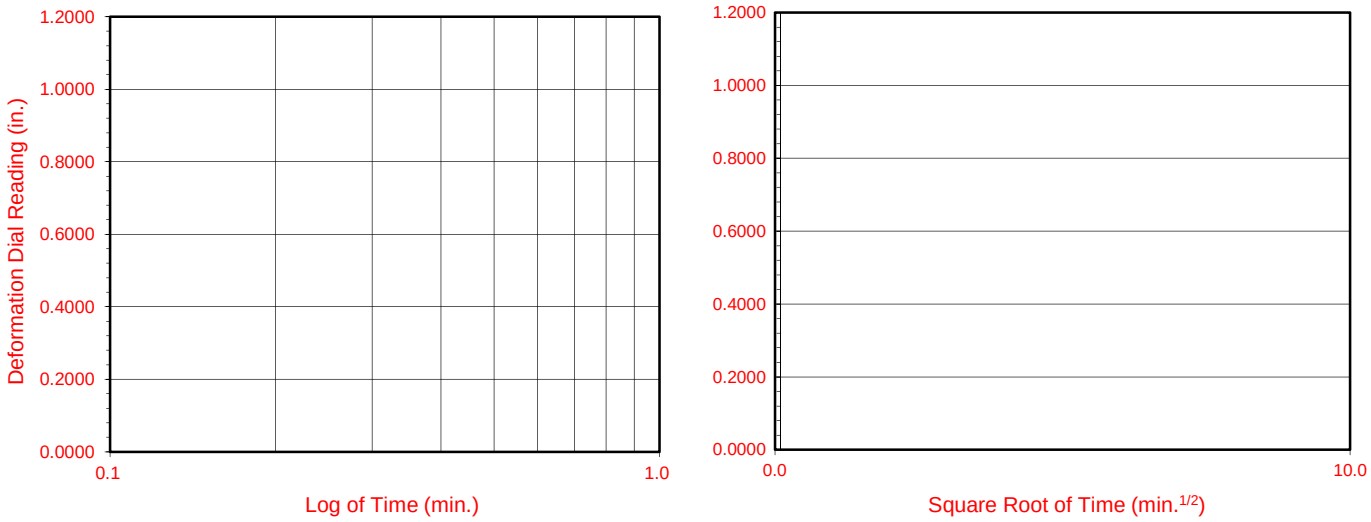
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

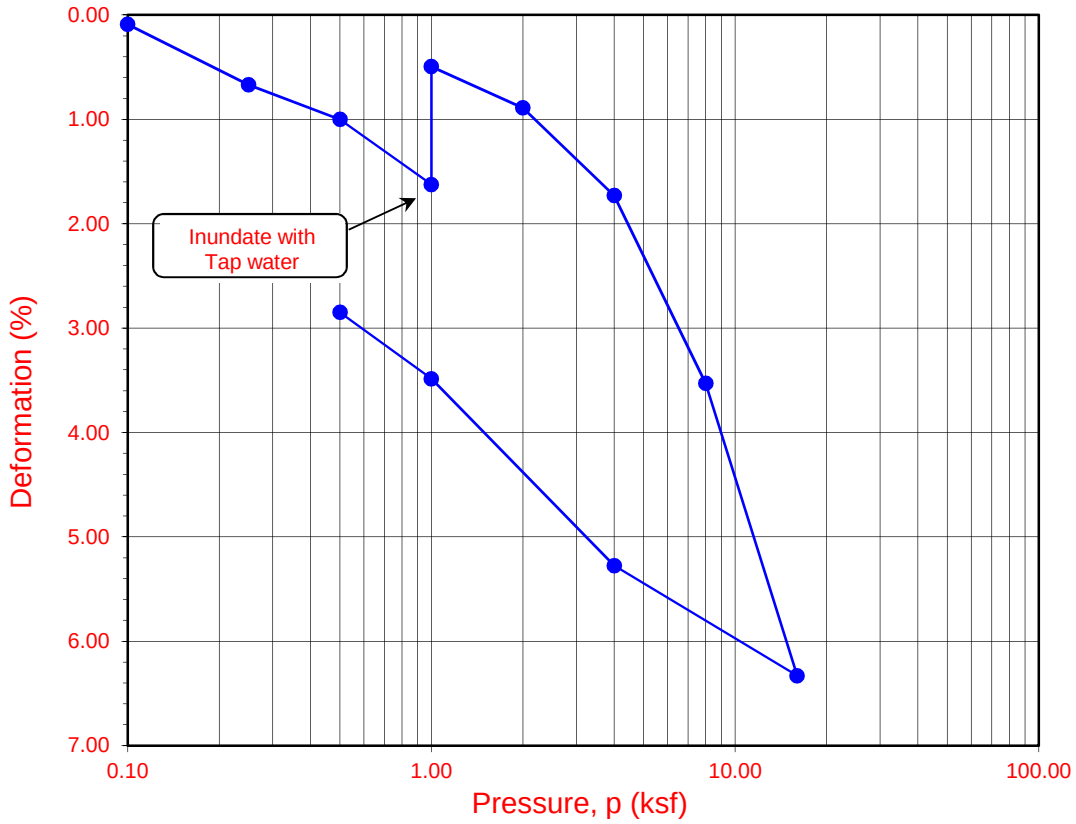
Project No.: 19153-01

Calabasas

09-19

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-3	**R-2**	**7.5**	**26.7**	**26.1**	**94.4**	**97.7**	**0.785**	**0.734**	**92**	**97**

Soil Identification: Dark olive brown fat clay (CH)

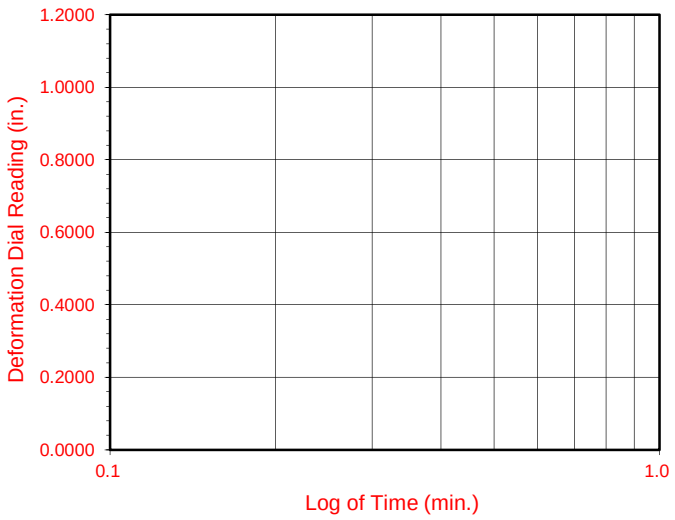
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

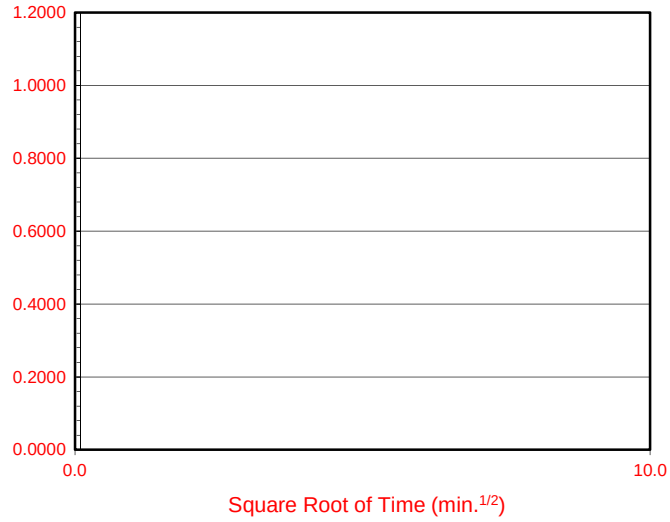
Project No.: 19153-01

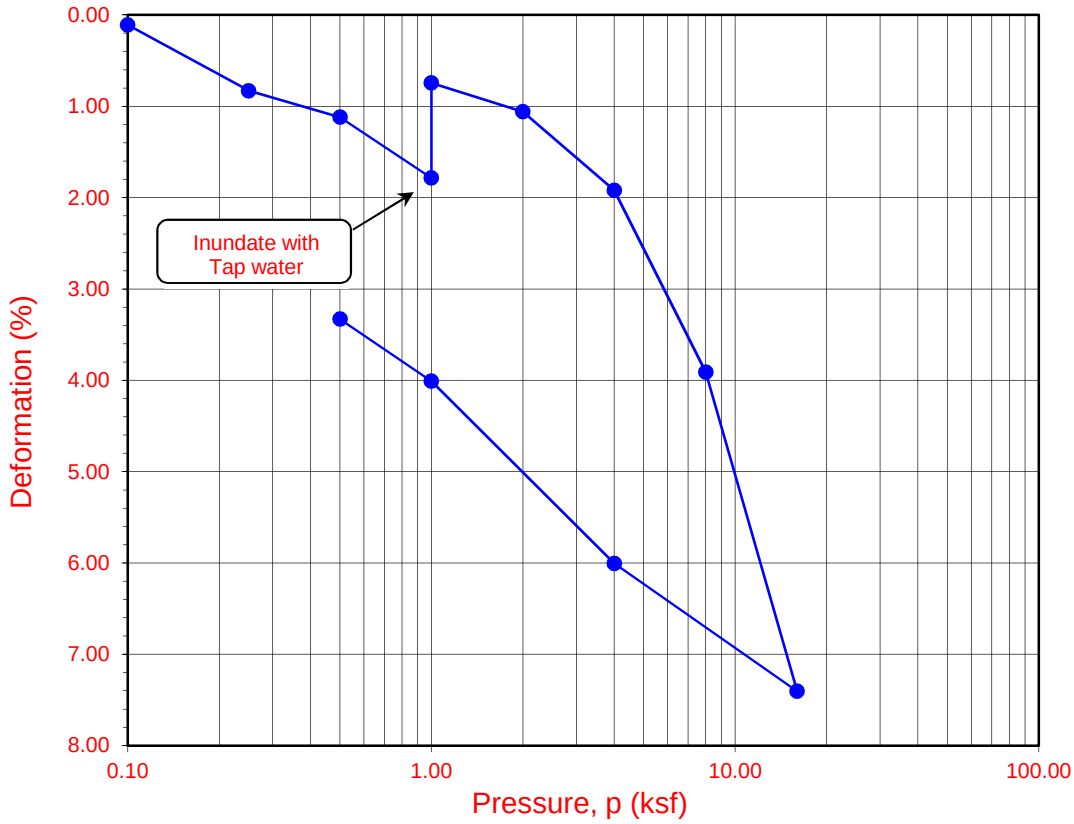
Calabasas

09-19

Time Readings







Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-5	**R-3**	**15.0**	**30.7**	**30.3**	**90.9**	**93.2**	**0.869**	**0.807**	**96**	**100**

Soil Identification: Olive brown fat clay (CH)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 19153-01

Calabasas

09-19

SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Calabasas		Tested By :	A. Santos	Date: 09/26/19
Project No. :	19153-01		Input By:	J. Ward	Date: 09/29/19
Boring No.:	HS-2		Depth (ft.) :	10-15	
Sample No. :	B-1				

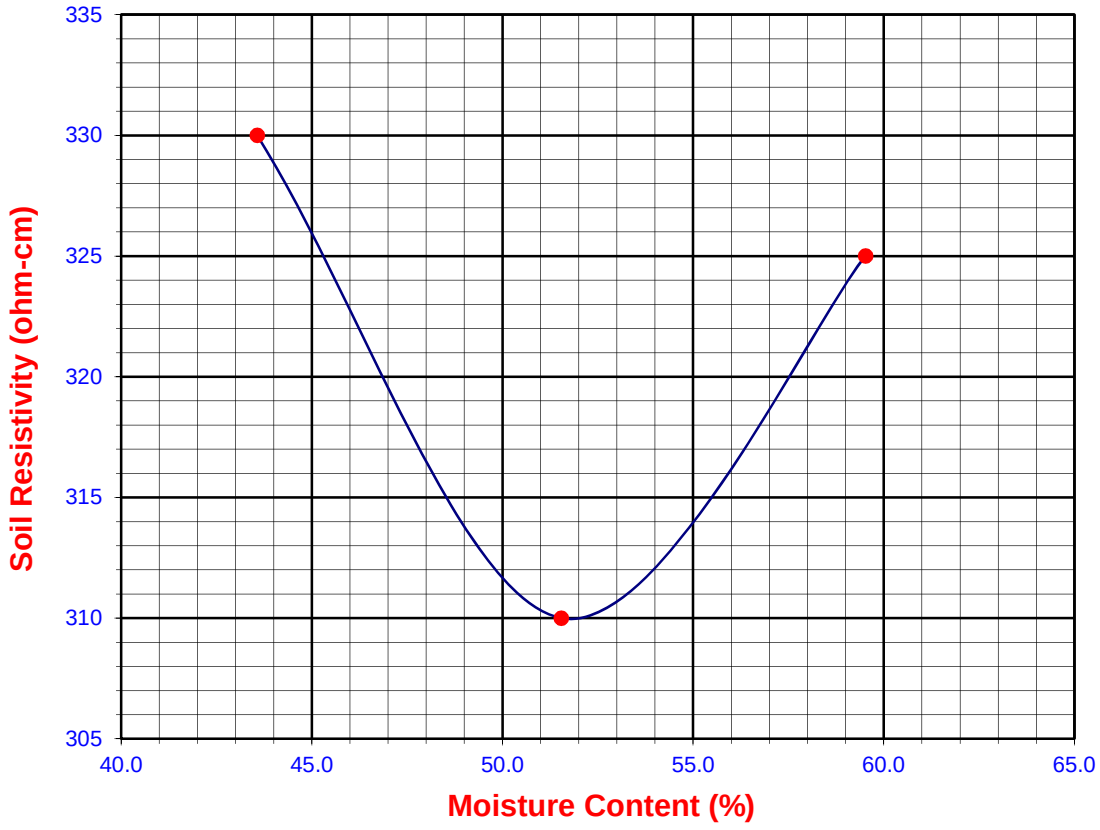
Soil Identification:* Dark olive gray CL

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	50	43.57	330	330
2	60	51.54	310	310
3	70	59.52	325	325
4				
5				

Moisture Content (%) (MCi)	3.69
Wet Wt. of Soil + Cont. (g)	194.48
Dry Wt. of Soil + Cont. (g)	189.69
Wt. of Container (g)	59.81
Container No.	
Initial Soil Wt. (g) (Wt)	130.00
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
310	**51.8**	**3961**	**291**	**7.11**	**20.7**



SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Calabasas		Tested By :	A. Santos	Date: 09/26/19
Project No. :	19153-01		Input By:	J. Ward	Date: 09/29/19
Boring No.:	BA-1		Depth (ft.) :	5-10	
Sample No. :	B-1				

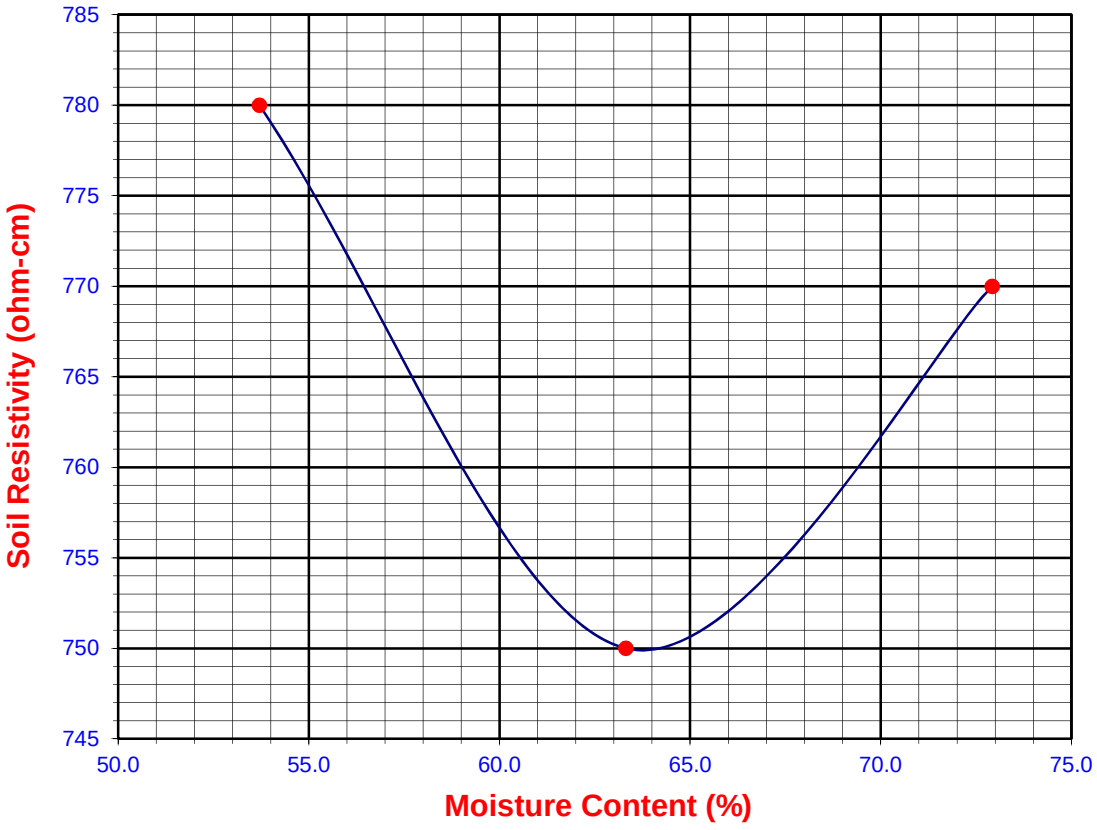
Soil Identification:* Olive CL

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	30	53.71	780	780
2	40	63.32	750	750
3	50	72.92	770	770
4				
5				

Moisture Content (%) (MCi)	24.89
Wet Wt. of Soil + Cont. (g)	119.26
Dry Wt. of Soil + Cont. (g)	108.09
Wt. of Container (g)	63.21
Container No.	
Initial Soil Wt. (g) (Wt)	130.00
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
750	**63.7**	**3139**	**107**	**7.51**	**20.6**



Appendix D
General Earthwork and Grading Specifications

General Earthwork and Grading Specifications for Rough Grading

1.0 General

1.1 Intent

These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to confirm that the attained level of compaction is being accomplished as specified. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor

The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the project plans and specifications. The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of “equipment” of work and the estimated quantities of daily earthwork

contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the
Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified. It is the contractor's sole responsibility to provide proper fill compaction.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed. The contractor is responsible for all hazardous waste relating to his work. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Client should acquire the services of a qualified environmental assessor.

2.2 Processing

Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be over-excavated as specified in the following section. Scarification shall continue until soils are broken down and free of oversize material and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Over-excavation

In addition to removals and over-excavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be over-excavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise over-excavated to provide a flat subgrade for the fill.

2.5 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 the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 General

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. 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.

3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of the geotechnical consultant. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill 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 over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing

Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing

Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations

The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than
5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 The Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

7.2 All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over

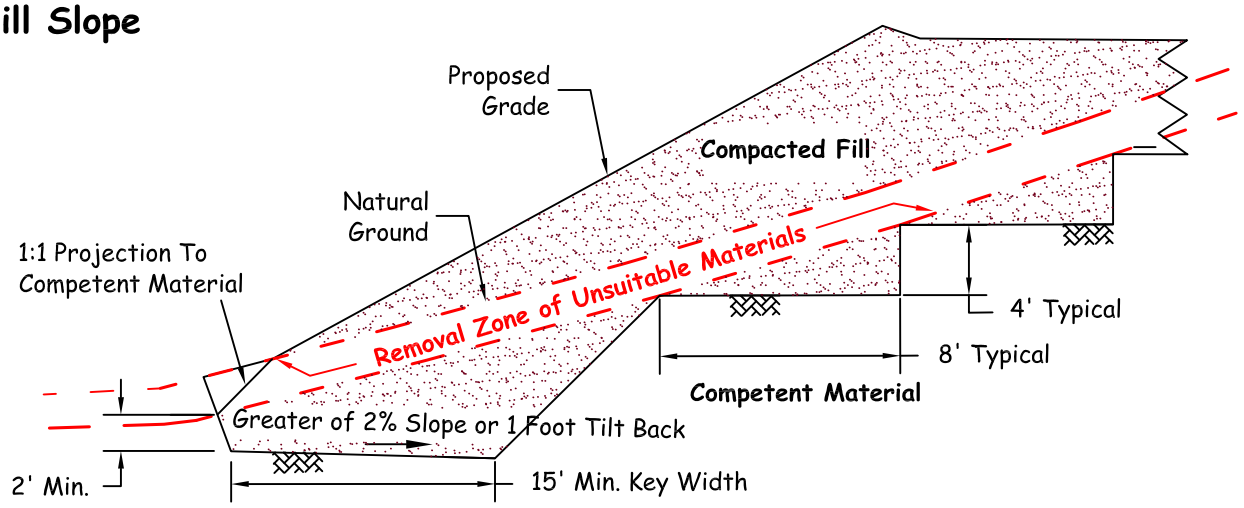
the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of maximum from 1 foot above the top of the conduit to the surface.

7.3 The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

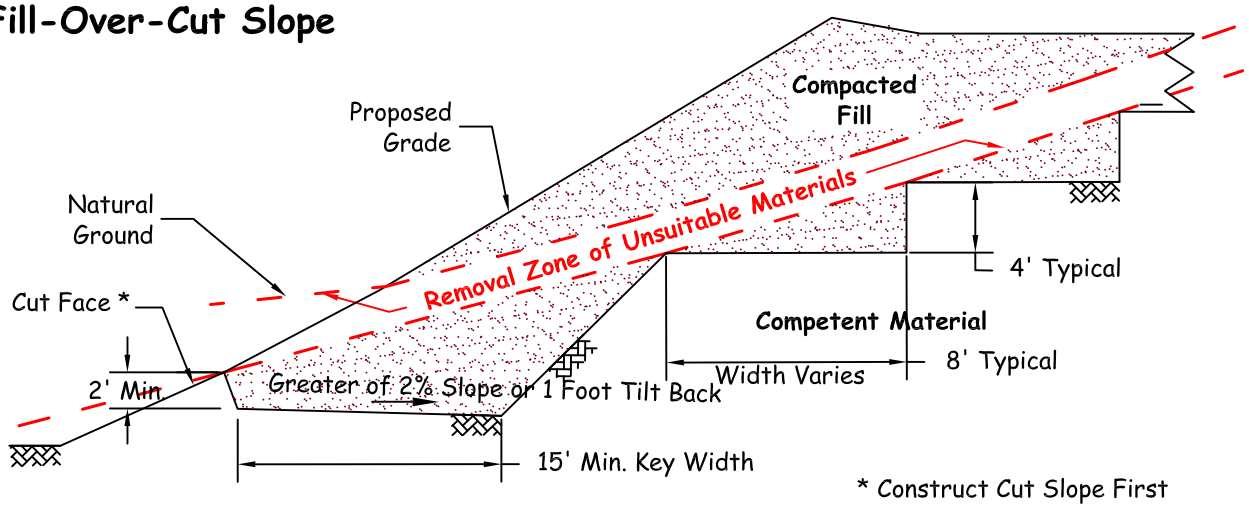
7.4 The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

Fill Slope

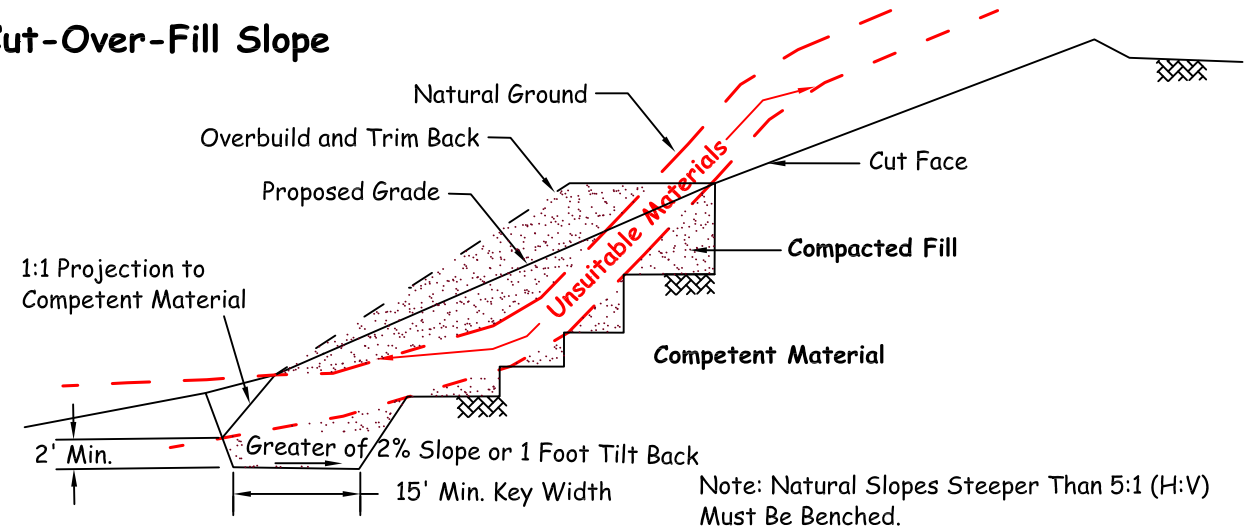


Fill-Over-Cut Slope



* Construct Cut Slope First

Cut-Over-Fill Slope



Note: Natural Slopes Steeper Than 5:1 (H:V) Must Be Benched.

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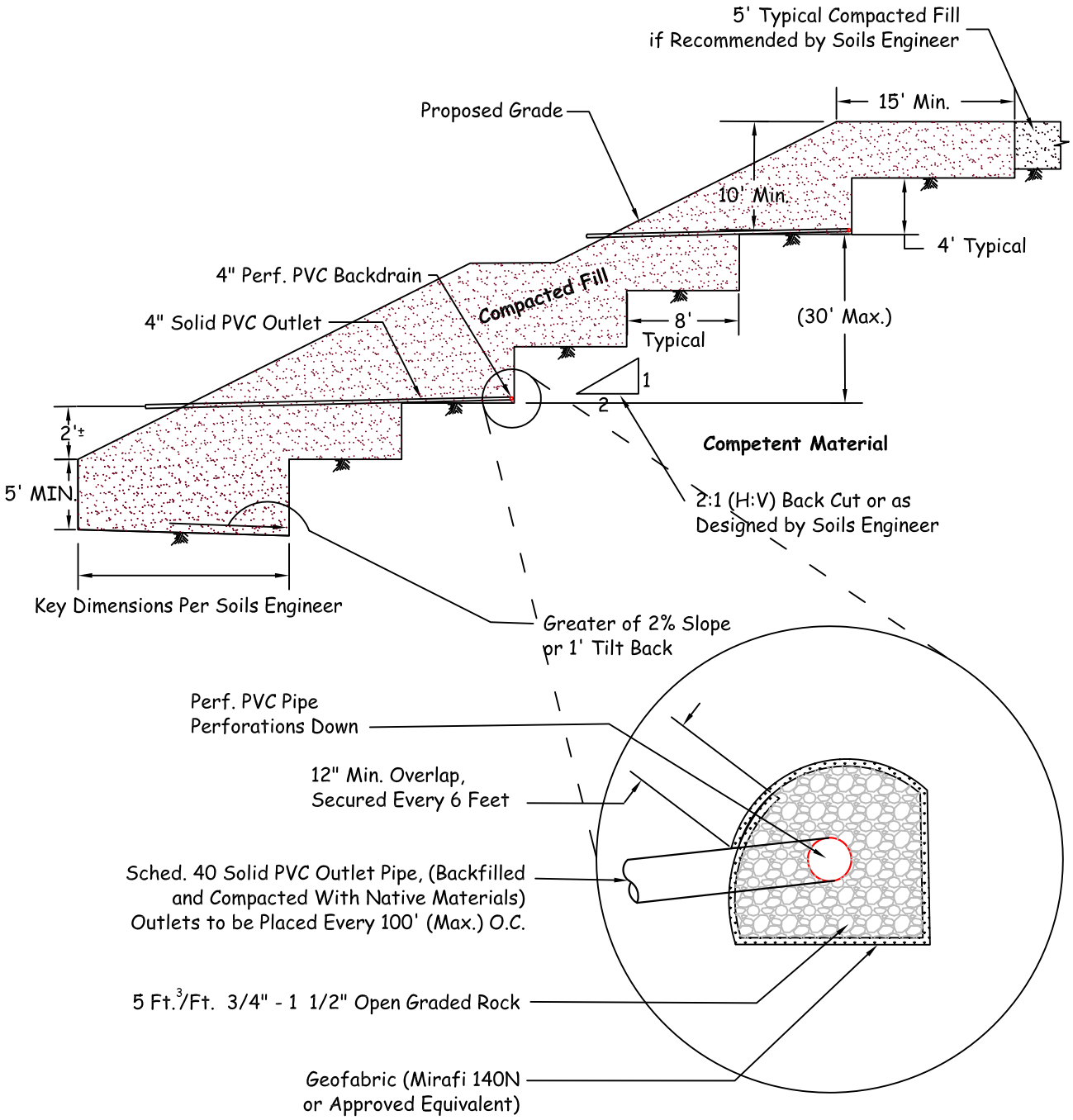
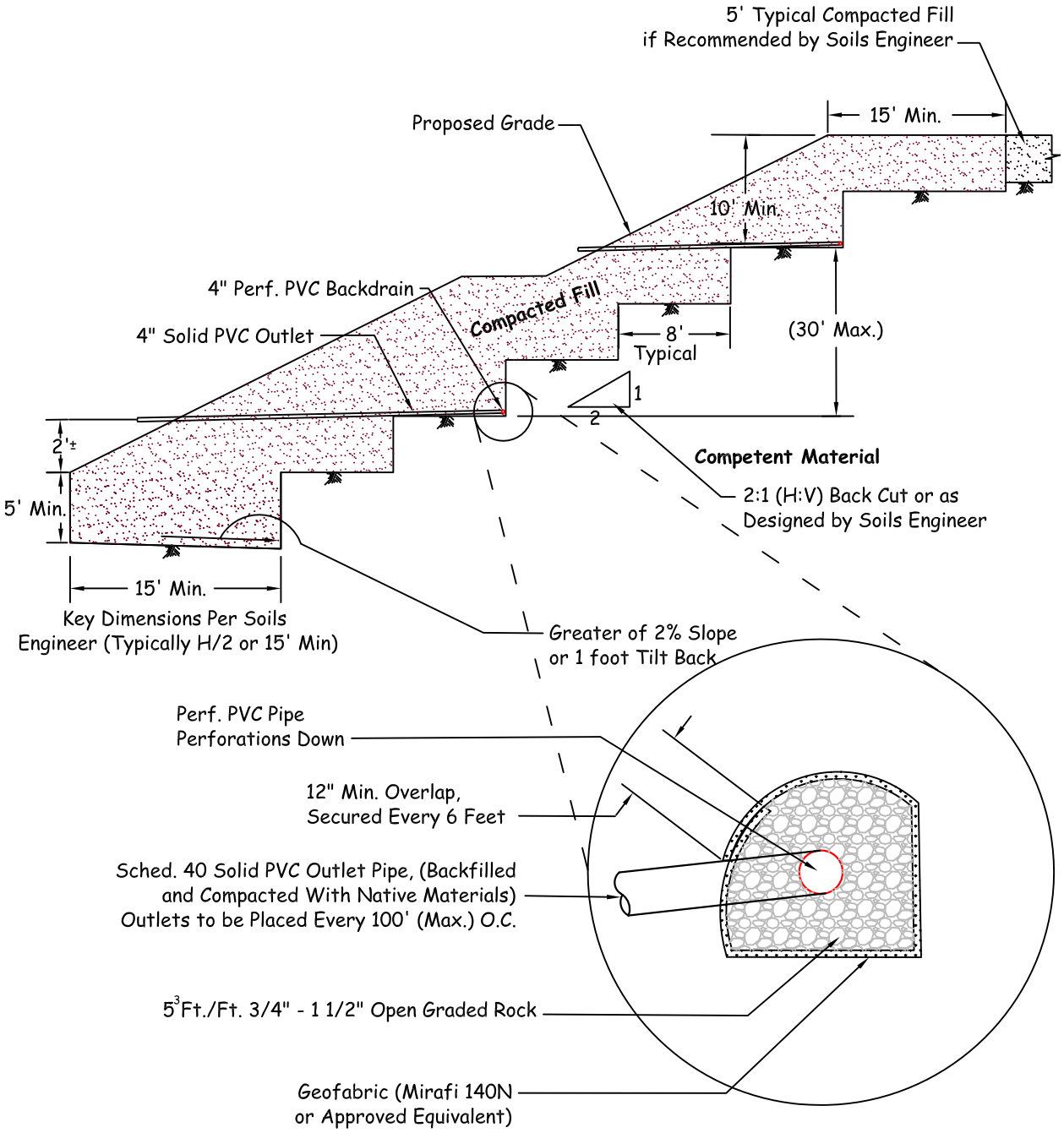
KEYING AND BENCHING



LGC Geotechnical, Inc.

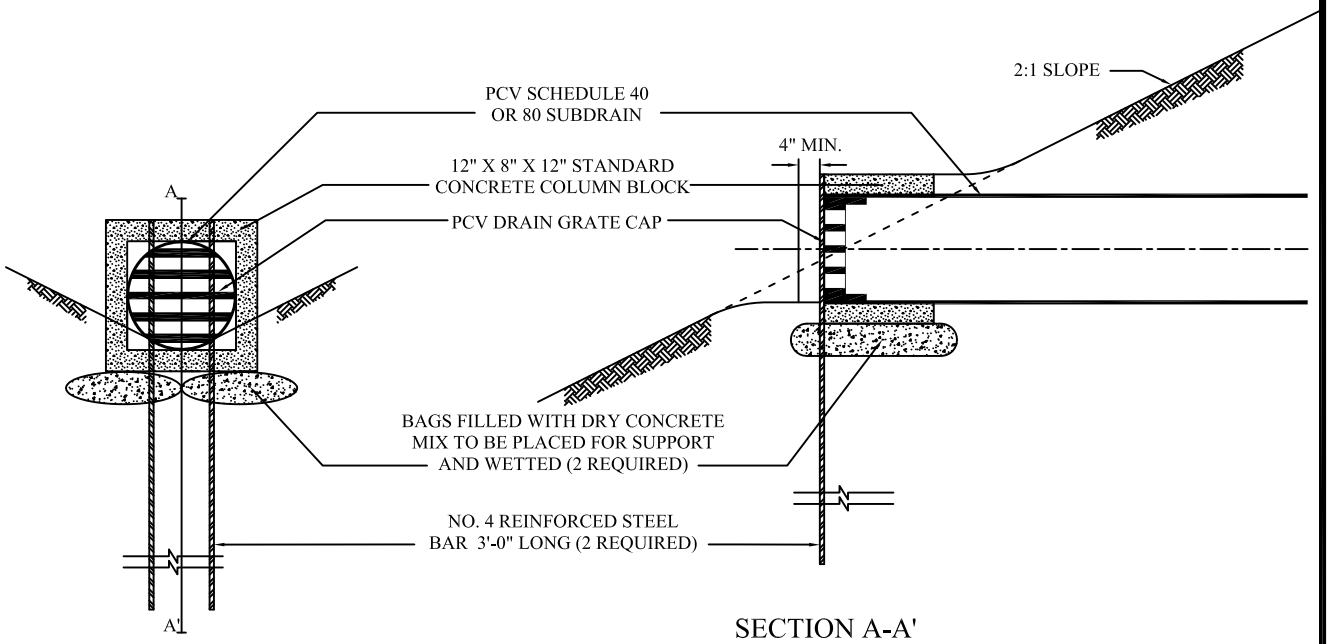
TYPICAL BUTTRESS DETAIL



LGC Geotechnical, Inc.

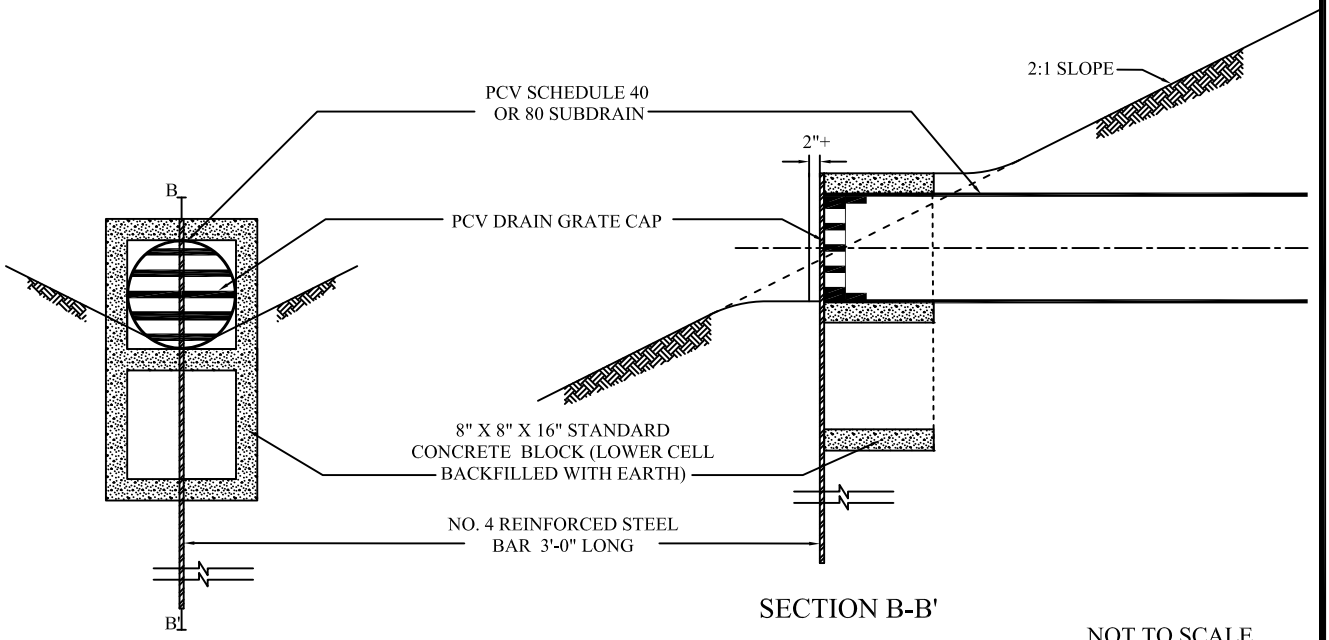
TYPICAL STABILIZATION FILL DETAIL

SUBDRAIN OUTLET MARKER -6" & 8" PIPE



SECTION A-A'

SUBDRAIN OUTLET MARKER -4" PIPE



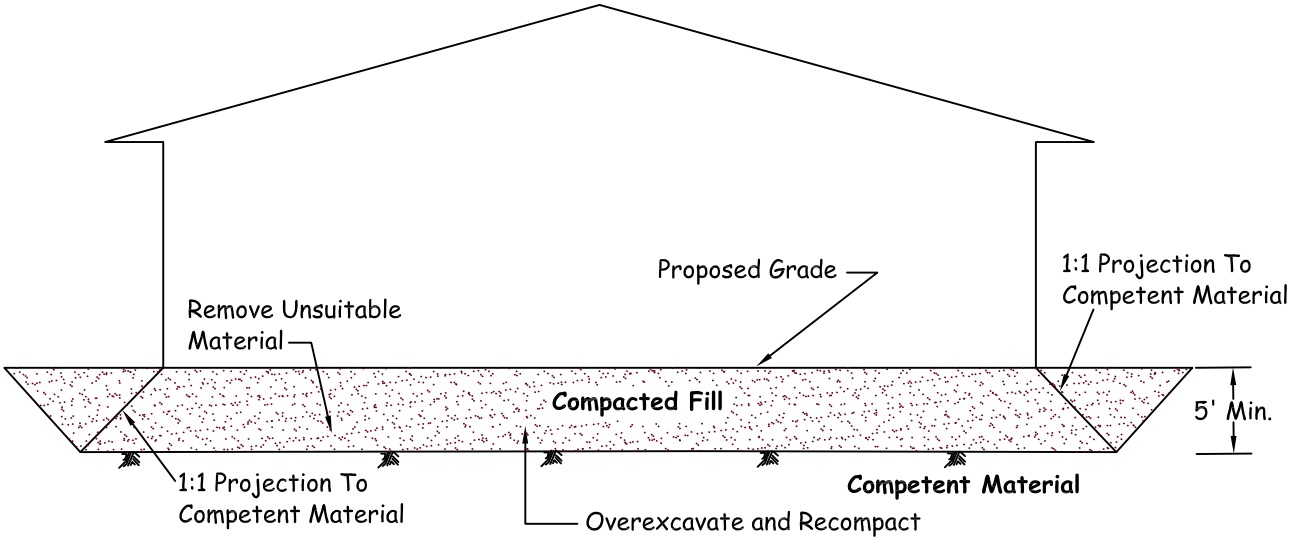
SECTION B-B'

NOT TO SCALE

LGC Geotechnical, Inc.

SUBDRAIN OUTLET MARKER DETAIL

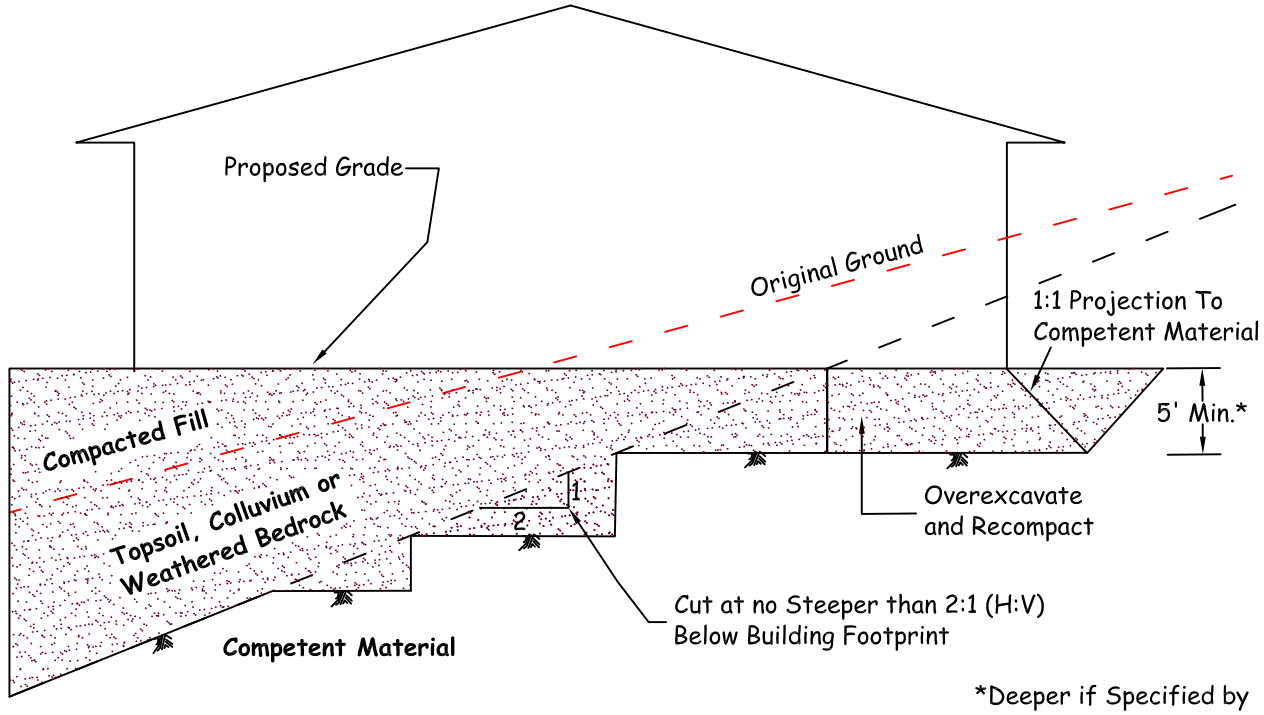
Cut Lot
(Exposing Unsuitable Soils at Design Grade)



Note 1: Removal Bottom Should be Graded With Minimum 2% Fall Towards Street or Other Suitable Area (as Determined by Soils Engineer) to Avoid Ponding Below Building

Note 2: Where Design Cut Lots are Excavated Entirely Into Competent Material, Overexcavation May Still be Required for Hard-Rock Conditions or for Materials With Variable Expansion Characteristics.

Cut/Fill Transition Lot



*Deeper if Specified by Soils Engineer

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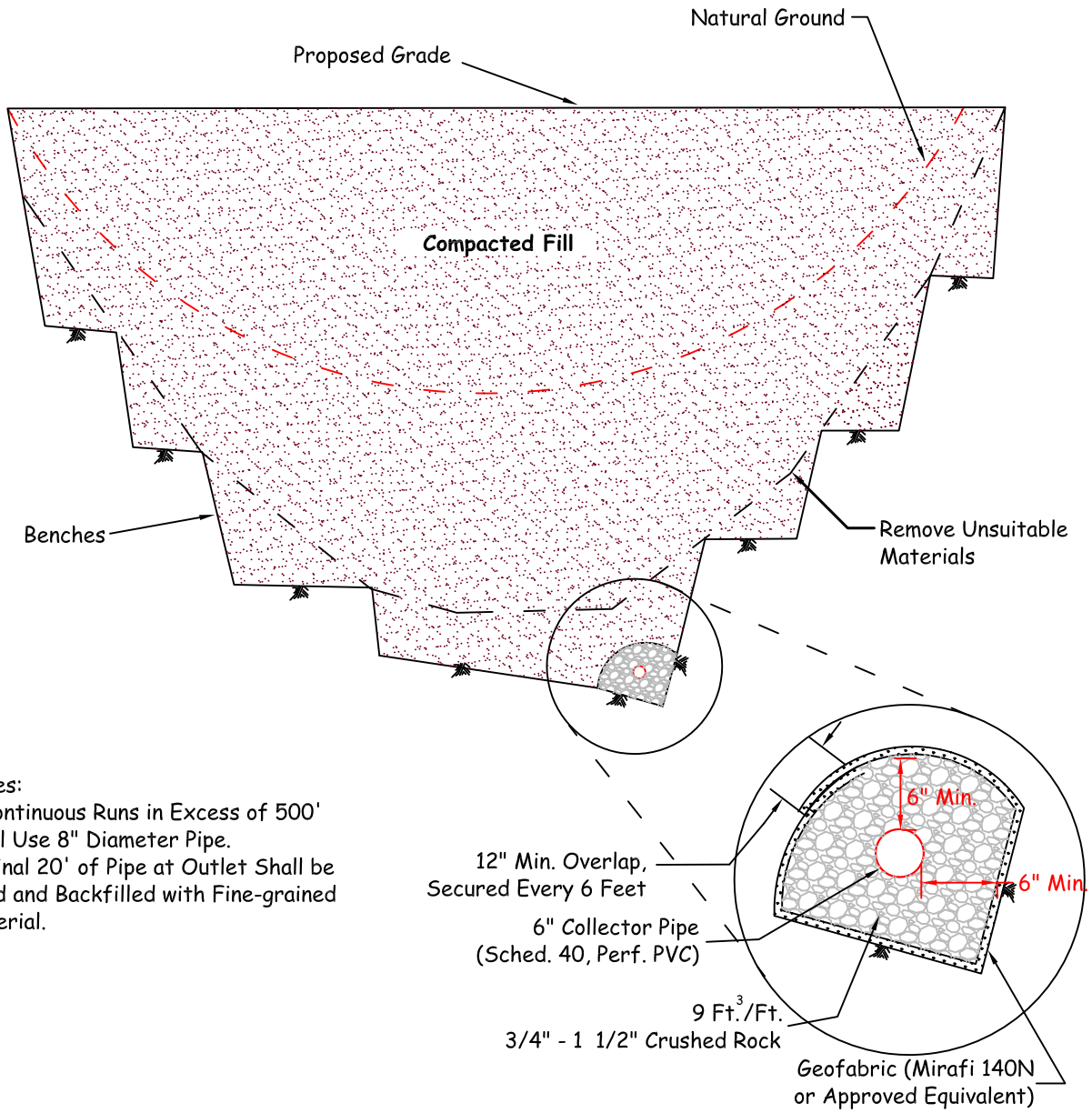
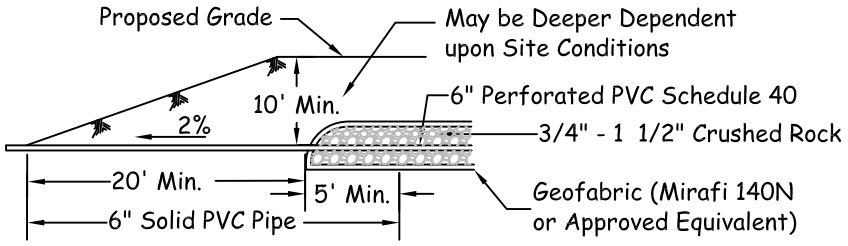
CUT AND TRANSITION LOT OVEREXCAVATION DETAIL



Notes:
1) Continuous Runs in Excess of 500' Shall Use 8" Diameter Pipe.
2) Final 20' of Pipe at Outlet Shall be Solid and Backfilled with Fine-grained Material.

Proposed Outlet Detail



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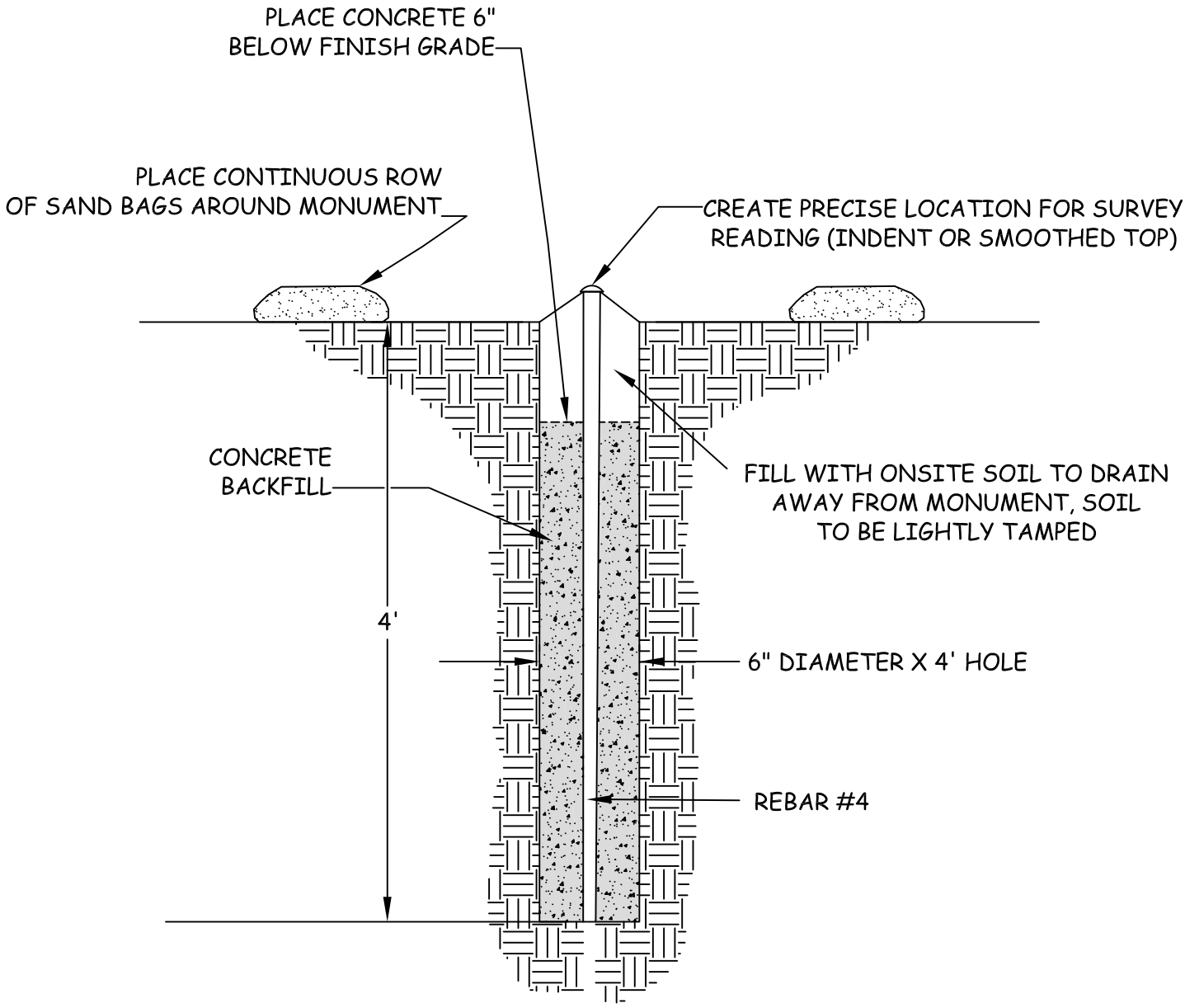
CANYON SUBDRAINS



NO CONSTRUCTION EQUIPMENT WITHIN 25 FEET
OF ANY INSTALLED SETTLEMENT MONUMENTS

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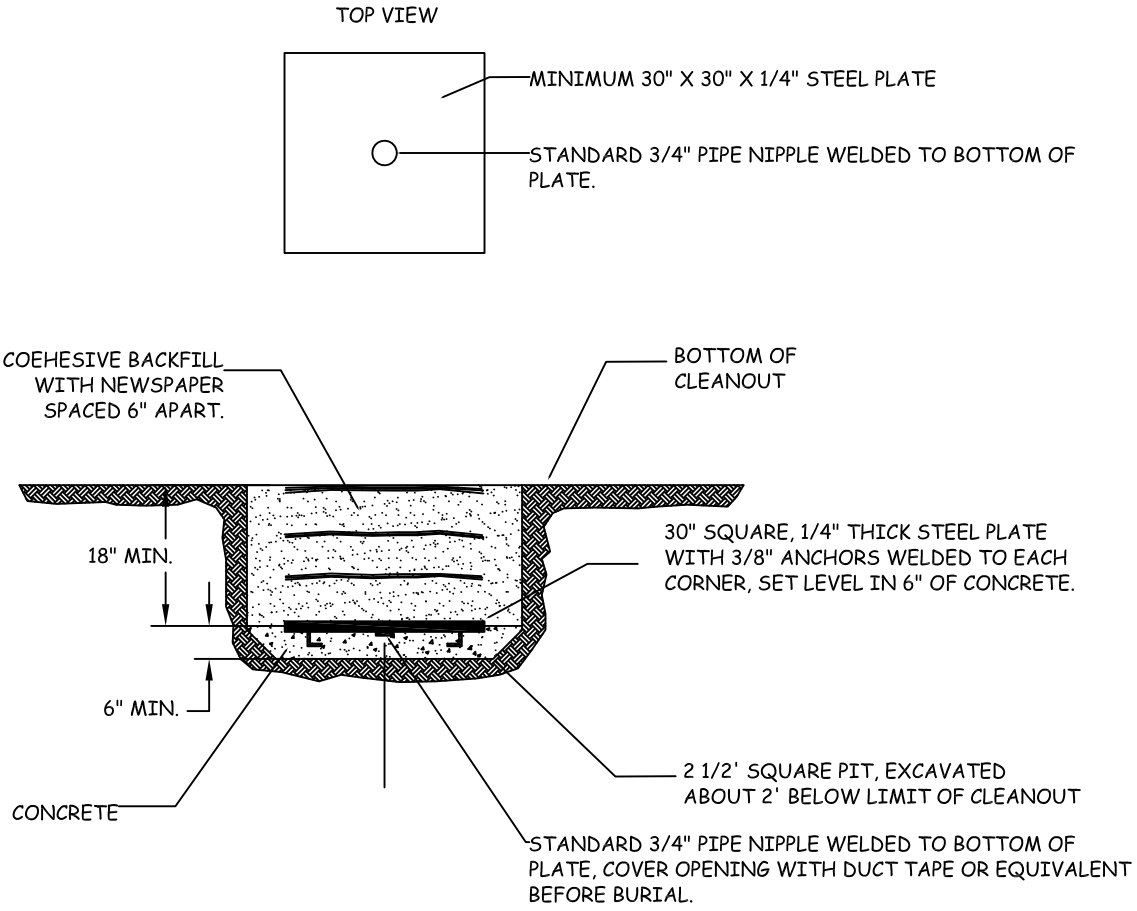
TYPICAL SURFACE SETTLEMENT MONUMENT



1. SURVEY FOR HORIZONTAL AND VERTICAL LOCATION TO NEAREST .01 INCH PRIOR TO BACKFILL USING KNOW LOCATIONS THAT WILL REMAIN INTACT DURING THE DURATION OF THE MONITORING PROGRAM. KNOW POINTS EXPLICITELY NOT ALLOWED ARE THOSE LOCATED ON FILL OR THAT WILL BE DESTROYED DURING GRADING.
2. IN THE EVENT OF DAMAGE TO SETTLEMENT PLATE DURING GRADING, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE GEOTECHNICAL ENGINEER AND SHALL BE RESPONSIBLE FOR RESTORING THE SETTLEMENT PLATES TO WORKING ORDER.
3. DRILL TO RECOVER AND ATTACH RISER PIPE.

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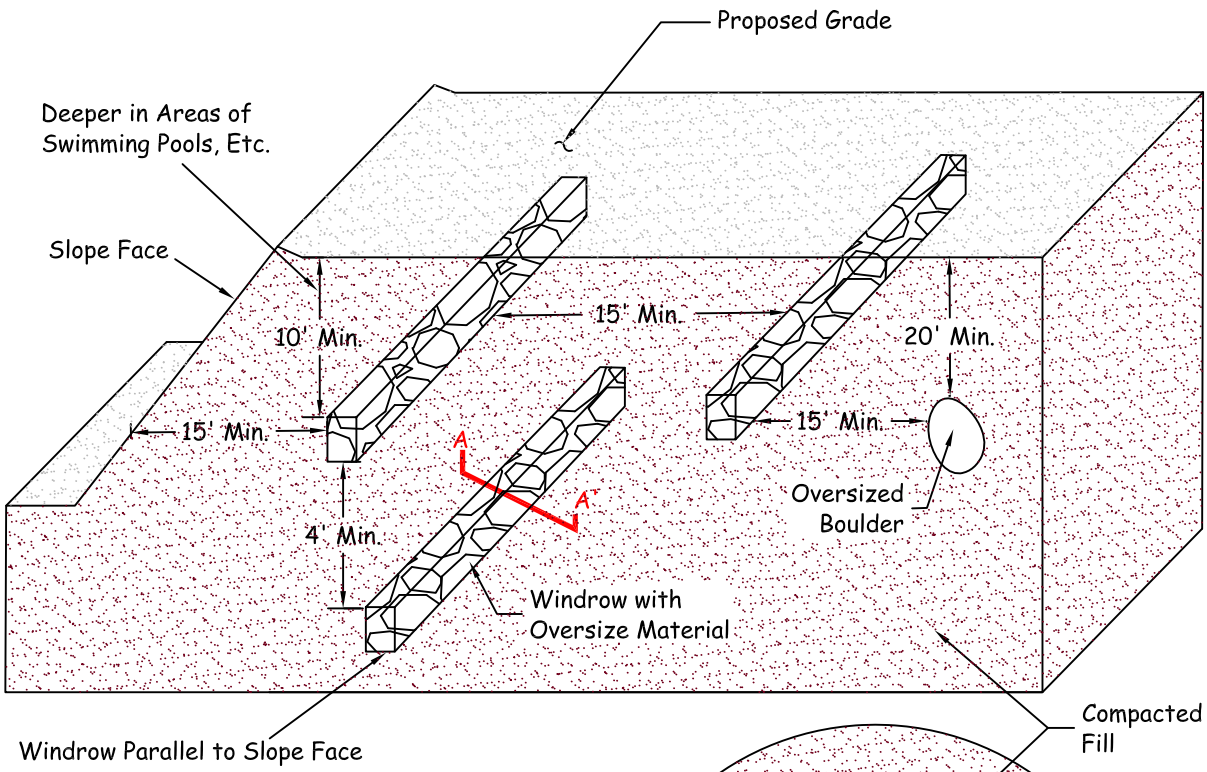
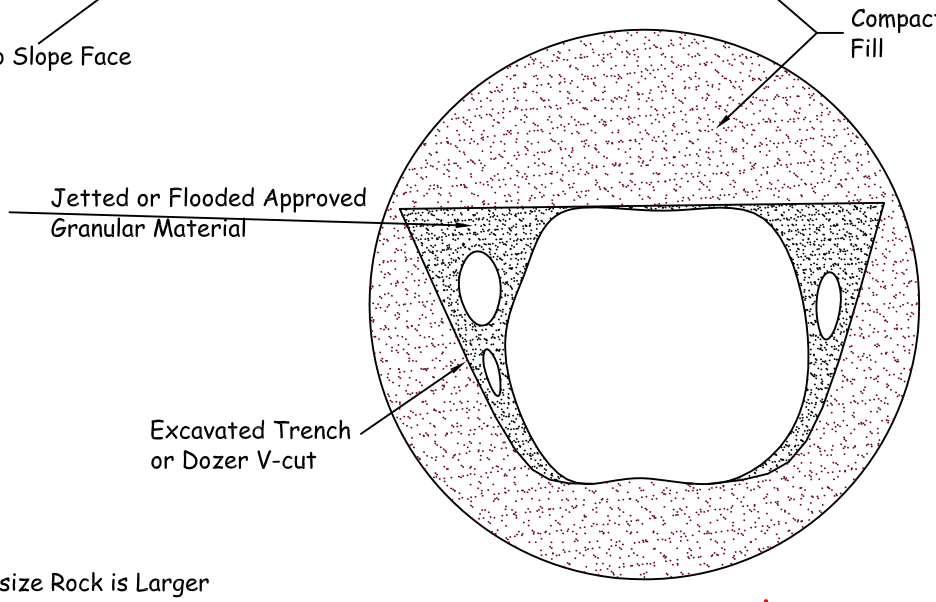
TYPICAL SETTLEMENT PLATE AND RISER



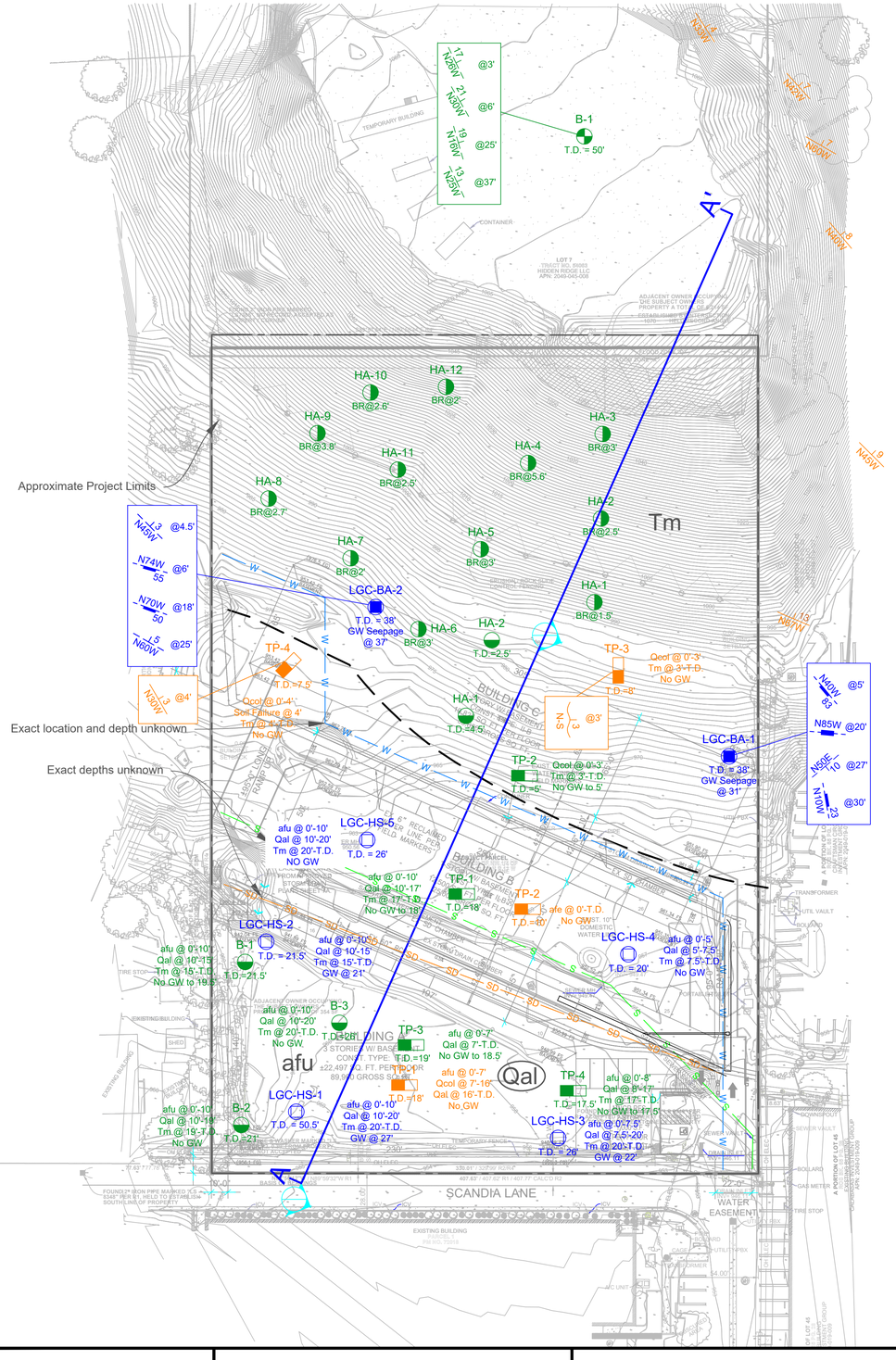


Note: Oversize Rock is Larger
than 8" in Maximum Dimension.

Section A-A'

LGC Geotechnical, Inc.

OVERSIZE ROCK DISPOSAL DETAIL

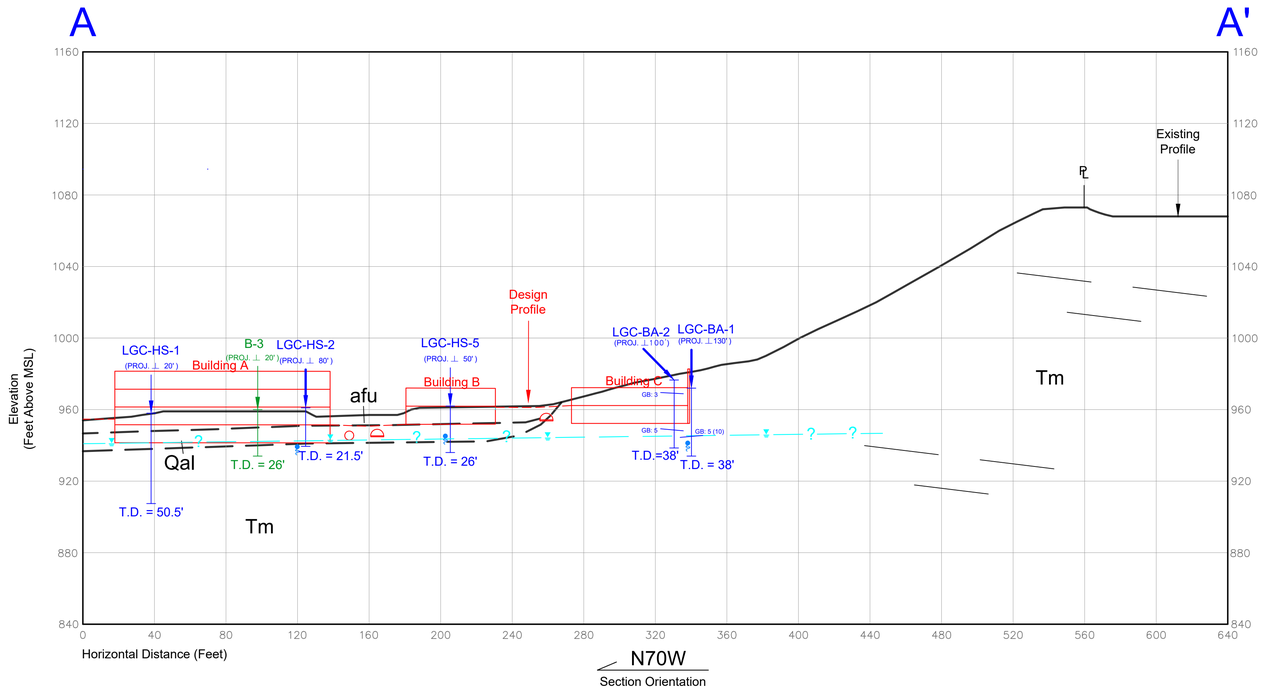


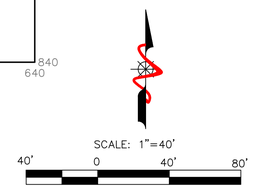
LEGEND

afu	Artificial Fill - Undocumented
Qal	Quaternary Alluvium, Circled Where Buried
Tm	Modelo Formation, Circled Where Buried
	Approximate Location of Geologic Contact; Dotted Where Buried, Queried Where Uncertain
LGC-BA-2 T.D. = 38'	Approximate Location of Bucket Auger Boring by LGC Geotechnical, With Total Depth in Feet
LGC-HS-5 T.D. = 26'	Approximate Location of Small Diameter Boring by LGC Geotechncial, With Total Depth in Feet
B-1 T.D. = 50'	Approximate Location of Bucket Auger Boring by J. Byer Group (2003), With Total Depth in Feet
B-3 T.D.=26'	Approximate Boring Location by Earth Systems Southern California (12/13/16), With Total Depth in Feet
HA-2 T.D.=2.5'	Approximate Hand Auger Boring Location by Earth Systems Southern California (12/13/16), With Total Depth in Feet
HA-12 T.D.=4.5'	Approximate Hand Auger Boring Location by Earth Systems Pacific (9/14/18), With Depth to Bedrock in Feet
TP-4 T.D.=17.5'	Approximate Location of Test Pits by Earth Systems Southern California (1/18/16), With Total Depth in Feet
TP-4 T.D.=7.5'	Approximate Location of Test Pits by McCollum Geotechnical (1986), With Total Depth in Feet
A A'	Geotechnical Cross-Section Alignment
?	Approximate Location of Groundwater Table, Queried Where Uncertain

Geologic Attitudes (Dashed Where Subsurface)

N67W 13	Bedding Attitude by McCollum Geotechnical (1986)
N.S 3	General Bedding Attitude by McCollum Geotechnical (1986)
N26W 17	Bedding Attitude by J. Byer Group (2003)
N60W 5	Bedding Attitude by LGC Geotechnical
N74W 55	Joint Attitude by LGC Geotechnical
N85W	Vertical Joint Attitude by LGC Geotechnical





LGC Geotechnical, Inc.

LGC Geotechnical, Inc.
131 Calle Iglesia, Ste. 200
San Clemente, CA 92672
TEL (949) 369-6141 FAX (949) 369-6142

Geotechnical Map and Cross Section A-A'

PROJECT NAME	Trojan - Calabasas
PROJECT NO.	19153-01
ENG. / GEOL.	BTZ / KBC
SCALE	1" = 40'
DATE	December 2019

SHEET 1 of 1

December 4, 2020 Project No. 19153-01

Mr. Brett Henry
Trojan Storage
1732 Aviation Boulevard, Suite 217
Redondo Beach, California 92078

Subject: ***Geotechnical Addendum Report, Proposed Self Storage Facility, 5050 Old Scandia Lane, Calabasas, California***

Introduction

In accordance with your request, LGC Geotechnical, Inc. has prepared this geotechnical addendum report for the proposed Self Storage Facility development to be located at 5050 Old Scandia Lane in Calabasas, California. This addendum report provides geotechnical seismic parameters per the 2019 California Building Code (CBC). In addition, the structural engineer has requested the option of spread footings for Buildings B and C and the office building. In consideration of the option of spread footings updated earthwork removals are provided herein.

The geotechnical recommendations provided herein supersede some of the recommendations previously provided (LGC Geotechnical, 2019). The previously provided geotechnical recommendations that are not superseded in the referenced report remain valid. For ease of reference some pertinent information is repeated herein. **This report is not a stand-alone document and must be used in conjunction with the referenced geotechnical report (Appendix A) for completeness.**

Proposed Development

The proposed development will consist of three self-storage buildings (Buildings "A" through "C") and an office building. Building "A" will be four stories including one subterranean level. Building "B" will be two stories which includes one subterranean level. Building "C" will include two stories; one subterranean and one partially subterranean, notched into the ascending hillside. A two story, at-grade office building will be located near Building "A". A parking lot will be in the southeast corner (Adams Streeter, 2020). Preliminary estimated maximum structural (dead plus live) structural loads provided by the project structural engineer are 200 kips and 9 kips per linear foot for column and wall loads, respectively for Building A and 100 kips and 4 kips per linear foot for column and wall loads, respectively for Buildings B and C (HW Engineering, 2020). A summary of the proposed development is provided in Table 1 on the following page.

Table 1

Summary of Proposed Development

Building	Approx. Finish Floor Elevation (ft.)	Comments
A	942.54	Basement
B	952.48	Basement
C	953.00	Basement
Office	953.67	At-Grade

Groundwater

Groundwater was encountered at depths ranging from approximately 20 feet (approximate elevation of 941 feet) to 37 feet (approximate elevation of 935 feet) below existing grade during our recent field evaluation (LGC Geotechnical, 2019). Groundwater is anticipated to be at an approximate elevation of 941 to 945 feet and may be encountered at higher elevations. Design groundwater for permanent conditions may be taken as elevation 949 feet. Refer to LGC Geotechnical, 2019.

Seismic Design Parameters

The site seismic characteristics were evaluated per the guidelines set forth in Chapter 16, Section 1613 of the 2019 California Building Code (CBC) and applicable portions of ASCE 7-16 which has been adopted by the CBC. Please note that the following seismic parameters are only applicable for code-based acceleration response spectra and are not applicable for where site-specific ground motion procedures are required by ASCE 7-16. Representative site coordinates of latitude 34.1565 degrees north and longitude -118.6502 degrees west were utilized in our analyses. The maximum considered earthquake (MCE) spectral response accelerations (S_{MS} and S_{M1}) and adjusted design spectral response acceleration parameters (S_{DS} and S_{D1}) for Site Class C are provided in Table 2 on the following page. The structural designer should contact the geotechnical consultant if structural conditions (e.g., number of stories, seismically isolated structures, etc.) require site-specific ground motions.

A deaggregation of the PGA based on a 2,475-year average return period (MCE) indicates that an earthquake magnitude of 6.74 at a distance of approximately 12.95 km from the site would contribute the most to this ground motion. A deaggregation of the PGA based on a 475-year average return period (Design Earthquake) indicates that an earthquake magnitude of 6.64 at a distance of approximately 15.99 km from the site would contribute the most to this ground motion (USGS, 2008).

TABLE 2

Seismic Design Parameters

Selected Parameters from 2019 CBC, Section 1613 - Earthquake Loads	Seismic Design Values	Notes/Exceptions
Distance to applicable faults classifies the site as a "Near-Fault" site.		Section 11.4.1 of ASCE 7
Site Class	C	Chapter 20 of ASCE 7
Ss (Risk-Targeted Spectral Acceleration for Short Periods)	1.589g	From SEAOC, 2020
S_1 (Risk-Targeted Spectral Accelerations for 1-Second Periods)	0.570g	From SEAOC, 2020
F_a (per Table 1613.2.3(1))	1.2	For Simplified Design Procedure of Section 12.14 of ASCE 7, F_a shall be taken as 1.4 (Section 12.14.8.1)
F_v (per Table 1613.2.3(2))	1.43	-
S_{MS} for Site Class C [Note: $S_{MS} = F_a S_S$]	1.907g	-
S_{M1} for Site Class C [Note: $S_{M1} = F_v S_1$]	0.815g	-
S_{DS} for Site Class C [Note: $S_{DS} = (^2/_3)\ S_{MS}$]	1.271g	-
S_{D1} for Site Class C [Note: $S_{D1} = (^2/_3)\ S_{M1}$]	0.543g	-
C_{RS} (Mapped Risk Coefficient at 0.2 sec)	0.934	ASCE 7 Chapter 22
C_{R1}(Mapped Risk Coefficient at 1 sec)	0.914	ASCE 7 Chapter 22

Section 1803.5.12 of the 2019 CBC (per Section 11.8.3 of ASCE 7) states that the maximum considered earthquake geometric mean (MCE_G) Peak Ground Acceleration (PGA) should be used for liquefaction potential. The PGA_M for the site is equal to 0.777g (SEAOC, 2020). The design PGA (applicable for soil nail wall design) is equal to 0.518g (2/3 of PGA_M).

Updated Preliminary Removal Depths and Limits

Removal depths have been updated for Buildings B and C and the office building in consideration of the option of being supported on spread footings instead of a mat foundation. Per County requirements, we recommend undocumented fill be completely removed from beneath proposed structures and structural improvements (e.g., retaining walls, etc.).

In order to provide a relatively uniform bearing condition for the planned improvements, undocumented fill soils and the loose/compressible upper portion of native soils are to be removed

and replaced as properly compacted fills. For preliminary planning purposes, the depth of required removals may be estimated as indicated below. It should be noted that updated recommendations may be required based on the actual conditions encountered during grading, changes to building layouts and/or structural loads.

Building Structure "A": Building "A" will be constructed in an area underlain by undocumented fill and alluvium. Undocumented fill and the potentially compressible portion of the alluvium (upper approximate 3 feet), should be removed to suitable alluvium or bedrock material. For Building "A" it is anticipated that this removal will be accomplished by the required excavation for the basement structure. If not removed during basement excavation, remaining undocumented fill soils and unsuitable alluvial soils should be removed to suitable alluvium or bedrock material. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundations, equal to the removal depth below the foundation. Note that the recommended lateral extent of remedial grading need not apply on the side(s) of the proposed building where shoring walls are to be constructed.

Building Structure "B": Building "B" will be constructed in an area underlain by undocumented fill and alluvium. Undocumented fill and the potentially compressible portion of the alluvium (upper approximate 3 feet), should be removed to suitable alluvium or bedrock material. For Building "B" it is anticipated that this removal will be accomplished by the required excavation for the partial basement of the structure. If not removed during basement excavation, remaining undocumented fill soils and unsuitable alluvial soils should be removed to suitable alluvium or bedrock material. For planned wall and column footings, additional removals should be made in order to provide a minimum of 3 feet of compacted fill below planned footings. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundations, equal to the removal depth below the foundation or 3 feet, whichever is greater. Note that the recommended lateral extent of remedial grading need not apply on the side(s) of the proposed building where shoring walls are to be constructed. If a bedrock/alluvium transition is encountered under proposed footings, over-excavation is recommended as outlined below.

Building Structure "C": Excavation for the proposed basement portion of Building "C" is anticipated to be excavated to at least 10 feet below existing grade. It is anticipated that bedrock materials will be suitable (i.e., firm and relatively unyielding) at this depth for foundation construction and that unsuitable soils will have been removed. However, if undocumented fill or soft or yielding soils are encountered, they should be completely removed and replaced with properly compacted fill and/or sand-cement slurry. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundation, equal to the removal depth below the foundation. Note that the recommended lateral extent of remedial grading need not apply on the side(s) of the proposed building where shoring walls are to be constructed. If a bedrock/alluvium transition is encountered under proposed footings, over-excavation is recommended as outlined below.

Office/Manager's Residence: The proposed Office/Manager's Residence will be constructed in areas underlain by undocumented fill and alluvium. Undocumented fill and the potentially compressible portion of the alluvium (upper approximate 3 feet), should be removed to suitable alluvium or bedrock material. It is anticipated that required excavations for the proposed foundation will remove the majority of previously placed undocumented fill soils. If not removed during grading, remaining undocumented fill soils and upper unsuitable alluvial soils should be removed to suitable alluvium or bedrock material. For planned wall and column footings, removals should be made in order to provide a

minimum of 3 feet of compacted fill below planned footings. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance, beyond the edges of the proposed foundations, equal to the removal depth below the foundation or 3 feet, whichever is greater.

Retaining/Free-Standing Wall Structures: Where not achieved by planned grading or remedial grading, we recommend planned wall footings be over-excavated so that they are underlain by at least 2 feet of compacted fill below proposed footings. Where practical, the envelope for over-excavation should extend laterally a minimum lateral distance of 2 feet beyond the edges of the proposed footings. Note that the recommended lateral extent of remedial grading need not apply on the side(s) of the proposed walls where shoring walls are to be constructed.

Pavement and Hardscape Areas: Where not achieved by planned grading or remedial grading, we recommend that proposed pavement and hardscape areas be over-excavated so that they are underlain by at least 1-foot of compacted fill below the proposed finished subgrade (i.e., below planned aggregate base/asphalt concrete). Where practical, the envelope for pavement and hardscape over-excavation should extend laterally a minimum lateral distance of 1-foot beyond the edges of the proposed improvements.

Bedrock/Alluvium Transitions: Structural footings should not be placed on a bedrock and alluvium transition. In order to provide a uniform bearing, for this condition the footing should be supported on a minimum of 2 feet compacted fill (removals should extend a minimum of 2 feet below the bottom of proposed footings and where practical extend 2 feet laterally beyond the edges of the proposed footings). Note that the recommended lateral extent of over-excavation need not apply on the side(s) of the structural footings where shoring walls are to be constructed.

Local conditions may be encountered during excavation that could require additional removals beyond the above-noted minimum in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading will be determined by the geotechnical consultant, based on subsurface conditions encountered during grading.

Supplemental Foundation Recommendations

It is our understanding that Building A will be supported on a mat foundation primarily due to site shallow groundwater. Buildings B and C and the office building may be supported on either a mat foundation or spread footings. Updated earthwork removal recommendations for Buildings B and C are provided herein for the option of supporting the structures on spread footings. Special design provisions are recommended due to site expansive soils as outlined in LGC Geotechnical, 2019.

Provided our earthwork recommendations are implemented, an allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 18 inches and minimum embedment of 24 inches below lowest adjacent ground surface. This value may be increased by 150 psf for each additional foot of foundation width to a maximum value of 2,500 psf. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5 horizontal feet to 1-foot vertical) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads). The increase of bearing capacity is based on a reduced factor of safety (seismic factor of safety equal to three-fourths of the static factor of safety) for short duration loading.

Soil settlement is a function of footing dimensions and applied soil bearing pressure. In utilizing the above-mentioned allowable bearing capacity, assumed structural loads, and provided our earthwork recommendations are implemented, foundation settlement due to estimated structural loads is anticipated to be on the order of 1-inch. Differential settlement should be anticipated between nearby columns or walls where a large differential loading condition exists. Settlement estimates should be evaluated by LGC Geotechnical when foundation plans are available.

Seismic Lateral Earth Pressures for Basement/Retaining Wall Design

If required, the structural designer may use a seismic lateral earth pressure increment of 42 pcf and 26 pcf for basement (restrained) and retaining (unrestrained) walls with a level backfill, respectively. These seismic increments are based on a PGA defined as $S_{DS}/2.5$ per the requirements of the County of Los Angeles (County of Los Angles, 2020). The applicable seismic increment should be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2019 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Categories D through F for retaining wall structures supporting more than 6 feet of backfill height. The seismic lateral earth pressures are estimated using the general procedure outlined by the County of Los Angeles and Agusti and Sitar, 2013. While not anticipated, a seismic lateral earth pressure for a sloping backfill condition can be provided.

Preliminary Pavement Sections

The following preliminary minimum asphalt concrete (AC) pavement section is based on an assumed R-value of 5 and a provided Traffic Index (TI) of 6. This section must be confirmed with R-value testing of representative near-surface soils at the completion of grading and after underground utilities have been installed and backfilled. Determination of the Traffic Index (TI) is not the purview of the geotechnical consultant. If requested, LGC Geotechnical will provide sections for alternate TI values.

TABLE 3

Preliminary Asphalt Concrete Pavement Section

Provided Traffic Index	6.0
R -Value Subgrade	5
AC Thickness	5.0 inches
Aggregate Base Thickness	9.5 inches

The provided preliminary Portland Cement concrete section is based on the guidelines of the American Concrete Institute (ACI 330R-08). For the final design section, we recommend a traffic study be performed as LGC Geotechnical does not perform traffic engineering. Traffic study should include the design vehicle (number of axles and load per axle) and estimated number of daily repetitions/trips. Based on an assumed Traffic Category C with an assumed Average Daily Truck Traffic (ADTT) of 20, we

recommend a preliminary section of a minimum of 6 inches of concrete over 4 inches of compacted aggregate base over compacted subgrade. The concrete should have a minimum compressive strength of 4,000 psi and a minimum flexural strength of 550 psi at the time the pavement is subjected to traffic. Steel reinforcement is not required (ACI, 2013). This pavement section assumes that edge restraints like a curb and gutter will be provided. To reduce the potential (but not eliminate) for cracking, paving should provide control joints at regular intervals not exceeding 10 feet in each direction. Decreasing the spacing of these joints will further reduce, but not eliminate the potential for unsightly cracking. Preliminary pavement section is based on a 20-year design. Truck loading is defined one 16-kip axle and two 32-kip tandem axles.

The pavement thicknesses provided are minimum thicknesses. Increasing the thickness of any or all of the above layers will reduce the likelihood of the pavement experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the roadway will occur through the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the pavement.

Earthwork recommendations regarding aggregate base and subgrade for pavements are provided in "Site Earthwork" and the related sub-sections LGC Geotechnical, 2019.

County of Los Angeles Section 111 Statement

This statement is made in accordance with Section 111 of the County of Los Angeles Building Code. Based on our field evaluation, and provided our recommendations are properly implemented and maintained, it is the opinion of LGC Geotechnical that the proposed development will be safe for its intended use against hazard from landslide, settlement or slippage and the proposed development will have no adverse effect on the stability of the site or adjoining properties.

Geotechnical Plan Review

Project plans (e.g., grading, foundation, basement/retaining wall, shoring, etc.) should be reviewed by this office prior to construction to verify that our geotechnical recommendations, provided herein, have been appropriately incorporated. Additional or modified geotechnical recommendations may be required based on the proposed layout.

Closure

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report. The samples taken and submitted for laboratory testing, the observations made, and the in-situ field testing performed are believed representative of the entire project; however, soil and geologic conditions revealed by excavation may be different than our preliminary findings. If this occurs, the changed conditions must be evaluated by the project soils engineer and geologist and design(s) adjusted as required or alternate design(s) recommended.

This report is issued with the understanding that it is the responsibility of the owner, or of his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and/or project engineer and incorporated into the plans, and the necessary steps are taken to see that the contractor and/or subcontractor properly implements the recommendations in the field. The contractor and/or subcontractor should notify the owner if they consider any of the recommendations presented herein to be unsafe.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can and do occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. Therefore, the findings, conclusions, and recommendations presented in this report can be relied upon only if LGC Geotechnical has the opportunity to observe the subsurface conditions during grading and construction of the project, in order to confirm that our preliminary findings are representative for the site.

In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and modification, and should not be relied upon after a period of 3 years.

Should you have any questions regarding this report, please do not hesitate to contact this office.

Sincerely,

LGC Geotechnical, Inc.

Brad Zellmer, GE 2618
Project Engineer

Kevin B. Colson, CEG 2210
Vice President

KBC/BTZ/amm

Attachments: References

Distribution: (1) Addressee (electronic copy)
(1) Streeter Civil Engineers (electronic copy)
Attn: Mr. Felix Gonzalez
(4) Jordan Architects (3 wet-signed copies and 1 electronic copy)
Attn: Mr. Bruce Jordan

References

Agusti, G.C., and Sitar, N., 2013, Seismic earth pressure on retaining structures in cohesive soils, Report submitted to the California Department of Transportation (Caltrans) under Contract No. 65A0367 and NSF-NEES-CR Grant No. CMMI-093676: Seismic earth pressure on retaining structures, Report NO. UCG GT 13-02.

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HYDROLOGY REPORT

Project Name:

Trojan Storage

5050 Old Scandia Lane
Calabasas, CA 91302
CUP: RPPL2020000732

Prepared for:

Trojan Storage
1732 Aviation Blvd, Suite 217
Redondo Beach, CA 90278

12.3.2020
Revised 4.14.2021

Prepared by:

Felix Gonzalez
fgonzalez@adams-streeter.com

ADAMS STREETER
Civil Engineers

16755 Von Karman Ave, Suite 150 | Irvine, CA 92606 | 949-474-2330

Contents

INTRODUCTION

Adams Streeter Civil Engineers has prepared a hydrologic study for the development of the 3.74 acre site located at 5050 Old Scandia Lane, Calabasas, CA. The hydrology study was developed using the *HydroCalc Calculator* (version 1.0.3) and the County of Los Angeles Hydrology Manual. Soil Classification number (#4) and the 50-year rain-depth of approximately 7.3 inches were obtained through the Los Angeles County Public Works Hydrology Map GIS Application. A 25-year storm intensity was used for on-site runoff calculations in conformance with LA County and City of Calabasas guidelines.

EXISITING DRAINAGE CONDITION

General Description:

The project area is an irregular-shaped site located off of Old Scandia Lane in the City of Calabasas. The Assessor's Parcel Number for the site is 2049-022-040. The site is currently undeveloped land. An existing channel that once traversed in approximately the middle of the property in the northwest-southeast orientation has been recently replaced with an underground 60" RCP. The lower two-thirds of the site are relatively flat, while the upper one-third slopes to the north and approximately 4.5H: 1V inclination. Undocumented fill material has been placed in the lower two-thirds of the site. The depth of the undocumented fill ranges from 7-10 feet.

The project area is mapped as being underlain by bedrock, which are composed primarily of uplifted Micoene age sedimentary rocks with interbeds of moderately weathered, cemented, massive to laminated siltstone and shales with minor sandstones. In addition, colluvium consisting brown silty clay was also located throughout the site.

Groundwater was encountered at depths ranging from 20 feet (approximate elevation of 941 MSL) to 37 feet (approximate elevation 935 MSL) below existing grade. It is expected that higher localized and seasonal perched groundwater conditions shall accumulate below the surface throughout the design life of the proposed improvements.

Existing Condition Peak Flow: The peak runoff from the site per the *HydroCalc* calculation based on a 25-year storm event is provided by the *Existing Condition Hydrology Map* and hydrologic calculations in Section II of this report. Results are summarized as follows:

TABLE 1 - OVERALL EXISTING CONDITION PEAK RUNOFF AND VOLUME

Drainage Sub-Area	Area (acre)	Total Runoff – Q_{25} (CFS)	Total Runoff Volume – V_{25} (CF)	Comments
Entire Site	3.74	9.99	17,439	-

PROPOSED DRAINAGE CONDITION

General Description:

The proposed development will consist of improvements for and construction of three self-storage buildings (Buildings "A" through "C"). Building "A" will be four stories including one subterranean level. Buildings "B" will be two stories which includes one subterranean level. Building "C" will include two stories; one subterranean level and one partially subterranean, notched into the ascending hillside. A two story, at-grade office building will be located near Building "A". A parking lot will be located in the southeast corner.

Onsite drainage patterns will remain similar to the existing conditions; stormwater runoff generated from subareas 1A and 1B (the hillside undeveloped portions) will intercepted by a concrete v-gutter located along the northside of building C and will be redirected to the east and west, respectively, to drain inlets which bypass the biofiltration treatment systems and discharge directly into an 18" RCP stub-out. The site POC was provided as part of the design and construction of the 60" LACFCD storm drain system. Subareas 1C and 2A, which make up the vast majority of the improved site will share similar drainage patterns. Buildings A-C will discharge at grade and centered along each drive aisle, concrete v-gutters will convey the runoff to the west where drain inlets will intercept the runoff and redirect to the tributary biofiltration systems before converging with the runoff from subareas 1A and 1B at the existing 18" stub-out point of connection. The southeast corner of the site, subarea 2B will sheet flow south towards Old Scandia Lane where a trench drain at the property line will intercept the runoff redirect to the same storm drain system servicing subarea 2A.

Also included with this project is presence of offsite run-off and run-on. Subarea 3A consist of a triangular offsite area (0.07 acres) located at the top of the site which generates stormwater run-on. Subarea 3B is another triangular area (0.14 acres) located at the northwest corner of the site that is considered within the site boundary but discharges offsite due to the natural sloping nature of the hillside. Though the discharge is offsite, it still remains tributary and accounted for in the existing 60" LACFCD storm drain system. The final offsite discharge is associated with subarea 3C where a narrow strip (0.03 acres) of landscaping along the westside of building A will flow south and discharge onto Old Scandia Lane via a parkway drain.

Proposed Condition Peak Flow:

The proposed on-site peak runoff and volume corresponding to each individual drainage sub-areas (1A through 3C) and the overall site based on the 25-year storm event is provided by the *Proposed Condition Hydrology Map* and hydrologic calculations in Section II of this report. The *HydroCalc* calculated peak flows for individual sub-areas summarized by the table below:

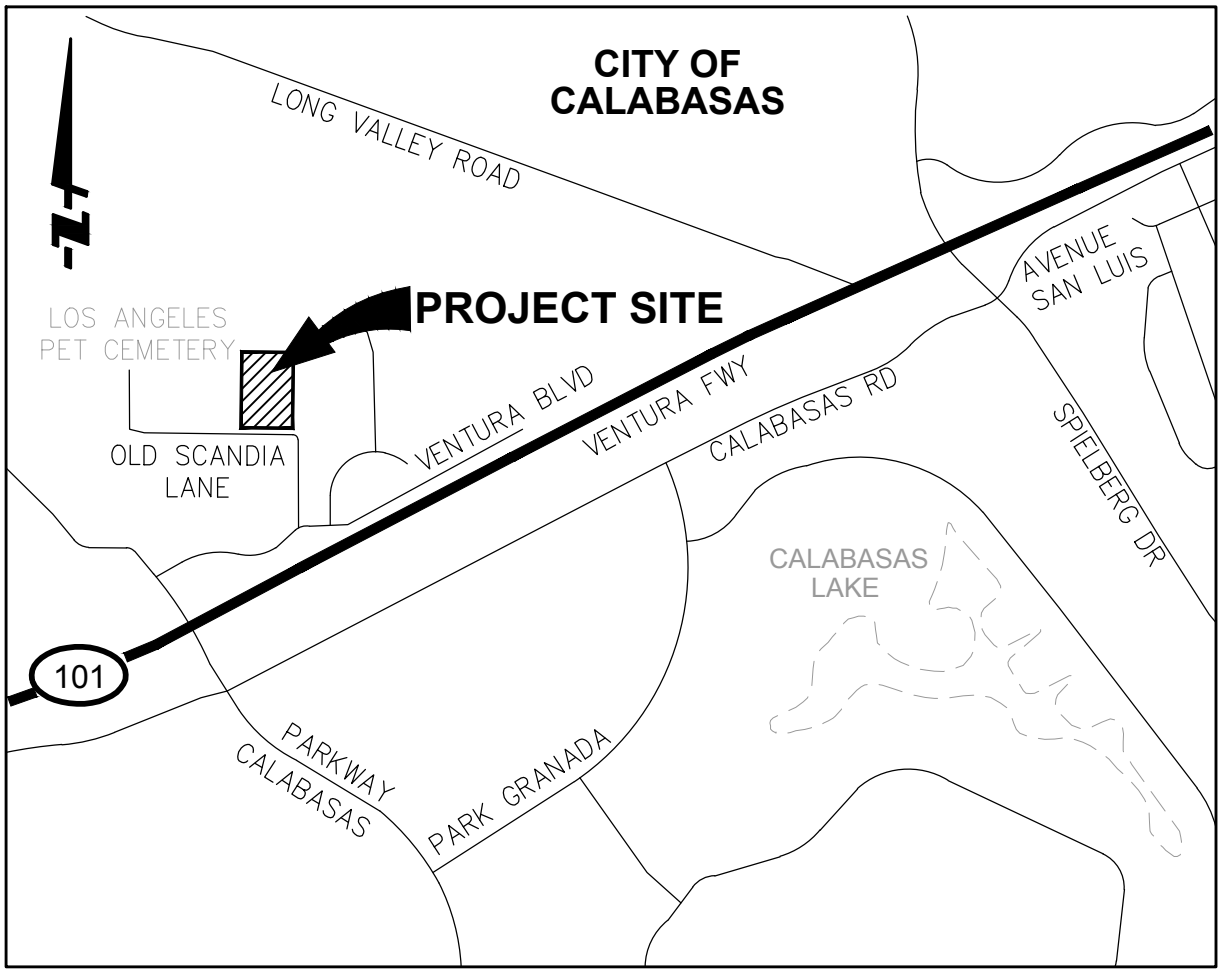
TABLE 3 - PROPOSED CONDITION INDIVIDUAL SUBAREA PEAK RUNOFF AND VOLUMES

Drainage Sub-Area	Area (acre)	Total Runoff – Q25 (CFS)	Total Runoff Volume – V_{25} (CF)	Comments
1A	0.53	1.56	2,472	
1B	0.75	2.21	3,499	
1C	1.12	3.85	23,258	
2A	0.97	3.33	19,828	
2B	0.2	0.66	3,340	
3A	0.07	0.21	327	OFFSITE RUN-ON SUB-AREA
3B	0.14	0.41	653	ONSITE RUN-OFF SUB-AREA
3C	0.03	0.09	140	ONSITE RUN-OFF SUB-AREA
Total	3.81	12.32	53,517	

Conclusion:

As stated above, the existing condition Q25 runoff was determined as 9.99 CFS whereas the proposed condition will generate a total of 12.32 CFS, producing an increase of 2.33 CFS. According to LACFD, the project site runoff pertains to LACFCD Facility: PD 2662 / Oakfield Drain System where the confirmed maximum allowable runoff discharge from this site into the existing lateral is 14.46 CFS therefore, the 12.32 CFS is within the allowable discharge rate.

VICINITY MAP



VICINITY MAP

NOT TO SCALE

MAP EXHIBITS

- EXHIBIT A - EXISTING CONDITION HYDROLOGY MAP
- EXHIBIT B - PROPOSED CONDITION HYDROLOGY MAP
- EXHIBIT C – PRIMARY STORM DRAINAGE FACILITIES

PROPERTY LINE

TRIBUTARY DRAINAGE AREA

EROSION / ROCK SLIDE CONTROL FENCING

EROSION / ROCK SLIDE CONTROL FENCING

1070.0 FG

RIDGELINE

PROPERTY LINE

TRIBUTARY DRAINAGE AREA

TRIBUTARY DRAINAGE AREA

PROPERTY LINE

EXISTING CHANNEL

EXISTING 18" STUB

952.91 TG

ΣQ_{25}=9.99 CFS
ΣA=3.74 AC

LACFCD FACILITY PD 2662:
60" DIA. STORM DRAIN

EXISTING CHANNEL

OLD SCANDIA LANE

L=732'

1A
AREA 3.74 | Q25 9.99

(1.8%)

(2.4%)

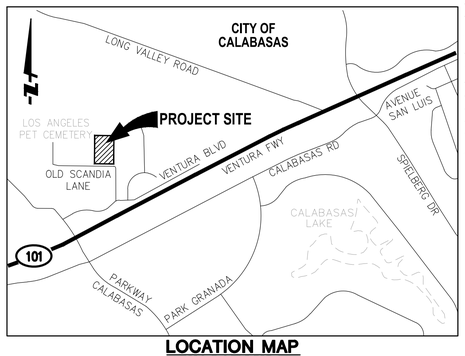
(1.0%)

EX RW

EX DW

EX SS

OH ELEC



LOCATION MAP
NOT TO SCALE

PRE-CONSTRUCTION DRAINAGE AREAS

DRAINAGE AREA	AREA (ACRE)	PERVIOUS AREA (ACRE)	IMPERVIOUS AREA (ACRE)	% PERVIOUS	% IMPERVIOUS	RUNOFF Q_{25} (CFS)
1A	3.74	3.74	0.00	100	0	9.99
TOTAL	**3.74**	**3.74**	**0.00**	**100**	**0**	**9.99**

LEGEND

- DRAINAGE AREA BOUNDARY
- DRAINAGE SUBAREA BOUNDARY
- FLOW ARROW
- X — HYDROLOGIC AREA/SUBAREA
- AREA / Q25 — Q25 (CFS), AREA (ACRE)

20' 0' 10' 20'
SCALE: 1" = 20'

DATE: 4/27/21

PREPARED BY:
ADAMS STREETER
Civil Engineers
16755 Von Karman Ave, Suite 150, Irvine, CA 92606
949.474.2330 | adams-streeter.com

REGISTERED PROFESSIONAL ENGINEER FELIX GONZALEZ No. 67660 Exp 6-30-2021 CIVIL STATE OF CALIFORNIA

DRAINAGE CONCEPT/HYDROLOGY STUDY FOR RPPL2020000732

PRE-CONSTRUCTION
TROJAN STORAGE - CALABASAS
5050 OLD SCANDIA LANE
APN: 2049-022-040

PROJECT NO. 19-2284

SHEET 1 OF 2

\\DATA\IRV-DATA\2019\19-2284 TROJAN STORAGE CALABASAS\HYDROLOGY\HYDROLOGY MAP\19-2284-HYDROLOGY-MAP-01-PRE.DWG

BMP SUMMATION

PROPOSED BMP	TOTAL DRAINAGE AREA TRIBUTARY TO BMP (AC)	LID TREATMENT VOLUME (CF)	LID REQUIRED TREATMENT FLOWRATE – BIOFILTRATION = 1.5X (CFS)
FILTERRA – 8'X16'	1.12	3,810	0.53
FILTERRA – BIOSCAPE	1.01	3,374	0.47
FILTERRA – 4'X4'	0.16	424	0.11

DRAINAGE MAINTENANCE RESPONSIBILITIES:

DRAIN INLETS:
CATCH BASIN INLETS, AREA DRAINS, CURB–AND–GUTTER SYSTEMS AND OTHER DRAINAGE SYSTEMS SHALL BE INSPECTED AFTER EACH STORM EVENT AND, IF NECESSARY, CLEANED PRIOR TO THE STORM SEASON BY OCTOBER 1ST EACH YEAR.

CONTECT FILTERRA SYSTEMS:
CLEANING OF THE SYSTEM SHALL BE DONE DURING DRY WEATHER CONDITIONS WHEN NO FLOW IS ENTERING THE SYSTEM, REMOVAL OF SEDIMENT, ORGANIC MATERIAL AND SOLIDS SHALL BE DONE PRIOR TO THE STORM SEASION BY OCTOBER 1ST EACH YEAR.

INPUT PARAMETERS

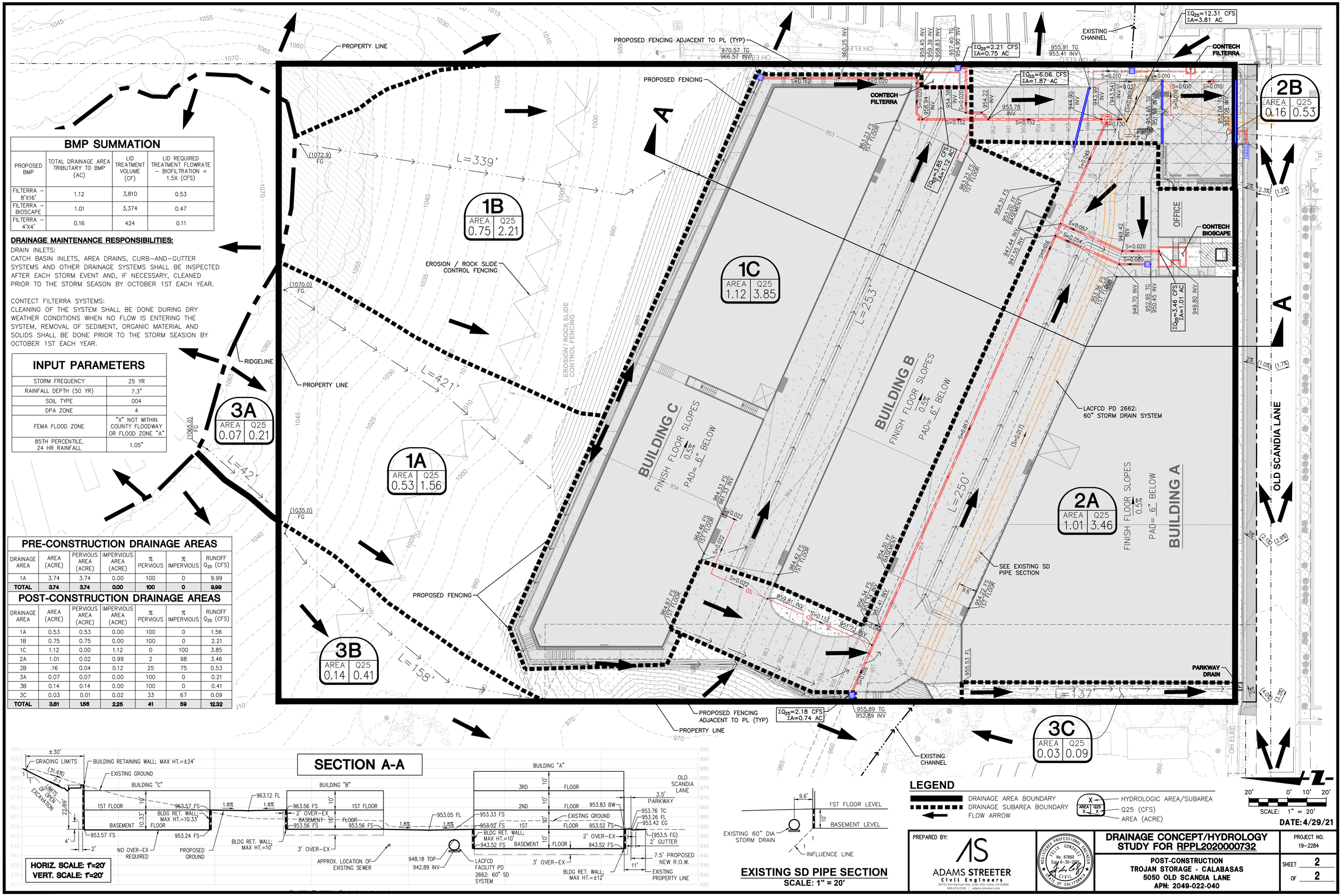
STORM FREQUENCY	25 YR
RAINFALL DEPTH (50 YR)	7.3"
SOIL TYPE	004
DPA ZONE	4
FEMA FLOOD ZONE	"X" NOT WITHIN COUNTY FLOODWAY OR FLOOD ZONE "A"
85TH PERCENTILE, 24 HR RAINFALL	1.05"

PRE-CONSTRUCTION DRAINAGE AREAS

DRAINAGE AREA	AREA (ACRE)	PERVIOUS AREA (ACRE)	IMPERVIOUS AREA (ACRE)	% PERVIOUS	% IMPERVIOUS	RUNOFF Q_{25} (CFS)
1A	3.74	3.74	0.00	100	0	9.99
TOTAL	**3.74**	**3.74**	**0.00**	**100**	**0**	**9.99**

POST-CONSTRUCTION DRAINAGE AREAS

DRAINAGE AREA	AREA (ACRE)	PERVIOUS AREA (ACRE)	IMPERVIOUS AREA (ACRE)	% PERVIOUS	% IMPERVIOUS	RUNOFF Q_{25} (CFS)
1A	0.53	0.53	0.00	100	0	1.56
1B	0.75	0.75	0.00	100	0	2.21
1C	1.12	0.00	1.12	0	100	3.85
2A	1.01	0.02	0.99	2	98	3.46
2B	.16	0.04	0.12	25	75	0.53
3A	0.07	0.07	0.00	100	0	0.21
3B	0.14	0.14	0.00	100	0	0.41
3C	0.03	0.01	0.02	33	67	0.09
TOTAL	**3.81**	**1.56**	**2.25**	**41**	**59**	**12.32**



SECTION A-A

HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=20'

EXISTING SD PIPE SECTION

SCALE: 1" = 20'

LEGEND

- DRAINAGE AREA BOUNDARY
- DRAINAGE SUBAREA BOUNDARY
- FLOW ARROW
- HYDROLOGIC AREA/SUBAREA
- Q25 (CFS)
- AREA (ACRE)

20' 0' 10' 20'
SCALE: 1" = 20'

DATE: 4/29/21

PREPARED BY:
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Civil Engineers
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949.474.2330 | adams-streeter.com

REGISTERED PROFESSIONAL ENGINEER FELIX GONZALEZ No. 67660 Exp 6-30-2021 CIVIL STATE OF CALIFORNIA

DRAINAGE CONCEPT/HYDROLOGY STUDY FOR RPPL2020000732

PROJECT NO. 19-2284

POST-CONSTRUCTION
TROJAN STORAGE - CALABASAS
5050 OLD SCANDIA LANE
APN: 2049-022-040

SHEET 2 OF 2

U:\2019\19-2284 TROJAN STORAGE CALABASAS\HYDROLOGY\HYDROLOGY MAP\19-2284-HYDROLOGY-MAP-02-POST.DWG

Office Use Only
☐ Sent Initials: _____
☐ Fax ☐ Email ☐ Other: _____
Date: _____ Time: _____

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
DESIGN DIVISION – HYDRAULIC ANALYSIS UNIT

INFORMATION REQUEST SUMMARY

INFORMATION REQUESTED BY

*Requester's Name: Felix Gonzalez
Company: Adams Streeter Civil Engineers
*Phone Number: 949.430.2531 Fax Number: _____
*Email: fgonzalez@adams-streeter.com

Method of Contact: ☐ Walk-in ☐ Phone ☐ Fax ☒ Email ☐ Prelim. Mtg. Date: 10/29/2019

Intended Use: Commercial Development

Proposed Project Type: Self Storage Facility Acreage Involved: 3.833

*Will information be used in any litigation? ☐ YES ☒ NO
Case Info. Name: _____ No: _____ Location: _____

INFORMATION REQUESTED (Attach Assessor Map)

LACFCD Facility: Name: PD 2662 / Oakfield Drain
Unit: _____ Line: _____ Station: _____
City: _____
*Street/Cross-street: Old Scandia Lane / Ventura Blvd.
*Thomas Guide: Page: 559 Grid: E4 ☒ Site Map/Plans Submitted
Info. Requested: Confirmation of allowable storm drain run-off of 14.46 cfs at existing 18" connection to Line A per FCDP 2019-000119. Station: 0+36.21

***Required Information. See Page 2 of 2 for Instructions.**

BELOW SECTION TO BE COMPLETED BY THE HYDRAULIC ANALYSIS UNIT

INFORMATION PROVIDED:
Hydrology Data, Drainage Map

REFERENCES SEARCHED:
Oakfield Drain Files and PD No. 2662 Files.

COMMENTS, ETC:

1- Subarea No. 10 Allowable Q=110/37 x 80/110=2.19cfs/acre.

2- Maximum allowed dischard via existing 18" Connection to PD 2662 Line "A" limited to 14.46cfs.
See PD 2662 Line "A" attached As Built Plan and Profile Sheet. No. 3A

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
DESIGN DIVISION
Hydraulic Analysis Unit
OFFICIAL RECORD DOCUMENT
Issued By: GLA
Date: 11/25/2020
Public Service That Works

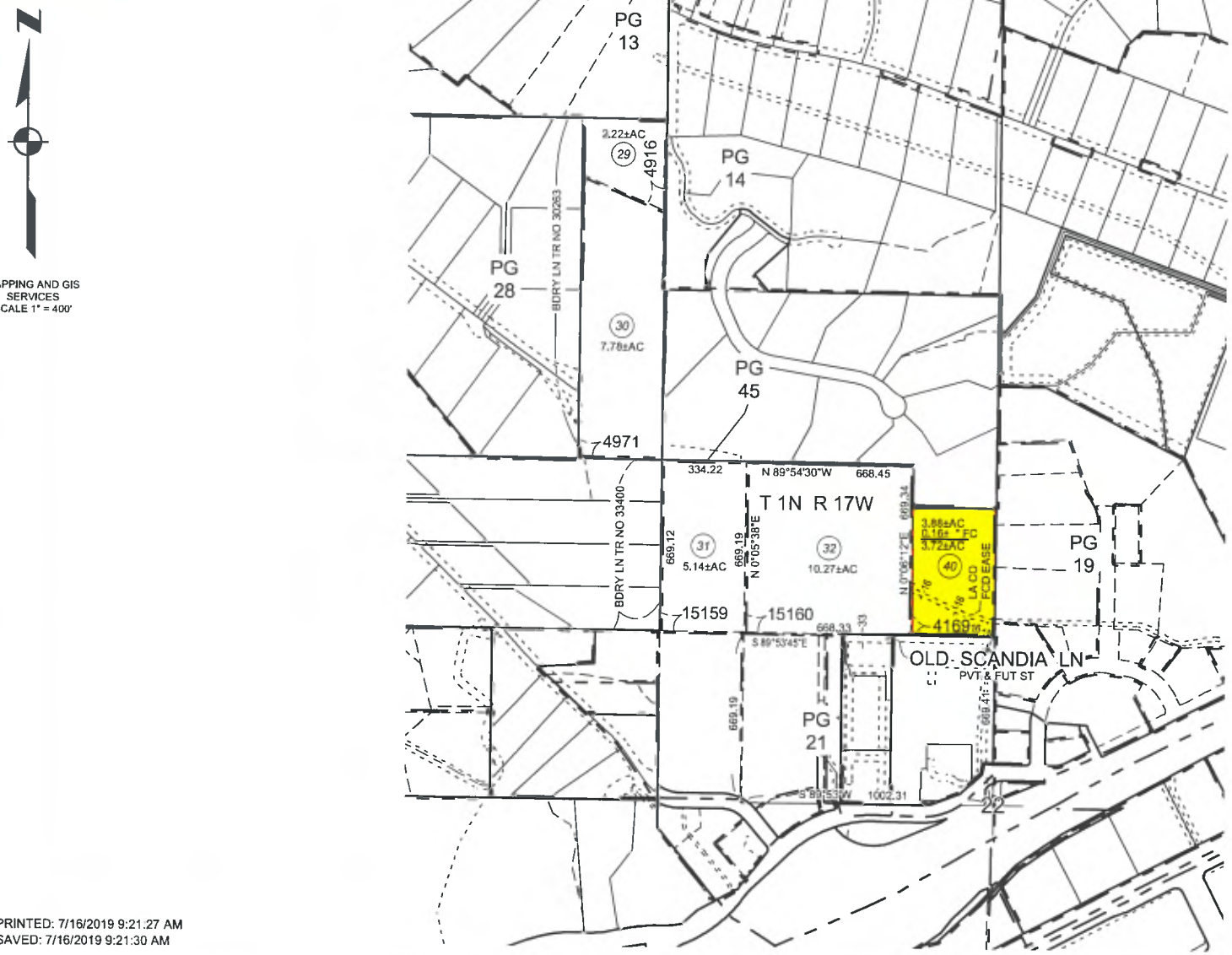
INFORMATION PROVIDED BY: George K AIntablian Date: 11/25/2020

INFORMATION REVIEWED BY: Date:

Print Save a Copy

2049	22 SHEET	P. A. 2049-22	TRA 4971 4169 15159 4916 15160	REVISED 810126201 811007215	830526-84 841002-85 900815-32	95102503006001-02 97071550001001-02 1999051904	20110322 20121211060010002-02 20121211060010004-02	2019071702-02	SEARCH NO		OFFICE OF THE ASSESSOR COUNTY OF LOS ANGELES COPYRIGHT © 2002

2020

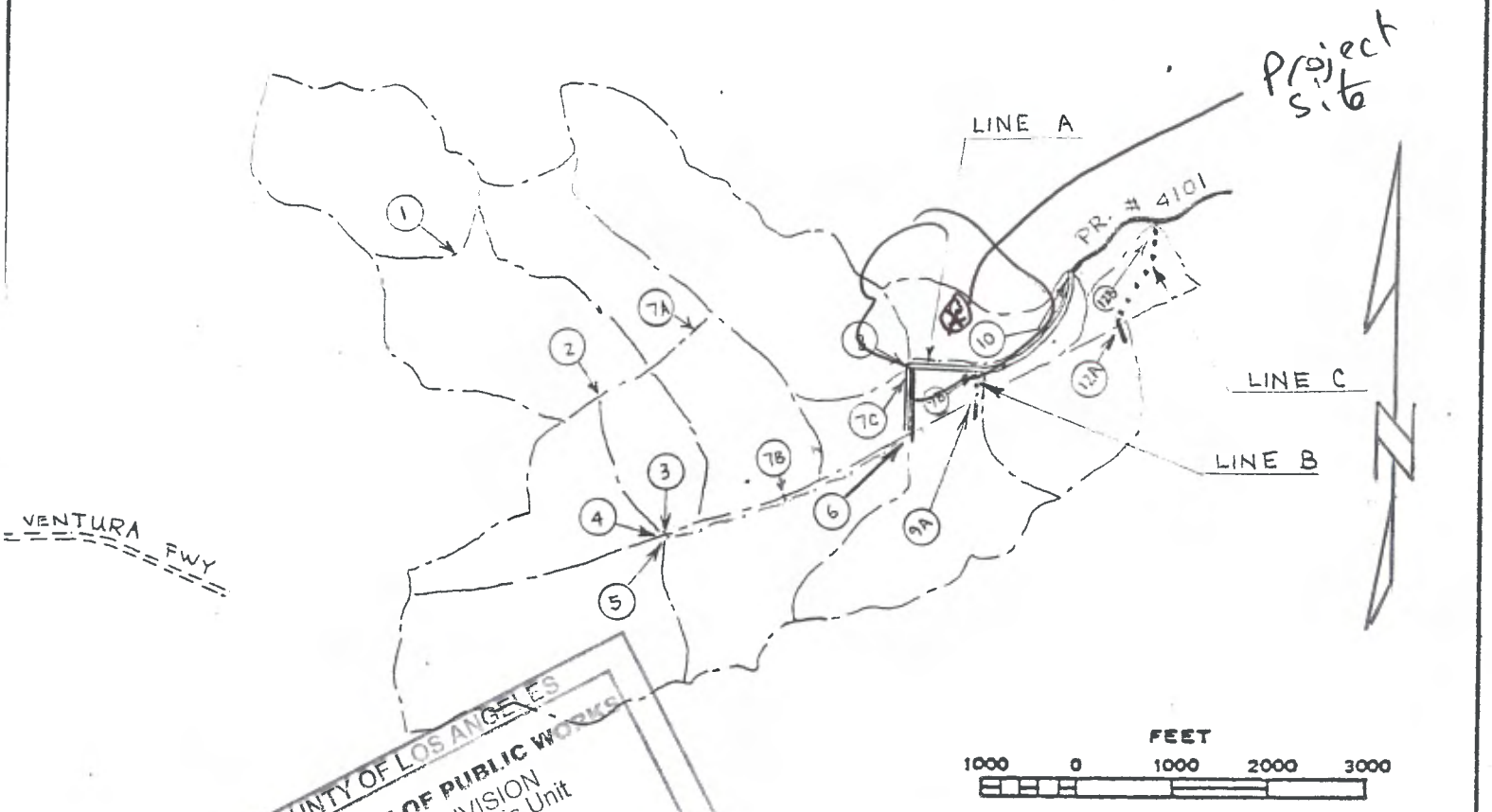


DATE PRINTED: 7/16/2019 9:21:27 AM
DATE SAVED: 7/16/2019 9:21:30 AM

REACH	Q (cfs)
LINE A	
~~6 - JUNCTION~~	~~880~~
~~JCT. - LINE B~~	~~1310~~
LINE B - 10	1450
10 - JCT. PR. 4101	1530
LINE B	
9A - 9B	180
9B - JCT. LINE A	200
LINE C 12A - 12B	140
12B - JCT. PR. 4101	190

ADDENDUM TO LINE A HYDROLOGY

SUBAREA OR REACH	AREA (ACRES)	SUBAREA Q (CFS)	REACH Q (CFS)
6+7A+7B	517	1080	
6-7C	517		1080
7C	18	70	
7C - JCT.	535		1110
8	125	250	
JCT. - LINE B	660		1310



FEET
1000 0 1000 2000 3000

LEGEND

- WATERSHED BOUNDARY
- PROJECT DRAIN
- EXISTING DRAIN
- SUBAREA AND COLLECTION POINT
- PROBABLE FUTURE DRAIN
- STREETS
- NATURAL WATER COURSE

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
DESIGN DIVISION
Hydraulic Analysis Unit
OFFICIAL RECORD DOCUMENT
Issued By: GHA
Date: 11/25/2019
Public Service Employees

REVISED 6/2/82 C.P. GARG

REVISED
C.P.GARG
8-21-81

CALABASAS QUAD

PREPARED R.N.W.	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
DATE 7-9-80	CALABASAS CREEK DRAINAGE DEFICIENCY 25-493 CAPITAL FLOOD Q'S
SCALE 1" = 2000'	

0005 FCD 1/73

Los Angeles County Flood Control District
Hydraulic Division

Calabasas Creek
Project Deficiency Drain No. 25-4.93

Hydrologic Data

Sheet 1 of 1

Channel Types
4. Pipe
5. Rectangular
6. Trapezoidal

50- Year Frequency Rainfall   Date August 24, 1981

Reach or Subarea	Preliminary Channel Length, Feet (Meters)	Type	Size, Feet (Meters)	Slope	Area, Acres (Hectares) Subarea	Total	Q, CFS (CMS) Subarea 1)	Reach 2)
Line A								
6						415 (168)	820 (23.2)	
6 - Junction	950 (290)	5	8 (2.44)	.0263		415 (168)		820 (23.2)
7C						120 (48.6)	290 (8.21)	
8					125 (50.6)		250 (7.08)	
Jct. - Line B	900 (274)	5	10.0 (3.05)	.0222		660 (267)		1310 (37.1)
Line B						80 (32.4)	200 (5.66)	
Line B - 1	1550 (472)	5	12.5 (3.81)	.0077		740 (299)		1450 (41.06)
10					37 (15.0)		110 (3.11)	
10 - Jct. Pr. 4101	0					777 (314)		1530 (43.3)
Line B								
9A					70 (28.3)		180 (5.10)	
9A - 9B	300 (91.4)	4	3.75 (1.14)	.0233		70 (28.3)		180 (5.10)
9B					10 (4.05)		25 (.71)	
9B - Jct. Line A	0					80 (32.4)		200 (5.66)
Line C								
12A					50 (20.2)		140 (3.96)	
12A - 12B	1200 (366)	4	4.0 (1.22)	.0125		50 (20.2)		140 (3.96)
12B					18 (7.28)		50 (1.42)	
12B - Jct. Pr. 4101	0					68 (27.5)		190 (5.38)

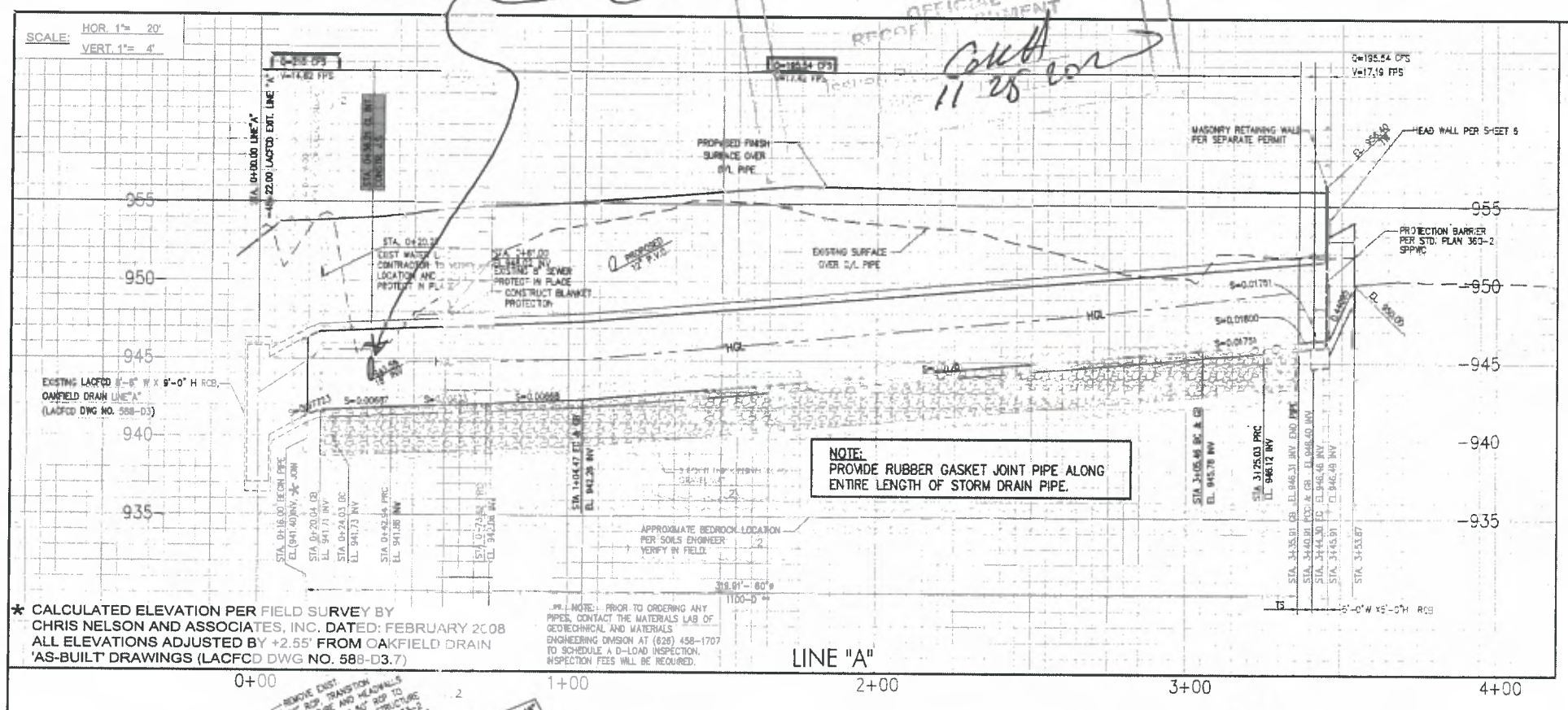
1) These Q's are the peak flow rates from the subarea which can be prorated (Q/A) for catch basin design (refer to Design Manual-Hydraulic).
2) Reach Q's are the peak flow rates for the design of drain or channel.

Q = 14.46 cfs

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
DESIGN DIVISION
Hydraulic Analysis Unit
OFFICIAL RECORD DOCUMENT

11 25 19

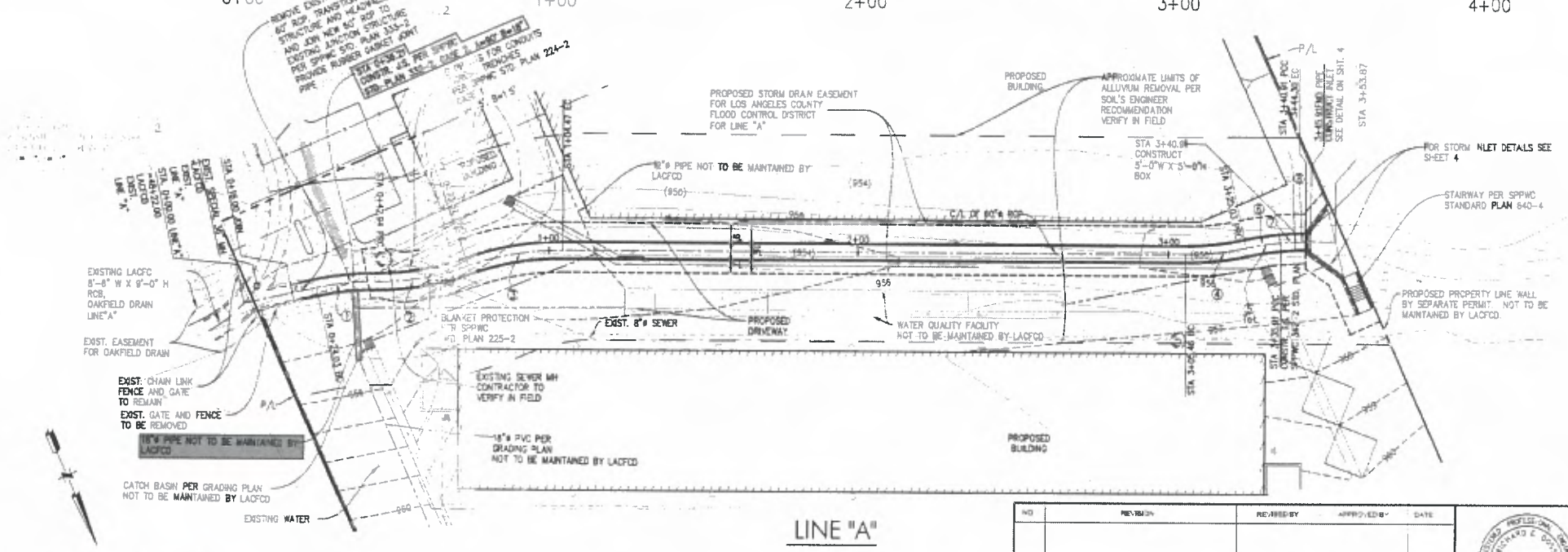
SCALE: HOR. 1"= 20'
VERT. 1"= 4'



LINE "A"

* CALCULATED ELEVATION PER FIELD SURVEY BY CHRIS NELSON AND ASSOCIATES, INC. DATED: FEBRUARY 2008 ALL ELEVATIONS ADJUSTED BY +2.55' FROM OAKFIELD DRAIN 'AS-BUILT' DRAWINGS (LACFCD DWG NO. 588-D3.7)

...NOTE: PRIOR TO ORDERING ANY PIPES, CONTACT THE MATERIALS LAB OF GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION AT (626) 458-1707 TO SCHEDULE A D-LOAD INSPECTION. INSPECTION FEES WILL BE REQUIRED.

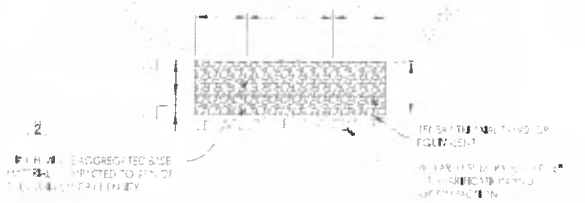


LINE "A"

SCALE: 1" = 20'
0 20' 40' 60'

CURVE TABLE

CURVE #	DELTA	R	L	T
①	12°2'11"	90.00'	18.91'	9.49'
②	19°28'13"	90.00'	30.58'	15.44'
③	19°42'15"	90.00'	30.95'	15.63'
④	12°27'20"	90.00'	19.57'	9.82'
⑤ TOT	12°16'26"	90.00'	19.27'	9.67'
⑥	6°55'45"	90.00'	10.88'	5.45'
⑦	3°10'59"	90.00'	5.00'	2.50'
⑧	2°09'15"	90.00'	3.39'	1.69'



NOTE: THIS DRAWING IS ATTACHED TO AND MADE PART OF PERMIT NO. FCDP2019000119. ANY DEVIATION FROM THE ATTACHED DRAWING WITHOUT WRITTEN AUTHORIZATION FROM THIS DEPARTMENT WILL VOID THIS PERMIT.

GE 2823 Exp. 6.30.21 GEOTECHNICAL ENGINEER STATE OF CALIFORNIA

NO	REVISION	REVISED BY	APPROVED BY	DATE
2	ADD GRAVEL BLEEDING TRENCH WALL ENGINEER CONSTRUCT CONCRETE PLUG AT STA 3+40.08	RICHARD DOSS		7/3/19
1	REALIGNMENT OF STORM DRAIN DUE TO BUILDING RELOCATION	RICHARD DOSS		5/29/19

REVIEWED LAND DEVELOPMENT DIVISION
BY _____ 5/29/19
STORM DRAIN SECTION

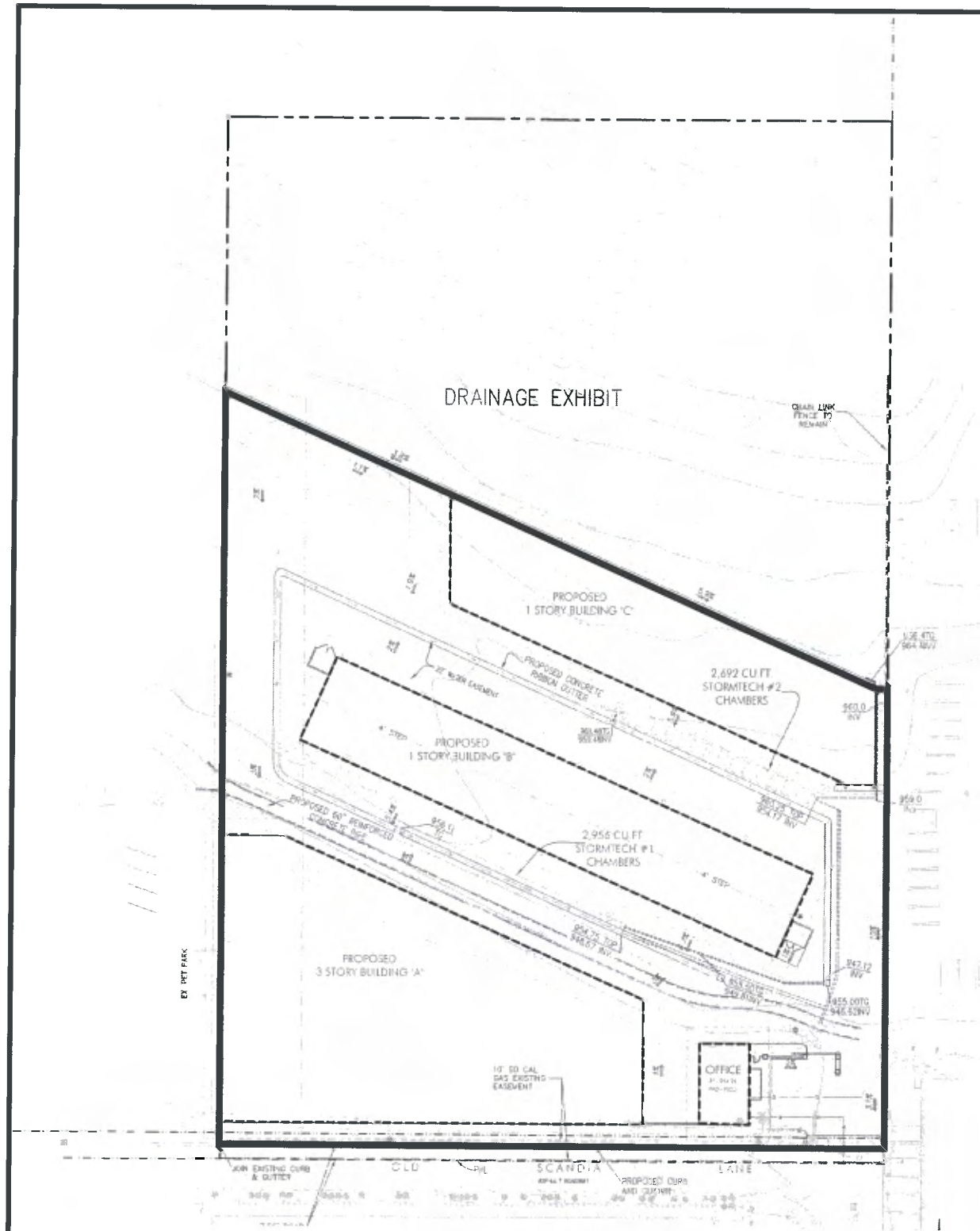
REGISTERED PROFESSIONAL ENGINEER RICHARD C. DOSS No. C48987 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER DATE

STORM DRAIN PLANS IN
5050 OLD SCANDIA LANE P.D. No. 2662
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

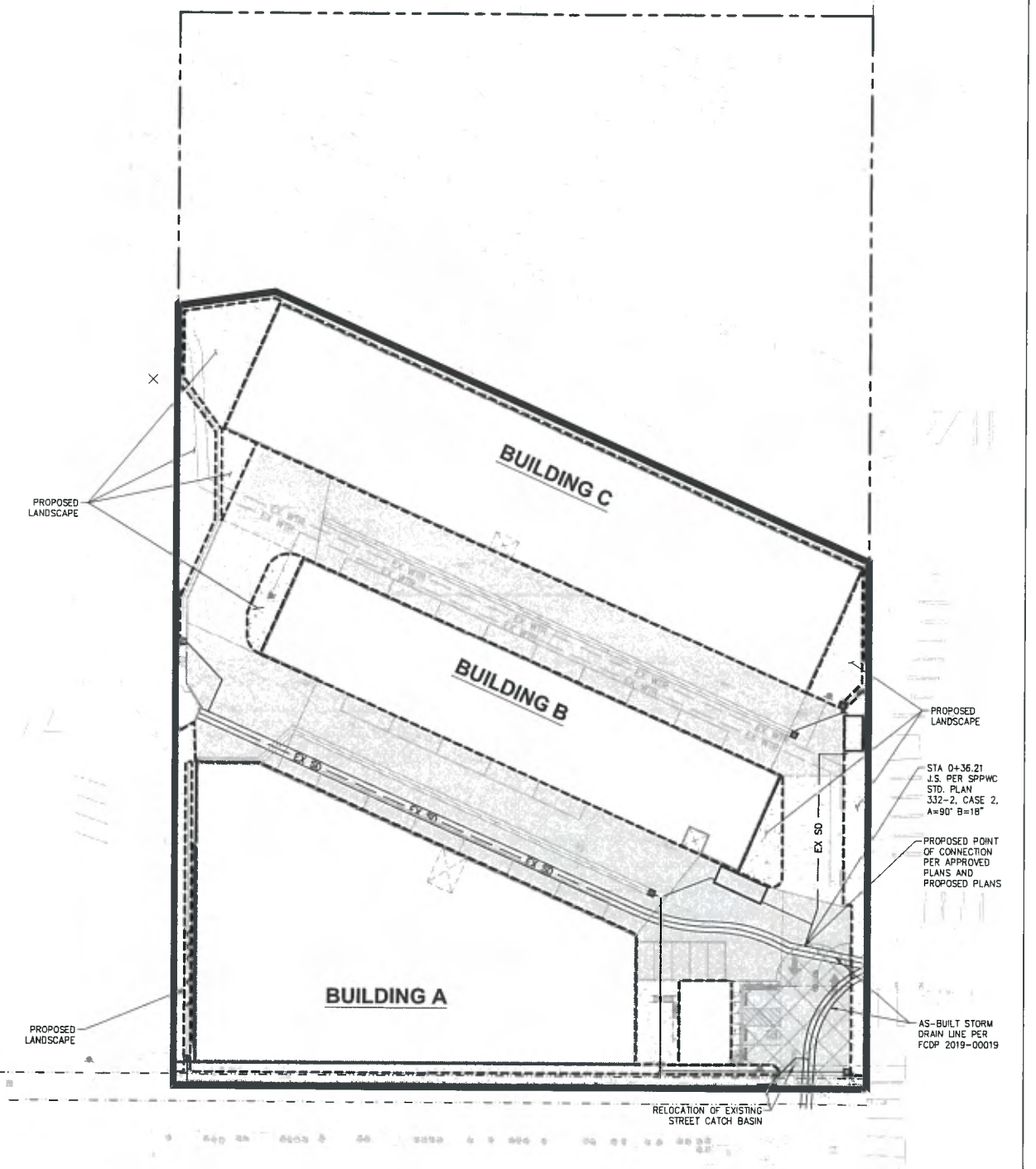
PACIFIC COAST CIVIL, INC.
30141 AGOURA ROAD, SUITE 200
AGOURA HILLS, CA 91301
PH: (818) 865-4168
FAX: (818) 865-4198

DWG SHEET 3A OF 7



3-19-2018 APPROVED SITE

(NO LANDSCAPE PROPOSED IN PREVIOUSLY APPROVED DESIGN)



PROPOSED SITE

	APPROVED SITE	PROPOSED SITE
TOTAL SITE AREA (SF):	169,012 (3.88 AC)	169,012 (3.88 AC)
BUILDING AREA (SF):	46,539	55,766
IMPERVIOUS AREA-HARDSCAPE (SF):	51,637	40,345
SITE PERVIOUS AREA-LANDSCAPE (SF):	0	9,575
TOTAL IMPROVED AREA (SF):	98,176	105,686
IMPERVIOUS PERCENT OF TOTAL SITE (%):	58	57
PERCENT OF IMPERVIOUS DECREASE FROM APPROVED SITE (%):	0	1

30' 0' 15' 30'

SCALE: 1" = 30'

PREPARED BY:

ADAMS STREETER
Civil Engineers

FLOOD CONTROL CONNECTION EXHIBIT

TROJAN STORAGE - CALABASAS
5050 OLD SCANDIA LANE
APN: 2049-022-040

DATE: 11/24/20

PROJECT NO 19-2284

SHEET 1 OF 1

HYDROLOGIC CALCULATIONS

(HYDROCALC)

EXISTING AND PROPOSED CONDITIONS

EXISTING CONDITIONS

Peak Flow Hydrologic Analysis

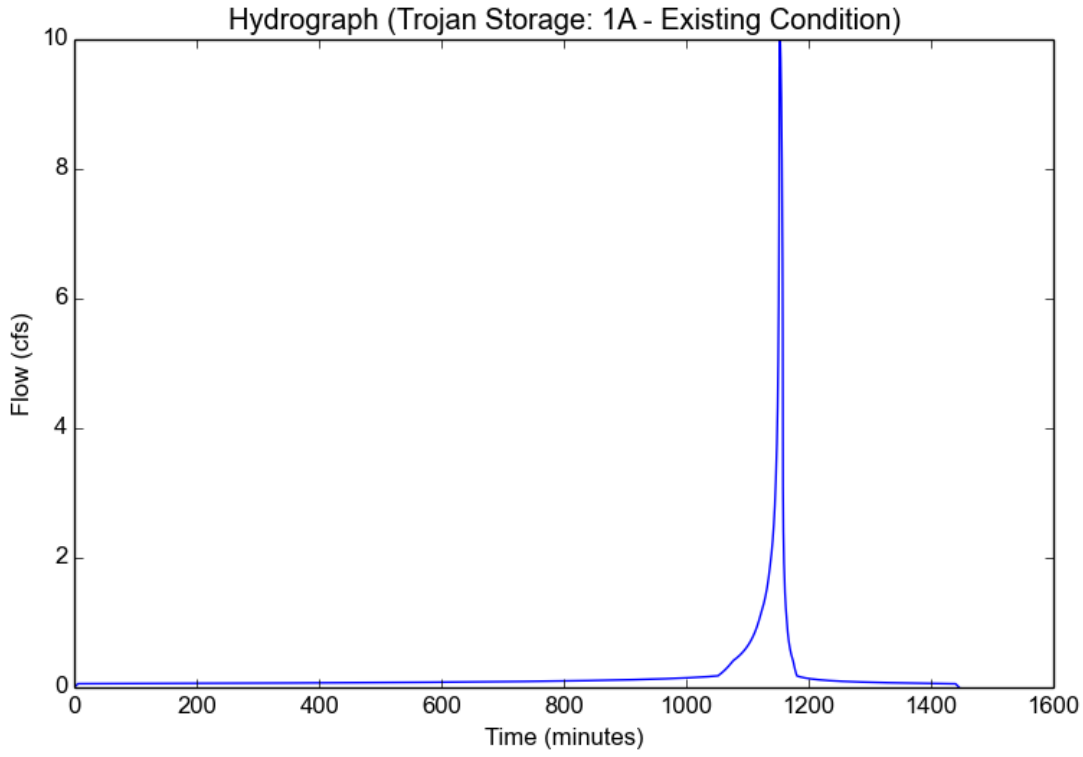
File location: D:/AS - Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Exisiting Condition/Trojan Storage - 1A - Exisitng Condition.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	1A - Existing Condition
Area (ac)	3.74
Flow Path Length (ft)	732.0
Flow Path Slope (vft/hft)	0.15
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.51
Undeveloped Runoff Coefficient (Cu)	0.7602
Developed Runoff Coefficient (Cd)	0.7616
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	9.9976
Burned Peak Flow Rate (cfs)	9.9976
24-Hr Clear Runoff Volume (ac-ft)	0.4004
24-Hr Clear Runoff Volume (cu-ft)	17439.5273



PROPOSED CONDITIONS

Peak Flow Hydrologic Analysis

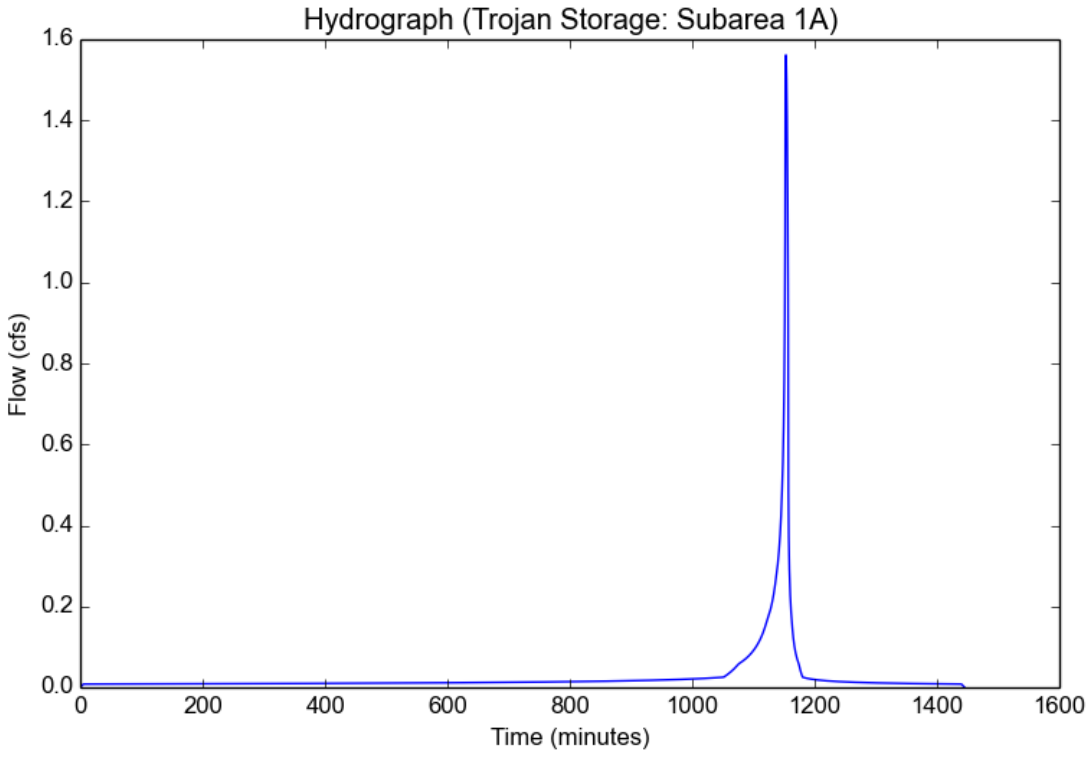
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 1A.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 1A
Area (ac)	0.53
Flow Path Length (ft)	421.0
Flow Path Slope (vft/hft)	0.24
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.7704
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.5614
Burned Peak Flow Rate (cfs)	1.5614
24-Hr Clear Runoff Volume (ac-ft)	0.0568
24-Hr Clear Runoff Volume (cu-ft)	2472.3429



Peak Flow Hydrologic Analysis

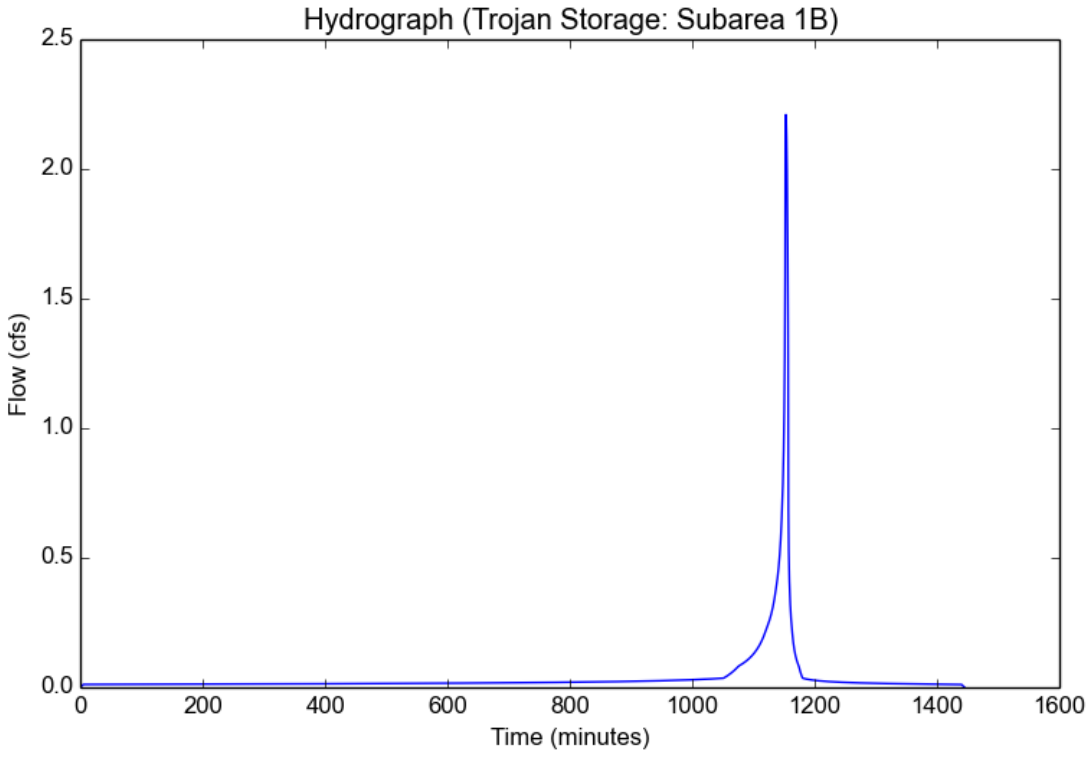
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 1B.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 1B
Area (ac)	0.75
Flow Path Length (ft)	339.0
Flow Path Slope (vft/hft)	0.32
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.7704
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	2.2096
Burned Peak Flow Rate (cfs)	2.2096
24-Hr Clear Runoff Volume (ac-ft)	0.0803
24-Hr Clear Runoff Volume (cu-ft)	3498.5985



Peak Flow Hydrologic Analysis

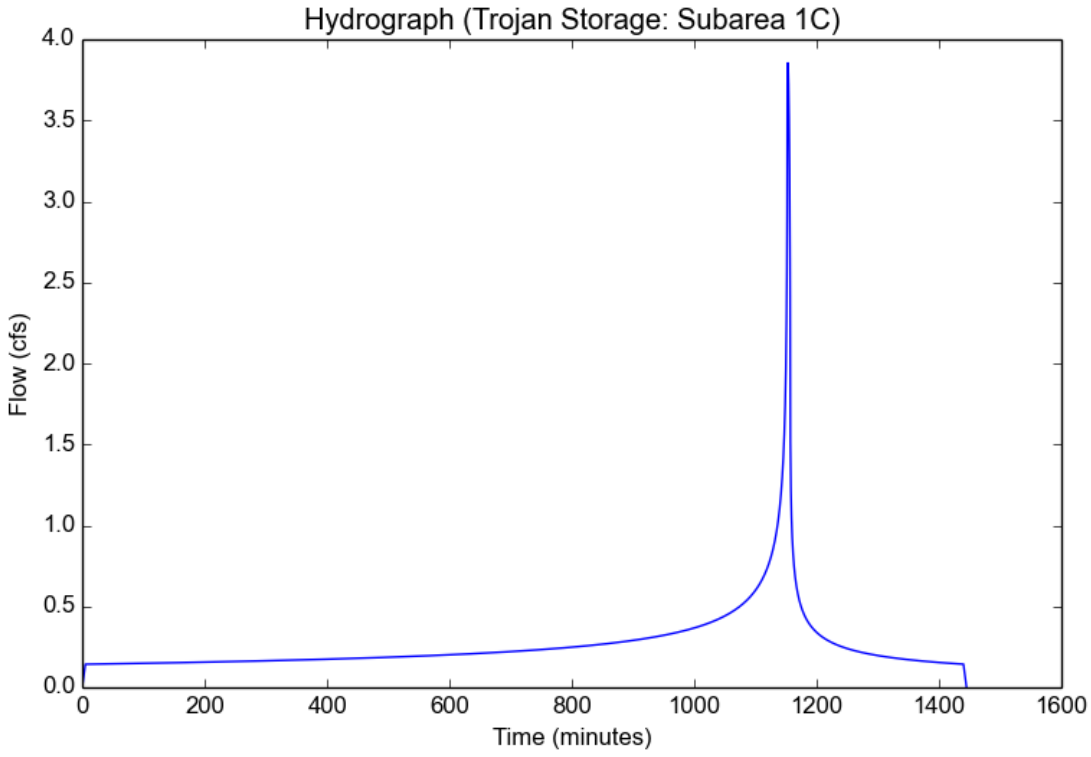
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 1C.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 1C
Area (ac)	1.12
Flow Path Length (ft)	253.0
Flow Path Slope (vft/hft)	0.005
50-yr Rainfall Depth (in)	7.3
Percent Impervious	1.0
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.8546
Burned Peak Flow Rate (cfs)	3.8546
24-Hr Clear Runoff Volume (ac-ft)	0.5339
24-Hr Clear Runoff Volume (cu-ft)	23258.438



Peak Flow Hydrologic Analysis

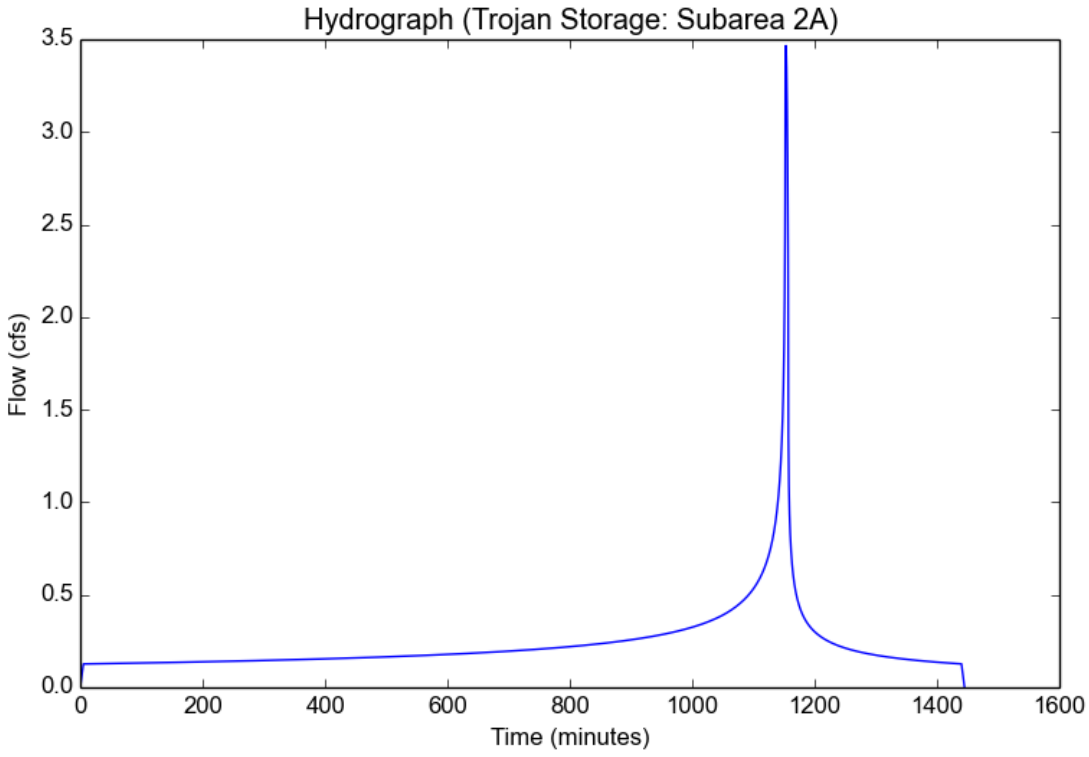
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 2A-4-26-
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 2A
Area (ac)	1.01
Flow Path Length (ft)	250.0
Flow Path Slope (vft/hft)	0.005
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.98
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.8974
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.4659
Burned Peak Flow Rate (cfs)	3.4659
24-Hr Clear Runoff Volume (ac-ft)	0.474
24-Hr Clear Runoff Volume (cu-ft)	20645.5881



Peak Flow Hydrologic Analysis

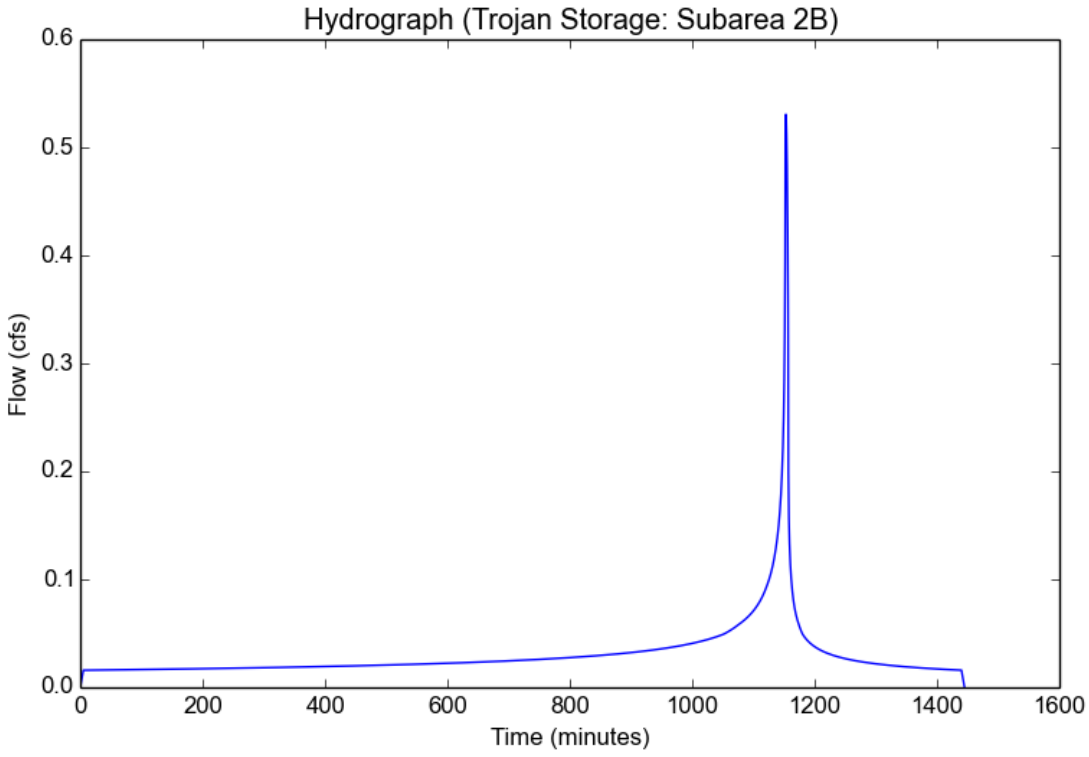
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 2B-4-26-
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 2B
Area (ac)	0.16
Flow Path Length (ft)	45.0
Flow Path Slope (vft/hft)	0.06
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.75
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.8673
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.5306
Burned Peak Flow Rate (cfs)	0.5306
24-Hr Clear Runoff Volume (ac-ft)	0.0613
24-Hr Clear Runoff Volume (cu-ft)	2672.0617



Peak Flow Hydrologic Analysis

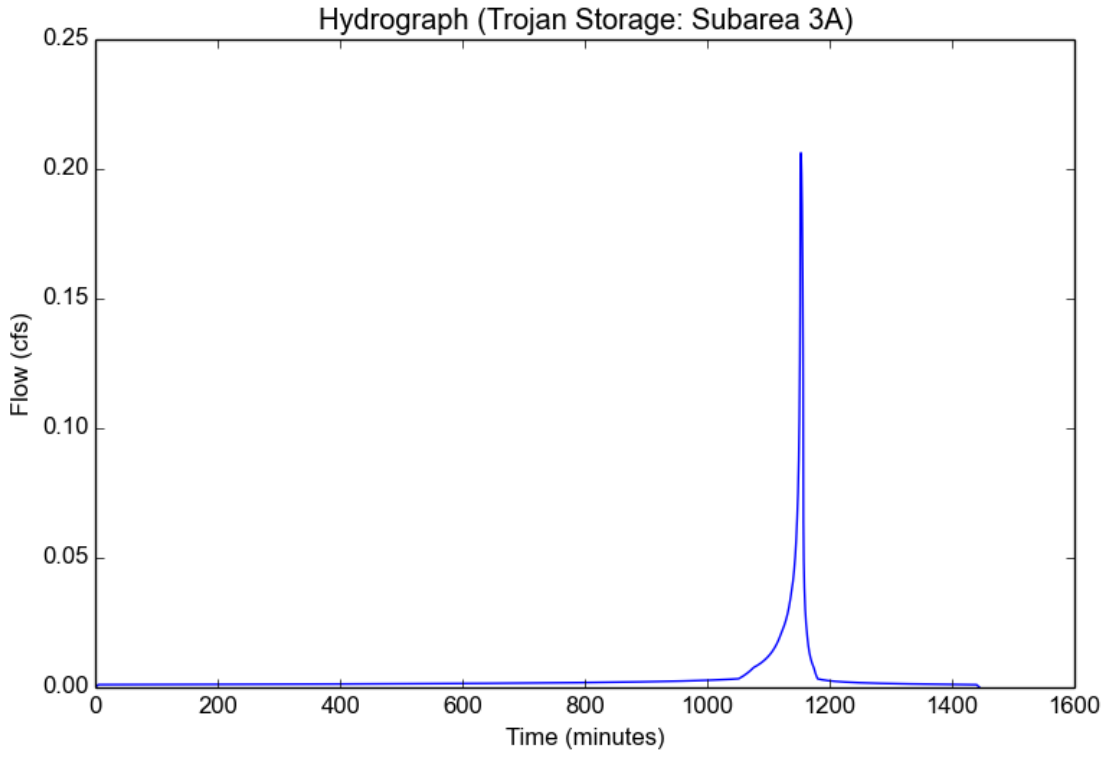
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 3A.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 3A
Area (ac)	0.07
Flow Path Length (ft)	42.0
Flow Path Slope (vft/hft)	0.5
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.7704
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.2062
Burned Peak Flow Rate (cfs)	0.2062
24-Hr Clear Runoff Volume (ac-ft)	0.0075
24-Hr Clear Runoff Volume (cu-ft)	326.5359



Peak Flow Hydrologic Analysis

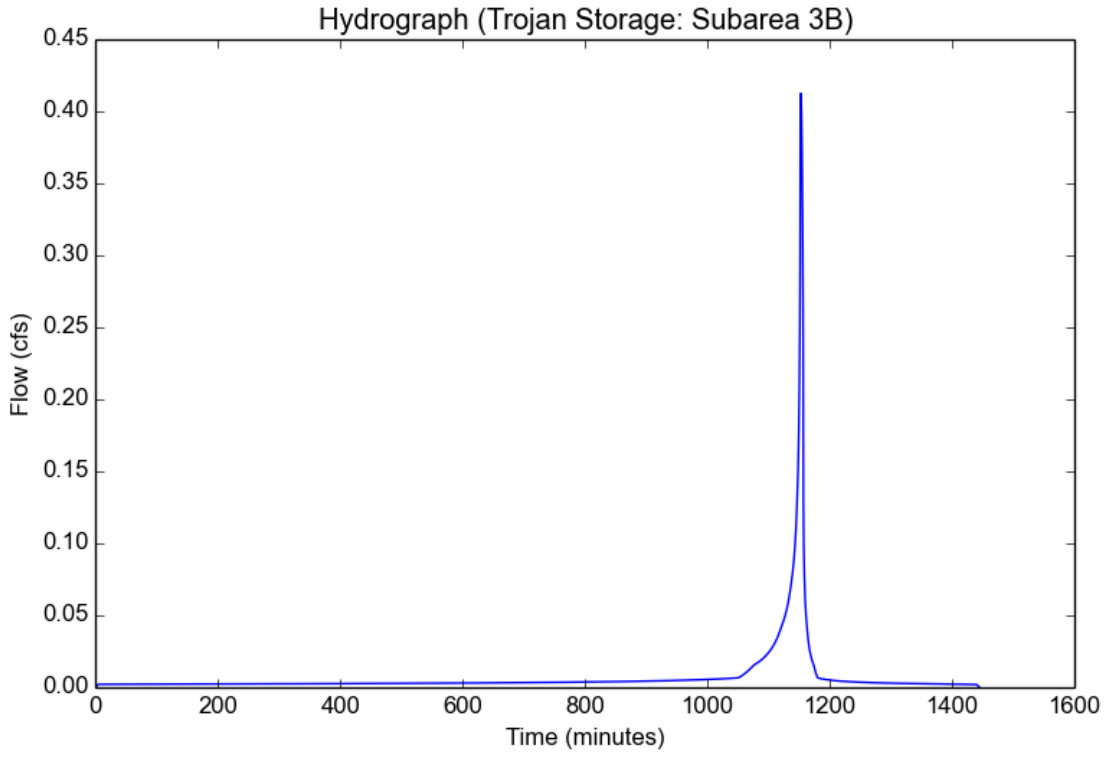
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 3B.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 3B
Area (ac)	0.14
Flow Path Length (ft)	158.0
Flow Path Slope (vft/hft)	0.38
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.7704
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.4125
Burned Peak Flow Rate (cfs)	0.4125
24-Hr Clear Runoff Volume (ac-ft)	0.015
24-Hr Clear Runoff Volume (cu-ft)	653.0717



Peak Flow Hydrologic Analysis

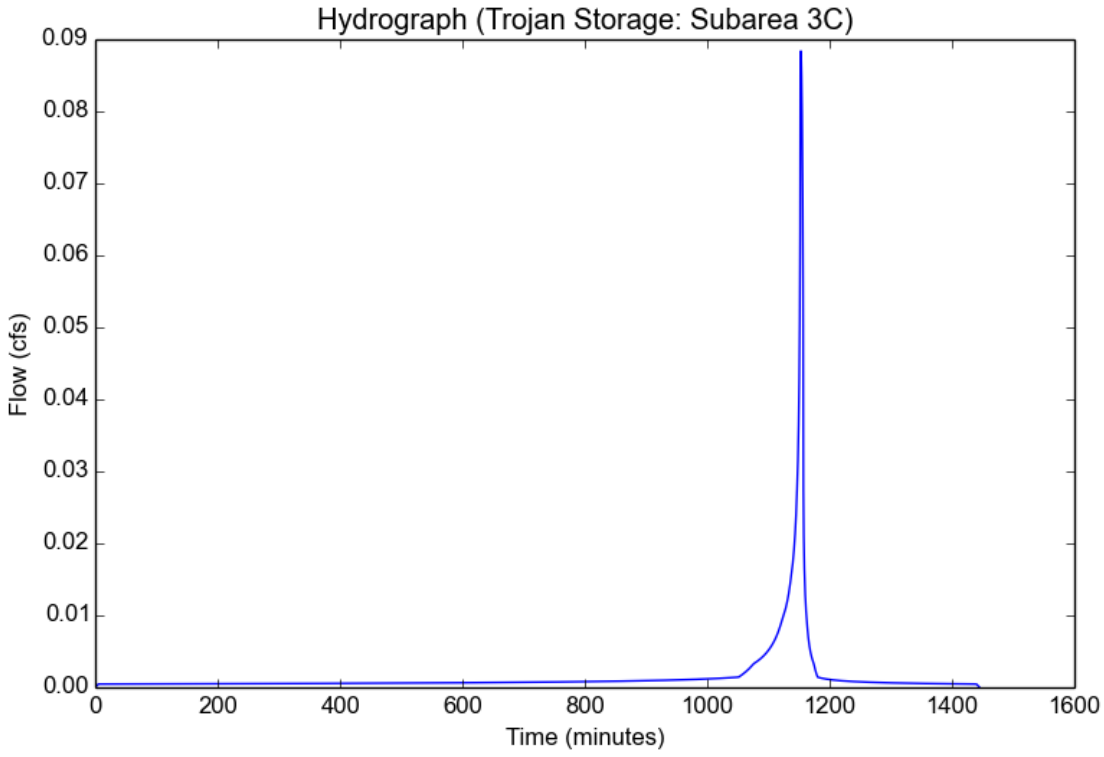
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/Hydrology/HydroCalc/Proposed Condition/Trojan Storage - Subarea 3C.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	Subarea 3C
Area (ac)	0.03
Flow Path Length (ft)	137.0
Flow Path Slope (vft/hft)	0.03
50-yr Rainfall Depth (in)	7.3
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.4094
Peak Intensity (in/hr)	3.824
Undeveloped Runoff Coefficient (Cu)	0.7691
Developed Runoff Coefficient (Cd)	0.7704
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0884
Burned Peak Flow Rate (cfs)	0.0884
24-Hr Clear Runoff Volume (ac-ft)	0.0032
24-Hr Clear Runoff Volume (cu-ft)	139.9439



Low Impact Development (LID) Report
CUP: RPPL2020000732

Project Name:

Trojan Storage

5050 Scandia Lane

Calabasas, CA 91302

Prepared for:

Trojan Storage

1732 Aviation Blvd, Suite 217

Redondo Beach, CA 90278

11.30.2020

REVISED - 2.2.2022

Prepared by:

Felix Gonzalez

fgonzalez@adams-streeter.com

ADAMS STREETER

Civil Engineers

16755 Von Karman Ave, Suite 150 | Irvine, CA 92606 | 949-474-2330

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APPENDIX

PURPOSE OF THE PLAN

The purpose of this Low Impact Development (LID) and National Pollutant Discharge Elimination System (NPDES) Report is to provide Best Management Practices (BMP) for reducing pollutants in storm water discharges after the completion of the project. The project falls under County of Los Angeles LID requirements with a classification of a Designated Project given the project proposes the disturbance of greater than one acre and the addition of more than 10,000 ft^2 of impervious surface area.

PROJECT DESCRIPTION

EXISTING CONDITION

The project area is an irregular-shaped site located off of Old Scandia Lane in the City of Calabasas. The Assessor's Parcel Number for the site is 2049-022-040. The site is currently undeveloped land. An existing channel that once traversed in approximately the middle of the property in the northwest-southeast orientation has been recently replaced with an underground 60" RCP. The lower two-thirds of the site are relatively flat, while the upper one-third slopes to the north and approximately 4.5H: 1V inclination. Undocumented fill material has been placed in the lower two-thirds of the site. The depth of the undocumented fill ranges from 7-10 feet.

The project area is mapped as being underlain by bedrock, which are composed primarily of uplifted Micoene age sedimentary rocks with interbeds of moderately weathered, cemented, massive to laminated siltstone and shales with minor sandstones. In addition, colluvium consisting brown silty clay was also located throughout the site.

Groundwater was encountered at depths ranging from 20 feet (approximate elevation of 941 MSL) to 37 feet (approximate elevation 935 MSL) below existing grade. It is expected that higher localized and seasonal perched groundwater conditions shall accumulate below the surface throughout the design life of the proposed improvements.

PROPOSED CONDITION

The proposed development will consist of improvements for and construction of three self-storage buildings (buildings "A" through "C"). Building "A" will be four stories including one subterranean level. Building "B" will be two stories which includes one subterranean level. Building "C" will include two stories; one subterranean level and one partially subterranean, notched into the ascending hillside. A two story, at-grade office building will be located near building "A". A parking lot will be located in the southeast corner.

In regards to stormwater treatment, the site has been divided into 8 distinct Drainage Management Areas (DMAs) in order to determine the required SWQDv. DMA's A,B,G,F and H consist of stabilized vegetated pervious areas comprising of a total 1.52 acres. DMA-C consists of building C, D and its surrounding improvements. Runoff from DMA C will discharge into an 8'x16' Filterra bio-filtration system before ultimately discharging into an existing LA County Flood Control 60" RCP storm drain system located onsite between buildings A and B. DMA-D consist of buildings A, the office building and the surrounding improvements. Runoff generated from this area follows similar drainage patterns to DMA-C. Building roof runoff discharges onto the concrete drive aisle where a 3' concrete v-gutter directs the runoff westerly before turning south and discharging into a 110 SF Filterra Bio-scape system nestled between building A and the office. Lastly, DMA-E (0.16 acres) consists of the site entrance improvements as well as the ramp leading up to Building C. Trench drains located at the entrance, by the security gates and at the bottom of the ramp will intercept stormwater runoff from this steep portion of the site and will redirect the runoff to a 4'x4' Filterra bio-filtration system before converging with the runoff from the remaining site and collectively discharging into the 60" RCP storm drain system.

RESPONSIBLE PARTIES

The Owner of the property, Trojan Storage, is responsible for implementation of the LID report. The Owner may employ sub-contractors to assist him in the application of the BMP's outlined in this LID report to ensure compliance with the requirements of the State of California General Permit for Storm Water Discharges.

Project Owner:

Trojan Storage of Calabasas, LLC
1732 Aviation Blvd. Suite 217
Redondo Beach, CA 90278

Contact Person(s):

Ingo Giani – Real Estate Development Manager
(Phone) 813.774.2247

PEAK MITIGATED DISCHARGE VALUES

The peak mitigated discharge value (QPM) has been calculated to be 0.53 cfs, 0.47 cfs and 0.11 DMA-C, DMA-D and DMA-E, respectively. The 85th Percentile design volume (SWQDv) for the project is 7,608cf and was determined using the County of Los Angeles Department of Public Works Low Impact Development Guidelines.

Input parameters and calculations are shown in Appendix D.

BEST MANAGEMENT PRACTICES (BMPs)

The following is a list of all BMP's to be implemented onsite:

A. Stormwater Runoff Harvest and Reuse Feasibility:

Stormwater use for indoor and outdoor use was studied and determined unfeasible for this project. Identified as tier 3, stormwater use indoor is limited to toilet flushing and cooling tower make-up. The office building is the only building containing restrooms which consist of two unisex restrooms and I one bathroom for the upstairs living area. The fixture count does not support the incorporation of a harvesting system. Outdoor usage was also determined as not feasible as there is less than 1% of proposed landscaping onsite. The existing hillside is stabilized with native non irrigated vegetation and shall remain as is.

B. Structural BMPs

Given the poor onsite infiltration rate and the minimal landscaped areas, the project will utilize biofiltration to satisfy storm water runoff treatment requirements. The systems have been selected to accommodate, up to and including, the 85th percentile storm event. See appendix "D" for calculations and see Appendix "E" for additional information including details and volume capacities.

B. Non-structural BMPs

1. Open Paved Areas and Planter Areas

a. Regular sweeping of all open areas, at a minimum, on a weekly basis in order to prevent dispersal of pollutants that may collect on those surfaces.

b. Trash and recycling containers shall be used such that, if they are to be located outside or apart from the principal structure, are fully enclosed and watertight in order to prevent contact of storm water with waste matter, which can be a potential source of bacteria and other pollutants in runoff. These containers shall be emptied and the wastes disposed of properly on a regular basis.

2. Education and Training

The owners shall be made aware of the structural BMPs installed in the project. Information materials, such as brochures, shall also be provided for their complete information. They shall also be briefed about chemical management and proper methods of handling and disposal of wastes and should understand the on-site BMPs and their maintenance requirements.

3. Monitoring and Maintenance

a. All BMPs shall be operated, monitored, and maintained for the life of the project and at a minimum, all structural BMPs shall be inspected, cleaned-out, and where necessary, repaired, at the following minimum frequencies: 1) prior to October 15th each year; 2) during each month between October 15th and April 15th of each year and, 3) at least twice during the dry season (between April 16 and October 14 of every year).

b. Maintenance procedures and recommendations outlined by Contech Solutions Inc. shall be followed by the owner to ensure proper performance of the below grade detention system.

c. Debris and other water pollutants removed from structural BMPs during cleanout shall be contained and disposed of in a proper manner.

d. The drainage system and the associated structures and BMPs shall be maintained according to manufacturer's specification to ensure maximum pollutant removal efficiencies.

4. Storm Drain Signage

Storm drain message markers, placards, concrete stamps, or stenciled language/icons (e.g., "No Dumping – Drains to the Ocean") will be placed at all storm drain inlets and catch basins within the project area to discourage illegal or inadvertent dumping. In addition, all private on-site catch basin inlets, area drains, ribbon gutters, curb and gutters, basins and other drainage systems shall be inspected and cleaned out by the Owner

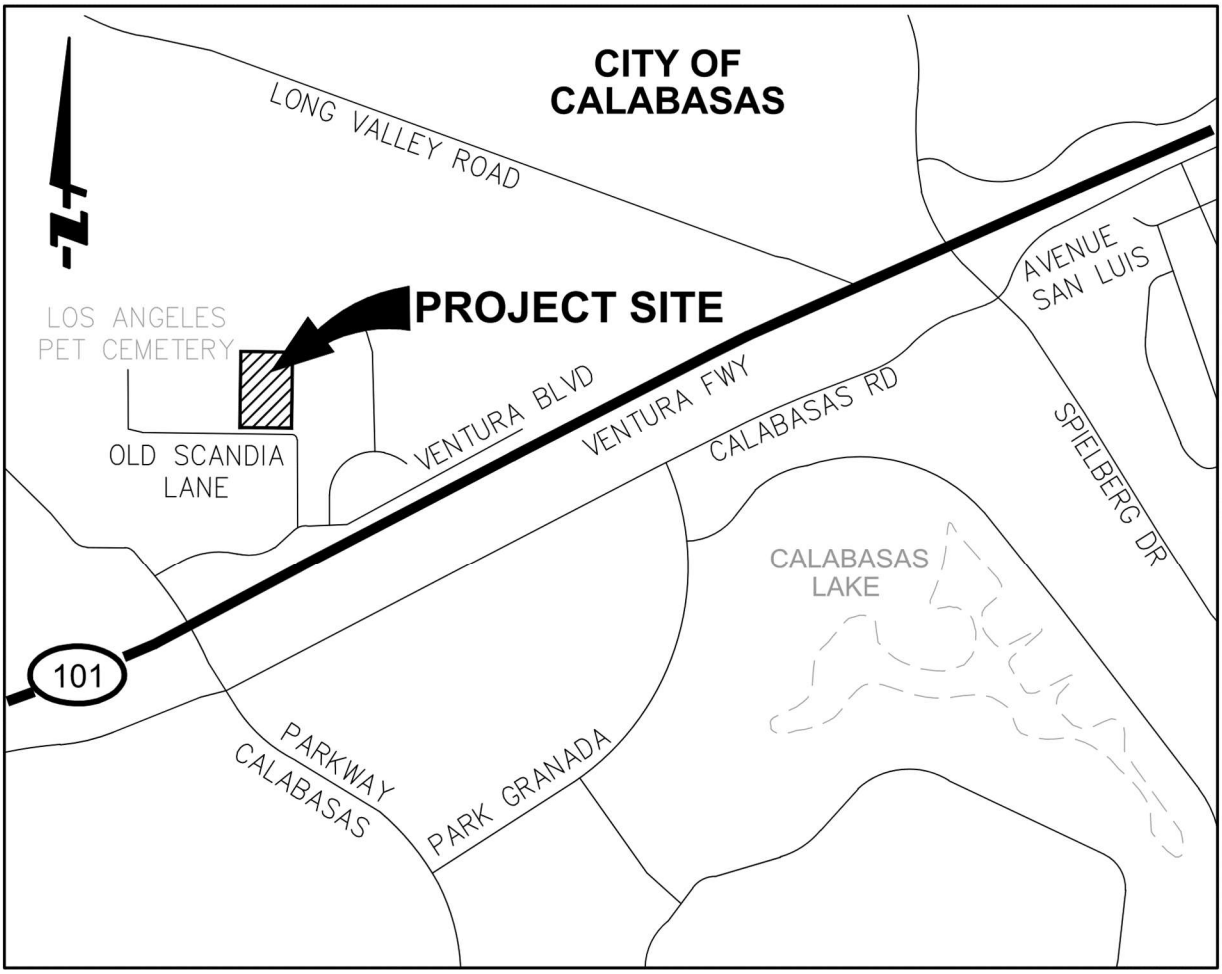
at least once a year, prior to the rainy season, no later than October 1st of each year in accordance with the fact sheets attached to this report.

5. Landscape Irrigation Practices

Maintain irrigation areas to remove trash and debris and loose vegetation. Rehabilitate areas of bare soil. If a rain or pressure sensor is installed, it should be checked periodically to ensure proper function. Inspect and maintain irrigation equipment and components to ensure proper functionality. Clean equipment as necessary to prevent algae growth and vector breeding.

Appendix A

Vicinity Map



VICINITY MAP

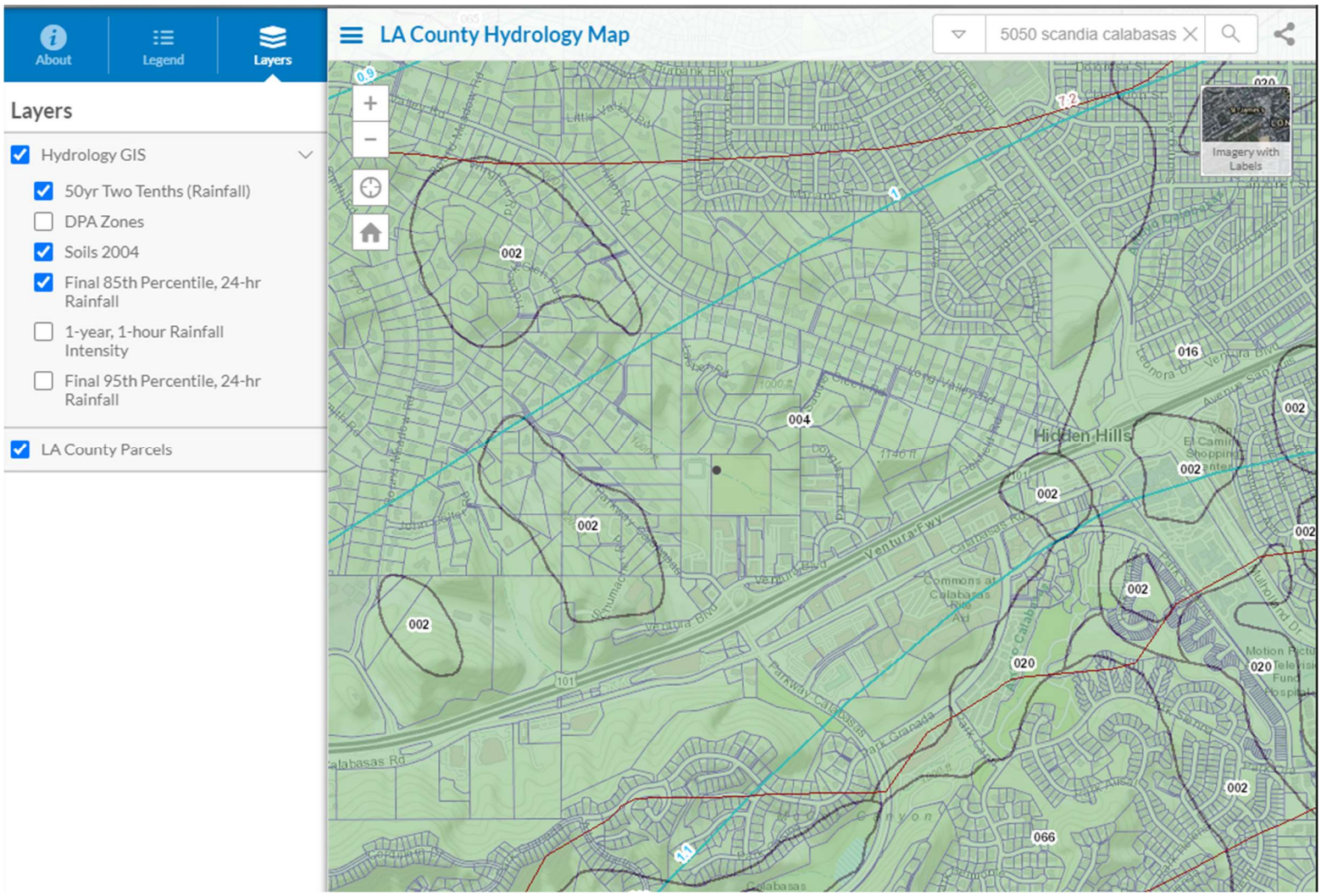
NOT TO SCALE

Appendix B

Los Angeles County Hydrologic Map

LOS ANGELES COUNTY HYDROLOGIC MAP

85th Percentile, 24-hr Rainfall = 1.05”
Soil Type: 004



Appendix C

Covenant & Agreement Forms

RECORDING REQUESTED BY
AND MAIL TO:

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION
900 S. FREMONT AVENUE, 3RD FLOOR
ALHAMBRA, CA 91803-1331

Space above this line is for Recorder's use

COVENANT AND AGREEMENT
REGARDING THE MAINTENANCE OF LOW IMPACT DEVELOPMENT (LID) & NATIONAL POLLUTANTS DISCHARGE ELIMINATION SYSTEM (NPDES) BMPs

The undersigned, Trojan Storage of Calabasas, LLC ("Owner"), hereby certifies that it owns the real property described as follows ("Subject Property"), located in the County of Los Angeles, State of California:

LEGAL DESCRIPTION

ASSESSOR'S ID # 2049-022-040 TRACT NO. 1 LOT NO. POR OF SE 1/4 OF NW 1/4 OF SEC 22 T1N R17W

ADDRESS: 5050 Old Scandia Lane, Calabasas CA 91302

Owner is aware of the requirements of County of Los Angeles' Green Building Standards Code, Title 31 Section 4.106.4 (LID), and the National Pollutant Discharge Elimination System (NPDES) permit. The following post-construction BMP features have been installed on the Subject Property:

- □ Porous pavement
- □ Cistern/rain barrel
- □ Infiltration trench/pit
- ☒ Bioretention or biofiltration
- □ Rain garden/planter box
- □ Disconnect impervious surfaces
- □ Dry Well
- □ Storage containers
- □ Landscape and landscape irrigation
- □ Green roof
- □ Other _____

The location, including GPS x-y coordinates, and type of each post-construction BMP feature installed on the Subject Property is identified on the site diagram attached hereto as Exhibit 1.

Owner hereby covenants and agrees to maintain the above-described post-construction BMP features in a good and operable condition at all times, and in accordance with the LID/NPDES Maintenance Guidelines, attached hereto as Exhibit 2.

Owner further covenants and agrees that the above-described post-construction BMP features shall not be removed from the Subject Property unless and until they have been replaced with other post-construction BMP features in accordance with County of Los Angeles' Green Building Standards Code, Title 31.

Owner further covenants and agrees to maintain all drainage devices located within his or her property in good condition and operable condition at all times.

Owner further covenants and agrees that if Owner hereafter sells the Subject Property, Owner shall provide printed educational materials to the buyer regarding the post-construction BMP features that are located on the Subject Property, including the type(s) and location(s) of all such features, and instructions for properly maintaining all such features.

Owner makes this Covenant and Agreement on behalf of itself and its successors and assigns. This Covenant and Agreement shall run with the Subject Property and shall be binding upon Owner, future owners, and their heirs, successors and assignees, and shall continue in effect until the release of this Covenant and Agreement by the County of Los Angeles, in its sole discretion.

Owner(s):

By:_____ Date:_____

By:_____ Date:_____

A notary public or other officer completing the attached certificate verifies only the identity of the individual who signed the document to which the certificate is attached, and not the truthfulness, accuracy, or validity of that document.

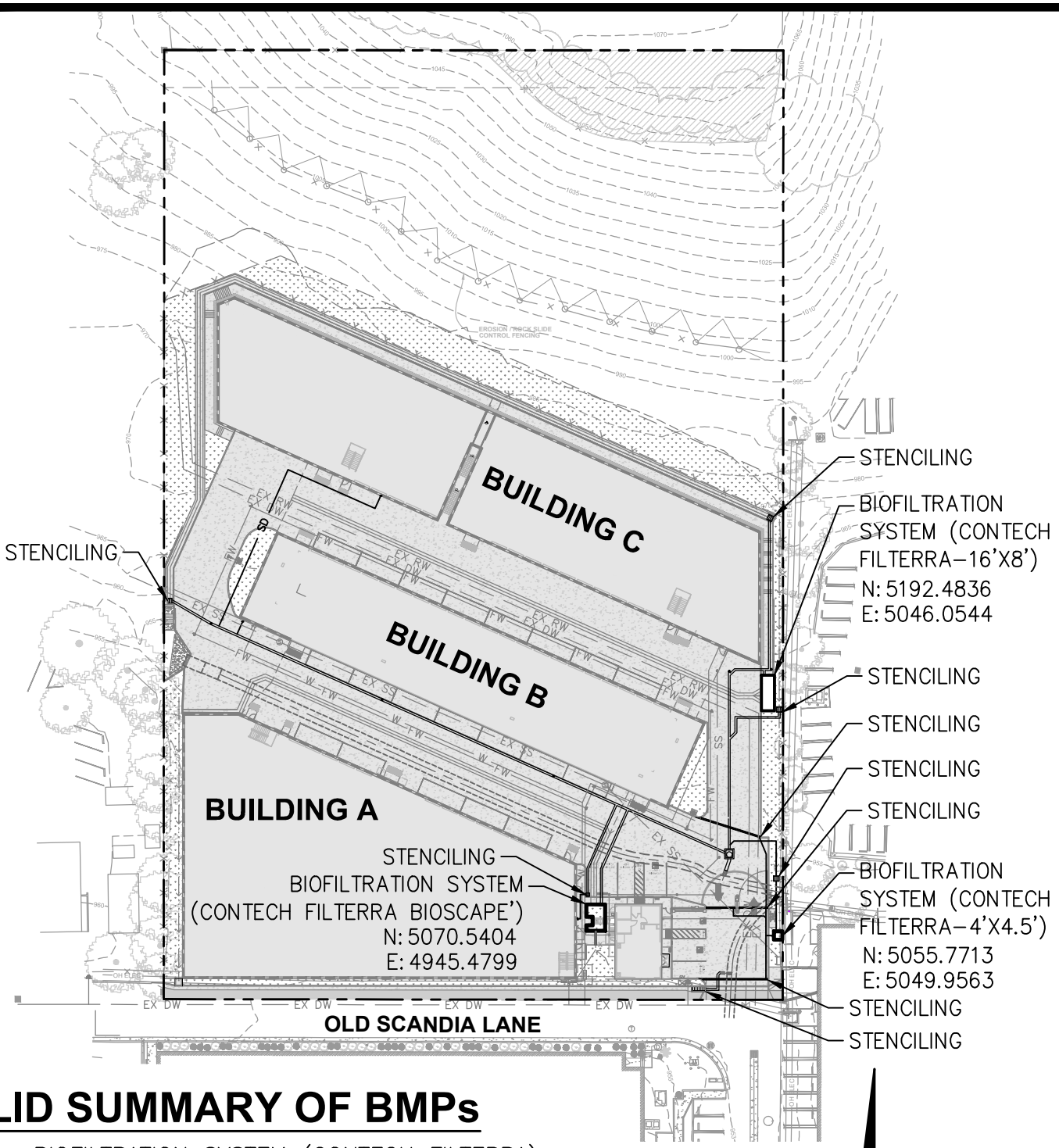
(PLEASE ATTACH NOTARY)

FOR DEPARTMENT USE ONLY:

MUST BE APPROVED BY COUNTY OF LOS ANGELES BUILDING AND SAFETY DIVISION PRIOR TO RECORDING.

APPROVED BY:_____ _____ Date _____
(Print Name) (Signature)

ATTACHMENTS



LID SUMMARY OF BMPs

1. BIOFILTRATION SYSTEM (CONTECH FILTERRA)
   – 4'X5.6' FTPD4X4.5 – 676210–030
   – 16'X8' FTIBC1608–C
2. BIOFILTRATION SYSTEM (CONTECH BIOSCAPE)
   – BIOSCAPE 676210–010
3. STORM DRAIN INLET STENCILING

80' 0' 40' 80'

SCALE: 1" = 80'

PREPARED BY:

ADAMS STREETER
Civil Engineers
16755 Von Karman Ave, Suite 150, Irvine, CA 92606 | 949.474.2330 | adams-streeter.com

EXHIBIT 1

5050 SCANDIA LANE
CALABASAS, CA 91302

PROJECT NO. 19–2284

SHEET 1
OF 1

U:\2019\19–2284 TROJAN STORAGE CALABASAS\WQMP\19–2284–LID–COV–EXHIBIT–1.DWG DATE: 8/6/21

Exhibit 2

Exclusion of Services

Clean up due to major contamination such as oils, chemicals, toxic spills, etc. will result in additional costs and are not covered under the Supplier maintenance contract. Should a major contamination event occur the Owner must block off the outlet pipe of the Filterra (where the cleaned runoff drains to, such as drop inlet) and block off the throat of the Filterra. The Supplier should be informed immediately.

Maintenance Visit Summary

Each maintenance visit consists of the following simple tasks (detailed instructions below).

1. Inspection of Filterra and surrounding area
2. Removal of tree grate and erosion control stones
3. Removal of debris, trash and mulch
4. Mulch replacement
5. Plant health evaluation and pruning or replacement as necessary
6. Clean area around Filterra
7. Complete paperwork

Maintenance Tools, Safety Equipment and Supplies

Ideal tools include: camera, bucket, shovel, broom, pruners, hoe/rake, and tape measure. Appropriate Personal Protective Equipment (PPE) should be used in accordance with local or company procedures. This may include impervious gloves where the type of trash is unknown, high visibility clothing and barricades when working in close proximity to traffic and also safety hats and shoes. A T-Bar or crowbar should be used for moving the tree grates (up to 170 lbs ea.). Most visits require minor trash removal and a full replacement of mulch. See below for actual number of bagged mulch that is required in each media bay size. Mulch should be a double shredded, hardwood variety. Some visits may require additional Filterra engineered soil media available from the Supplier.

Box Length	Box Width	Filter Surface Area (ft^2)	Volume at 3" (ft^3)	# of 2 ft^3 Mulch Bags
4	4	16	4	2
6	4	24	6	3
8	4	32	8	4
6	6	36	9	5
8	6	48	12	6
10	6	60	15	8
12	6	72	18	9
13	7	91	23	12

Maintenance Visit Procedure

Keep sufficient documentation of maintenance actions to predict location specific maintenance frequencies and needs. An example Maintenance Report is included in this manual.

1. Inspection of Filterra and surrounding area

- Record individual unit before maintenance with photograph (numbered). Record on Maintenance Report (see example in this document) the following:

Record on Maintenance Report the following:

Standing Water	yes | no
Damage to Box Structure	yes | no
Damage to Grate	yes | no
Is Bypass Clear	yes | no

If yes answered to any of these observations, record with close-up photograph (numbered).

2. Removal of tree grate and erosion control stones

- Remove cast iron grates for access into Filterra box.
- Dig out silt (if any) and mulch and remove trash & foreign items.

3. Removal of debris, trash and mulch

Record on Maintenance Report the following:

Silt/Clay	yes | no
Cups/ Bags	yes | no
Leaves	yes | no
Buckets Removed	_____

- After removal of mulch and debris, measure distance from the top of the Filterra engineered media soil to the top of the top slab. Compare the measured distance to the distance shown on the approved Contract Drawings for the system. Add Filterra media (not top soil or other) to bring media up as needed to distance indicated on drawings.

Record on Maintenance Report the following:

Distance to Top of Top Slab (inches)	_____
Inches of Media Added	_____

4. Mulch replacement

- Add double shredded mulch evenly across the entire unit to a depth of 3".
- Refer to Filterra Mulch Specifications for information on acceptable sources.
- Ensure correct repositioning of erosion control stones by the Filterra inlet to allow for entry of trash during a storm event.
- Replace Filterra grates correctly using appropriate lifting or moving tools, taking care not to damage the plant.

5. Plant health evaluation and pruning or replacement as necessary

- Examine the plant's health and replace if necessary.
- Prune as necessary to encourage growth in the correct directions

Record on Maintenance Report the following:

Height above Grate	_____ (ft)
Width at Widest Point	_____ (ft)
Health	healthy | unhealthy
Damage to Plant	yes | no
Plant Replaced	yes | no

6. Clean area around Filterra

- Clean area around unit and remove all refuse to be disposed of appropriately.

7. Complete paperwork

- Deliver Maintenance Report and photographs to appropriate location (normally Contech during maintenance contract period).
- Some jurisdictions may require submission of maintenance reports in accordance with approvals. It is the responsibility of the Owner to comply with local regulations.

Maintenance Checklist

Drainage System Failure	Problem	Conditions to Check	Condition that Should Exist	Actions
Inlet	Excessive sediment or trash accumulation.	Accumulated sediments or trash impair free flow of water into Filterra.	Inlet should be free of obstructions allowing free distributed flow of water into Filterra.	Sediments and/or trash should be removed.
Mulch Cover	Trash and floatable debris accumulation.	Excessive trash and/or debris accumulation.	Minimal trash or other debris on mulch cover.	Trash and debris should be removed and mulch cover raked level. Ensure bark nugget mulch is not used.
Mulch Cover	"Ponding" of water on mulch cover.	"Ponding" in unit could be indicative of clogging due to excessive fine sediment accumulation or spill of petroleum oils.	Stormwater should drain freely and evenly through mulch cover.	Recommend contact manufacturer and replace mulch as a minimum.
Vegetation	Plants not growing or in poor condition.	Soil/mulch too wet, evidence of spill. Incorrect plant selection. Pest infestation. Vandalism to plants.	Plants should be healthy and pest free.	Contact manufacturer for advice.
Vegetation	Plant growth excessive.	Plants should be appropriate to the species and location of Filterra.		Trim/prune plants in accordance with typical landscaping and safety needs.
Structure	Structure has visible cracks.	Cracks wider than 1/2 inch or evidence of soil particles entering the structure through the cracks.		Vault should be repaired.
Maintenance is ideally to be performed twice annually.				

Filterra Inspection & Maintenance Log

Filterra System Size/Model:_____ **Location:** _____

Date	Mulch & Debris Removed	Depth of Mulch Added	Mulch Brand	Height of Vegetation Above Grate	Vegetation Species	Issues with System	Comments
1/1/17	*5 – 5 gal Buckets*	*3″*	*Lowe's Premium Brown Mulch*	*4′*	*Galaxy Magnolia*	*- Standing water in downstream structure*	*- Removed blockage in downstream structure*

Appendix 1 – Filterra® Activation Checklist

Project Name: ______________________ Company: ______________________

Site Contact Name: ______________________ Site Contact Phone/Email: ______________________

Site Owner/End User Name: ______________________ Site Owner/End User Phone/Email: ______________________

Preferred Activation Date: ______________________ (provide 2 weeks minimum from date this form is submitted)

Site Designation	System Size	Final Pavement / Top Coat Complete	Landscaping Complete / Grass Emerging	Construction materials / Piles / Debris Removed	Throat Opening Measures 4" Min. Height	Plant Species Requested
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	

Attach additional sheets as necessary.

NOTE: A charge of $500.00 will be invoiced for each Activation visit requested by Customer where Contech determines that the site does not meet the conditions required for Activation. ONLY Contech authorized representatives can perform Activation of Filterra systems; unauthorized Activations will void the system warranty and waive manufacturer supplied Activation and 1st Year Maintenance.

______________________ ______________________

Signature Date

Appendix D

Hydrology Design Criteria and Calculation

HYDROLOGY DESIGN CRITERIA

HYDROLOGY METHOD:	County of Los Angeles Department of Public Works Low Impact Development Guidelines Runoff Calculation Method: Rational Method
DESIGN STORM:	85th Percentile, 24-hr Rainfall = 1.05"
SOIL TYPE:	004
AREAS:	A = Area of drainage for each sub area is shown on the hydrology/LID plans

HYDROLOGY CALCULATIONS

The peak mitigated discharge value (QPM) has been calculated to be 0.35 cfs for DMA-C, 0.31 cfs for DMA-D and 0.07 cfs for DMA-E. Given that biofiltration is the proposed method of treatment, per section 7.4 of the LA County LID Manual, a multiplier for onsite biofiltration of 1.5 times the calculated SWQDv is required to be added. With the added multiplier, the final QPM for the upper treatment unit is revised to 0.53 cfs and the final QPM for the lower units are revised to 0.47 and 0.11 cfs. To satisfy the treatment flows, DMA-C will consist of an 8'x16' Filterra Biofiltration unit, DMA-D will consist of 110 SF of Filterra Bioscape and DMA-E will utilize a 4'x4' Filterra unit.

See the following table below for a BMP summation:

Proposed BMP	Drainage Areas	Total Drainage Area Tributary to BMP (AC)	LID Treatment Volume (CF)	LID Required Treatment Flowrate – Biofiltration = 1.5x (CFS)
Filterra – 8'x16'	DMA-C	1.12	3,810	0.53
Filterra – Bioscape	DMA-D	1.01	3,374	0.47
Filterra – 4'x4'	DMA-E	0.16	424	0.11
TOTAL		2.29	7,608	1.11

Peak Flow Hydrologic Analysis

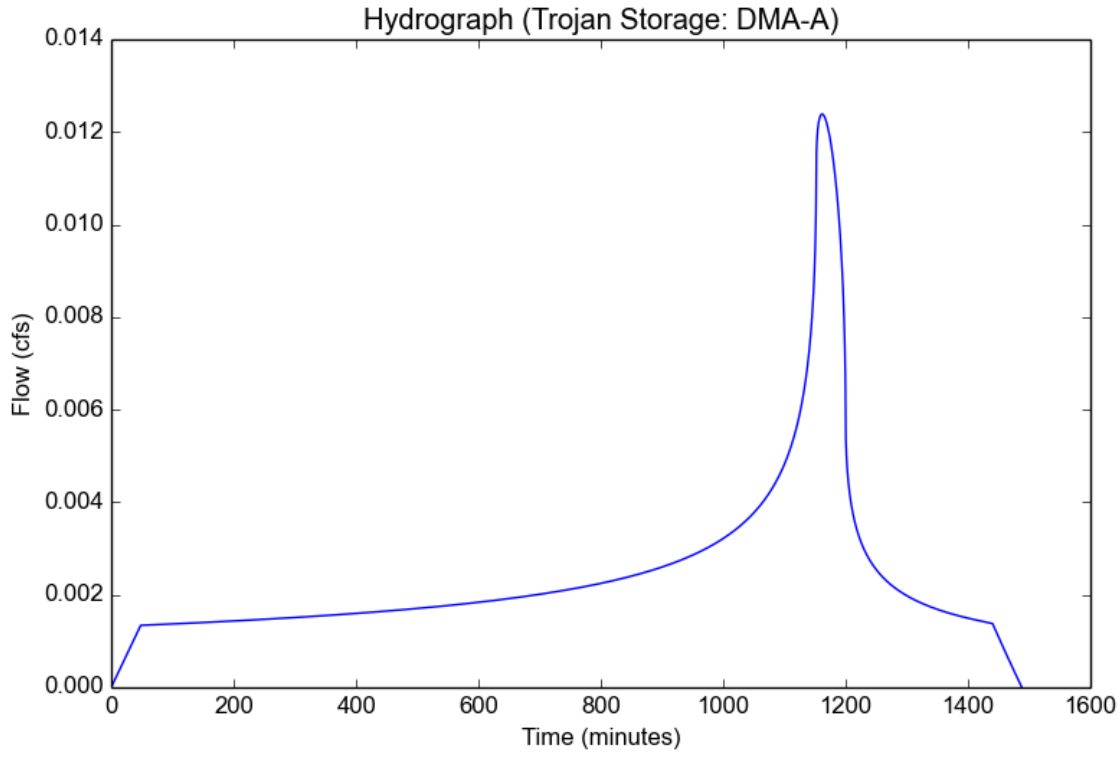
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-A.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-A
Area (ac)	0.53
Flow Path Length (ft)	421.0
Flow Path Slope (vft/hft)	0.27
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.2164
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.108
Time of Concentration (min)	48.0
Clear Peak Flow Rate (cfs)	0.0124
Burned Peak Flow Rate (cfs)	0.0124
24-Hr Clear Runoff Volume (ac-ft)	0.005
24-Hr Clear Runoff Volume (cu-ft)	216.3736



Peak Flow Hydrologic Analysis

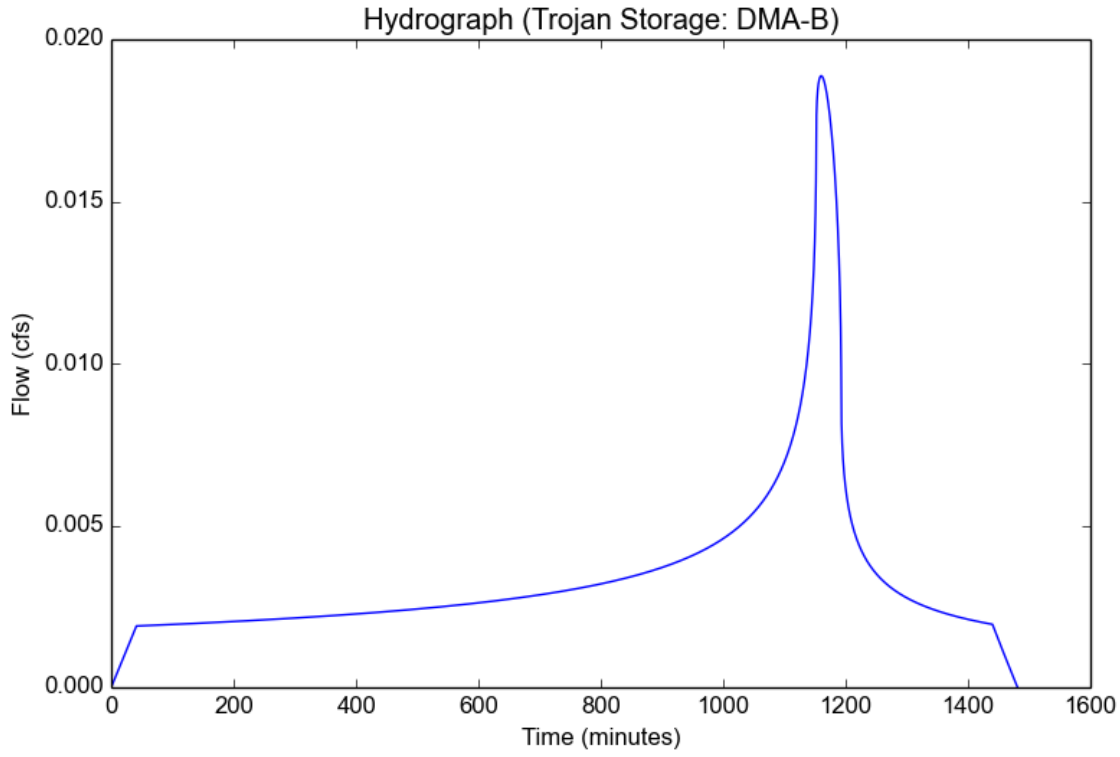
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-B.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-B
Area (ac)	0.75
Flow Path Length (ft)	339.0
Flow Path Slope (vft/hft)	0.32
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.233
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.108
Time of Concentration (min)	41.0
Clear Peak Flow Rate (cfs)	0.0189
Burned Peak Flow Rate (cfs)	0.0189
24-Hr Clear Runoff Volume (ac-ft)	0.007
24-Hr Clear Runoff Volume (cu-ft)	306.1866



Peak Flow Hydrologic Analysis

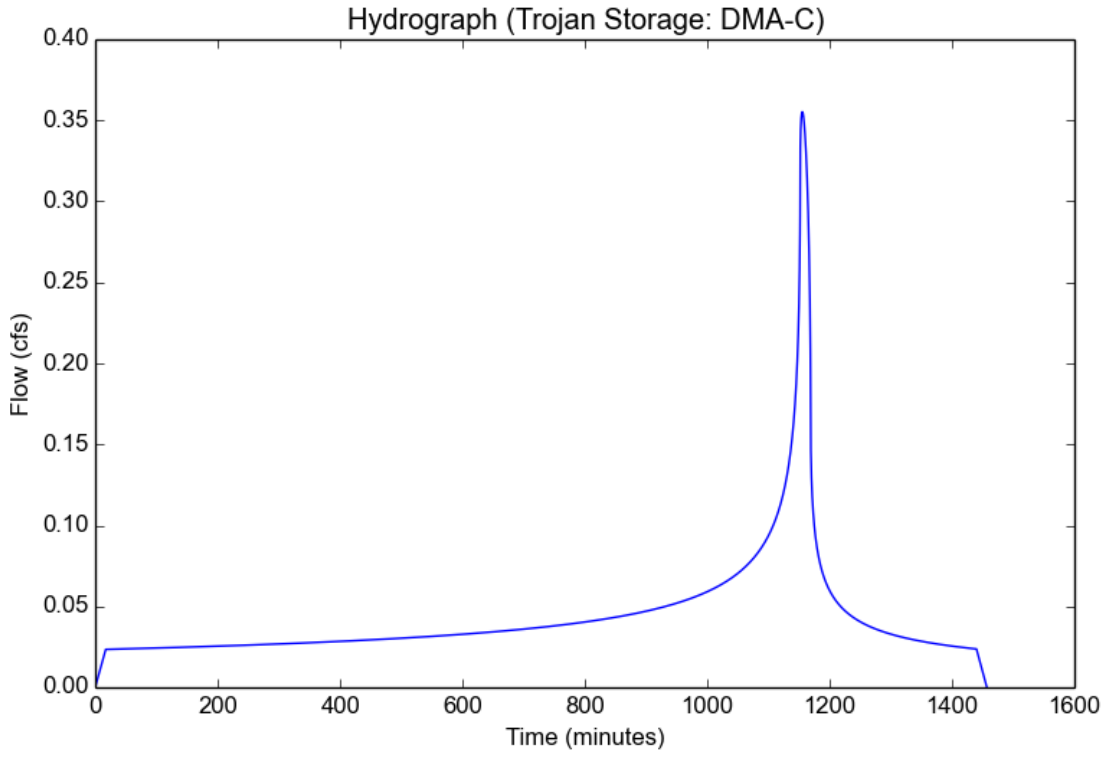
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-C.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-C
Area (ac)	1.12
Flow Path Length (ft)	253.0
Flow Path Slope (vft/hft)	0.005
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	1.0
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3524
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	17.0
Clear Peak Flow Rate (cfs)	0.3553
Burned Peak Flow Rate (cfs)	0.3553
24-Hr Clear Runoff Volume (ac-ft)	0.0875
24-Hr Clear Runoff Volume (cu-ft)	3810.2539



Peak Flow Hydrologic Analysis

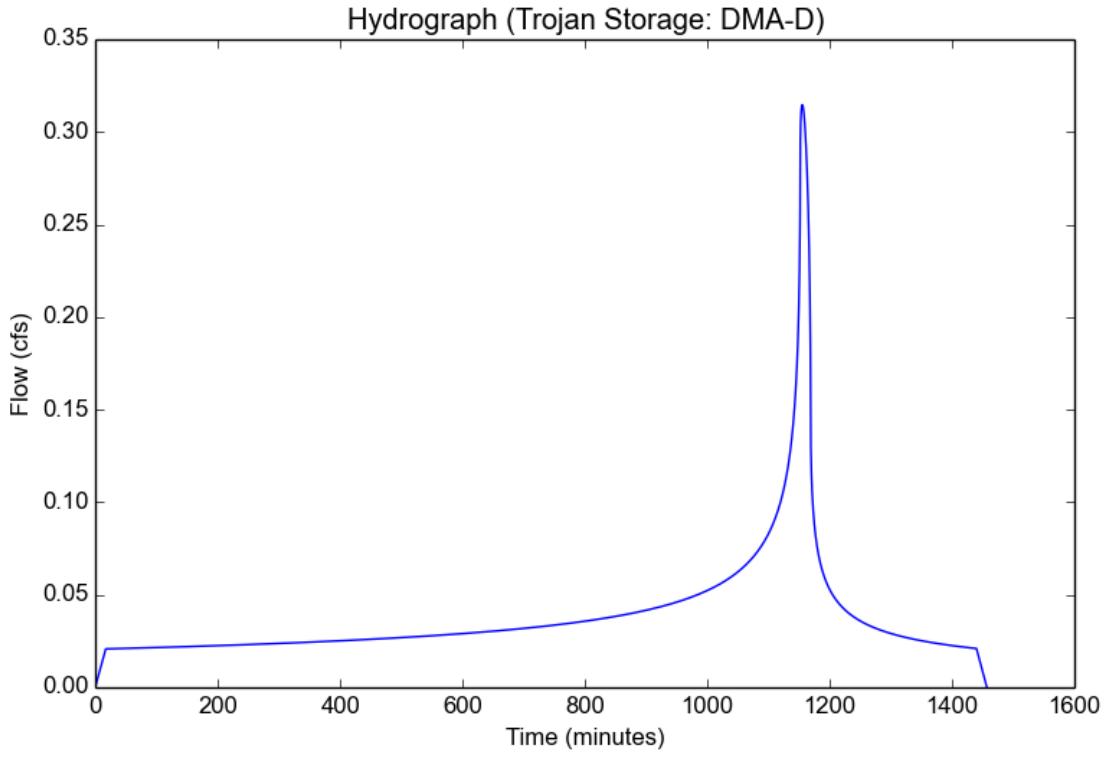
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-D.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-D
Area (ac)	1.01
Flow Path Length (ft)	250.0
Flow Path Slope (vft/hft)	0.005
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.98
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3524
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.884
Time of Concentration (min)	17.0
Clear Peak Flow Rate (cfs)	0.3147
Burned Peak Flow Rate (cfs)	0.3147
24-Hr Clear Runoff Volume (ac-ft)	0.0775
24-Hr Clear Runoff Volume (cu-ft)	3374.9475



Peak Flow Hydrologic Analysis

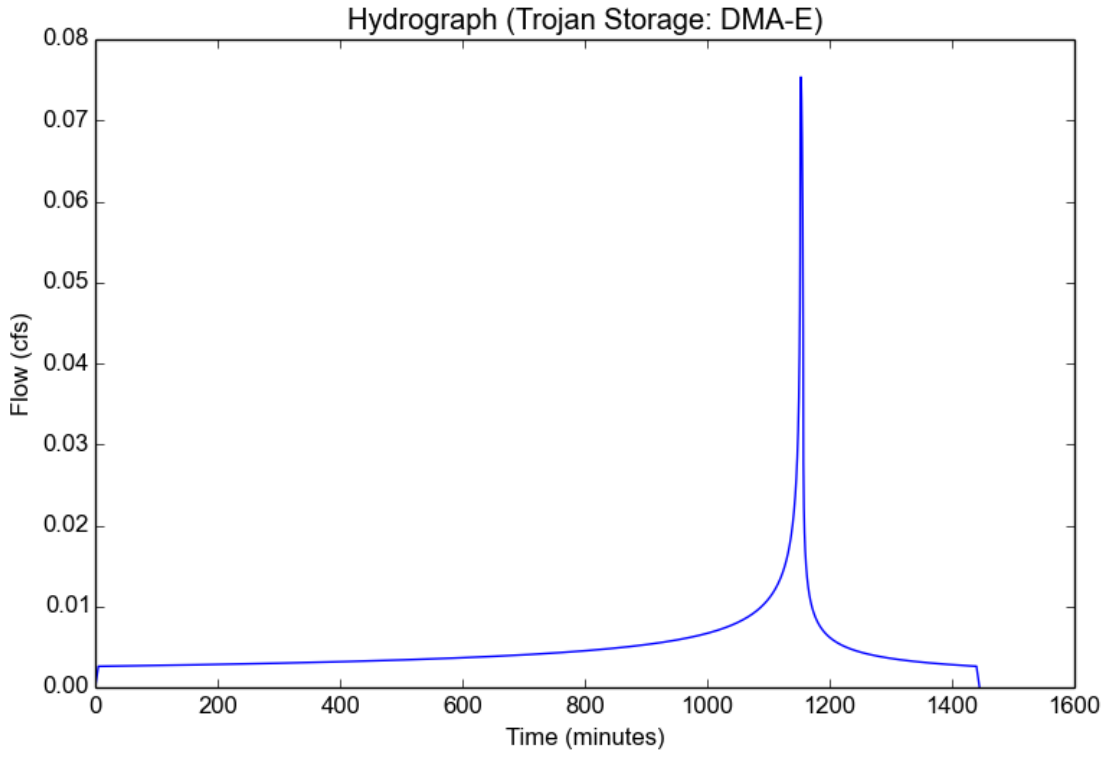
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-E.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-E
Area (ac)	0.16
Flow Path Length (ft)	45.0
Flow Path Slope (vft/hft)	0.06
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.75
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.6265
Undeveloped Runoff Coefficient (Cu)	0.3068
Developed Runoff Coefficient (Cd)	0.7517
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0753
Burned Peak Flow Rate (cfs)	0.0753
24-Hr Clear Runoff Volume (ac-ft)	0.0097
24-Hr Clear Runoff Volume (cu-ft)	424.4718



Peak Flow Hydrologic Analysis

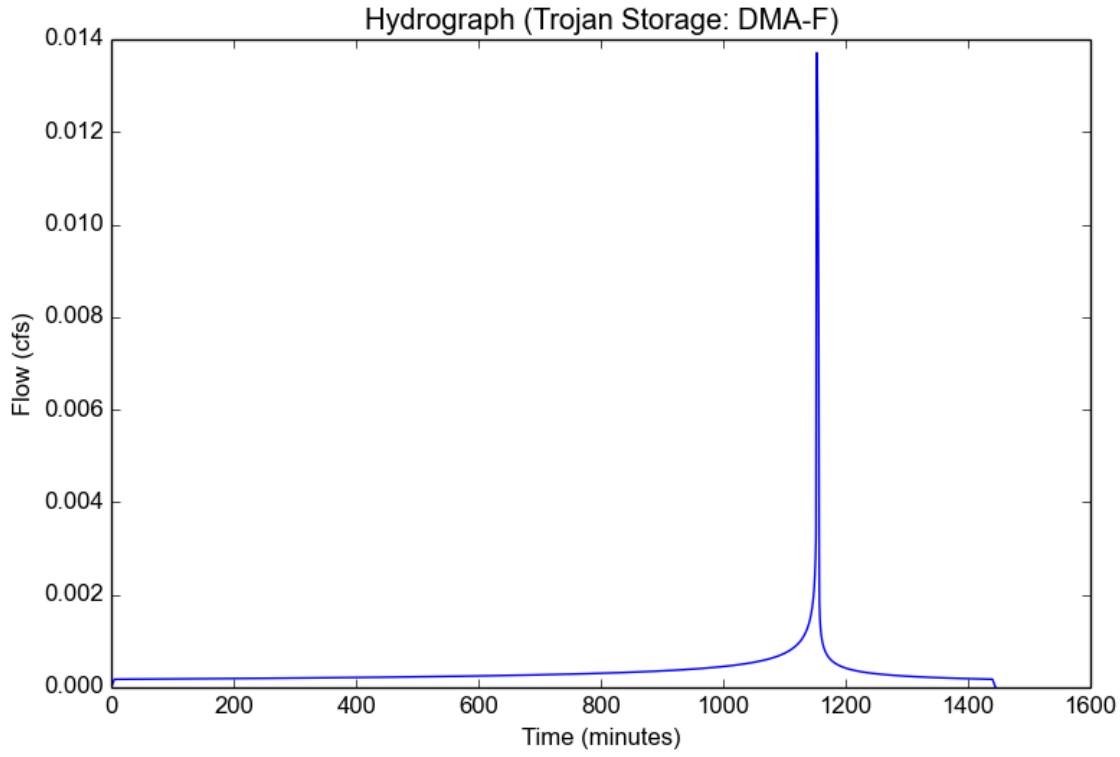
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-F.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-F
Area (ac)	0.07
Flow Path Length (ft)	42.0
Flow Path Slope (vft/hft)	0.5
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.6265
Undeveloped Runoff Coefficient (Cu)	0.3068
Developed Runoff Coefficient (Cd)	0.3127
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0137
Burned Peak Flow Rate (cfs)	0.0137
24-Hr Clear Runoff Volume (ac-ft)	0.0007
24-Hr Clear Runoff Volume (cu-ft)	30.5028



Peak Flow Hydrologic Analysis

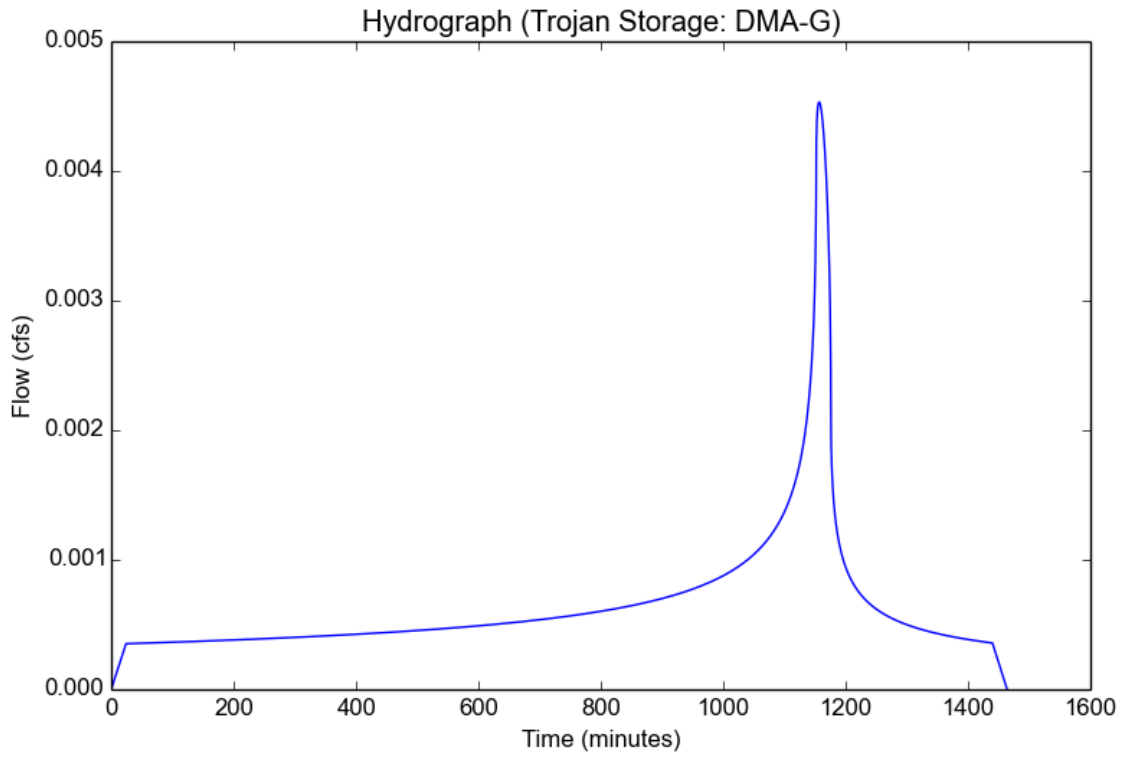
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-G.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-G
Area (ac)	0.14
Flow Path Length (ft)	158.0
Flow Path Slope (vft/hft)	0.38
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.2997
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.108
Time of Concentration (min)	24.0
Clear Peak Flow Rate (cfs)	0.0045
Burned Peak Flow Rate (cfs)	0.0045
24-Hr Clear Runoff Volume (ac-ft)	0.0013
24-Hr Clear Runoff Volume (cu-ft)	57.154



Peak Flow Hydrologic Analysis

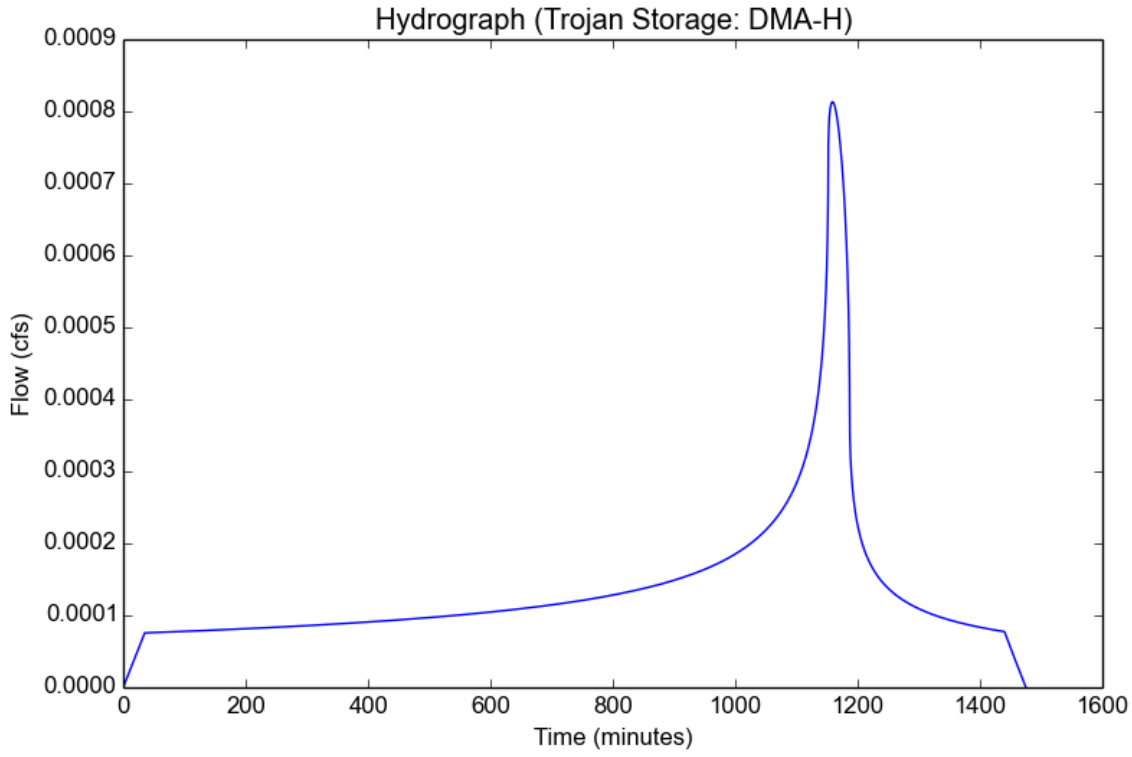
File location: Z:/My Drive/Omar's Work/19-2284 Trojan Storage Calabasas/WQMP/BMP Calcs/Trojan Storage - DMA-H.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Trojan Storage
Subarea ID	DMA-H
Area (ac)	0.03
Flow Path Length (ft)	137.0
Flow Path Slope (vft/hft)	0.03
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.01
Soil Type	4
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.251
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.108
Time of Concentration (min)	35.0
Clear Peak Flow Rate (cfs)	0.0008
Burned Peak Flow Rate (cfs)	0.0008
24-Hr Clear Runoff Volume (ac-ft)	0.0003
24-Hr Clear Runoff Volume (cu-ft)	12.2474



Appendix E

Treatment Unit Description, Operation & Maintenance Manual

CONTECH®
ENGINEERED SOLUTIONS

Filterra®
High Performance Bioretention

The experts you need to solve your stormwater challenges

Contech is the leader in stormwater solutions, helping engineers, contractors and owners with infrastructure and land development projects throughout North America.

With our responsive team of stormwater experts, local regulatory expertise and flexible solutions, Contech is the trusted partner you can count on for stormwater management solutions.

Your Contech Team

STORMWATER CONSULTANT

It's my job to recommend the best solution to meet permitting requirements.

STORMWATER DESIGN ENGINEER

I work with consultants to design the best approved solution to meet your project's needs.

REGULATORY MANAGER

I understand the local stormwater regulations and what solutions will be approved.

SALES ENGINEER

I make sure our solutions meet the needs of the contractor during construction.

Contech is your partner in stormwater management solutions

Low Impact Development in a Small Footprint – Filterra®

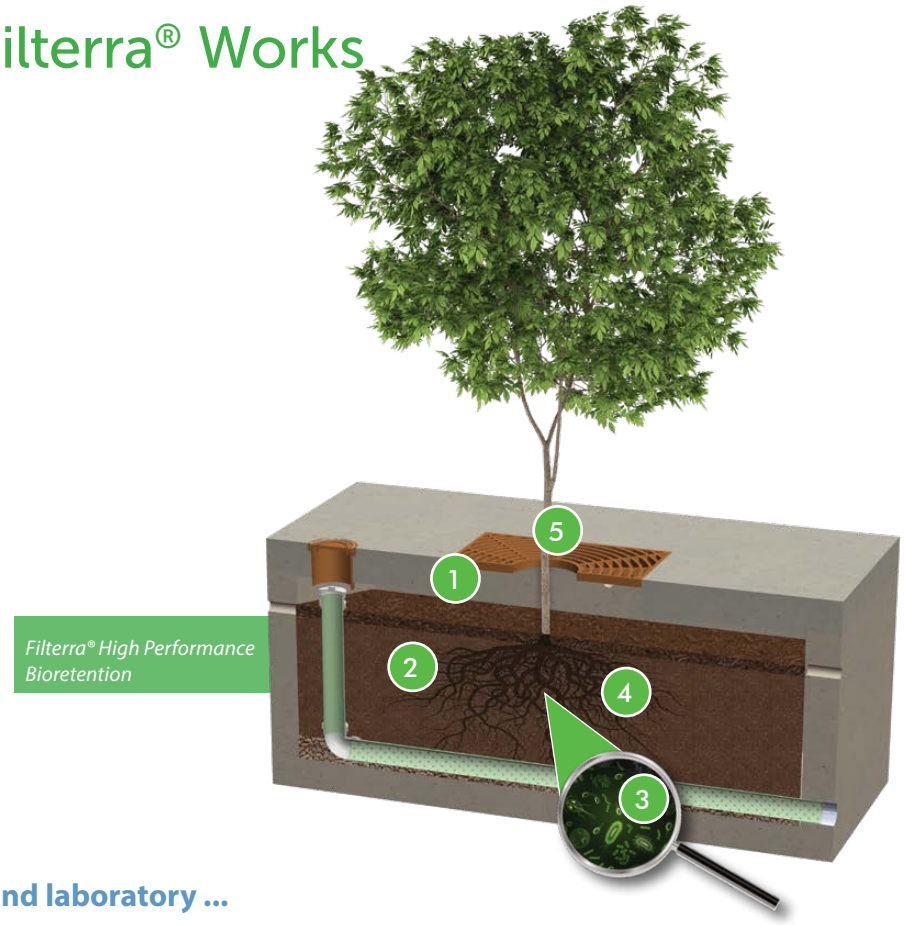
Filterra is an engineered high-performance bioretention system. While it operates similar to traditional bioretention, its high flow media allows for a reduction in footprint of up to 95% versus traditional bioretention practices. Filterra provides a Low Impact Development (LID) solution for tight, highly developed sites such as urban development projects, commercial parking lots, residential streets, and streetscapes. Its small footprint also reduces installation and life cycle costs versus traditional bioretention. Filterra can be configured in many different ways to enhance site aesthetics, integrate with other LID practices, or increase runoff reduction through infiltration below or downstream of the system.

At the Manchester Stormwater Park seen above, the Filterra systems surrounding the central courtyard allowed for the creation of a community space with parking, sidewalks, and benches in a quaint downtown area. A traditional bioretention system treating the same drainage area would have occupied the entire park area leaving no room for these amenities.

filterra® Bioretention Systems

filterra® Bioscape®

How the Filterra® Works



Tested in the field and laboratory ...

1. Stormwater enters the Filterra through a pipe, curb inlet, or sheet flow and ponds over the pretreatment mulch layer, capturing heavy sediment and debris. Organics and microorganisms within the mulch trap and degrade metals and hydrocarbons. The mulch also provides water retention for the system's vegetation.

2. Stormwater flows through engineered Filterra media which filters fine pollutants and nutrients. Organic material in the media removes dissolved metals and acts as a food source for root-zone microorganisms. Treated water exits through an underdrain pipe or infiltrates (if designed accordingly).

3. Rootzone microorganisms digest and transform pollutants into forms easily absorbed by plants.

4. Plant roots absorb stormwater and pollutants that were transformed by microorganisms, regenerating the media's pollutant removal capacity. The roots grow, provide a hospitable environment for the rootzone microorganisms and penetrate the media, maintaining hydraulic conductivity.

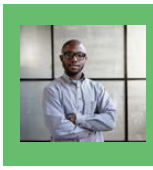
5. The plant trunk and foliage utilize nutrients such as Nitrogen and Phosphorus for plant health, sequester heavy metals into the biomass, and provide evapotranspiration of residual water within the system.

Plants and organic material are vital to the long term performance of bioretention systems

Using nature to facilitate Stormwater Management

Filterra® Features and Benefits

FEATURE	BENEFITS
High biofiltration media flow rate (up to 175"/hr+)	Greatly reduced footprint versus traditional bioretention and LID solutions
Filterra system is packaged, including all components necessary for system performance	Quality control for easy, fast and successful installation
Quick and easy maintenance	Low lifecycle costs
Variety of configurations and aesthetic options	Integrates easily into any site or landscape plan
Natural stormwater management processes featuring organics and vegetation	Meets Low Impact Development requirements and ensures long-term performance



The Filterra system can be configured with many different aesthetic options

Select Filterra® Approvals

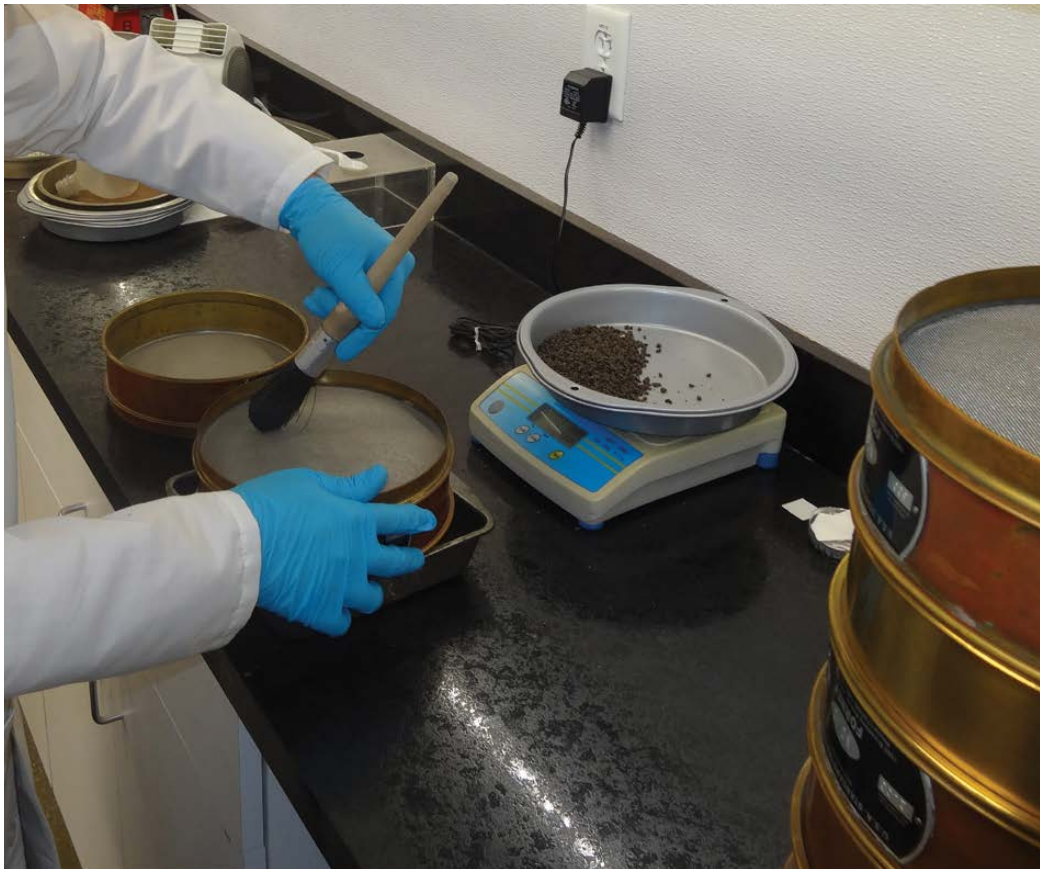
Filterra is approved through numerous local, state and federal verification programs, including:

- New Jersey Department of Environmental Protection (NJ DEP)
- Washington Department of Ecology (GULD) – Basic, Enhanced, Phosphorus, and Oil
- Maryland Department of the Environment - Environmental Site Design (ESD)
- Texas Commission on Environmental Quality (TCEQ)
- Virginia Department of Environmental Quality (VA DEQ)
- Maine Department of Environmental Protection (ME DEP)
- Atlanta, GA Regional Commission
- Los Angeles County, CA - Alternate to Attachment H
- City of Portland, Oregon Bureau of Environmental Services
- North Carolina Department of Environmental Quality (NC DEQ)

Filterra® Performance Testing Results

APPLICATION TIPS

- The Filterra system has been tested under industry standard protocols and has proven its pollutant removal performance and system longevity.
- Contech invests significant resources in media blending calibration and product testing to ensure our media meets our strict performance specifications every time.
- Keep regulators and owners happy by selecting a product with predictable and proven maintenance longevity.



POLLUTANT OF CONCERN	MEDIAN REMOVAL EFFICIENCY	MEDIAN EFFLUENT CONCENTRATION (MG/L)
Total Suspended Solids (TSS)	86%	3.3
Total Phosphorus - TAPE (TP)	70%	0.05
Total Nitrogen (TN)	34%	0.54
Total Copper (TCu)	55%	0.004
Total Dissolved Copper	43%	0.003
Total Zinc (TZn)	56%	0.04
Total Dissolved Zinc	54%	0.1
Total Zinc (TZn)	56%	0.04
Total Petroleum Hydrocarbons	87%	0.71

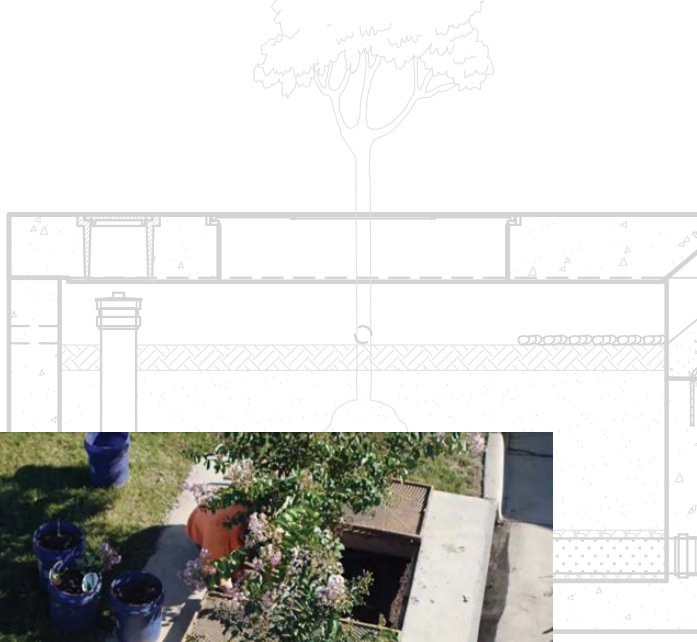
Each batch of Filterra® media has been extensively tested to ensure consistent performance every time.

Sources:
UVA (TARP) Field Study - 2006
Herrera (TAPE) Study - 2009
Herrera (TAPE) Study - 2014
NC State Study - 2015

Note: Some jurisdictions recognize higher removal rates. Contact your Contech Stormwater Consultant for performance expectations.

Field tested and performance verified

Filterra® Maintenance



Activation and first year of maintenance is included with every system.*

With proper routine maintenance, the engineered media within the Filterra system should last as long as traditional bioretention media. Routine maintenance is included by the manufacturer on all Filterra systems for the first year after activation.* This includes a maximum of 2 visits to remove debris, replace pretreatment mulch, and prune the vegetation.

Maintenance is low-cost, low-tech and simple:

- Remove trash, sediment, and mulch
- Replace with a fresh 3" layer of mulch
- No confined space entry or special tools
- Easily performed by landscape contractor or facilities maintenance provider

** Some exclusions may apply.*

Filterra offers high performance bioretention for advanced pollutant removal with easy maintenance.

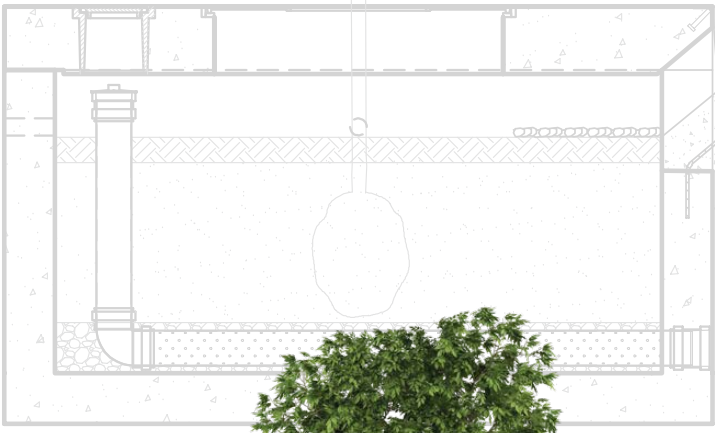
Plant health evaluation and pruning is important to encourage growth.

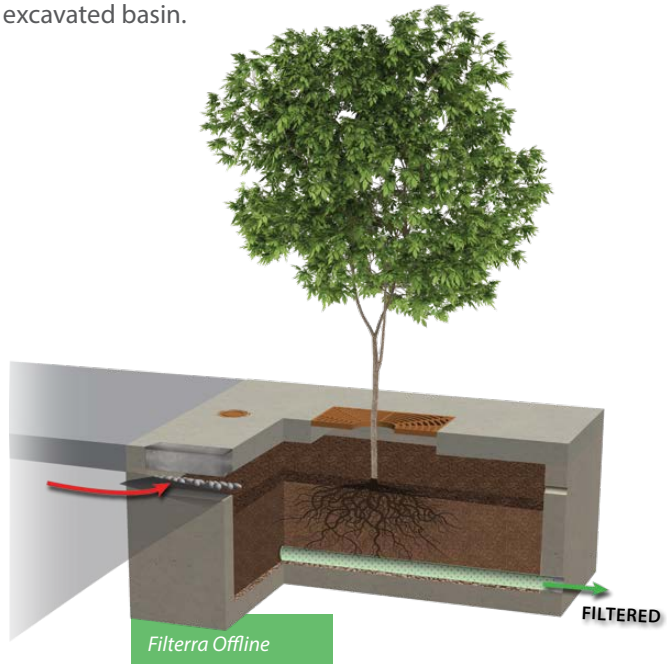
All stormwater treatment systems require maintenance for effective operation.

Filterra® Configurations

Multiple system configurations integrate with site hydraulic design and layout ...

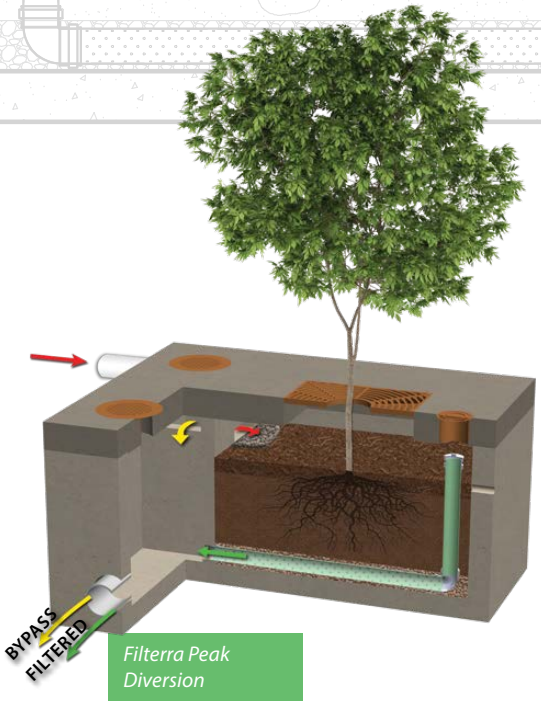
The Filterra is available in a variety of precast configurations as well as Filterra Bioscape, which can be installed directly into an excavated basin.



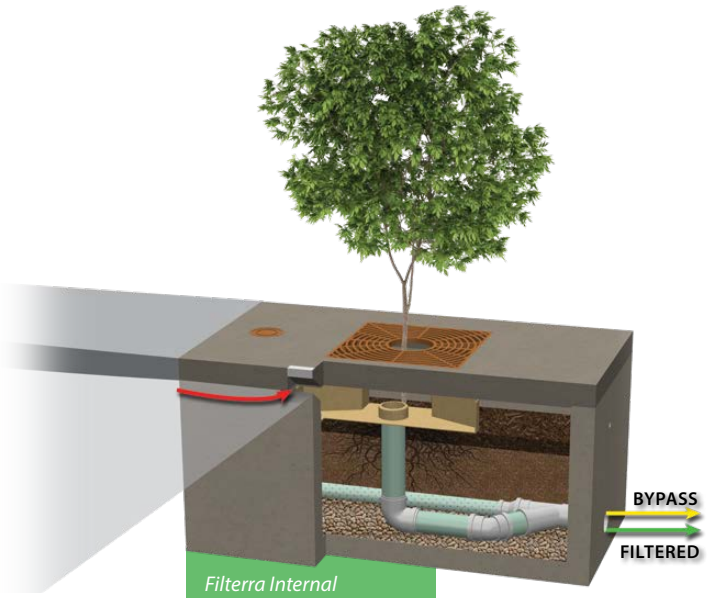


Filterra Offline

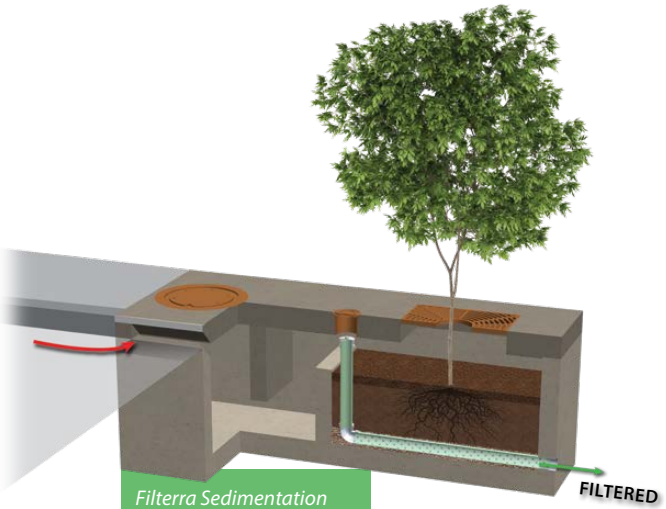
Bypass via downstream catch basin.



Filterra Peak Diversion



Filterra Internal Bypass Curb



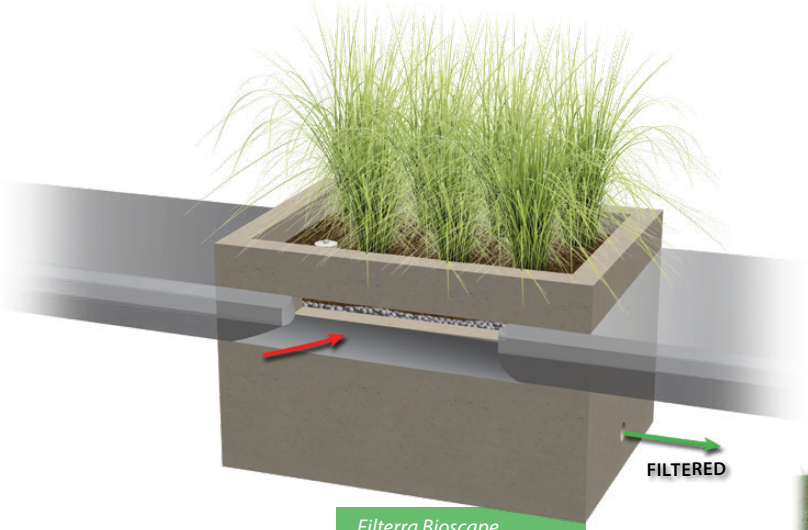
Filterra Sedimentation Chamber

Bypass via downstream catch basin.

**Additional configurations available, including offline - pipe, peak diversion - grate, and internal bypass curb-chamber.*

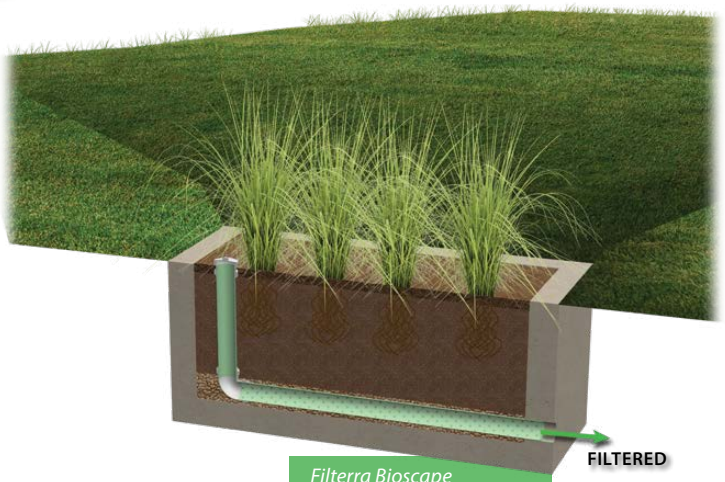
Multiple configurations allow for easy site integration

Filterra® Bioscape® Configurations



Filterra Bioscape Vault Offline

Bypass via downstream catch basin.



Filterra Bioscape Vault Basin

Bypass via upstream structure. Multiple inlet options.

Filterra Bioscape

Bypass via upstream structure. Multiple inlet options.

**Additional configurations available, including bioscape vault offline pipe.*

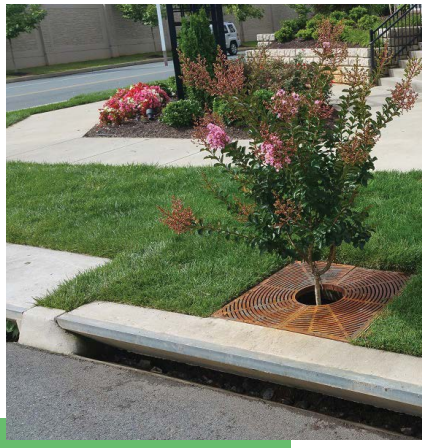
Filterra® Aesthetic Options

Multiple aesthetic options to enhance the appearance and integrate with landscaping ...

Standard Tree Grate

Custom/Decorative Tree Grate

Full Grate with Grasses



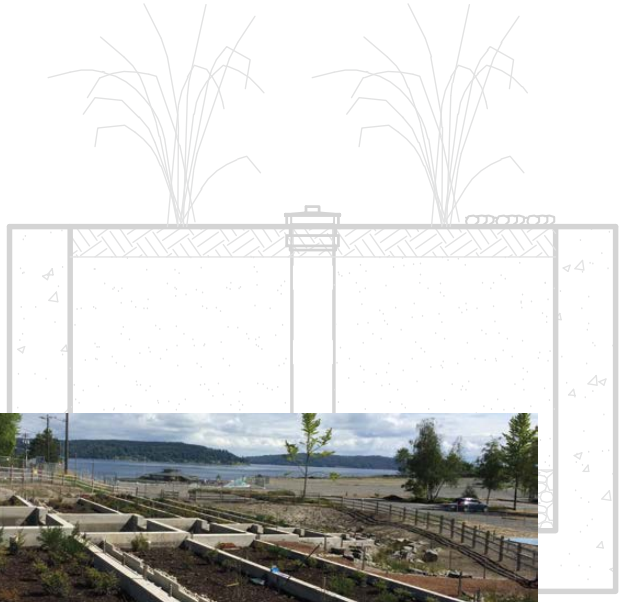
Recessed Top Slab

Open Top Planter - Filterra Bioscape

Street Tree

An aesthetic solution to meet your bioretention needs

Filterra® Bioscape®



Large-scale Filterra that can be customized to your site ...

- Ideal for Filterra systems greater than 300 square feet
- Design with or without containment structure
- Incorporate infiltration directly below the system, where required
- Combine with upstream storage or downstream infiltration
- Use as an alternative to larger regional traditional bioretention systems
- Easily add pretreatment Hydrodynamic Separator for large-scale or heavy pollutant loading applications

A partner you can rely on

STORMWATER SOLUTIONS

PIPE SOLUTIONS

STRUCTURES SOLUTIONS

Few companies offer the wide range of high-quality stormwater resources you can find with us — state-of-the-art products, decades of expertise, and all the maintenance support you need to operate your system cost-effectively.

THE CONTECH WAY

Contech® Engineered Solutions provides innovative, cost-effective site solutions to engineers, contractors, and developers on projects across North America. Our portfolio includes bridges, drainage, erosion control, retaining wall, sanitary sewer and stormwater management products.

TAKE THE NEXT STEP

For more information: www.ContechES.com

CONTECH® ENGINEERED SOLUTIONS

Get social with us:

800-338-1122 | www.ContechES.com

Filterra Owner's Manual

filterra®

Bioretention Systems

CONTECH®

ENGINEERED SOLUTIONS

filterra®
Bioretention Systems

Table of Contents

Enclosed

Local Area Filterra Plant List

CONTECH®
ENGINEERED SOLUTIONS

Introduction

Thank you for your purchase of the Filterra® Bioretention System. Filterra is a specially engineered stormwater treatment system incorporating high performance biofiltration media to remove pollutants from stormwater runoff. The system's biota (vegetation and soil microorganisms) then further breakdown and absorb captured pollutants. All components of the system work together to provide a sustainable long-term solution for treating stormwater runoff.

The Filterra system has been delivered to you with protection in place to resist intrusion of construction related sediment which can contaminate the biofiltration media and result in inadequate system performance. These protection devices are intended as a best practice and cannot fully prevent contamination. It is the purchaser's responsibility to provide adequate measures to prevent construction related runoff from entering the Filterra system.

Included with your purchase is Activation of the Filterra system by the manufacturer as well as a 1-year warranty from delivery of the system and 1-year of routine maintenance (mulch replacement, debris removal, and pruning of vegetation) up to twice during the first year after activation.

Design and Installation

Each project presents different scopes for the use of Filterra systems. Information and help may be provided to the design engineer during the planning process. Correct Filterra box sizing (by rainfall region) is essential to predict pollutant removal rates for a given area. The engineer shall submit calculations for approval by the local jurisdiction. The contractor is responsible for the correct installation of Filterra units as shown in approved plans. A comprehensive installation manual is available at www.ContechES.com.

Activation Overview

Activation of the Filterra system is a procedure completed by the manufacturer to place the system into working condition. This involves the following items:

- Removal of construction runoff protection devices
- Planting of the system's vegetation
- Placement of pretreatment mulch layer using mulch certified for use in Filterra systems.

Activation MUST be provided by the manufacturer to ensure proper site conditions are met for Activation, proper installation of the vegetation, and use of pretreatment mulch certified for use in Filterra systems.

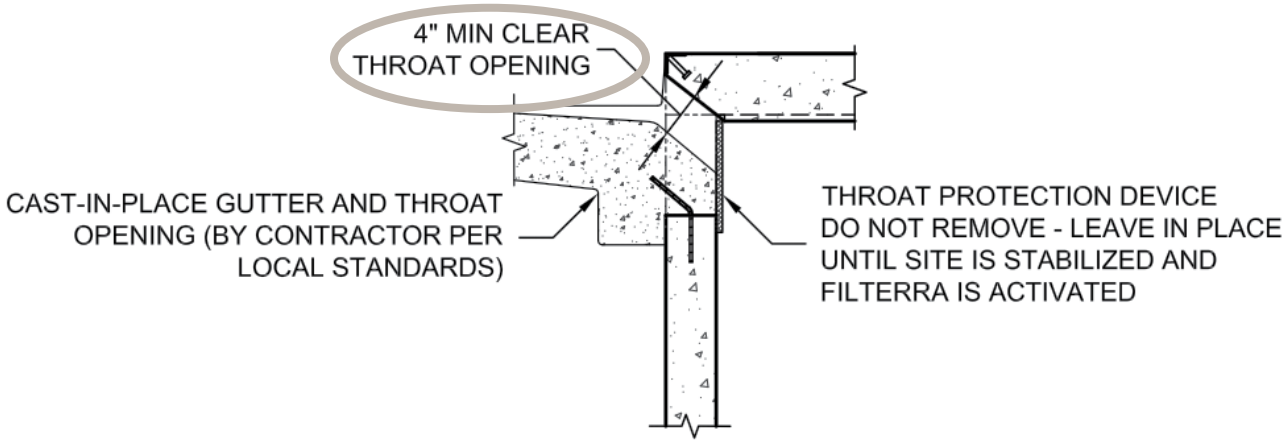
Minimum Requirements

The minimum requirements for Filterra Activation are as follows:

1. The site landscaping must be fully stabilized, i.e. full landscaping installed and some grass cover (not just straw and seed) is required to reduce sediment transport. Construction debris and materials should be removed from surrounding area.

2. Final paving must be completed. Final paving ensures that paving materials will not enter and contaminate the Filterra system during the paving process, and that the plant will receive runoff from the drainage area, assisting with plant survival for the Filterra system.

3. Filterra throat opening should be at least 4" in order to ensure adequate capacity for inflow and debris.



An Activation Checklist is included on page 12 to ensure proper conditions are met for Contech to perform the Activation services. A charge of $500.00 will be invoiced for each Activation visit requested by Customer where Contech determines that the site does not meet the conditions required for Activation.

Filterra Plant Selection Overview

A Plant List has been enclosed with this packet highlighting recommended plants for Filterra systems in your area. Keep in mind that plants are subject to availability due to seasonality and required minimum size for the Filterra system. Plants installed in the Filterra system are container plants (max 15 gallon) from nursery stock and will be immature in height and spread at Activation.

It is the responsibility of the owner to provide adequate irrigation when necessary to the plant of the Filterra system.

The "Planting Requirements for Filterra Systems" document is included as an appendix and discusses proper selection and care of the plants within Filterra systems.

Warranty Overview

Refer to the Contech Engineered Solutions LLC Stormwater Treatment System LIMITED WARRANTY for further information. The following conditions may void the Filterra system's warranty and waive the manufacturer provided Activation and Maintenance services:

- Unauthorized activation or performance of any of the items listed in the activation overview
- Any tampering, modifications or damage to the Filterra system or runoff protection devices
- Removal of any Filterra system components
- Failure to prevent construction related runoff from entering the Filterra system
- Failure to properly store and protect any Filterra components (including media and underdrain stone) that may be shipped separately from the vault

Routine Maintenance Guidelines

With proper routine maintenance, the biofiltration media within the Filterra system should last as long as traditional bioretention media. Routine maintenance is included by the manufacturer on all Filterra systems for the first year after activation. This includes a maximum of 2 visits to remove debris, replace pretreatment mulch, and prune the vegetation. More information is provided in the Operations and Maintenance Guidelines. Some Filterra systems also contain pretreatment or outlet bays. Depending on site pollutant loading, these bays may require periodic removal of debris, however this is not included in the first year of maintenance, and would likely not be required within the first year of operation.

These services, as well as routine maintenance outside of the included first year, can be provided by certified maintenance providers listed on the Contech website. Training can also be provided to other stormwater maintenance or landscape providers.

Why Maintain?

All stormwater treatment systems require maintenance for effective operation. This necessity is often incorporated in your property's permitting process as a legally binding BMP maintenance agreement. Other reasons to maintain are:

- Avoiding legal challenges from your jurisdiction's maintenance enforcement program.
- Prolonging the expected lifespan of your Filterra media.
- Avoiding more costly media replacement.
- Helping reduce pollutant loads leaving your property.

Simple maintenance of the Filterra is required to continue effective pollutant removal from stormwater runoff before discharge into downstream waters. This procedure will also extend the longevity of the living biofilter system. The unit will recycle and accumulate pollutants within the biomass, but is also subjected to other materials entering the inlet. This may include trash, silt and leaves etc. which will be contained above the mulch layer. Too much silt may inhibit the Filterra's flow rate, which is the reason for site stabilization before activation. Regular replacement of the mulch stops accumulation of such sediment.

When to Maintain?

Contech includes a 1-year maintenance plan with each system purchase. Annual included maintenance consists of a maximum of two (2) scheduled visits. Additional maintenance may be necessary depending on sediment and trash loading (by Owner or at additional cost). The start of the maintenance plan begins when the system is activated.

Maintenance visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands while the fall visit helps the system by removing excessive leaf litter.

It has been found that in regions which receive between 30-50 inches of annual rainfall, (2) two visits are generally required; regions with less rainfall often only require (1) one visit per annum. Varying land uses can affect maintenance frequency; e.g. some fast food restaurants require more frequent trash removal. Contributing drainage areas which are subject to new development wherein the recommended erosion and sediment control measures have not been implemented may require additional maintenance visits.

Some sites may be subjected to extreme sediment or trash loads, requiring more frequent maintenance visits. This is the reason for detailed notes of maintenance actions per unit, helping the Supplier and Owner predict future maintenance frequencies, reflecting individual site conditions.

Owners must promptly notify the (maintenance) Supplier of any damage to the plant(s), which constitute(s) an integral part of the bioretention technology. Owners should also advise other landscape or maintenance contractors to leave all maintenance to the Supplier (i.e. no pruning or fertilizing) during the first year.

Exclusion of Services

Clean up due to major contamination such as oils, chemicals, toxic spills, etc. will result in additional costs and are not covered under the Supplier maintenance contract. Should a major contamination event occur the Owner must block off the outlet pipe of the Filterra (where the cleaned runoff drains to, such as drop inlet) and block off the throat of the Filterra. The Supplier should be informed immediately.

Maintenance Visit Summary

Each maintenance visit consists of the following simple tasks (detailed instructions below).

1. Inspection of Filterra and surrounding area
2. Removal of tree grate and erosion control stones
3. Removal of debris, trash and mulch
4. Mulch replacement
5. Plant health evaluation and pruning or replacement as necessary
6. Clean area around Filterra
7. Complete paperwork

Maintenance Tools, Safety Equipment and Supplies

Ideal tools include: camera, bucket, shovel, broom, pruners, hoe/rake, and tape measure. Appropriate Personal Protective Equipment (PPE) should be used in accordance with local or company procedures. This may include impervious gloves where the type of trash is unknown, high visibility clothing and barricades when working in close proximity to traffic and also safety hats and shoes. A T-Bar or crowbar should be used for moving the tree grates (up to 170 lbs ea.). Most visits require minor trash removal and a full replacement of mulch. See below for actual number of bagged mulch that is required in each media bay size. Mulch should be a double shredded, hardwood variety. Some visits may require additional Filterra engineered soil media available from the Supplier.

Box Length	Box Width	Filter Surface Area (ft^2)	Volume at 3" (ft^3)	# of 2 ft^3 Mulch Bags
4	4	16	4	2
6	4	24	6	3
8	4	32	8	4
6	6	36	9	5
8	6	48	12	6
10	6	60	15	8
12	6	72	18	9
13	7	91	23	12

Maintenance Visit Procedure

Keep sufficient documentation of maintenance actions to predict location specific maintenance frequencies and needs. An example Maintenance Report is included in this manual.

1. Inspection of Filterra and surrounding area

- Record individual unit before maintenance with photograph (numbered). Record on Maintenance Report (see example in this document) the following:

Record on Maintenance Report the following:

Standing Water	yes | no
Damage to Box Structure	yes | no
Damage to Grate	yes | no
Is Bypass Clear	yes | no

If yes answered to any of these observations, record with close-up photograph (numbered).

2. Removal of tree grate and erosion control stones

- Remove cast iron grates for access into Filterra box.
- Dig out silt (if any) and mulch and remove trash & foreign items.

3. Removal of debris, trash and mulch

Record on Maintenance Report the following:

Silt/Clay	yes | no
Cups/ Bags	yes | no
Leaves	yes | no
Buckets Removed	_____

- After removal of mulch and debris, measure distance from the top of the Filterra engineered media soil to the top of the top slab. Compare the measured distance to the distance shown on the approved Contract Drawings for the system. Add Filterra media (not top soil or other) to bring media up as needed to distance indicated on drawings.

Record on Maintenance Report the following:

Distance to Top of Top Slab (inches)	_____
Inches of Media Added	_____

4. Mulch replacement

- Add double shredded mulch evenly across the entire unit to a depth of 3".
- Refer to Filterra Mulch Specifications for information on acceptable sources.
- Ensure correct repositioning of erosion control stones by the Filterra inlet to allow for entry of trash during a storm event.
- Replace Filterra grates correctly using appropriate lifting or moving tools, taking care not to damage the plant.

5. Plant health evaluation and pruning or replacement as necessary

- Examine the plant's health and replace if necessary.
- Prune as necessary to encourage growth in the correct directions

Record on Maintenance Report the following:

Height above Grate	_____ (ft)
Width at Widest Point	_____ (ft)
Health	healthy | unhealthy
Damage to Plant	yes | no
Plant Replaced	yes | no

6. Clean area around Filterra

- Clean area around unit and remove all refuse to be disposed of appropriately.

7. Complete paperwork

- Deliver Maintenance Report and photographs to appropriate location (normally Contech during maintenance contract period).
- Some jurisdictions may require submission of maintenance reports in accordance with approvals. It is the responsibility of the Owner to comply with local regulations.

Maintenance Checklist

Drainage System Failure	Problem	Conditions to Check	Condition that Should Exist	Actions
Inlet	Excessive sediment or trash accumulation.	Accumulated sediments or trash impair free flow of water into Filterra.	Inlet should be free of obstructions allowing free distributed flow of water into Filterra.	Sediments and/or trash should be removed.
Mulch Cover	Trash and floatable debris accumulation.	Excessive trash and/or debris accumulation.	Minimal trash or other debris on mulch cover.	Trash and debris should be removed and mulch cover raked level. Ensure bark nugget mulch is not used.
Mulch Cover	"Ponding" of water on mulch cover.	"Ponding" in unit could be indicative of clogging due to excessive fine sediment accumulation or spill of petroleum oils.	Stormwater should drain freely and evenly through mulch cover.	Recommend contact manufacturer and replace mulch as a minimum.
Vegetation	Plants not growing or in poor condition.	Soil/mulch too wet, evidence of spill. Incorrect plant selection. Pest infestation. Vandalism to plants.	Plants should be healthy and pest free.	Contact manufacturer for advice.
Vegetation	Plant growth excessive.	Plants should be appropriate to the species and location of Filterra.		Trim/prune plants in accordance with typical landscaping and safety needs.
Structure	Structure has visible cracks.	Cracks wider than 1/2 inch or evidence of soil particles entering the structure through the cracks.		Vault should be repaired.
Maintenance is ideally to be performed twice annually.				

Filterra Inspection & Maintenance Log

Filterra System Size/Model:_____ **Location:** _____

Date	Mulch & Debris Removed	Depth of Mulch Added	Mulch Brand	Height of Vegetation Above Grate	Vegetation Species	Issues with System	Comments
1/1/17	*5 – 5 gal Buckets*	*3″*	*Lowe's Premium Brown Mulch*	*4′*	*Galaxy Magnolia*	*- Standing water in downstream structure*	*- Removed blockage in downstream structure*

Appendix 1 – Filterra® Activation Checklist

Project Name:______________________________ Company: ______________________________

Site Contact Name: ______________________________ Site Contact Phone/Email: ______________________________

Site Owner/End User Name: ______________________________ Site Owner/End User Phone/Email: ______________________________

Preferred Activation Date: ______________________________ (provide 2 weeks minimum from date this form is submitted)

Site Designation	System Size	Final Pavement / Top Coat Complete	Landscaping Complete / Grass Emerging	Construction materials / Piles / Debris Removed	Throat Opening Measures 4" Min. Height	Plant Species Requested
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	

Attach additional sheets as necessary.

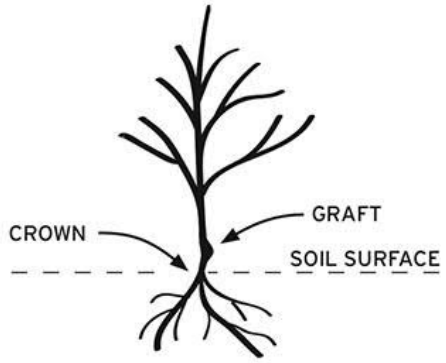
NOTE: A charge of $500.00 will be invoiced for each Activation visit requested by Customer where Contech determines that the site does not meet the conditions required for Activation. ONLY Contech authorized representatives can perform Activation of Filterra systems; unauthorized Activations will void the system warranty and waive manufacturer supplied Activation and 1st Year Maintenance.

______________________________ ______________________________

Signature Date

Appendix 2 – Planting Requirements for Filterra® Systems

Plant Material Selection



- Select plant(s) as specified in the engineering plans and specifications.
- Select plant(s) with full root development but not to the point where root bound.
- Use local nursery container plants only. Ball and burlapped plants are not permitted.
- For precast Filterra systems with a tree grate, plant(s) must not have scaffold limbs at least 14 inches from the crown due to spacing between the top of the mulch and the tree grate. Lower branches can be pruned away provided there are sufficient scaffold branches for tree or shrub development.
- For precast Filterra systems with a tree grate, at the time of installation, it is required that plant(s) must be at least 6" above the tree grate opening at installation for all Filterra configurations. This DOES NOT apply to Full Grate Cover designs.
- Plant(s) shall not have a mature height greater than 25 feet.
- For standard 21" media depth, a 7 – 15 gallon container size shall be used. Media less than 21" (Filterra boxes only) will require smaller container plants.
- For precast Filterra systems, plant(s) should have a single trunk at installation, and pruning may be necessary at activation and maintenance for some of the faster growing species, or species known to produce basal sprouts.

Plant Installation

- During transport protect the plant leaves from wind and excessive jostling.
- Prior to removing the plant(s) from the container, ensure the soil moisture is sufficient to maintain the integrity of the root ball. If needed, pre-wet the container plant.
- Cut away any roots which are growing out of the container drain holes. Plants with excessive root growth from the drain holes should be rejected.
- Plant(s) should be carefully removed from the pot by gently pounding on the sides of the container with the fist to loosen root ball. Then carefully slide out. Do not lift plant(s) by trunk as this can break roots and cause soil to fall off. Extract the root ball in a horizontal position and support it to prevent it from breaking apart. Alternatively the pot can be cut away to minimize root ball disturbance.
- Remove any excess soil from above the root flare after removing plant(s) from container.
- Excavate a hole with a diameter 4" greater than the root ball, gently place the plant(s).
- If plant(s) have any circling roots from being pot bound, gently tease them loose without breaking them.
- If root ball has a root mat on the bottom, it should be shaved off with a knife just above the mat line.
- Plant the tree/shrub/grass with the top of the root ball 1" above surrounding media to allow for settling.
- All plants should have the main stem centered in the tree grate (where applicable) upon completion of installation.
- With all trees/shrubs, remove dead, diseased, crossed/rubbing, sharply crotched branches or branches growing excessively long or in wrong direction compared to majority of branches.
- To prevent transplant shock (especially if planting takes place in the hot season), it may be necessary to prune some of the foliage to compensate for reduced root uptake capacity. This is accomplished by pruning away some of the smaller secondary branches or a main scaffold branch if there are too many. Too much foliage relative to the root ball can dehydrate and damage the plant.
- Plant staking may be required.

Mulch Installation

- Only mulch that has been meeting Contech Engineered Solutions' mulch specifications can be used in the Filterra system.
- Mulch must be applied to a depth of 3" evenly over the surface of the media.

Irrigation Requirements

- Each Filterra system must receive adequate irrigation to ensure survival of the living system during periods of drier weather.
- Irrigation sources include rainfall runoff from downspouts and/or gutter flow, applied water through the tree grate or in some cases from an irrigation system with emitters installed during construction.
- At Activation: Apply about one (cool climates) to two (warm climates) gallons of water per inch of trunk diameter over the root ball.
- During Establishment: In common with all plants, each Filterra plant will require more frequent watering during the establishment period. One inch of applied water per week for the first three months is recommended for cooler climates (2 to 3 inches for warmer climates). If the system is receiving rainfall runoff from the drainage area, then irrigation may not be needed. Inspection of the soil moisture content can be evaluated by gently brushing aside the mulch layer and feeling the soil. Be sure to replace the mulch when the assessment is complete. Irrigate as needed**.
- Established Plants: Established plants have fully developed root systems and can access the entire water column in the media. Therefore irrigation is less frequent but requires more applied water when performed. For a mature system assume 3.5 inches of available water within the media matrix. Irrigation demand can be estimated as 1" of irrigation demand per week. Therefore if dry periods exceed 3 weeks, irrigation may be required. It is also important to recognize that plants which are exposed to windy areas and reflected heat from paved surfaces may need more frequent irrigation. Long term care should develop a history which is more site specific.

** Five gallons per square yard approximates 1 inch of water Therefore for a 6' by 6' Filterra approximately 20-60 gallons of water is needed. To ensure even distribution of water it needs to be evenly sprinkled over the entire surface of the filter bed, with special attention to make sure the root ball is completely wetted. NOTE: if needed, measure the time it takes to fill a five gallon bucket to estimate the applied water flow rate then calculate the time needed to irrigate the Filterra. For example, if the flow rate of the sprinkler is 5 gallons/minute then it would take 12 minutes to irrigate a 6' by 6' filter.

Notes

filterra®
Bioretention Systems

CONTECH®
ENGINEERED SOLUTIONS

9025 Centre Pointe Drive, Suite 400
West Chester, OH 45069
info@conteches.com | 800-338-1122
www.ContechES.com

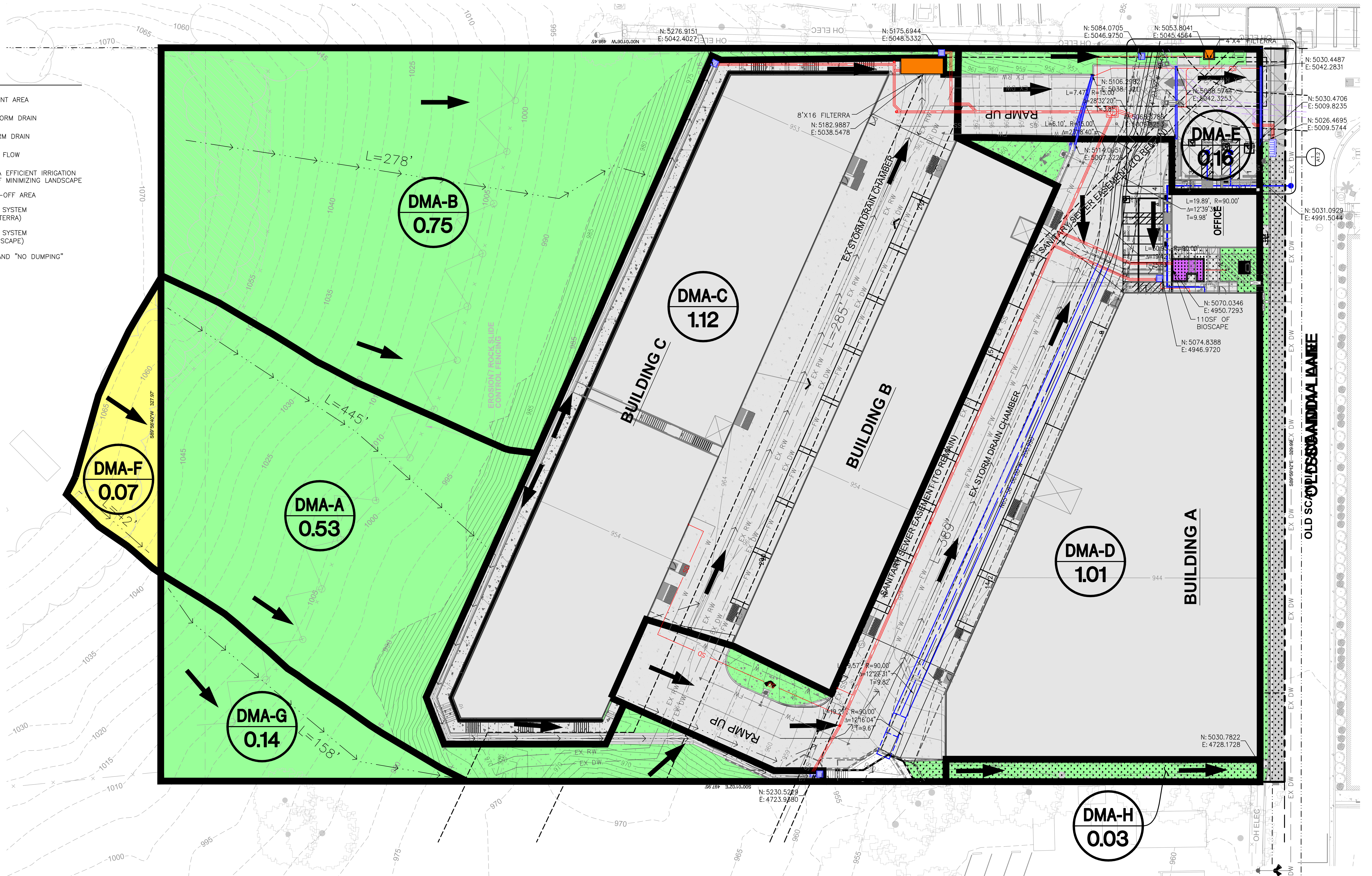
PDF 6/20

Appendix F

LID Exhibit

LEGEND

- BMP CATCHMENT AREA
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- DIRECTION OF FLOW
- COMMON AREA EFFICIENT IRRIGATION AND RUN-OFF MINIMIZING LANDSCAPE
- OFFSITE RUN-OFF AREA
- BIOFILTRATION SYSTEM (CONTECH FILTERRA)
- BIOFILTRATION SYSTEM (CONTECH BIOSCAPE)
- DRAIN INLET AND "NO DUMPING" STENCILING
- DMA-X: DRAINAGE AREA; X.XX: AREA (ACRE)



BMP SUMMATION

PROPOSED BMP	DRAINAGE AREAS	TOTAL DRAINAGE AREA TRIBUTARY TO BMP (AC)	LID TREATMENT VOLUME (CF)	LID REQUIRED TREATMENT FLOWRATE – BIOFILTRATION = 1.5X (CFS)
FILTERRA – 8'X16'	DMA–C	1.12	3,810	0.53
FILTERRA – BIOSCAPE	DMA–D	1.01	3,374	0.47
FILTERRA – 4'X4'	DMA–E	0.16	424	0.11

DRAINAGE AREAS

DRAINAGE AREA	AREA (ACRE)	PERVIOUS AREA (ACRE)	IMPERVIOUS AREA (ACRE)	% PERVIOUS	% IMPERVIOUS
DMA–A	0.53	0.53	0.00	100	0
DMA–B	0.75	0.75	0.00	100	0
DMA–C	1.12	0.00	1.12	0	100
DMA–D	1.01	0.02	0.99	2	98
DMA–E	0.16	.04	0.12	25	75
DMA–F	0.07	0.07	0.00	100	0
DMA–G	0.14	0.14	0.00	100	0
DMA–H	0.03	.01	0.02	33	67
TOTAL	3.81	1.56	2.25	41	59

SCALE: 1" = 20'

DATE: 8/5/21

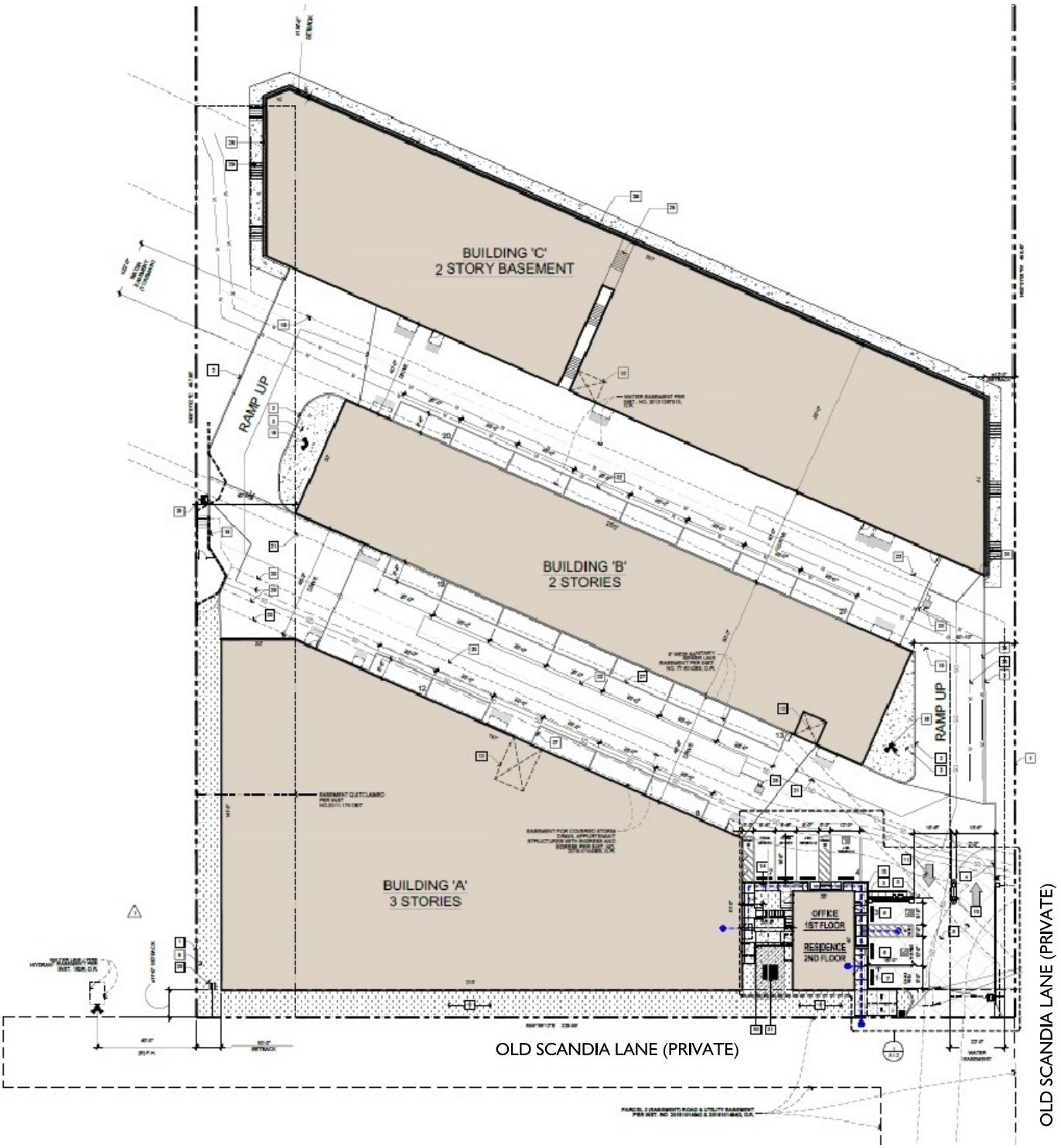
PREPARED BY: ADAMS STREETER Civil Engineers

LID EXHIBIT

TROJAN STORAGE - CALABASAS
5050 OLD SCANDIA LANE
APN: 2049-022-040

PROJECT NO. 19-2284
SHEET 1 OF 1

TROJAN CALABASAS SELF-STORAGE WAREHOUSE PROJECT
TRAFFIC STUDY
County of Los Angeles, California



TROJAN CALABASAS SELF-STORAGE PROJECT
TRAFFIC STUDY
County of Los Angeles, California

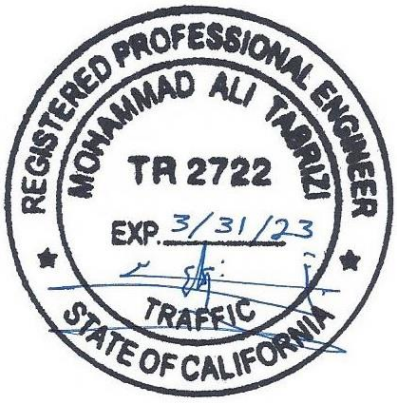
Prepared for:

TROJAN STORAGE
1732 Aviation Boulevard, Suite 217
Redondo Beach, CA 90278

Prepared by:

RK ENGINEERING GROUP, INC.
4000 Westerly Place, Suite 280
Newport Beach, CA 92660

Alex Tabrizi, P.E., T.E.
Michael Torres, E.I.T.



October 28, 2021

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Section **Page**

List of Attachments

Exhibits

Tables

Appendices

1.0 Introduction

1.1 Purpose of Report and Study Objectives

The purpose of this traffic impact analysis is to evaluate the proposed Trojan Calabasas Self-Storage Project (hereinafter referred to as project) from a traffic and circulation standpoint and to determine whether the proposed project will have a significant traffic impact on the environment. This study has been conducted pursuant to the *Los Angeles Public Works Transportation Impact Analysis Guidelines (July 2020)* and the California Environmental Quality Act (CEQA) requirements.

The project site is within the jurisdiction of Los Angeles County, hence Los Angeles County is considered as the lead agency for the proposed project. The project study area is also within the jurisdiction of Los Angeles County

Other nearby jurisdictions include City of Calabasas, City of Los Angeles, and California Department of Transportation (Caltrans). The analysis prepared is consistent with the requirements of these adjacent jurisdictions and utilizes the County of Los Angeles thresholds and requirements for evaluation of traffic impacts and operations which generally has the most stringent requirements and thresholds of the listed agencies.

Based on previous discussions with Caltrans staff, Caltrans generally focuses on projects that have a regional significance (large scale projects with potential to serve as a regional attraction and contribute a significant amount of traffic to the State Highway system) and/or take access off of a State Highway and require an encroachment permit from Caltrans, none of which apply to the proposed project.

1.2 Site Location

The proposed project is located at 5050 Old Scandia Lane in the County of Los Angeles. The project's parcel assessor number is 2049-022-040.

The project site's location map is shown on Exhibit 1-1.

1.3 Project Description

The proposed project consists of the construction of 1,334 self-storage units upon approximately 3.72 acres of land.

The project site is generally vacant and undeveloped.

Access for the project is planned via one unsignalized driveway located north of the Old Scandia Lane / Ventura Boulevard intersection.

The project is planned to open in 2022 and will be evaluated in one single phase.

The project's site plan is shown on Exhibit 1-2.

The site's proposed parking layout and on-site circulation system is shown in Exhibit 1-3.

1.4 Traffic Study Area & Analysis Scenarios

Based on review of the project's geographical area, circulation system, and discussions with County staff during the scoping process, the traffic study evaluates level of service for the following study intersection:

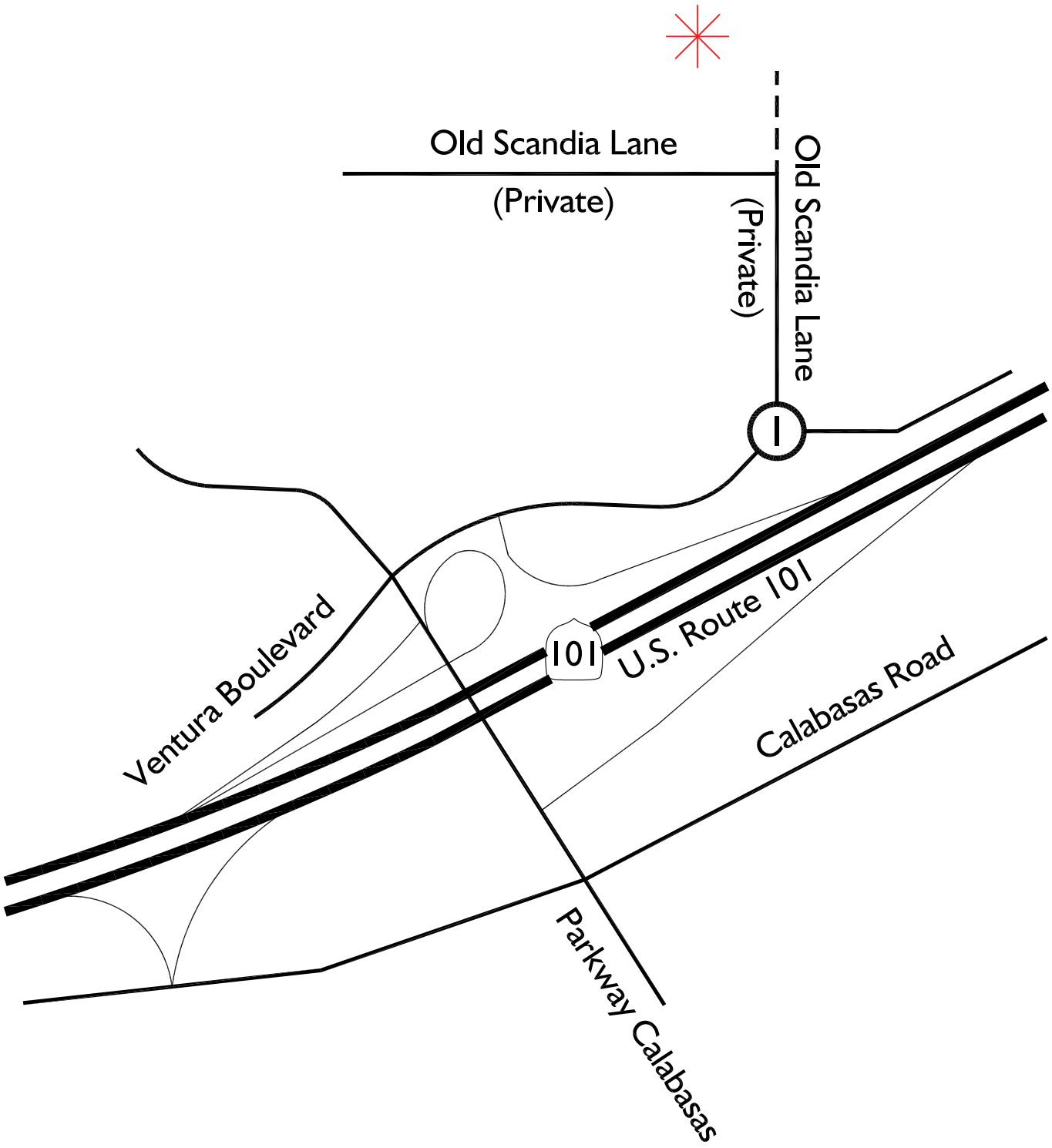
1. Old Scandia Lane (NS) and Ventura Boulevard (EW).

The study intersection level of service has been evaluated for the following study scenarios for AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods:

- Existing Conditions; and

- Project Opening Year (2022) With Ambient Growth With Cumulative Projects With Project Conditions.

Exhibit 1-1
Location Map



Legend:

1 = Study Area Intersection

= Project Site

= Project Access Driveway

N

Exhibit 1-2
Site Plan

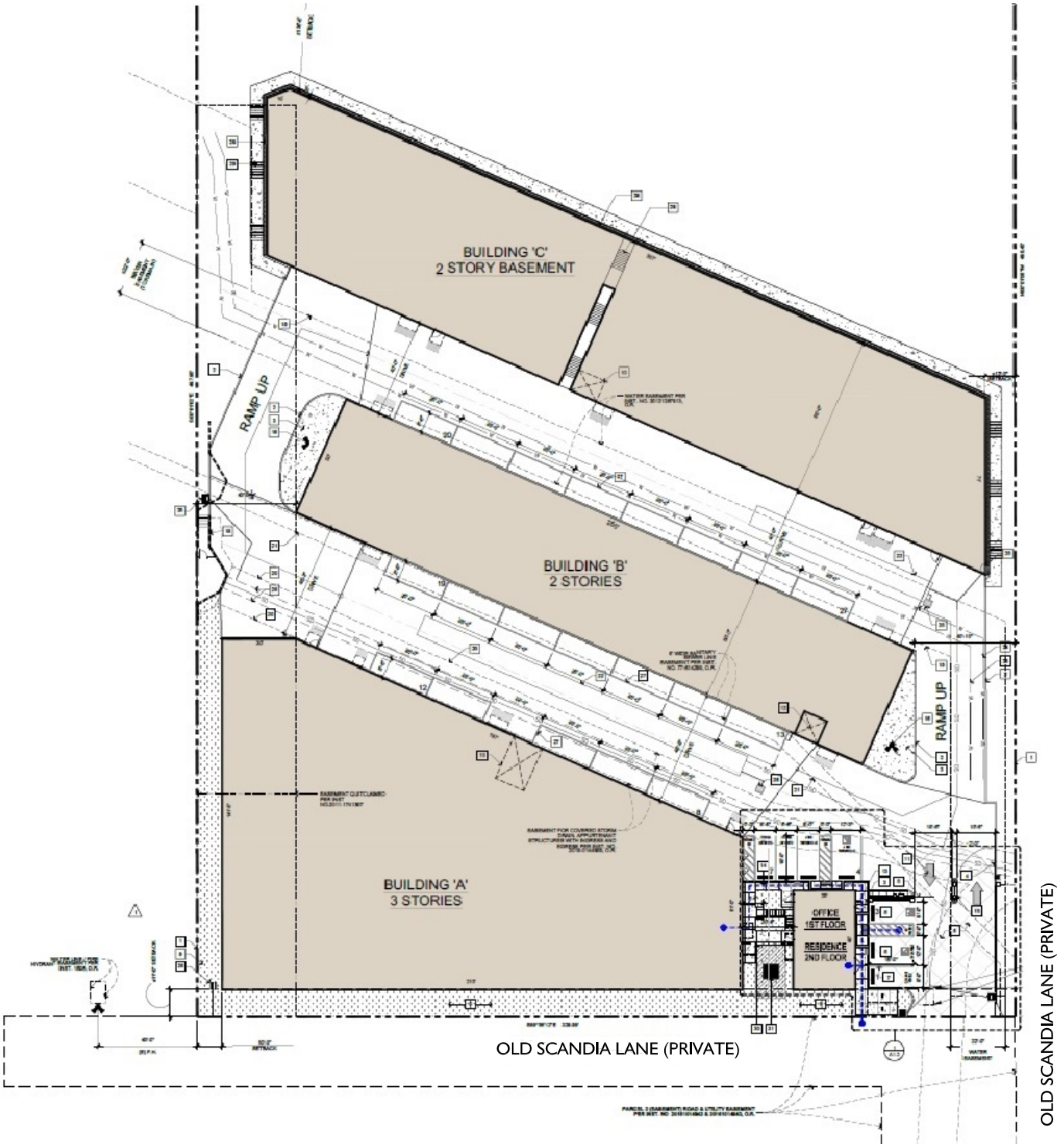


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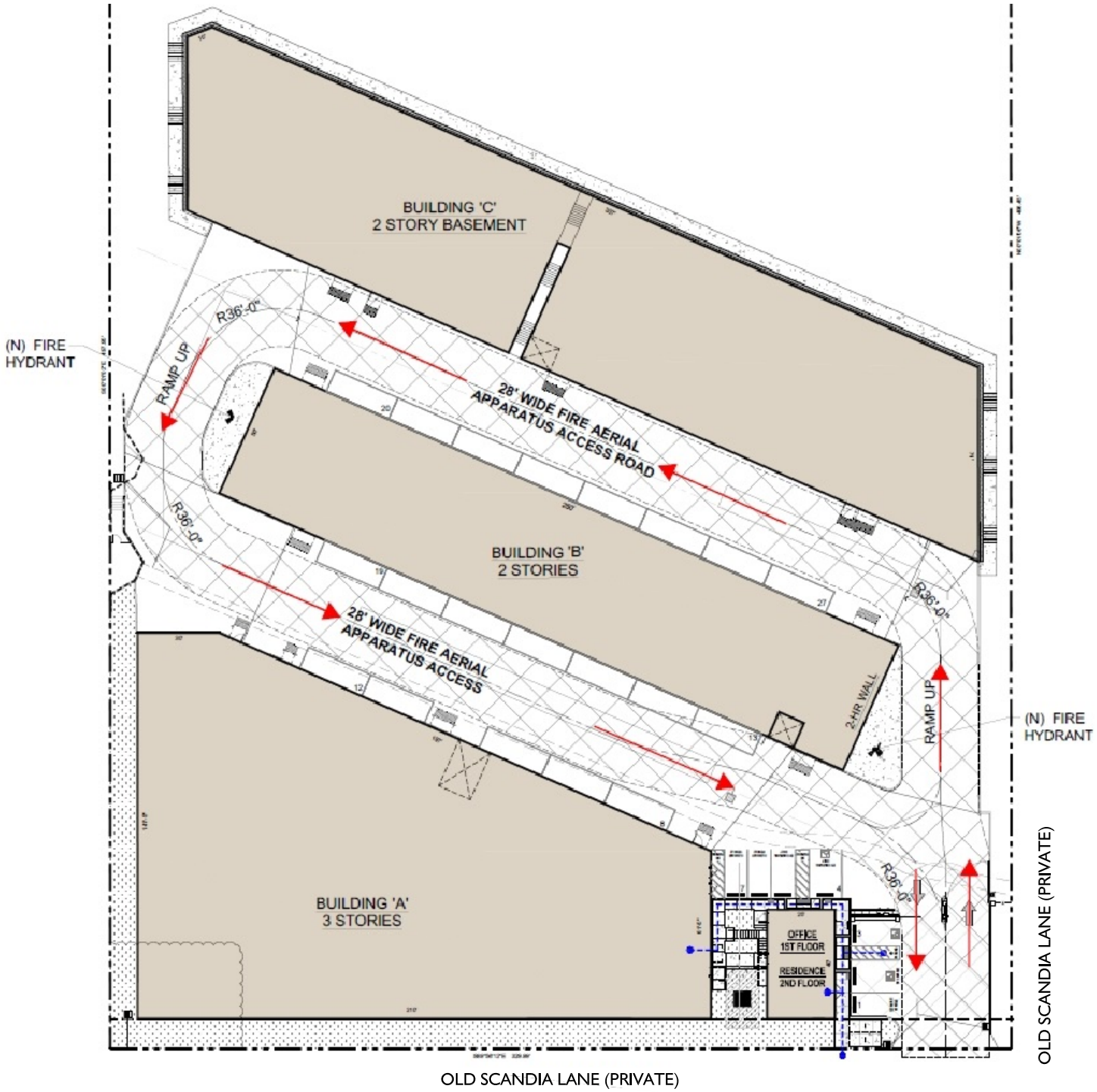
Exhibit 1-3

On-Site Parking and Circulation



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2.0 Existing Traffic Volumes & Circulation System

This section provides a discussion of existing study area conditions and traffic volumes.

2.1 Existing Study Intersection Geometrics

Exhibit 2-1 identifies the existing lane geometry at the study intersection.

The type of traffic control and number of lanes at an intersection are key inputs for the calculation of level of service.

2.2 Existing Traffic Volumes

Due to the COVID-19 pandemic, collection of new traffic counts would result in abnormal traffic volume data as traffic volumes and patterns might not be typical.

After reviewing available pre-pandemic traffic count data provided by RK's traffic count sub consultant within the study area, RK identified historical traffic count data from August 2018 for the following nearby intersection:

- Parkway Calabasas (NS) / Ventura Boulevard (EW).

The 2018 historical traffic count data is contained in Appendix A-1.

After discussions with County staff, the following methodology was approved to derive adjusted existing (2021) traffic count data for the study intersection of Old Scandia Lane / Ventura Boulevard based on the historical traffic count data.

Based on direction received from County staff on February 25, 2020, the project is in Regional Statistical Area Agoura Hills (RSA) #7 and would be subject to the following traffic growth rates:

- 2015 to 2020: Annual growth rate of 0.41%.
- 2020 to 2025: Annual growth rate of 0.21%.

1. **Collect New 2021 Field Counts:** Existing (2021) traffic count data was newly collected in May 2021 for the following intersections:

    - Study intersection of Old Scandia Lane (NS) / Ventura Boulevard (EW); and
    - Nearby intersection of Parkway Calabasas (NS) / Ventura Boulevard (EW).

    The newly collected 2021 field traffic counts are contained in Appendix A-2.

2. **Derive 2021 Counts from Pre-Pandemic Counts:** Using the available pre-pandemic conditions traffic counts from August 2018 ***at the nearby intersection of Parkway Calabasas / Ventura Boulevard***, RK projected 2021 traffic count data for the nearby intersection by applying a growth rate of 0.41% per year from 2018-2020 and by applying a growth rate of 0.21% per year from 2020-2021.

    The 2018 historical traffic counts are contained in Appendix A-1.

    The projected 2021 traffic counts calculations and adjustment factor calculations are contained in Appendix A-3.

3. **Determine Adjustment Factors for Converting Pandemic Conditions to Non-Pandemic Conditions:** RK has compared the newly collected 2021 field counts ***at the nearby intersection of Parkway Calabasas / Ventura Boulevard*** as part of Step 1 to the derived 2021 traffic count volumes at this intersection from Step 2.

    The newly collected 2021 traffic counts are contained in Appendix A-2.

    The produced adjustment factors for the intersection of Parkway Calabasas/ Ventura Blvd for both AM and PM peak hours are contained in Appendix A-3.

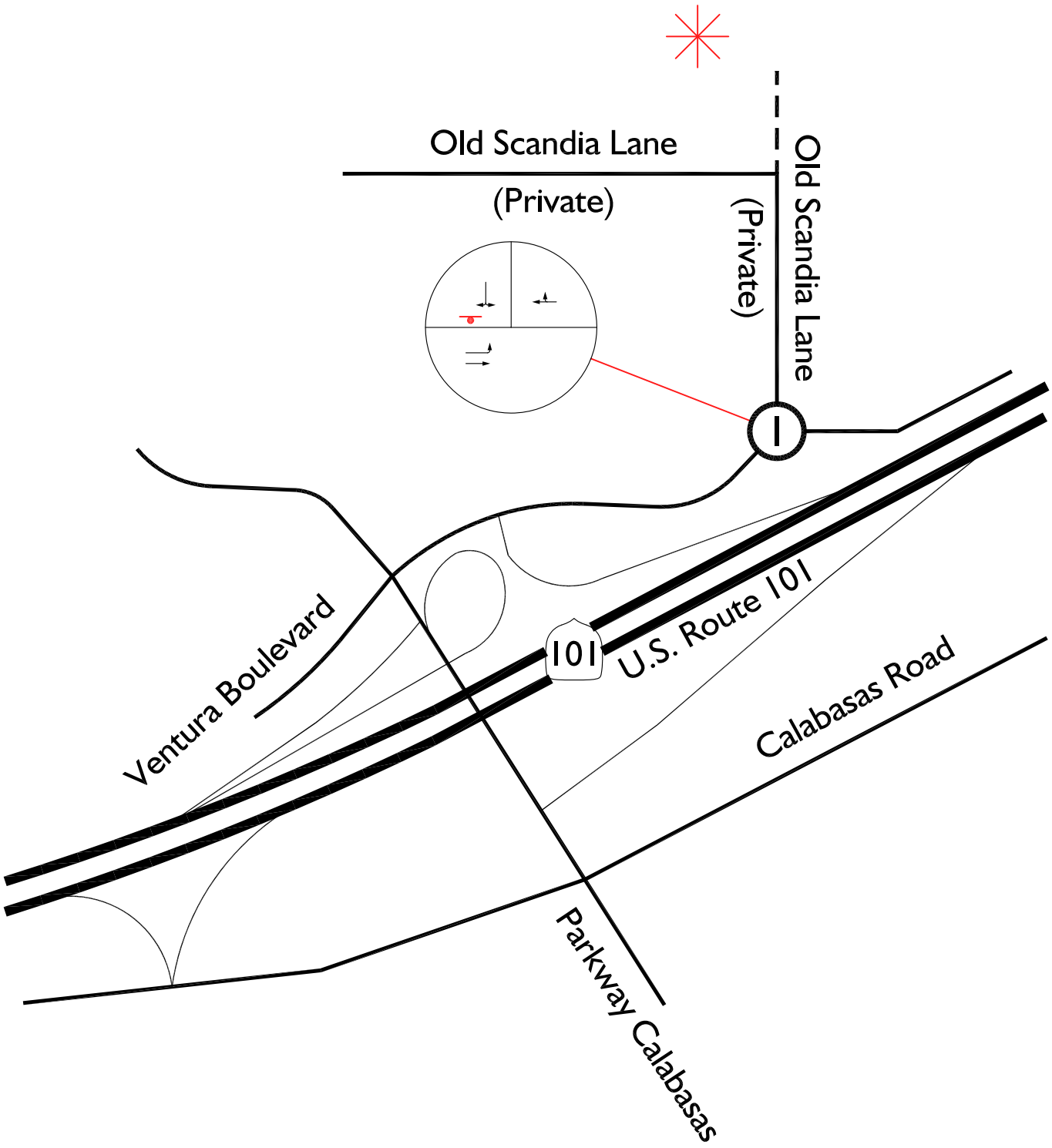
    This comparison observed the total intersection's traffic volume between the projected and observed 2021 traffic count volumes to produce an adjustment factor for both AM and PM peak hours.

4. **Derive 2021 Non-Pandemic Conditions at the Study Intersection:** Utilizing the adjustment factors derived in Step 3 ***from the nearby intersection of Parkway Calabasas / Ventura Boulevard***, RK converted the newly collected 2021 traffic count volumes ***for the Old Scandia Lane / Ventura Boulevard*** study intersection from Step 1 into 2021 non-pandemic conditions to be used in this traffic analysis

Exhibit 2-2 shows the adjusted existing (2021) conditions traffic volumes for the study area.

Exhibit 2-1

Existing Study Intersection Lane Geometry



Legend:

= Stop Sign

= Study Area Intersection

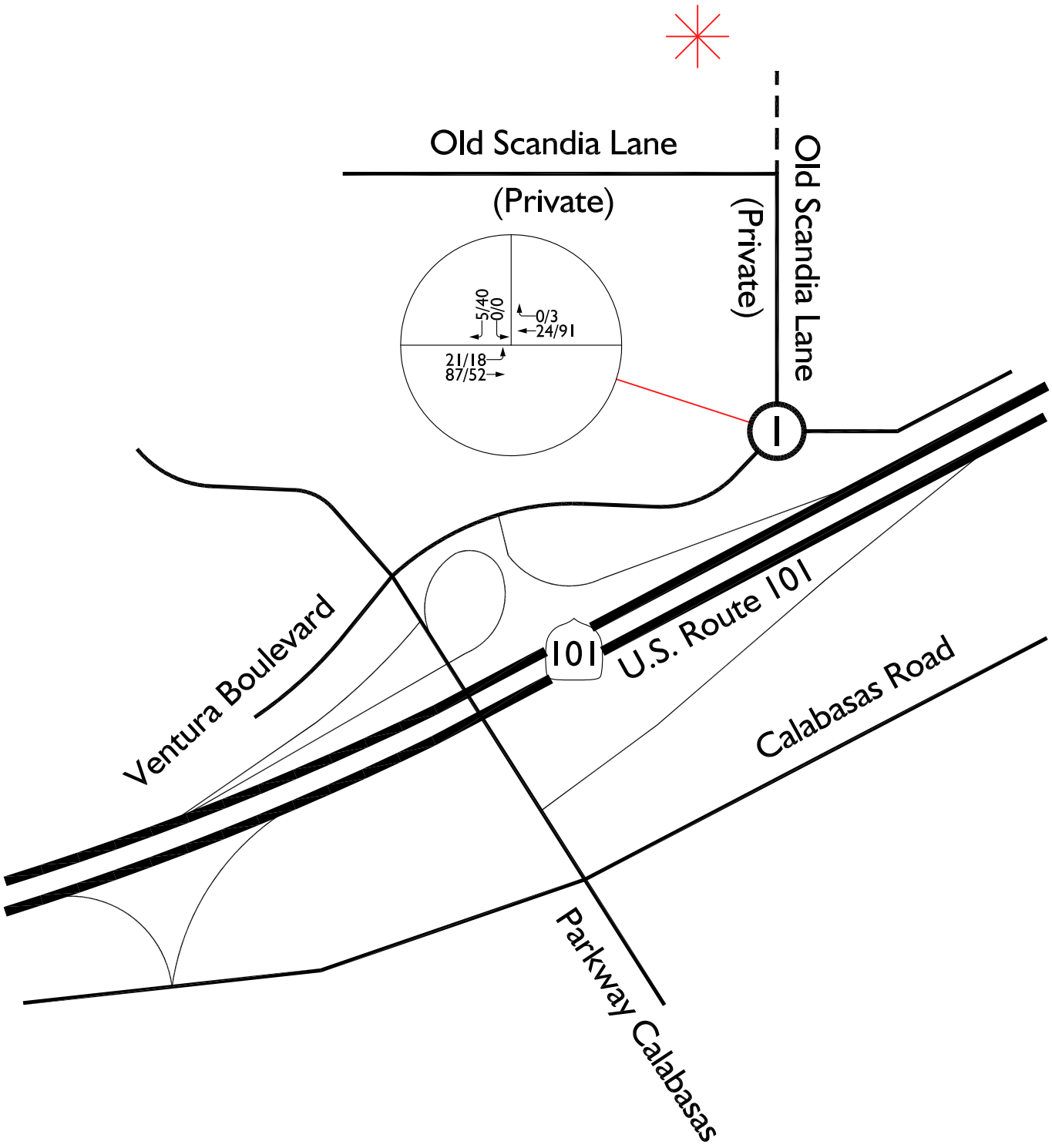
= Project Site

= Project Access Driveway

N

Exhibit 2-2

Adjusted Existing (2021) Traffic Volumes



Legend:

10/20 = AM/PM Peak Hour Volumes

(1) = Study Area Intersection

= Project Site

= Project Access Driveway

N

3.0 Projected & Future Traffic Volumes

This section of the report provides a discussion on methodologies utilized to derive future traffic volumes for the study area.

3.1 Project Traffic Conditions

3.1.1 Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. The trip generation for the project is based upon the specific land uses that have been planned for this development.

Trip generation is typically estimated based on the trip generation rates from the latest *Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017)*. This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

Table 3-1 shows the ITE trip generation rates for the Mini warehouse/Self-Storage.

Table 3-2 shows the trip generation for the proposed project utilizing the trip generation rates shown in Table 3-1.

As shown in Table 3-2, based on ITE trip generation rates, the proposed project is forecast to generate approximately 240 daily trips which include approximately 18 AM peak hour trips and approximately 26 PM peak hour trips.

3.1.2 Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of retail, employment, and recreational opportunities, and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the study area.

The outbound project trip distribution in percentages is shown in Exhibit 3-1 and the inbound project trip distribution in percentages is shown in Exhibit 3-2.

3.1.3 Modal Split

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic-reducing potential of public transit and other modes is significant. However, the traffic projections in this study are conservative in that public transit and alternative transportation may be able to reduce the traffic volumes, but, no modal split reduction is applied to the projections. With the implementation of transit service and provision of alternative transportation ideas and incentives, the automobile traffic demand can be reduced significantly.

3.1.4 Project Traffic Volumes/Assignment

The assignment of project traffic to the adjoining roadway system is based upon the project's trip generation, trip distribution, and proposed arterial highway and local street systems that would be in place by the time of initial occupancy of the site.

Project traffic volumes are shown in Exhibit 3-3.

3.2 Background Traffic

3.2.1 Method of Projection

Based on direction received from County staff on February 25, 2020, the project is in Regional Statistical Area Agoura Hills (RSA) #7 and would be subject to the following traffic growth rates:

- 2015 to 2020: Annual growth rate of 0.41%.
- 2020 to 2025: Annual growth rate of 0.21%.

To assess future conditions, project traffic is combined with existing traffic and area-wide growth. To account for area-wide/ambient growth in the study area, an annual growth rate of 0.21% per year has been applied to existing (2021) traffic

volumes over a one-year period to derive project opening year (2022) traffic volumes.

3.2.2 Cumulative Projects Traffic

Information on future projects in the vicinity of study area has been obtained from the County of Los Angeles staff for inclusion in this analysis.

"Probable future projects" include projects that have been filed with the agency but are not yet approved or projects that the agency reasonably anticipates will be submitted in the foreseeable future.

The list provided by the Los Angeles County staff consisted of a total of 2,492 projects in this area of the County.

Out of the 2,492 individual projects identified and provided, most with the exception of 141 are projects that are not expected to generate substantial trips (cell phone tower, one single family home, lot line adjustments, roof repair, etc.)

Table 3-3 shows the 141 cumulative projects.

Exhibit 3-4 shows the location of the 141 cumulative projects. As shown in Exhibit 3-4, none of the 141 cumulative projects are within the sphere of influence of the project site and study area (are not expected to contribute substantial trips to the study area.

Hence, after review of the provided cumulative projects land uses and location in relation to the proposed project, none were identified to generate significant cumulative traffic within the study area.

3.3 Project Opening Year (2022) With Ambient Growth With Project Conditions Traffic Volumes

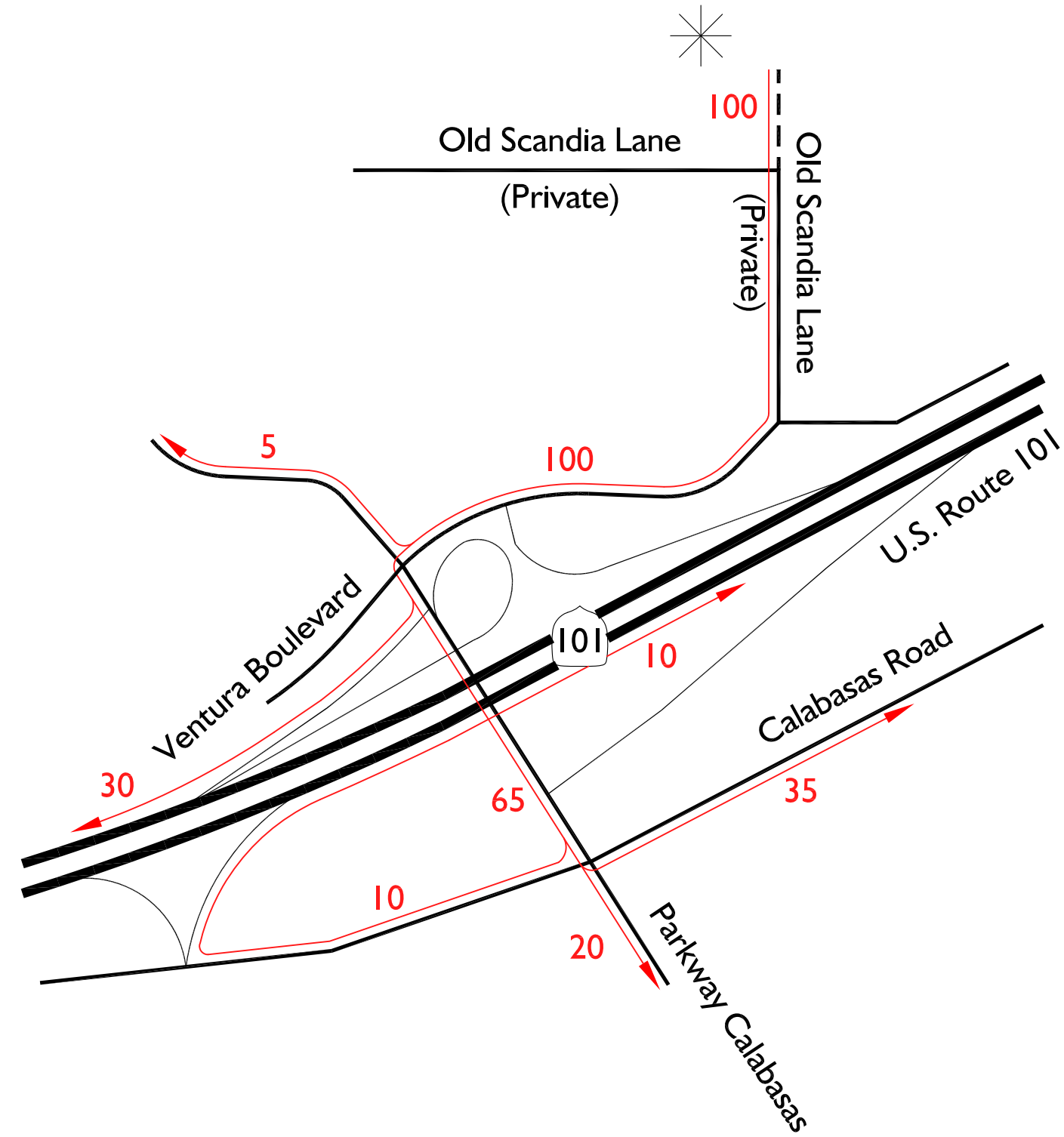
Project Opening Year (2022) With Ambient Growth With Project Conditions traffic volumes consist of one (1) year of annual growth on top of adjusted existing (2021) traffic volumes at 0.21% per year, plus the traffic generated by the proposed project.

As previously noted, after review of the provided cumulative projects land uses and location in relation to the proposed project, none were identified to generate significant cumulative traffic within the study area.

Project Opening Year (2022) With Ambient Growth With Project Conditions traffic volumes are shown in Exhibit 3-5.

Exhibit 3-1

Outbound Project Trip Distribution (in percentages)



Legend:

10 = Percent from Project

(I) = Study Area Intersection

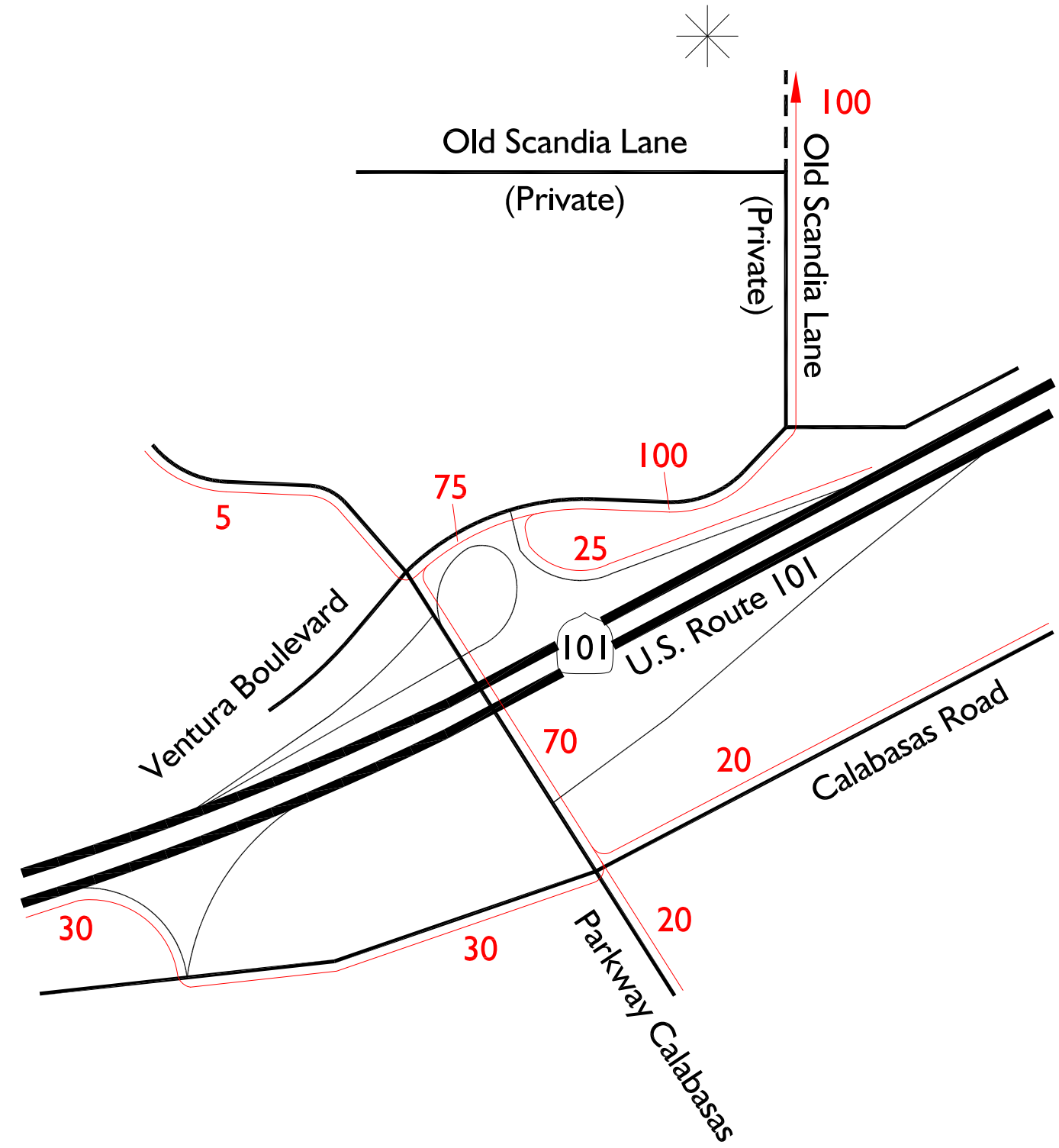
= Project Site

= Project Access Driveway

N

Exhibit 3-2

Inbound Project Trip Distribution (in percentages)



Legend:

10 = Percent to Project

(I) = Study Area Intersection

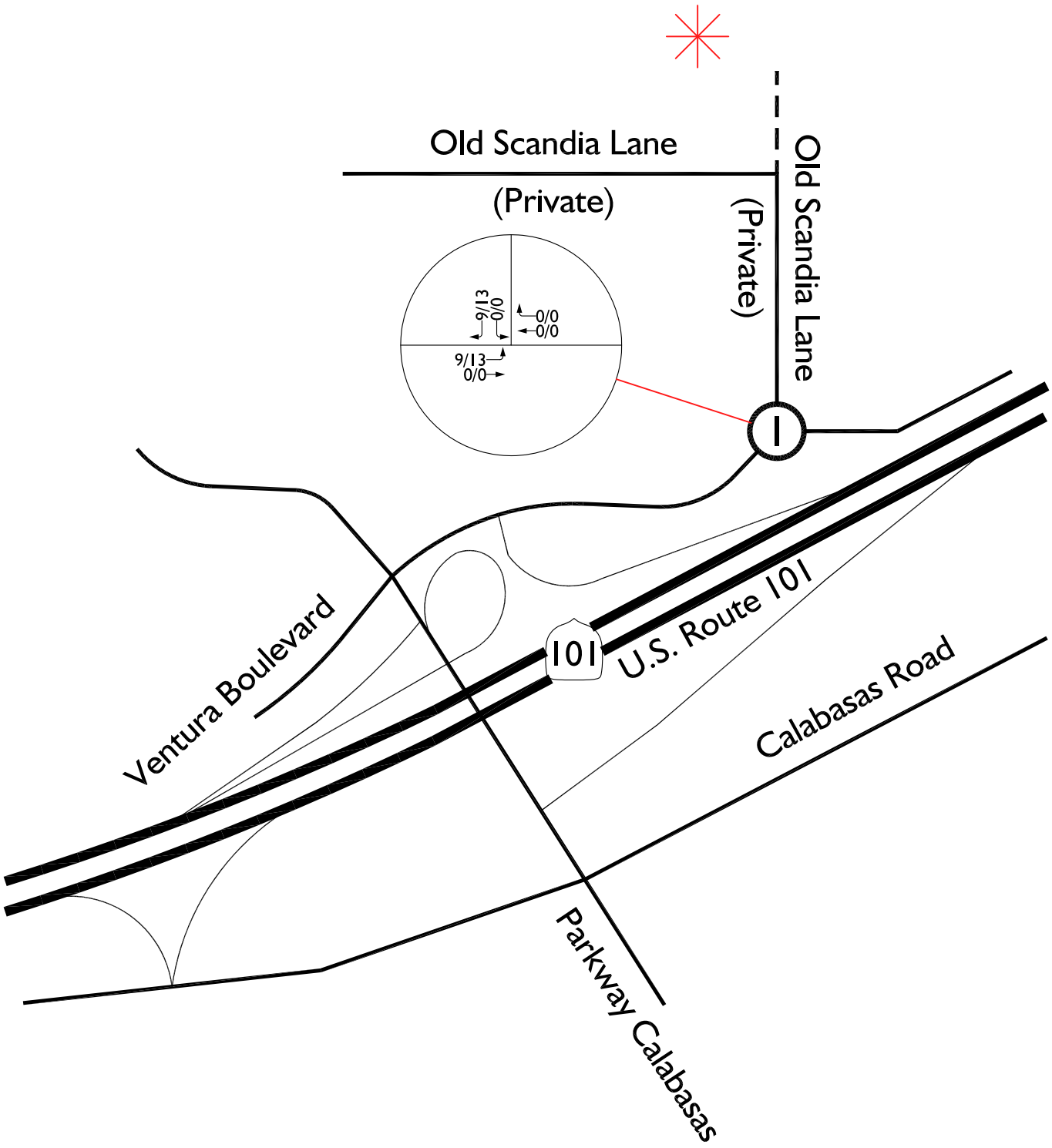
= Project Site

= Project Access Driveway

N

Exhibit 3-3

Project Traffic Volumes



Legend:

10/20 = AM/PM Peak Hour Volumes

(1) = Study Area Intersection

= Project Site

= Project Access Driveway

N

Exhibit 3-4

Cumulative Projects Location Map

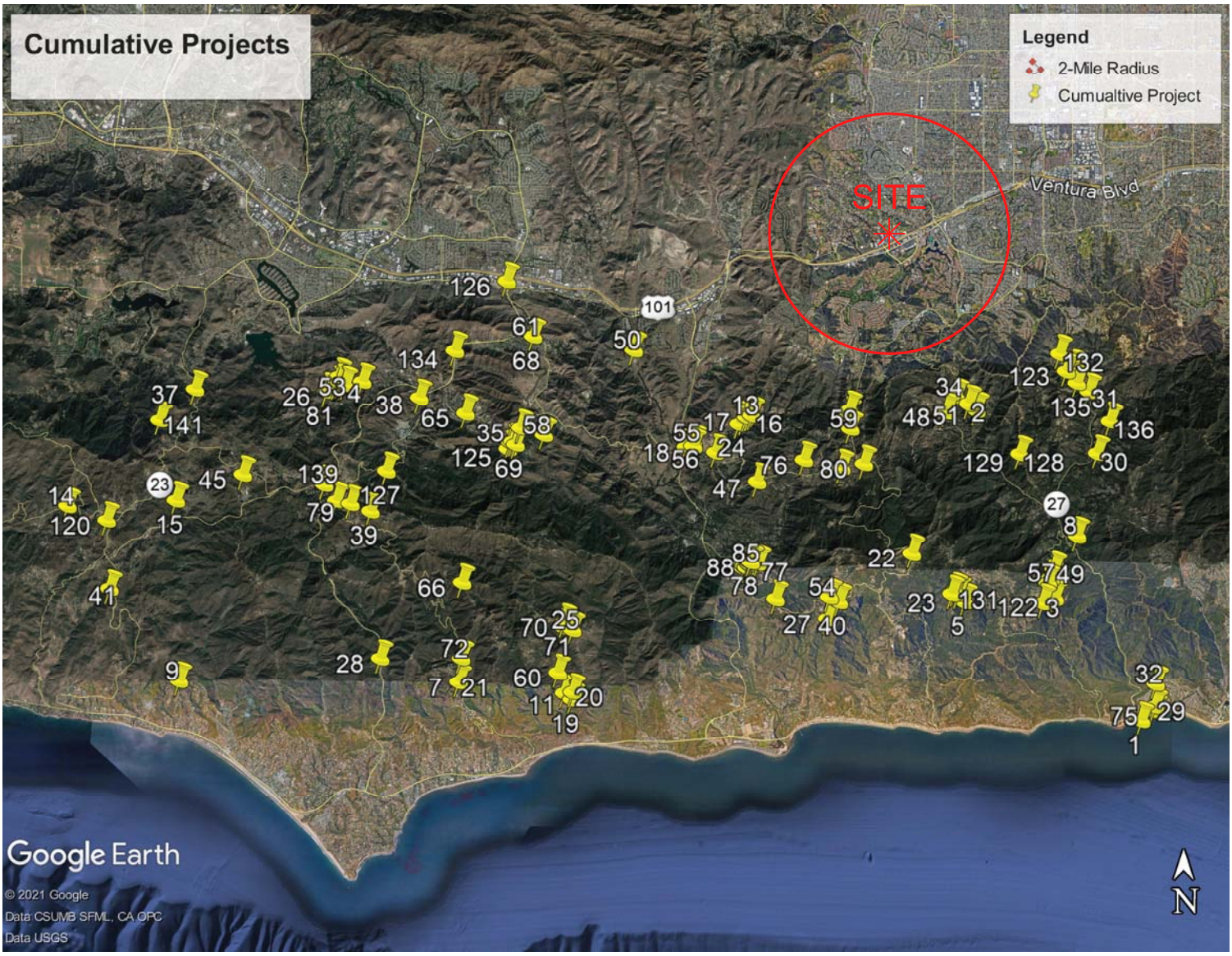


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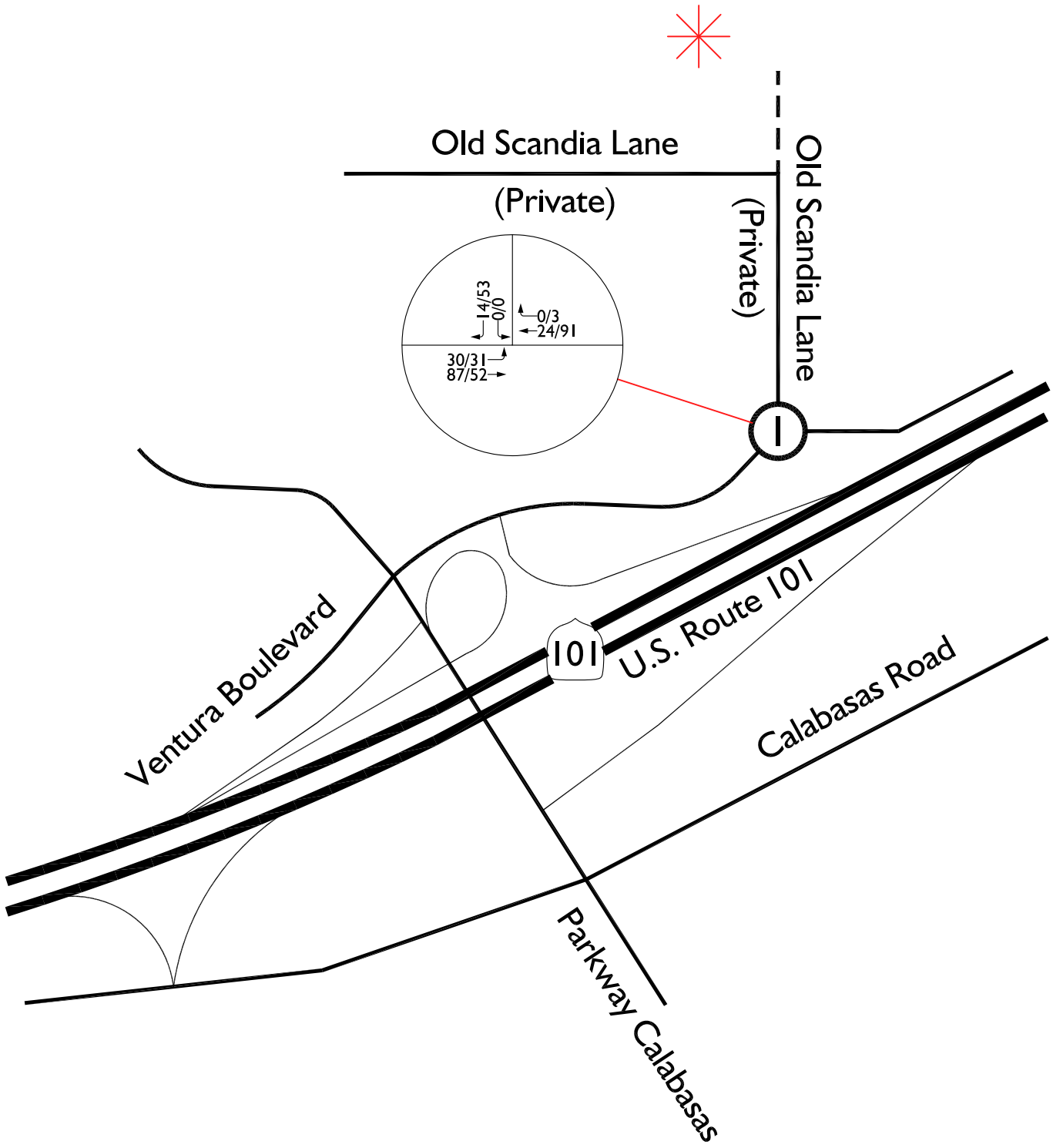
Exhibit 3-5

Project Opening Year (2022) With Ambient Growth With Project Conditions Traffic Volumes



Legend:

10/20 = AM/PM Peak Hour Volumes

(1) = Study Area Intersection

= Project Site

= Project Access Driveway

N

Table 3-1
Land Use 151 ITE Trip Generation Rates[1]

Land Use	Units	ITE Code	AM			PM			Daily
			In	Out	Total	In	Out	Total	
Mini Warehouse/Self-Storage (151)	100 Units of Storage	151	0.71	0.68	1.39	0.98	0.98	1.95	17.96

(1) Source: *2017 ITE Trip Generation Manual (10th Edition).*

Table 3-2
Trojan Calabasas Self-Storage Project Trip Generation[1]

Land Use (ITE Code)	Quantity	Units	AM			PM			Daily
			In	Out	Total	In	Out	Total	
Mini Warehouse/Self-Storage (151)	13.34	100 Units of Storage	9	9	18	13	13	26	240

(1) Source: *2017 ITE Trip Generation Manual (10th Edition).*

Table 3-3
Cumulative Projects

Cumulative #	PROJECTNUMBER	DESCRIPTION	SITE_ADDRESS
1	R2013-03650	Approved by Robert Glaser Date: 4/28/14 EXPIRES: 4/28/17 Project No: R2013-03650 Permit No: RPP 201301355 Address: 18412 E. Pacific Coast Highway, Malibu APN: 4443-001-002 Zone: C-2 CSD: None Malibu Land Use Plan Land Use Policy: 17 ¿ Recreation ¿ Serving Commercial This Plot Plan is approved in concept for the following: ¿ A striping of a handicap access path and several tenant improvements. The tenant improvements do not change any seating for the existing restaurant. Special Notes: ¿ The parking for the non-conforming restaurant was authorized under Plot Plan No. 18600 on July 7, 1994. All parking is valet only. ¿ Parking shall be provided as authorized. ¿ New wall signage for this restaurant was authorized under Plot Plan No. RPP201301287 on January 28, 2014. ¿ There is no grading authorized with this request. ¿ This project must also comply with the: 0 Green Building ordinance to the satisfaction of the Department of Public Works 0 Drought-Tolerant Landscaping ordinance 0 Low Impact Development ordinance to the satisfaction of the Department of Public Works 1 No other compliance required This approval is found to be in substantial compliance with the Los Angeles County Title 22 code requirements. Changes to this approval require additional DRP review and fees, and may be subject to the Green Building Program. Obtain any necessary approvals from Los Angeles County Department of Public Works. Approvals from other County Departments may be needed prior to the issuance of a Building Permit.	18412 Pacific Coast Highway, MALIBU CA 90265
2	R2013-02628	2063019031	2445 Burson Road, TOPANGA CA 90290
3	R2014-00385	NEW 8,180 SF SFR IN COASTAL ZONE	2525 Hawks Nest Drive, MALIBU CA 90265
4	R2014-00165	PROJECT NO. R 2014-00165 RPP 201400165 31553 LOBO CANYON ROAD ¿ Approved for new 6,489 square feet 2-story single-family residence with attached garage, swimming pool/spa, cabana, grading, walls and water tank. ¿ Maintain height and yard setbacks as shown on the plans. ¿ This project must comply with: 1.) The Green Building and Drought Tolerant Landscaping requirements include the following: a.) Design to achieve at least 15% more energy efficiency than the Title 24 2005 California Energy Efficiency Standards. b.) Recycle/reuse at least 50 percent of non-hazardous construction/demolition debris by weight. c.) Install smart irrigation controller. d.) Plant at least two 15-gallon trees. At least one of them must be must be from the Drought-Tolerant Plant List. 2.) Low Impact Development (LID) to the satisfaction of Public Works. 3.) Drought-tolerant landscaping (covenant recorded). ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ No oak trees are indicated on the plan. ¿ 2,032 CY of cut and 2,166 CY of fill is proposed. This is subject to the Santa Monica Mountains North Area Plan and grading shall not begin during the rainy season, defined as October 15 of any year through April 15 of the subsequent year. ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety, must be obtained prior to expiration of DRP¿s approval. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 4/14/2014 Expires: 4/14/2016 PROJECT NO. R 2014-00165 RPP 201400165 (AMENDMENT) 31553 LOBO CANYON ¿ Amendment approves changes to the grading plan. ¿ This approval is limited to the specific design changes highlighted and is intended to allow modification to the original design only to the extent of this change. ¿ No oak trees are indicated on the plan. ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ 2,500 CY of cut and 2,300 CY of fill is proposed. This is subject to the Santa Monica Mountains North Area Plan and grading shall not begin during the rainy season, defined as October 15 of any year through April 15 of the subsequent year. ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety, must be obtained prior to expiration of DRP¿s approval. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 5/20/2014 Expires: 4/14/2016	31553 Lobo Canyon Road, Agoura CA 91301
5	R2006-03775	PROJECT NO. R 2006-03775 RPP 201400200 (APPROVAL IN CONCEPT) 2195 Little Las Flores APN: 4448-023-009 ¿ Approved in concept for 6,826 SF residence with attached garage, barn, swimming pool/spa, second pool, grading and retaining walls. This approval supersedes the previous approval which has expired. ¿ 1,854 CY of cut and 1,799 CY of fill is proposed. ¿ Maintain height and setbacks as shown on the plan. ¿ Oak trees are not indicated on site. ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety and Health Department must be obtained prior to expiration of DRP¿s approval. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 7/16/2014 Expires: 7/16/2017	2171 Little Las Flores Street
6	R2004-00366	PROJECT NO. R 2004-00366 RPP 201400236 31619 LOBO CANYON ¿ Approved for 2-story single-family residence with attached garage. ¿ Maintain height and yard setbacks as shown on the plans. ¿ This project must comply from the Green Building Program to the satisfaction of Public Works. ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ No oak trees are indicated on the plan. ¿ No grading is proposed (Previously approved). This is subject to the Santa Monica Mountains North Area Plan and grading shall not begin during the rainy season, defined as October 15 of any year through April 15 of the subsequent year. ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety, must be obtained prior to expiration of DRP¿s approval. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 4/28/2014 Expires: 4/28//2016	31619 Lobo Cyn Street, Agoura CA 91301
7	R2006-00193	new single-family residence. Previously went to erb and needs to go back since the plan expired.	4133 Maguire Drive
8	R2014-00698	SA WEST SD 3; THE MALIBU; A-1-1; URIEL MENDOZA DEMOLITION OF EXISTING RESIDENCE AND ACCESSORY STRUCTURES; CONSTRUCT A NEW 10,309 SQ. FT. TWO STORY SINGLE FAMILY RESIDENCE WITH AN ATTACHED 452 SQ. FT. GARAGE; NEW RETAINING WALLS PREVIOUS APPROVALS DOES NOT APPLY DUE TO CHANGE OF SCOPE OF WORK	21475 Colina Drive, TOPANGA CA 90290
9	R2014-00722	PROJECT NO. R 2014-00722 RPP 201400276 (APPROVAL IN CONCEPT) ANACAPA VIEW APN: 4471-027-020 ¿ Approved in concept for new multi-story single-family residence with detached garage, grading and retaining walls. This approval supersedes the previous approval which has expired. ¿ 5,100 CY of cut and 2,500 CY of fill is proposed. ¿ Maintain height and setbacks as shown on the plan. ¿ Oak trees are not indicated on site. ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety and Health Department must be obtained prior to expiration of DRP¿s approval. ¿ Unconditional Certificate if Compliance recorded as instrument no. 20081693744. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 5/7/2014 Expires: 5/7/2017	31539 Anacapa View Drive, MALIBU CA 90265
10	R2014-00897	PROJECT NO. R 2014-00897 RPP 201400335 (APPROVAL IN CONCEPT) 22350 SWENSON DRIVE APN: 4448-023-011 ¿ Approved in concept for new 2-story 3,416 square foot single-family residence with attached garage, water tanks, grading and retaining walls. ¿ 543 CY of cut and 146 CY of fill is proposed. ¿ Maintain height and setbacks as shown on the plan. ¿ Oak trees are not indicated on site. ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety and Health Department must be obtained prior to expiration of DRP¿s approval. ¿ Unconditional Certificate if Compliance recorded as instrument no. 20081693744. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 7/16/2014 Expires: 7/16/2017	22350 Swenson Dr. Street CA 0
11	R2014-01082	new 3-bedroom 2-story single-family residence with attached garage. approvalin concept	2901 Sea Breeze Drive, MALIBU CA 90265
12	R2005-00014	PROJECT NO. R 2005-00014 RPP 201400479 31611 LOBO CANYON ROAD ¿ Approved for new 6,387 square feet 2-story single-family residence with detached garage, swimming pool/spa, retaining walls, veranda, pergola, entry gate and water tank. ¿ This approval supersedes previous approval which has expired. ¿ Maintain height and yard setbacks as shown on the plans. ¿ Project must comply with the Rural Outdoor Lighting District requirements (Part 9, Section 22.44 of Title 22). ¿ No oak trees are indicated on the plan. ¿ No grading is proposed. This is subject to the Santa Monica Mountains North Area Plan and grading shall not begin during the rainy season, defined as October 15 of any year through April 15 of the subsequent year. ¿ Obtain all approvals and permits necessary from the County of Los Angeles, including but not limited to the Department of Public Works Building and Safety, must be obtained prior to expiration of DRP¿s approval. ¿ Changes to this approval require additional DRP review and fees and may be subject to additional requirements. Approved: 7/1/2014 Expires: 7/1/2016	31611 Lobo Cyn Road
13	90186	LOT 2 SINGLE-FAMILY RESIDENCE. APN 4455-061-002 2710 COUNTY RIDGE ROAD CALABASAS, CA 91302 Zone: A-1-10 ¿Plan: N10 ¿CSD: Santa Monica Mtns North Area REVISED EXHIBIT ¿A¿ NO. 201400213 PROJECT NUMBER 90-186 1. This plan is approved for a 6,680 square foot structure to be used as a single family residence (SFR) with an attached 635 square foot three (3)-car garage and 712 square foot of loggias attached to the sides and rear of the SFR, and a 2,091 square foot accessory structure to be used as a four (4)-car garage, 299 square foot pool loggia, 126 square foot bath as pool house and attached 672 square foot upper bonus room as guest house, located on Lot 2 of Parcel Map No. 21951. A covenant with instrument number 20141075046 has been signed, notarized and recorded restricting the use of the accessory structure. 2. The property owner must ensure compliance with Conditional Use Permit 90-186 at all times. 3. Changes to this approval require additional Department of Regional Planning review and fees. 4. This approval does not authorize construction. Obtain building permits from Los Angeles County Building and Safety prior to construction. DO NOT REMOVE!	2710 Country Ridge Rd Street CA 0
14	R2014-02775	New single family residence	34134 Mulholland Highway, MALIBU CA 90265
15	TR071735	TO AUTHORIZED THE RECONFIGURATION OF 29 EXISITNG PARCELS INTO 7 (5 OPEN SPACE & 2 DEVELOPMENT) LOTS FOR THE OPERATEION AND REDEVELOPMENT OF AN EXISTING GOLF COURSE AND EDUCATIONAL RETREAT FACILITY WITH ACCESSORY USES (OVERNIGHT ACCOMODATIONS 40 BUNGALOWS/160 ROOMS TOTAL & CONFERENCE CENTER, PARKIING LOTS...ETC) ON 650 ACRES.	901 Encinal Canyon Road, MALIBU CA 90265

Table 3-3
Cumulative Projects

16	90186	SINGLE-FAMILY HOME ON LOT 2. APN 4455-061-002 2710 COUNTRY RIDGE ROAD CALABASAS, CA Zone: A-1-10 ¿Plan: N10 ¿CSD: Santa Monica Mountains North Area REVISED EXHIBIT ¿A¿ NO. 201400359 PROJECT NUMBER 90-186 1. This plan is approved for 286 cubic yards of cut, 1,254 cubic yards of fill for precise grading of parcel 2, map PM21951. 2. 1,182 cubic yards proposed to be imported to parcel 2 (792 cy cut from parcel 3 and 390 cy cut from parcel 1), map PM21951. 3. The property owner must ensure compliance with Conditional Use Permit 90-186 and Oak Tree Permit 89-123 at all times. 4. Santa Monica Mountains North Area CSD prohibits grading during October 15 of any year through April 15 of the subsequent year. 5. Changes to this approval require additional Department of Regional Planning review and fees. 6. This approval does not authorize construction. Obtain grading permits from Los Angeles County Building and Safety prior to grading activity. DO NOT REMOVE!	2710 Country Ridge Rd Street CA 0
17	90186	SINGLE-FAMILY HOME. APN 4455-061-001 2691 COUNTRY RIDGE ROAD CALABASAS, CA Zone: A-1-10 ¿Plan: N10 ¿CSD: Santa Monica Mountains North Area REVISED EXHIBIT ¿A¿ NO. 201400358 PROJECT NUMBER 90-186 1. This plan is approved for 421 cubic yards of cut, 31 cubic yards of fill for precise grading of parcel 1, map PM21951. 2. 390 cubic yards proposed to be exported to parcel 2, map PM21951. 3. The property owner must ensure compliance with Conditional Use Permit 90-186 and Oak Tree Permit 89-123 at all times. 4. Santa Monica Mountains North Area CSD prohibits grading during October 15 of any year through April 15 of the subsequent year. 5. Changes to this approval require additional Department of Regional Planning review and fees. 6. This approval does not authorize construction. Obtain grading permits from Los Angeles County Building and Safety prior to grading activity. DO NOT REMOVE!	2691 Country Ridge Rd Street CA 0
18	PM14863	5,700 sf SFR, 1,100 sf garage (Project PM14863, CUP 2164)	26793 Mulholland Highway CA 0
19	R2015-00082	NEW SINGLE FAMILY RESIDENCE. WITHIN 200 FEET OF H-1 AREA. 44 CUBIC YARDS GRADING. R-C-10000 MALIBU 3RD DISTRICT	2901 Sea Breeze Drive, MALIBU CA 90265
20	R2015-00080	NEW SINGLE FAMILY RESIDENCE. WITHIN 200 FEET OF H-1 AREA. NO GRADING. R-C-10000 MALIBU 3RD DISTRICT	2891 Seabreeze Drive 90265
21	R2006-00193	New 3-level hillside single-family residence in Santa Monica Mountains Coastal Range, Malibu Vista Rural Village. Project must meet GSA requirements involving Transfer Development Credit.	4133 Maguire Drive
22	R2015-00841	NEW SFR.	24020 Hovenweep Lane
23	R2015-01161	New 3,416 square foot single-family residence	22390 Swenson Drive, Topanga CA 90290
24	R2007-02674	NEW SFR	2599 Stokes Canyon Road, Calabasas
25	R2015-02072	new sfr	26247 Fairside Road, MALIBU CA 90265
26	R2015-02653	17,931 sf 2-story sfr with detached 4-car garage, guest hse, pool hse, pool, tennis court, storage barn, two 16,000 gal. wtr tanks.	31725 Lobo Canyon Road, AGOURA HILLS CA 91301
27	R2015-02785	new sfr on site with ridgeline minor cdp with variance for ridgeline	Costa Del Sol Way, MALIBU CA 90265
28	R2014-00461	Major CDP. Applicant proposes to construct a 9,278 sq. ft., 35-foot fall single-family residence, 1,550 ft. long driveway and turnaround, landscaping, hardscaping, retaining walls, two water wells, a 30,000 gallon water storage tank, drainage devices, and a private septic system. 4,950 cubic yard of grading (3,700 cubic yards of cut and 600 cubic yards of fill for the proposed residence and motorcourt and 650 cubic yards of cut for the driveway) is proposed as part of this project. A Variance is required because the driveway is proposed to be more than 300 feet long. One oak tree is proposed to be removed and 100 oak trees are proposed to be encroached upon by the driveway.	3300 S. Kanan Dume Rd. Street CA 0
29	R2015-03107	Three residential condominium units	18225 Coastline Drive, MALIBU CA 90265
30	R2015-03681	Single Family residence, attached garage, grading, septic system.	1104 Rosario Dr Street, TOPANGA CA 0
31	R2012-01555	SINGLE FAMILY RESIDENCE	1832 N Topanga Canyon Road
32	R2015-03437	new sfr	3424 Shoreheights Drive, MALIBU CA 90265
33	2018-001094	New 5517 sf sfr with attached garage. New septic and driveway.	621 Thrift Road, Malibu CA 90265
34	PRJ2021-000239	New SFR	2743 Halsey Road, Topanga CA 90290
35	2016-000416	New 2-story single family dwelling with attached 2-car garage.	29070 Mulholland Highway, Agoura CA 91301
36	2016-000615	New SFR near ridgeline area; Amendment 8/26/19 to change grading amounts (>1000 cy off-site transport)	2420 N Topanga Canyon Boulevard, Topanga CA 90290
37	R2005-02460	New single family home	1077 Westlake Boulevard, Westlake Village CA 91361
38	2016-000713	Site Plan Review for a new Single Family Residence, Barn, Accessory Storage Structure and Utility Shed. Approved: 06/29/2017	2439 Sierra Creek Road, Agoura Hills CA 91301
39	2016-001016	New SFR with guest house, barn and temporary mobile home.	1200 Latigo Canyon Road, Malibu CA 90265
40	2016-001731	New "amended" SFR with valid approved CDP. Coastal will process amendment under existing CDP.	24500 Piuma Road, Malibu CA 90265
41	R2015-00089	NEW SFR. 8355cy cut, 8336cy fill, 862 ft long driveway. Major CDP and Variance	2181 Encinal Canyon Road CA
42	2017-003079	New 1400-sf SFR	26349 Fairside Road, Malibu CA 90265
43	R2013-02400	New SFR	24541 Mulholland Highway, Calabasas CA 91302
44	R2004-00439	New 6,200-sf SFR with attached 3-car garage, pool, cabana	31625 Lobo Canyon Road, Agoura Hills CA 91301
45	90245	Approved for construction of a one-story 8,472 square foot single family residence with an attached 1,136 square foot garage, an attached 45 square foot covered porch and an attached 1,059 square foot covered patio.	32188 Mulholland Highway, Malibu 1719280 90265
46	R2014-02557	5,642-sf SFR (previously approved, expired)	2665 N Country Ridge Road, Calabasas CA 91302
47	2017-004054	New 5390-sf SFR w/5800 cubic yards grading	25740 Mulholland Highway, Calabasas CA 91302
48	2017-004106	(Associated Oak Tree Permit RPPL2017008194 was approved, but not yet finalized) new two story 3444 sq ft sfr with attached 640 sq. ft 2 car garage	1830 Old Topanga Canyon Road, Topanga CA 90290
49	R2008-01131	AIC & Admin. Oak Tree Permit: Additions to SFR, guest house, 1 oak tree encroachment	19936 Grand View Drive, Topanga CA 90290
50	02-201	Approved for construction of seven (7) single-family homes and gate/gate house, gates and fences. Lots 2-8 of Tract 53100. Approval authorizes placement of construction trailer/temporary real estate office for TR53100 with adjacent wood deck.	3665 Liberty Canyon Road, Agoura CA 91301
51	2017-004791	New SFR in hillside with GSA calculations	2171 Topanga Skyline Drive, Topanga CA 90290
52	2017-004974	2,054-sf, two-story SFR	20681 Medley Lane, Topanga CA 90290
53	2017-005188	New SFR (16,476 sf); 2,918 cubic yards grading	31341 Lobo Canyon Road, Agoura Hills CA 91301

Table 3-3
Cumulative Projects

54	2017-005327	SFR within ridgeline	330 Costa Del Sol, Malibu CA 90265
55	87058	New 7919-sf SFR w/pool (45'-3" height)	26773 Mulholland Highway, Calabasas CA 91302
56	2017-006772	New SFR in Coastal area	26509 Mulholland Highway, Calabasas CA 91302
57	2017-006787	Minor CDP to authorize grading of 956 cubic yards of total cut plus fill material associated with the construction of a 1,920-square-foot single-family residence, an attached 399-square-foot two-car garage, 29-foot six-inch long concrete driveway, an onsite wastewater treatment system, and raised planter box	20720 Medley Lane, Topanga CA 90290
58	2017-006865	New SFR on vacant lot (4,144 sf)	28886 Lake Vista Drive, Agoura Hills CA 91301
59	R2015-00871	New SFR with LCP-compliance glass windows. Landscaping with all native plants, grading, and HIMMP.	24604 Mulholland Highway, Calabasas CA 91302
60	2017-007331	Single-family residence 8,040 sq. ft. and garage, pool, septic system Approval In Concept - Site Plan Review	2520 Marby Drive, Malibu CA
61	2017-007329	New SFR	28900 Silver Creek Road, Agoura Hills CA 91301
62	2018-000494	new SFR (amendments approved 6/28/18, 1/24/19)	31553 Lobo Canyon Road, Agoura Hills CA 91301
63	R2014-02557	New 9,911-sf SFR, swimming pool	2665 N Country Ridge Road, Calabasas CA 91302
64	R2014-01823	New SFR, garage (earlier AIC expired); Amendment to reduce sq. footage (8/2/18); 2nd Amendment to reconfigure driveway (2/7/19)	3030 Vista Mar Drive, Malibu CA 90265
65	2018-001912	New SFR in the North Area of SMM	29751 Mulholland Highway, Agoura Hills CA 91301
66	2018-002228	New SFR in the Coastal area of the Santa Monica Mountains	2388 Mar Vista Ridge Drive, Malibu CA 90265
67	2018-001051	New 2,400 sq. ft. single-family residence, attached 2 car garage, with 18' height, removal of two oak trees.	2527 Coal Canyon Road
68	2017-007329	New 5,915-sf SFR (Associated w/Oak Tree Permit RPPL2017010990)	28900 Silver Creek Road, Agoura Hills CA 91301
69	2018-003015	new SFR in North Area/Malibou Lake CSD	29101 Paiute Drive, Agoura Hills CA 91301
70	2018-003231	New SFR w/347 c.y. grading	26363 T Ingleside Way T, Malibu CA 90265
71	2018-003231	New SFR w/OWTS within 50 feet of oak trees	26363 T Ingleside Way T, Malibu CA 90265
72	2016-000392	New SFR on pad graded under previous CDP--MND w/MMRP	3806 Latigo Canyon Road, Malibu CA 90265
73	2018-003287	New SFR in Coastal with active CDP from state/AIC	2171 Little Las Flores Road, Topanga CA 90290
74	2019-000010	New SFR (5,503 sf) -Lot 1.	24937 Mulholland Highway, Calabasas CA 91302
75	2016-002883	New SFR in the Coastal Zone with garage, pool and spa	18316 Coastline Drive, Malibu CA 90265
76	2017-005950	New two-story, 7,361 sq. ft. single-family residence, attached 639 sq. ft. four-car garage, pool, cabana, trellis, covered patios, new OWTS, and associated grading and infrastructure	2011 Delphine lane, Calabasas 91302
77	2019-000686	(Monte Nido - Lot 7) Construction of new single family residence in coastal zone.	25617 Piuma Road, Calabasas CA 91302
78	2019-000686	(Monte Nido - Lot 7) Construction of new single family residence in coastal zone.	25631 Piuma Road, Calabasas CA 91302
79	2019-000766	New SFR with ADU, pool, garage, greenhouse, barn, workshop	31300 Birdella Road, Malibu CA 90265
80	2019-000827	New SFR in Coastal zone, CCC has vested project	2116 Stunt Road, Calabasas CA 91302
81	2019-000943	New SFR in the Santa Monica Mnts North Area	31725 Lobo Canyon Road, Agoura Hills CA 91301
82	2019-000686	(Monte Nido - Lot 2) Construction of new single family residence in coastal zone.	420 Woodbluff Road, Calabasas CA 91302
83	2019-000686	(Monte Nido - Lot 1) Construction of new single family residence in coastal zone.	420 Woodbluff Road, Calabasas CA 91302
84	2019-000686	(Monte Nido - Lot 2) Construction of new single family residence in coastal zone.	25693 Piuma Road, Calabasas CA 91302
85	2019-000686	(Monte Nido - Lot 3) Construction of new single family residence in coastal zone.	25677 Piuma Road, Calabasas CA 91302
86	2019-000686	(Monte Nido - Lot 2) Construction of new single family residence in coastal zone.	25693 Piuma Road, Calabasas CA 91302
87	2019-000686	(Monte Nido - Lot 3) Construction of new single family residence in coastal zone.	25677 Piuma Road, Calabasas CA 91302
88	2019-000686	(Monte Nido - Lot 6) Construction of new single family residence in coastal zone.	25645 Piuma Road, Calabasas CA 91302

Table 3-3
Cumulative Projects

89	2019-000686	(Monte Nido - Lot 4) Construction of new single family residence in coastal zone.	25675 Piuma Road, Calabasas CA 91302
90	2019-000686	(Monte Nido - Lot 4) Construction of new single family residence in coastal zone.	25675 Piuma Road, Calabasas CA 91302
91	2019-000686	(Monte Nido - Lot 6) Construction of new single family residence in coastal zone.	25645 Piuma Road, Calabasas CA 91302
92	2019-000686	(Monte Nido - Lot 13) Construction of new single family residence in coastal zone.	25634 Piuma Road, Calabasas CA 91302
93	2019-000686	(Monte Nido - Lot 14) Construction of new single family residence in coastal zone.	25664 Piuma Road, Calabasas CA 91302
94	2019-000686	(Monte Nido - Lot 14) Construction of new single family residence in coastal zone.	25664 Piuma Road, Calabasas CA 91302
95	2019-000686	(Monte Nido - Lot 13) Construction of new single family residence in coastal zone.	25634 Piuma Road, Calabasas CA 91302
96	2019-000686	(Monte Nido - Lot 14) Construction of new single family residence in coastal zone.	25664 Piuma Road, Calabasas CA 91302
97	2019-000686	(Monte Nido - Lot 13) Construction of new single family residence in coastal zone.	25634 Piuma Road, Calabasas CA 91302
98	2019-000686	(Monte Nido - Lot 13) Construction of new single family residence in coastal zone.	25634 Piuma Road, Calabasas CA 91302
99	2019-000686	(Monte Nido - Lot 14) Construction of new single family residence in coastal zone.	25664 Piuma Road, Calabasas CA 91302
100	2019-000686	(Monte Nido - Lot 17) Construction of new single family residence in coastal zone.	25720 Piuma Road, Calabasas CA 91302
101	2019-000686	(Monte Nido - Lot 15 & 16) Construction of new single family residence in coastal zone.	25666 Piuma Road, Calabasas CA 91302
102	2019-000686	(Monte Nido - Lot 15 & 16) Construction of new single family residence in coastal zone.	25666 Piuma Road, Calabasas CA 91302
103	2019-000686	(Monte Nido - Lot 15 & 16) Construction of new single family residence in coastal zone.	25666 Piuma Road, Calabasas CA 91302
104	2019-000686	(Monte Nido - Lot 17) Construction of new single family residence in coastal zone.	25720 Piuma Road, Calabasas CA 91302
105	2019-000686	(Monte Nido - Lot 15 & 16) Construction of new single family residence in coastal zone.	25666 Piuma Road, Calabasas CA 91302
106	2019-000686	(Monte Nido - Lot 18) Construction of new single family residence in coastal zone.	25722 Piuma Road, Calabasas CA 91302
107	2019-000686	(Monte Nido - Lot 18) Construction of new single family residence in coastal zone.	25722 Piuma Road, Calabasas CA 91302
108	2019-000686	(Monte Nido - Lot 19) Construction of new single family residence in coastal zone.	25724 Piuma Road, Calabasas CA 91302
109	2019-000686	(Monte Nido - Lot 19) Construction of new single family residence in coastal zone.	25724 Piuma Road, Calabasas CA 91302
110	2019-000686	(Monte Nido - Lot 18) Construction of new single family residence in coastal zone.	25722 Piuma Road, Calabasas CA 91302
111	2019-000686	(Monte Nido - Lot 18) Construction of new single family residence in coastal zone.	25722 Piuma Road, Calabasas CA 91302
112	2019-000686	(Monte Nido - Lot 20) Construction of new single family residence in coastal zone.	25734 Piuma Road, Calabasas CA 91302
113	2019-000686	(Monte Nido - Lot 20) Construction of new single family residence in coastal zone.	25734 Piuma Road, Calabasas CA 91302
114	2019-000686	(Monte Nido - Lot 20) Construction of new single family residence in coastal zone.	25734 Piuma Road, Calabasas CA 91302
115	2019-000686	(Monte Nido - Lot 21) Construction of new single family residence in coastal zone.	25750 Piuma Road, Calabasas CA 91302
116	2019-000686	(Monte Nido - Lot 22) Construction of new single family residence in coastal zone.	25752 Piuma Road, Calabasas CA 91302
117	2019-000686	(Monte Nido - Lot 21) Construction of new single family residence in coastal zone.	25750 Piuma Road, Calabasas CA 91302
118	2019-000686	(Monte Nido - Lot 22) Construction of new single family residence in coastal zone.	25752 Piuma Road, Calabasas CA 91302
119	2019-000686	(Monte Nido - Lot 20) Construction of new single family residence in coastal zone.	25734 Piuma Road, Calabasas CA 91302
120	2019-003034	New 3,341-sf SFR w/2,140 c.y. grading (balanced on site)	33500 Mulholland Highway, Malibu CA 90265
121	2019-003114	New SFR in the SMMNA	31335 Lobo Canyon Road, Agoura Hills CA 91301

Table 3-3
Cumulative Projects

122	2019-003128	New SFR in the Coastal zone	20266 Reigate Road, Topanga CA 90290
123	2016-000615	New SFR in the SMMNA to replace RPPL2016002439	2446 N Topanga Canyon Boulevard, Topanga CA 90290
124	R2010-01878	New SFR (old AIC expired)	24810 Piuma Road, Malibu CA 90265
125	2019-003397	New SFR in North Area of SMM, Malibou Lake CSD area	29152 Crags Drive, Agoura Hills CA 91301
126	2019-003498	Single Family House 8,608 sq. ft. and Accesory Dwelling Unit 1,195 sq. ft.	xxxx Kanan Road, Agoura Hills CA 91301
127	R2010-01119	New SFR with OTP	30890 Mulholland Highway, Malibu CA
128	2020-000267	New 3,827-sf single-family residence w/3,000 cu. yds grading	1035 Henry Ridge Motorway, Topanga CA 90290
129	2020-000267	New 3,827-sf single-family residence on Significant Ridgeline	1035 Henry Ridge Motorway, Topanga CA 90290
130	2020-000267	New 3,827-sf single-family residence w/3,000 cu. yds grading	1035 Henry Ridge Motorway, Topanga CA 90290
131	2020-000374	New SFR in the Coastal zone, CCC has vested project.	22345 Swenson Drive, Topanga CA
132	2017-006460	New SFR in the SMMNA	2480 N Topanga Canyon Boulevard, Topanga CA 90290
133	PRJ2020-001248	New 2 story SFR	29255 S Lake Shore Drive, Agoura Hills CA 91301
134	2017-005321	New single-family dwelling on an empty lot. Planning has previously approved the proposed improvements but has recently expired.	3410 N Kanan Road, Agoura Hills CA 91301
135	PRJ2020-000501	PRJ2020-000501 - Proposed 3,564 sq.ft. Single family Residence with 346 sq.ft attached deck. Proposed 942 sq.ft Detached Accessory Dwelling Unit with 310 sq.ft. covered porch.	2247 N Topanga Canyon Boulevard, Topanga CA 90290
136	2018-000819	Minor CDP for new single-family residence, detached garage, OWTS, and pool.	20662 Callon Drive, Topanga CA 90290
137	PRJ2020-003042	New two-story residential house with attached garage and living space above garage. Outdoor deck, pool and driveway access.	29225 S Lake Shore Drive, Agoura Hills CA 91301
138	PRJ2020-003043	PRJ2020-003043 - TWO STORY SFD WITH 3 CAR GARAGE ATTACHED, ONE STORY ADU W/ ONE CAR GARAGE ATTACHED & POOL	24577 Mulholland Highway, Calabasas CA 91302
139	PRJ2020-003252	PRJ2020-003252 - A single-family residence with a two-car garage and accessory dwelling unit are proposed on an existing vacant lot. The lot is approximately 0.76 ac, and is located at the southwest corner of Mulholland Hwy and Kanan Dume Rd. The subject property is zoned Light Agricultural (A-1-2) within the Santa Monica Mountains North Area Plan. This zoning district permits the construction of single family residences through a Site Plan Review. The proposed residence will take access from Mulholland Hwy, widening the existing driveway. The main house will be built into the existing slope with retaining walls (max height of 6 ft) to support the driveway and patios. The main residence will be two stories (height = 24 ft) with an area of 2, 882 SF. The ADU will be a separate single-story structure (height = 15 ft) with an area of 412 SF and its own patio. No encroachment to oak trees is anticipated.	31504 Mulholland Highway, Malibu CA 90265
140	87058	New SFR with ADU and JADU	26719 Mulholland Highway, Calabasas CA 91302
141	PRJ2021-001353	new 2-story residential with 4 car attached garage and detached gazebo with pool and spa	557 Westlake Boulevard

4.0 Study Intersection Peak Hour Level of Service & Queue Analysis

4.1 Existing Conditions Study Intersection Peak Hour LOS & Queue Analysis

Existing Conditions level of service (LOS) calculations for the study intersection is shown in Table 4-1A and are based upon the baseline adjusted existing (2021) volumes shown in Exhibit 2-2, and the existing geometry shown in Exhibit 2-1.

As shown in Table 4-1A, the study intersection is currently operating at LOS A during the peak hours for Existing Conditions.

An analysis of vehicular queues has also been performed utilizing the Highway Capacity Manual (HCM) 95th percentile methodology to determine the adequacy of the eastbound Ventura Boulevard left-turn pocket to accommodate the traffic volumes for Existing Conditions.

Existing Conditions 95th percentile vehicular queue analysis summary for the study intersection is shown in Table 4-1B.

As shown in Table 4-1B, adequate storage capacity is currently provided for the eastbound Ventura Boulevard left-turn movement for Existing Conditions.

Detailed LOS analysis sheets for Existing Conditions are contained in Appendix B.

4.2 Project Opening Year (2022) With Ambient Growth With Project Conditions Study Intersection Peak Hour LOS & Queue Analysis

As previously noted, after review of the provided cumulative projects land uses and location in relation to the proposed project, none were identified to generate significant cumulative traffic within the study area.

Project Opening Year (2022) With Ambient Growth With Project Conditions level of service (LOS) calculations for the study intersections are shown in Table 4-2A and are based upon the Project Opening Year (2022) With Ambient Growth With Project Conditions traffic volumes shown in Exhibit 3-5, and the existing geometry shown in Exhibit 2-1.

As shown in Table 4-2A, the study intersection is forecast to continue operate at LOS A during the peak hours for Project Opening Year (2022) With Ambient Growth With Project Conditions.

An analysis of vehicular queues has also been performed utilizing the Highway Capacity Manual (HCM) 95th percentile methodology to determine the adequacy of the eastbound Ventura Boulevard left-turn pocket to accommodate the traffic volumes for Project Opening Year (2022) With Ambient Growth With Project Conditions.

Project Opening Year (2022) With Ambient Growth With Project Conditions 95th percentile vehicular queue analysis summary for the study intersection is shown in Table 4-2B.

As shown in Table 4-2B, adequate storage capacity is currently provided for the eastbound Ventura Boulevard left-turn movement for Project Opening Year (2022) With Ambient Growth With Project Conditions.

Detailed LOS analysis sheets for Project Opening Year (2022) With Ambient Growth With Project Conditions are contained in Appendix C.

Table 4-1A
Study Intersection LOS Analysis Summary
Existing (2021) Conditions

	Intersection	Traffic Control[3]	Delay (Secs)[1,2]		Level of Service	
			AM	PM	AM	PM
1.	Old Scandia Lane (NS) / Ventura Boulevard (EW)	CSS	8.5	9.1	A	A

1 Deficient operation shown in **Bold**.

2 HCM Analysis Software: Synchro, Version 10.0. Per the Highway Capacity Manual 6th Edition (HCM 6), intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single

3 CSS = Cross-Street Stop

Table 4-1B
Study Intersection HCM 95th Percentile Vehicular Queue Analysis Summary
Existing (2021) Conditions

	Intersection	Movement	Existing Storage Capacity (Feet)	HCM 95th Percentile Vehicular Queue (Feet) [1]	Adequate Left-Turn Storage Available?
1.	Old Scandia Lane (NS) / Ventura Boulevard (EW)	Eastbound Left-Turn	100	0 - Nominal	Yes

[1] HCM Analysis Software: Synchro, Version 10.0. Per the Highway Capacity Manual 6th Edition (HCM 6).

Table 4-2A
Study Intersection LOS Analysis Summary
Project Opening Year (2022) With Ambient Growth With Project Conditions

	Intersection	Traffic Control[3]	Delay (Secs)[1,2]		Level of Service	
			AM	PM	AM	PM
1.	Old Scandia Lane (NS) / Ventura Boulevard (EW)	CSS	8.5	9.2	A	A

1 Deficient operation shown in **Bold**.

2 HCM Analysis Software: Synchro, Version 10.0. Per the Highway Capacity Manual 6th Edition (HCM 6), intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single

3 CSS = Cross-Street Stop

Table 4-2B
Study Intersection HCM 95th Percentile Vehicular Queue Analysis Summary
Project Opening Year (2022) With Ambient Growth With Project Conditions

	Intersection	Movement	Existing Storage Capacity (Feet)	HCM 95th Percentile Vehicular Queue (Feet) [1]	Adequate Left-Turn Storage Available?
1.	Old Scandia Lane (NS) / Ventura Boulevard (EW)	Eastbound Left-Turn	100	25 feet - 1 Vehicle	Yes

[1] HCM Analysis Software: Synchro, Version 10.0. Per the Highway Capacity Manual 6th Edition (HCM 6).

5.0 CEQA Vehicle Miles Traveled (VMT) Analysis

In accordance with the Office of Planning Research (OPR), vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision 15064.3(b)(2) of the CEQA Guidelines, regarding roadway capacity, a project's effect on automobile delay cannot constitute a significant environmental impact.

The County of Los Angles has updated their transportation impact analysis guidelines, *Los Angeles County Public Works Transportation Impact Analysis Guidelines, (July 23, 2020)*, to provide recommendations in the form of thresholds of significance and methodology for identifying VMT related impacts. The proposed project is subject to a VMT analysis and will adhere to the recommendations and practices described in the *Los Angeles County Public Works Transportation Impact Analysis Guidelines, July 23, 2020).*

The County of Los Angeles has developed a VMT analysis tool to evaluate VMT impacts for projects. The VMT tool has input parameters for the following land use types:

- Residential – Single Family Housing;
- Residential – Multifamily Housing;
- Residential – Affordable Housing;
- Office – General Office;
- Office – Medical Office;
- Retail – Shopping Center, Restaurant, Services;
- Industrial – Warehousing;
- Industrial – Light Industrial; and
- Custom Land Use.

Since the proposed project consists of self-storage use, it does not fall into any of the above categories. The closest use would be industrial/warehousing. However, a self-storage use is vastly different than a warehouse as it does not generate significant truck use, or has many employees. For instance, the proposed project is expected to have only one employee that will be required to live on-site. The rest of its traffic would be attributed to the few visits by customers do bring or remove items from the storages. This is also reflected in the low trip generation of the proposed project as previously shown in Table 3-

2 which shows the project to generate approximately 240 daily trips which include approximately 18 AM peak hour trips and approximately 26 PM peak hour trips.

Another tool for VMT analysis is the Southern California Association of Governments (SCAG) traffic analysis model. However, the use of the SCAG might not be appropriate for a small self-storage type project generating a low number of trips since the SCAG model evaluates larger traffic analysis zones (TAZ) instead of individual parcels. Additionally, the type of the proposed land use (self-storage), is operationally much different than the generic and general land uses which the SCAG model is based on. The land uses contained in the SCAG model are broken down into general uses such as retail, residential, employment, etc. A self-storage use can be considered different than a general retail or even employment use in terms of traffic generation and VMT since it does not have many employees and the activities and traffic generation is much less than a general retail or office use.

Hence, to address the project's VMT impact, a qualitative analysis has been conducted.

The project has been qualitatively evaluated for VMT based on the following metrics:

- Employee VMT; and

- Total VMT.

1. **Employee VMT:** As previously noted, the proposed project is expected to have only one employee that will be required to live on-site. The rest of its traffic would be attributed to the few visits by customers do bring or remove items from the storages. Hence, the proposed project screens out for Employee VMT since there will be zero to nominal employee-related VMT for the project.

2. **Total VMT:** *The goal of the VMT and new CEQA criteria is to promote local-serving uses and discourage uses that result in longer vehicles miles and travel routes.* It is on this basis that generally local-serving retail uses are screened out of requiring a VMT analysis for most part. For example, a new gym use or grocery use, is actually expected to help in reducing VMT by helping the nearby residents not to have to drive far to obtain their groceries or visit a gym. If drivers had to drive 10 blocks before to get their groceries, with the new store, now they only have to drive three blocks.

On the same basis, the proposed self-storage use can be expected to have very low VMT, if not actually reduce existing VMTs due to the following:

- Self-storage uses are generally designed and built to serve the local community and hence fall into the local-serving land use type.

  As in the case of any self-storage use, the users that will utilize this self-storage can all be expected to live very close. Users will typically not be living in distant locations and have their items in a storage in Calabasas. This new self-storage use will provide a better and closer alternative for the nearby residents and businesses for storing their items, potentially reducing existing travel routes and trip lengths.

- Exhibit 5-1 shows the location of existing self-storage facilities in the area. As shown in Exhibit 5-1, currently a large number of self-storage facilities are in operation near the project site. Hence, the proposed project is not introducing a new use in the area which could then be viewed as a destination and attract patrons from distant areas. Instead, as shown in exhibit 5-1, the proposed project will be one of many existing self-storage facilities serving the area.

  As shown in Exhibit 5-1, the proposed Trojan Storage of Calabasas has the following similar land uses around it:

  - Life Storage is located on 5045 Old Scandia Ln, Calabasas, CA 91302 across the street from our site

  - Public Storage is located is located at 23811 Ventura Blvd, Calabasas, CA 91302 or 0.2 miles from our site

  - Public Storage is located at 22222 Ventura Blvd, Woodland Hills, CA 91364 or 2.4 miles from our site

  - Storage Etc…Woodland Hills is located at 6030 Canoga Ave, Woodland Hills, CA 91367 or 3.5 miles from our site

  - StorCal Self-Storage Woodland Hills #2 is located at 21051 W Oxnard St, Woodland Hills, CA 91367 or 3.7 miles from our site

- Storage Etc…Topanga Canyon is located at 7026 Topanga Canyon Blvd, Canoga Park, CA 91303 or 3.8 miles from our site

- StorCal Self-Storage Woodland Hills #3 is located at 6061 De Soto Ave, Woodland Hills, CA 91367 or 3.8 miles from our site

- Public Storage is located at 22222 Ventura Blvd, Woodland Hills, CA 91364 or 3.8 miles from our site

- Calabasas Self-Storage is located at 4200 Shadow Hills Rd, Agoura Hills, CA 91301 or 3.9 miles from our site

- StorCal Self-Storage Woodland Hills #1 is located at 6411 De Soto Ave, Woodland Hills, CA 91367 or 4.1 miles from our site

- StorQuest Self-Storage is located at 7700 Canoga Ave, Canoga Park, CA 91304 or 4.8 miles from our site

- Public Storage is located at 7900 Deering Ave, Canoga Park, CA 91304 or 5.1 miles from our site

- Self-Storage: Local is located at 21360 Deering Ct, Canoga Park, CA 91304 or 5.2 miles from our site

- Storage Etc…Canoga Park is located at 8111 Deering Ave, Canoga Park, CA 91304 or 5.2 miles from our site

- Public Storage is located at 20140 Sherman Way, Winnetka, CA 91306 or 5.4 miles from our site

- Agoura Self-Storage is located at 29301 Agoura Rd, Agoura Hills, CA 91301 or 6.5 miles from our site

- Conejo U-Store-It is located at 29055 Agoura Rd, Agoura Hills, CA 91301 or 6.2 miles from our site

- Public Storage is located at 18440 Burbank Blvd, Tarzana, CA 91356 or 6.7 miles from our site

- The Storage Place is located at 6836 Canby Ave, Reseda, CA 91335 or 7.1 miles from our site

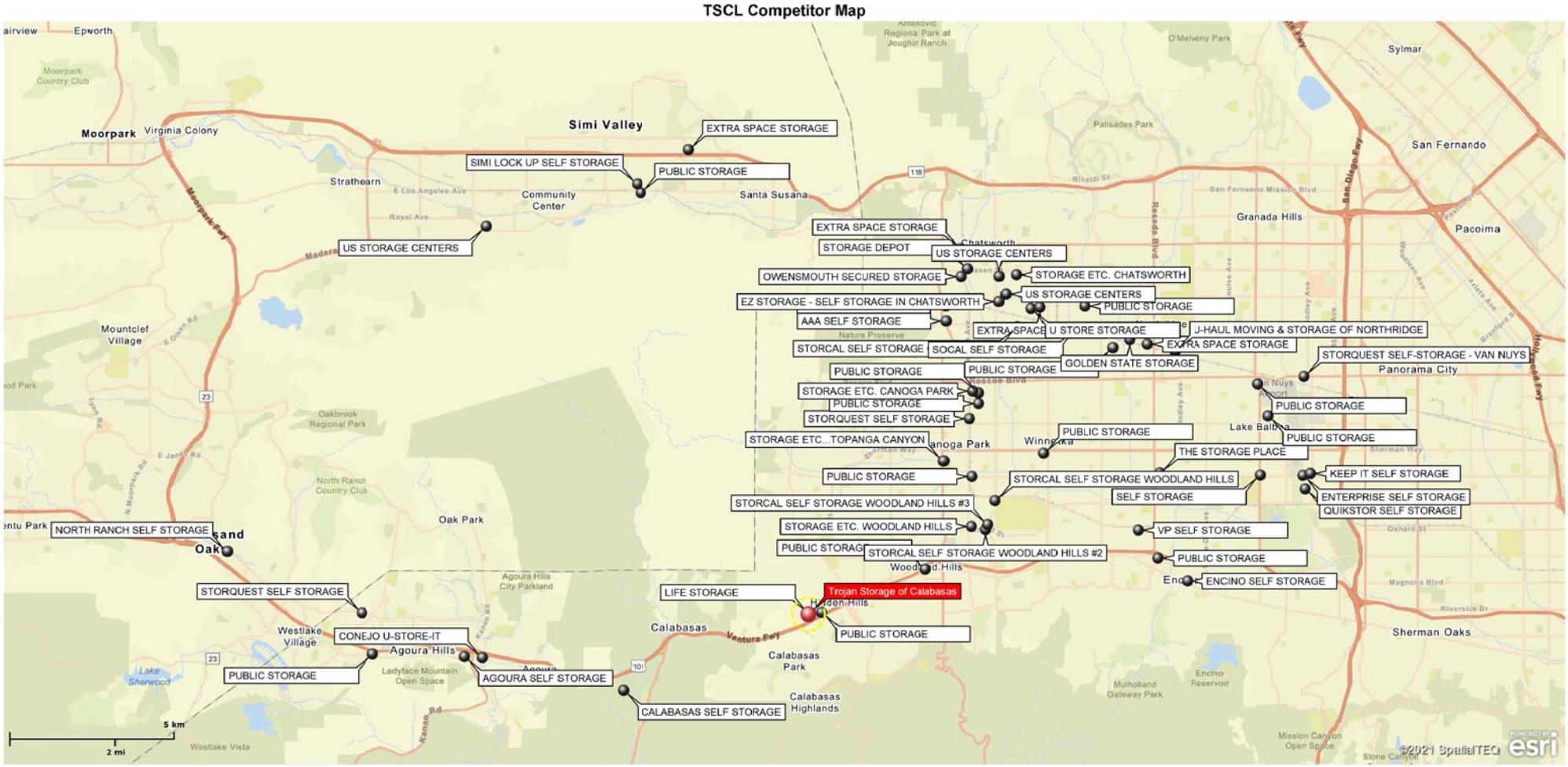
- Extra Space Storage is located at 18500 Eddy St, Northridge, CA 91324 or 8.2 miles from our site

- Golden State Storage is located at 18832 Rayen St, Northridge, CA 91324 or 8.4 miles from our site

Hence, the project is forecast to have a less than significant impact on VMT and potentially even reduce existing VMT in the area.

Exhibit 5-1

Map of Existing Storage Facilities



N

6.0 Residential Cut-Through Analysis

Development and transportation projects may be required to conduct a Local Residential Street Cut-Through Analysis (LRSTM). The objective of this analysis is to determine potential increases in average daily traffic (ADT) volumes on designated Local Streets near a project that can be classified as cut-through trips generated by the project, and that can adversely affect the character and function of those streets. Cut- through trips are defined as trips along a street classified as a Local Street in the County's General Plan, with residential land-use frontage, as an alternative to trips along a highway defined as Limited Secondary, Secondary, Major, Parkway, or Expressway as designated in the County's General Plan for purposes of accessing a destination that is not within the neighborhood within which the Local Street is located.

Cut-through traffic may result from development projects that add vehicle trips to congested arterial street segments, or by transportation projects that reduce vehicular capacity on highway street segments. To mitigate potential adverse impacts from cut-through traffic (e.g., congestion, access issues, and speeding on Local Streets), traffic calming and diverting features should be considered and, if deemed appropriate by Public Works, implemented to offset any anticipated cut-through traffic.

If the answer is yes to the following questions, further analysis may be required to assess whether the project would negatively affect residential streets:

- Is the project required to submit a Transportation Impact Analysis?

- Does the development project involve a discretionary action that would be reviewed by the Department of Regional Planning?

In addition, for development projects to which all of the following circumstances apply, select local residential street segments for analyses during the transportation assessment scoping process:

- The project is located along a current Limited Secondary, Secondary, Major, Parkway, Expressway per the County's General Plan and the study intersections under project build-out conditions (as determined in Section 4.1) operate at a peak hour LOS E or LOS F.

- The project has a potential, based on connectivity to the roadway network, to add automobile traffic to the alternative local residential street route(s) during peak hours.

- An alternative local residential street route (defined as local streets as designated in the County's General Plan passing through a residential neighborhood) provide motorists with a viable alternative route. A viable alternative local residential street route is defined as one which is parallel and reasonably adjacent to the primary route as to make it attractive as an alternative to the primary route. The project applicant in consultation with Public Works shall define which routes are viable alternative routes, based on, but not limited to, features such as geography and presence of existing traffic control devices, and other criteria as determined by Public Works.

For the purpose of screening for daily vehicle trips, a proposed project's daily vehicle trips should be estimated using the most recent edition of the ITE Trip Generation Manual. If the project proposed land use is not listed in the ITE Trip Generation Manual, please submit a trip generation study to Public Works for review and approval.

Based on the project's trip generation and also site location, the proposed project is not expected to result in cut-through residential traffic and satisfy the criteria listed above. Hence, a residential cut-through analysis is not required for the proposed project.

7.0 Construction Traffic Analysis

If the answer is yes to any of the following questions, further analysis will be required to assess if the project could negatively affect existing pedestrian, bicycle, transit, or vehicle circulation:

- For projects that require construction activities to take place within the right-of-way of a highway, would it be necessary to close any temporary lanes, alleys, or streets for more than one day (including day and evening hours, and overnight closures if on a residential street)?

- For projects that require construction activities to take place within the right-of-way of a Local Street, would it be necessary to temporarily close any lanes, alleys, or streets for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?

- Would in-street construction activities result in the loss of any vehicle, bicycle, or pedestrian access, including loss of existing bicycle parking to an existing land use for more than one day, including day and evening hours and overnight closures if access is lost to residential units?

- Would in-street construction activities result in the loss of any ADA access to an existing transit station, stop, or facility (e.g., layover zone)?

- Would in-street construction activities restrict access to any bus stops for more than one day, or necessitate any rerouting of a bus route?

- Would construction of a project interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas?

Since the proposed project is not expected to satisfy any of the above criteria, a construction traffic analysis is not required for the proposed project.

8.0 Findings & Conclusions

The purpose of this traffic impact analysis is to evaluate the proposed Trojan Calabasas Self-Storage Project (hereinafter referred to as project) from a traffic and circulation standpoint and to determine whether the proposed project will have a significant traffic impact on the environment. This study has been conducted pursuant to the *Los Angeles Public Works Transportation Impact Analysis Guidelines (July 2020)* and the California Environmental Quality Act (CEQA) requirements.

The project site is within the jurisdiction of Los Angeles County, hence Los Angeles County is considered as the lead agency for the proposed project. The project study area is also within the jurisdiction of Los Angeles County

Other nearby jurisdictions include City of Calabasas, City of Los Angeles, and California Department of Transportation (Caltrans). The analysis prepared is consistent with the requirements of these adjacent jurisdictions and utilizes the County of Los Angeles thresholds and requirements for evaluation of traffic impacts and operations which generally has the most stringent requirements and thresholds of the listed agencies.

Based on previous discussions with Caltrans staff, Caltrans generally focuses on projects that have a regional significance (large scale projects with potential to serve as a regional attraction and contribute a significant amount of traffic to the State Highway system) and/or take access off of a State Highway and require an encroachment permit from Caltrans, none of which apply to the proposed project.

8.1 Proposed Project

The proposed project is located at 5050 Old Scandia Lane in the County of Los Angeles. The project's parcel assessor number is 2049-022-040.

The proposed project consists of the construction of 1,334 self-storage units upon approximately 3.72 acres of land.

The project site is generally vacant and undeveloped.

Access for the project is planned via one unsignalized driveway located north of the Old Scandia Lane / Ventura Boulevard intersection.

The project is planned to open in 2022 and will be evaluated in one single phase.

8.2 Project Trip Generation

Based on ITE trip generation rates, the proposed project is forecast to generate approximately 240 daily trips which include approximately 18 AM peak hour trips and approximately 26 PM peak hour trips.

8.3 Study Intersections Level of Service & Queue Analysis Summary

The study intersection operates at LOS A during the peak hours for all of the analysis scenarios evaluated as part of this report.

Adequate storage capacity is provided for the eastbound Ventura Boulevard left-turn movement for all of the analysis scenarios evaluated as part of this report.

8.4 CEQA Vehicle Miles Traveled (VMT) Analysis Summary

In accordance with the Office of Planning Research (OPR), vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision 15064.3(b)(2) of the CEQA Guidelines, regarding roadway capacity, a project's effect on automobile delay cannot constitute a significant environmental impact.

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- Custom Land Use.

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Another tool for VMT analysis is the Southern California Association of Governments (SCAG) traffic analysis model. However, the use of the SCAG might not be appropriate for a small self-storage type project generating a low number of trips since the SCAG model evaluates larger traffic analysis zones (TAZ) instead of individual parcels. Additionally, the type of the proposed land use (self-storage), is operationally much different than the generic and general land uses which the SCAG model is based on. The land uses contained in the SCAG model are broken down into general uses such as retail, residential, employment, etc. A self-storage use can be considered different than a general retail or even employment use in terms of traffic generation and VMT since it does not have many employees and the activities and traffic generation is much less than a general retail or office use.

Hence, to address the project's VMT impact, a qualitative analysis has been conducted.

The project has been qualitatively evaluated for VMT based on the following metrics:

- Employee VMT; and
- Total VMT.

3. **Employee VMT:** As previously noted, the proposed project is expected to have only one employee that will be required to live on-site. The rest of its traffic would be attributed to the few visits by customers do bring or remove items from the storages. Hence, the proposed project screens out for Employee VMT since there will be zero to nominal employee-related VMT for the project.

4. **Total VMT:** *The goal of the VMT and new CEQA criteria is to promote local-serving uses and discourage uses that result in longer vehicles miles and travel routes.* It is on this basis that generally local-serving retail uses are screened out of requiring a VMT analysis for most part. For example, a new gym use or grocery use, is actually expected to help in reducing VMT by helping the nearby residents not to have to drive far to obtain their groceries or visit a gym. If drivers had to drive 10 blocks before to get their groceries, with the new store, now they only have to drive three blocks.

   On the same basis, the proposed self-storage use can be expected to have very low VMT, if not actually reduce existing VMTs due to the following:

   - Self-storage uses are generally designed and built to serve the local community and hence fall into the local-serving land use type.

     As in the case of any self-storage use, the users that will utilize this self-storage can all be expected to live very close. Users will typically not be living in distant locations and have their items in a storage in Calabasas. This new self-storage use will provide a better and closer alternative for the nearby residents and businesses for storing their items, potentially reducing existing travel routes and trip lengths.

   - Exhibit 5-1 shows the location of existing self-storage facilities in the area. As shown in Exhibit 5-1, currently a large number of self-storage facilities are in operation near the project site. Hence, the proposed project is not introducing a new use in the area which could then be viewed as a destination and attract patrons from distant areas. Instead, as shown in exhibit 5-1, the proposed project will be one of many existing self-storage facilities serving the area.

As shown in Exhibit 5-1, the proposed Trojan Storage of Calabasas has the following similar land uses around it:

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- Public Storage is located is located at 23811 Ventura Blvd, Calabasas, CA 91302 or 0.2 miles from our site
- Public Storage is located at 22222 Ventura Blvd, Woodland Hills, CA 91364 or 2.4 miles from our site
- Storage Etc…Woodland Hills is located at 6030 Canoga Ave, Woodland Hills, CA 91367 or 3.5 miles from our site
- StorCal Self-Storage Woodland Hills #2 is located at 21051 W Oxnard St, Woodland Hills, CA 91367 or 3.7 miles from our site
- Storage Etc…Topanga Canyon is located at 7026 Topanga Canyon Blvd, Canoga Park, CA 91303 or 3.8 miles from our site
- StorCal Self-Storage Woodland Hills #3 is located at 6061 De Soto Ave, Woodland Hills, CA 91367 or 3.8 miles from our site
- Public Storage is located at 22222 Ventura Blvd, Woodland Hills, CA 91364 or 3.8 miles from our site
- Calabasas Self-Storage is located at 4200 Shadow Hills Rd, Agoura Hills, CA 91301 or 3.9 miles from our site
- StorCal Self-Storage Woodland Hills #1 is located at 6411 De Soto Ave, Woodland Hills, CA 91367 or 4.1 miles from our site
- StorQuest Self-Storage is located at 7700 Canoga Ave, Canoga Park, CA 91304 or 4.8 miles from our site

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- Self-Storage: Local is located at 21360 Deering Ct, Canoga Park, CA 91304 or 5.2 miles from our site
- Storage Etc…Canoga Park is located at 8111 Deering Ave, Canoga Park, CA 91304 or 5.2 miles from our site
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- Agoura Self-Storage is located at 29301 Agoura Rd, Agoura Hills, CA 91301 or 6.5 miles from our site
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- Public Storage is located at 18440 Burbank Blvd, Tarzana, CA 91356 or 6.7 miles from our site
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- Extra Space Storage is located at 18500 Eddy St, Northridge, CA 91324 or 8.2 miles from our site
- Golden State Storage is located at 18832 Rayen St, Northridge, CA 91324 or 8.4 miles from our site

Hence, the project is forecast to have a less than significant impact on VMT and potentially even reduce existing VMT in the area.

8.5 Residential Cut-Through Analysis Summary

Based on the project's trip generation and also site location, the proposed project is not expected to result in cut-through residential traffic and satisfy the criteria listed above. Hence, a residential cut-through analysis is not required for the proposed project.

8.6 Construction Traffic Analysis Summary

Since the proposed project is not expected to satisfy any of the County's criteria for requiring a construction traffic analysis, a construction traffic analysis is not required for the proposed project.

Appendices

Appendix A-1

2018 Historical Traffic Counts

National Data & Surveying Services

Intersection Turning Movement Count

Location: Parkway Calabasas & Ventura Blvd
City: Calabasas
Control: Signalized

Project ID: Historical
Date: 8/23/2018

Total

NS/EW Streets:	Parkway Calabasas						Parkway Calabasas					Ventura Blvd					Ventura Blvd						
AM	NORTHBOUND						SOUTHBOUND					EASTBOUND					WESTBOUND						
	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	2	0.5	0.5	0	0	0	
	NL	NT	NR	NU	NR2	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	WU2	TOTAL
7:00 AM	12	4	4	0	37	0	1	9	0	0	0	1	2	15	0	0	129	21	15	0	0	0	250
7:15 AM	11	8	8	0	56	0	0	4	0	0	3	0	1	21	0	2	131	22	8	0	0	0	275
7:30 AM	13	13	7	1	84	0	0	10	0	0	2	0	0	10	0	3	209	18	12	0	1	0	383
7:45 AM	17	13	18	0	91	0	0	6	1	0	2	0	0	23	0	7	146	8	12	0	2	0	346
8:00 AM	14	19	26	0	110	0	2	10	1	0	0	0	1	9	0	2	151	16	23	0	0	0	384
8:15 AM	10	17	22	2	112	0	1	7	0	0	2	0	0	11	0	2	112	13	23	0	0	0	334
8:30 AM	9	16	26	0	107	0	1	11	0	0	3	0	0	11	0	3	122	19	21	0	2	0	351
8:45 AM	5	27	23	0	77	2	0	9	1	0	2	0	1	15	0	5	118	12	24	0	4	0	325
	NL	NT	NR	NU	NR2	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	WU2	TOTAL
TOTAL VOLUMES :	91	117	134	3	674	2	5	66	3	0	14	1	5	115	0	24	1118	129	138	0	9	0	2648
APPROACH %'s :	8.91%	11.46%	13.12%	0.29%	66.01%	0.20%	5.68%	75.00%	3.41%	0.00%	15.91%	0.69%	3.45%	79.31%	0.00%	16.55%	80.20%	9.25%	9.90%	0.00%	0.65%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																						TOTAL
PEAK HR VOL :	54	62	73	3	397	0	3	33	2	0	6	0	1	53	0	14	618	55	70	0	3	0	1447
PEAK HR FACTOR :	0.794	0.816	0.702	0.375	0.886	0.000	0.375	0.825	0.500	0.000	0.750	0.000	0.250	0.576	0.000	0.500	0.739	0.764	0.761	0.000	0.375	0.000	0.942
	0.871						0.846					0.567					0.777						

PM	NORTHBOUND						SOUTHBOUND					EASTBOUND					WESTBOUND						
	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	2	0.5	0.5	0	0	0	
	NL	NT	NR	NU	NR2	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	WU2	TOTAL
4:00 PM	4	8	12	1	105	0	2	22	1	0	2	1	0	30	0	3	202	9	20	0	9	0	431
4:15 PM	4	6	9	1	118	0	1	32	0	0	7	2	2	40	0	10	172	7	7	0	6	0	424
4:30 PM	4	8	10	0	113	0	3	27	0	0	8	0	1	40	0	8	191	11	10	0	12	0	446
4:45 PM	0	11	7	1	88	0	4	24	0	0	16	0	0	43	0	11	172	5	10	0	10	0	402
5:00 PM	4	12	12	0	105	0	3	42	1	0	10	0	0	39	0	10	198	6	8	0	27	0	477
5:15 PM	4	5	3	0	104	0	0	47	0	0	9	1	1	20	0	4	186	12	10	0	13	0	419
5:30 PM	3	6	1	0	126	0	0	29	0	0	6	0	1	17	0	1	200	6	9	0	15	0	420
5:45 PM	4	5	6	0	109	0	0	31	0	0	15	0	1	21	0	5	168	6	10	0	7	0	388
	NL	NT	NR	NU	NR2	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	WU2	TOTAL
TOTAL VOLUMES :	27	61	60	3	868	0	13	254	2	0	73	4	6	250	0	52	1489	62	84	0	99	0	3407
APPROACH %'s :	2.65%	5.99%	5.89%	0.29%	85.18%	0.00%	3.80%	74.27%	0.58%	0.00%	21.35%	1.28%	1.92%	80.13%	0.00%	16.67%	85.87%	3.58%	4.84%	0.00%	5.71%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																						TOTAL
PEAK HR VOL :	12	37	38	2	424	0	11	125	1	0	41	2	3	162	0	39	733	29	35	0	55	0	1749
PEAK HR FACTOR :	0.750	0.771	0.792	0.500	0.898	0.000	0.688	0.744	0.250	0.000	0.641	0.250	0.375	0.942	0.000	0.886	0.926	0.659	0.875	0.000	0.509	0.000	0.917
	0.929						0.795					0.954					0.891						

Prepared by National Data & Surveying Services

Parkway Calabasas & Ventura Blvd

Peak Hour Turning Movement Count

ID: 18-05545-002
City: Calabasas

Day: Thursday
Date: 08/23/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:15 PM - 05:15 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Parkway Calabasas — SOUTHBOUND

AM	2	33	3	0	132	AM
NOON	0	0	0	0	0	NOON
PM	1	125	11	0	74	PM

Ventura Blvd — EASTBOUND

AM	NOON	PM		
111	0	42		
0	0	0	0	
0	0	2	1	
1	0	3	1	
53	0	162	0	
AM	NOON	PM		

Ventura Blvd — WESTBOUND

PM	NOON	AM		
35	0	70	0.5	
29	0	55	0.5	
733	0	618	2	
0	0	0	0	
52	0	77		
PM	NOON	AM		

	0	1	0	0		
					0.5	
					0.5	
					2	
					0	
	0	0	1	0		

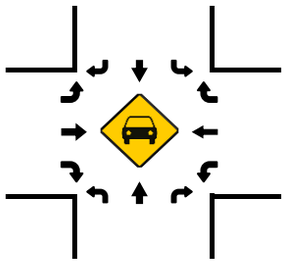
CONTROL: Signalized

TEV	1027 AM	0 NOON	1190 PM
PHF	0.94		0.92

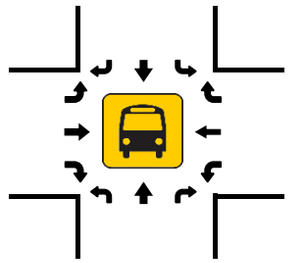
Parkway Calabasas — NORTHBOUND

PM	1022	2	12	37	38	PM
NOON	0	0	0	0	0	NOON
AM	707	3	54	62	73	AM

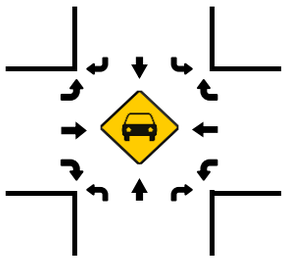
Total Vehicles (AM)



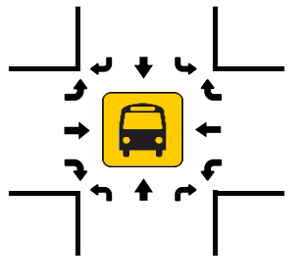
Total Vehicles (AM)



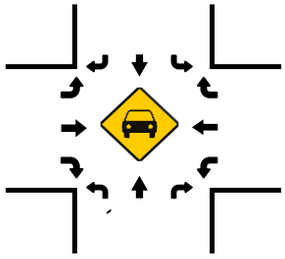
Total Vehicles (NOON)



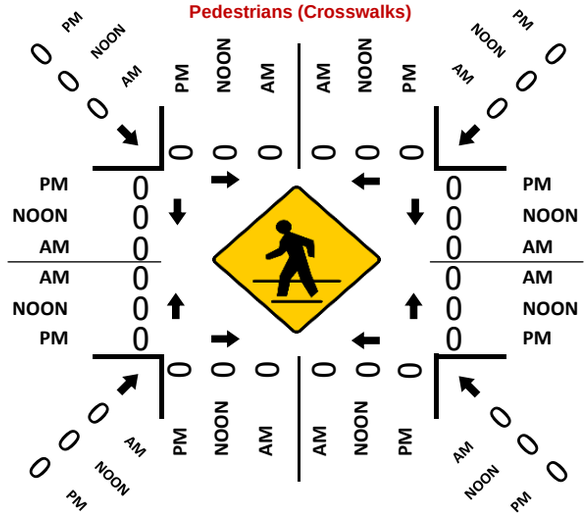
Total Vehicles (NOON)



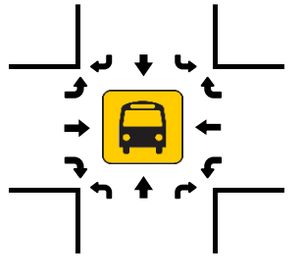
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



Appendix A-2

Newly Collected 2021 Filed Traffic Counts

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268
counts@countsunlimited.com

County of Los Angeles
N/S: Parkway Calabasas
E/W: Ventura Boulevard
Weather: Clear

File Name : CLA_Parkway Calabasas_Ventura_AM
Site Code : 10521210
Start Date : 5/11/2021
Page No : 1

Groups Printed- Total Volume

	Parkway Calabasas Southbound				Ventura Boulevard Westbound				Parkway Calabasas Northbound				Ventura Boulevard 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	5	0	5	90	6	7	103	2	6	8	16	0	0	12	12	136
07:15 AM	0	8	0	8	123	10	17	150	3	5	7	15	0	1	5	6	179
07:30 AM	2	11	0	13	171	11	8	190	0	6	14	20	0	0	10	10	233
07:45 AM	3	11	1	15	177	15	12	204	0	12	12	24	1	1	5	7	250
Total	5	35	1	41	561	42	44	647	5	29	41	75	1	2	32	35	798
08:00 AM	0	4	0	4	165	7	20	192	3	16	23	42	0	0	8	8	246
08:15 AM	1	11	0	12	161	9	20	190	4	12	15	31	1	0	5	6	239
08:30 AM	2	7	2	11	138	11	15	164	3	13	12	28	1	1	5	7	210
08:45 AM	2	9	0	11	141	13	18	172	7	12	18	37	0	1	9	10	230
Total	5	31	2	38	605	40	73	718	17	53	68	138	2	2	27	31	925
Grand Total	10	66	3	79	1166	82	117	1365	22	82	109	213	3	4	59	66	1723
Apprch %	12.7	83.5	3.8		85.4	6	8.6		10.3	38.5	51.2		4.5	6.1	89.4		
Total %	0.6	3.8	0.2	4.6	67.7	4.8	6.8	79.2	1.3	4.8	6.3	12.4	0.2	0.2	3.4	3.8	

	Parkway Calabasas Southbound				Ventura Boulevard Westbound				Parkway Calabasas Northbound				Ventura Boulevard 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 07:30 AM																	
07:30 AM	2	**11**	0	13	171	11	8	190	0	6	14	20	0	0	**10**	**10**	233
07:45 AM	**3**	11	**1**	**15**	**177**	**15**	12	**204**	0	12	12	24	**1**	**1**	5	7	**250**
08:00 AM	0	4	0	4	165	7	**20**	192	3	**16**	**23**	**42**	0	0	8	8	246
08:15 AM	1	11	0	12	161	9	20	190	**4**	12	15	31	1	0	5	6	239
Total Volume	6	37	1	44	674	42	60	776	7	46	64	117	2	1	28	31	968
% App. Total	13.6	84.1	2.3		86.9	5.4	7.7		6	39.3	54.7		6.5	3.2	90.3		
PHF	.500	.841	.250	.733	.952	.700	.750	.951	.438	.719	.696	.696	.500	.250	.700	.775	.968

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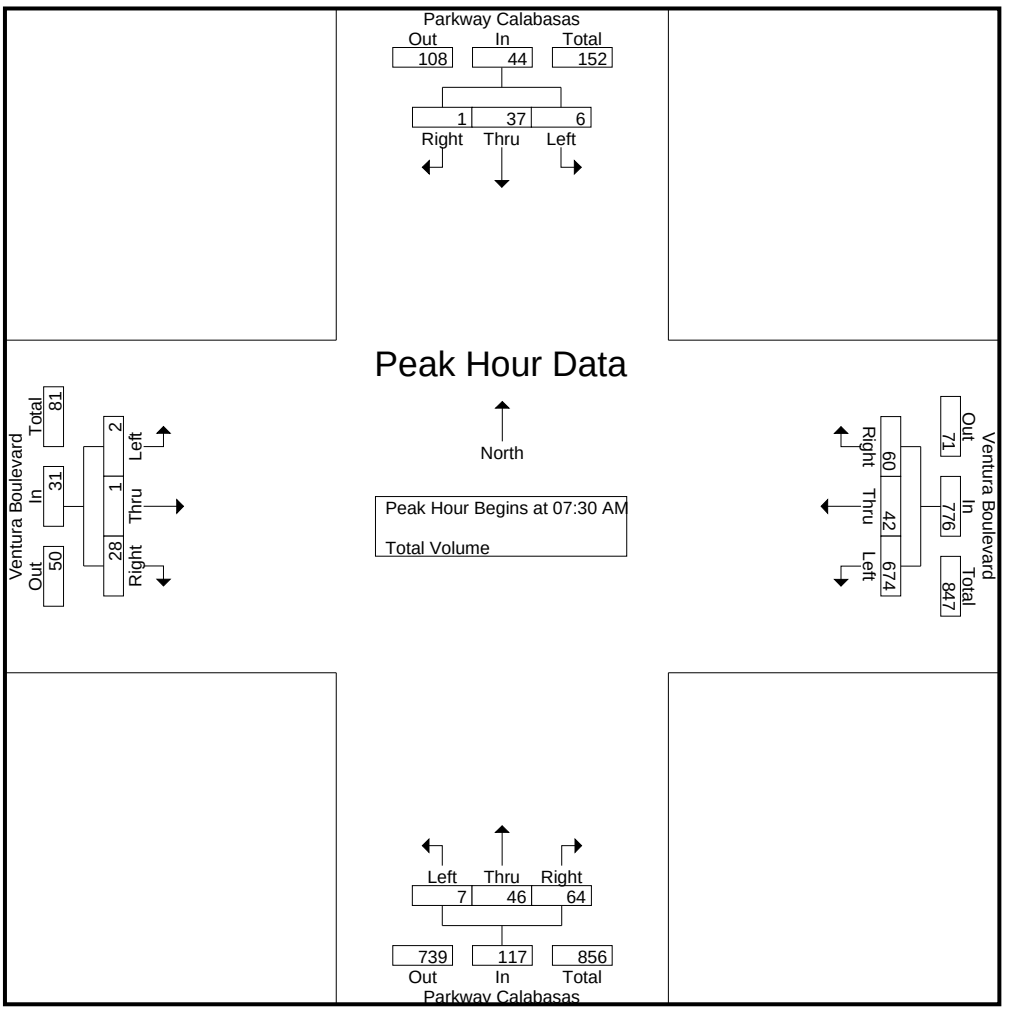
County of Los Angeles
N/S: Parkway Calabasas
E/W: Ventura Boulevard
Weather: Clear

File Name : CLA_Parkway Calabasas_Ventura_AM
Site Code : 10521210
Start Date : 5/11/2021
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:

	07:30 AM				07:30 AM				08:00 AM				07:00 AM			
+0 mins.	2	**11**	0	13	171	11	8	190	3	**16**	**23**	**42**	0	0	**12**	**12**
+15 mins.	**3**	11	**1**	**15**	**177**	**15**	12	**204**	4	12	15	31	0	**1**	5	6
+30 mins.	0	4	0	4	165	7	**20**	192	3	13	12	28	0	0	10	10
+45 mins.	1	11	0	12	161	9	20	190	**7**	12	18	37	**1**	1	5	7
Total Volume	6	37	1	44	674	42	60	776	17	53	68	138	1	2	32	35
% App. Total	13.6	84.1	2.3		86.9	5.4	7.7		12.3	38.4	49.3		2.9	5.7	91.4	
PHF	.500	.841	.250	.733	.952	.700	.750	.951	.607	.828	.739	.821	.250	.500	.667	.729

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County of Los Angeles
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E/W: Ventura Boulevard
Weather: Clear

File Name : CLA_Parkway Calabasas_Ventura_PM
Site Code : 10521210
Start Date : 5/11/2021
Page No : 1

Groups Printed- Total Volume

	Parkway Calabasas Southbound				Ventura Boulevard Westbound				Parkway Calabasas Northbound				Ventura Boulevard 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	1	27	0	28	190	10	18	218	3	12	29	44	0	1	11	12	302
04:15 PM	1	19	0	20	141	7	9	157	3	4	11	18	0	0	9	9	204
04:30 PM	0	25	1	26	153	12	10	175	7	12	8	27	0	1	10	11	239
04:45 PM	0	53	0	53	146	9	6	161	2	6	8	16	0	0	10	10	240
Total	2	124	1	127	630	38	43	711	15	34	56	105	0	2	40	42	985
05:00 PM	0	55	1	56	166	8	8	182	7	9	9	25	0	1	12	13	276
05:15 PM	0	37	1	38	143	6	6	155	14	8	4	26	1	0	14	15	234
05:30 PM	0	38	1	39	137	6	7	150	3	6	5	14	0	0	20	20	223
05:45 PM	0	23	0	23	146	2	2	150	3	5	4	12	2	0	9	11	196
Total	0	153	3	156	592	22	23	637	27	28	22	77	3	1	55	59	929
Grand Total	2	277	4	283	1222	60	66	1348	42	62	78	182	3	3	95	101	1914
Apprch %	0.7	97.9	1.4		90.7	4.5	4.9		23.1	34.1	42.9		3	3	94.1		
Total %	0.1	14.5	0.2	14.8	63.8	3.1	3.4	70.4	2.2	3.2	4.1	9.5	0.2	0.2	5	5.3	

	Parkway Calabasas Southbound				Ventura Boulevard Westbound				Parkway Calabasas Northbound				Ventura Boulevard 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 04:30 PM																	
04:30 PM	0	25	**1**	26	153	**12**	**10**	175	7	**12**	8	**27**	0	**1**	10	11	239
04:45 PM	0	53	0	53	146	9	6	161	2	6	8	16	0	0	10	10	240
05:00 PM	0	**55**	1	**56**	**166**	8	8	**182**	7	9	**9**	25	0	1	12	13	**276**
05:15 PM	0	37	1	38	143	6	6	155	**14**	8	4	26	**1**	0	**14**	**15**	234
Total Volume	0	170	3	173	608	35	30	673	30	35	29	94	1	2	46	49	989
% App. Total	0	98.3	1.7		90.3	5.2	4.5		31.9	37.2	30.9		2	4.1	93.9		
PHF	.000	.773	.750	.772	.916	.729	.750	.924	.536	.729	.806	.870	.250	.500	.821	.817	.896

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County of Los Angeles
N/S: Parkway Calabasas
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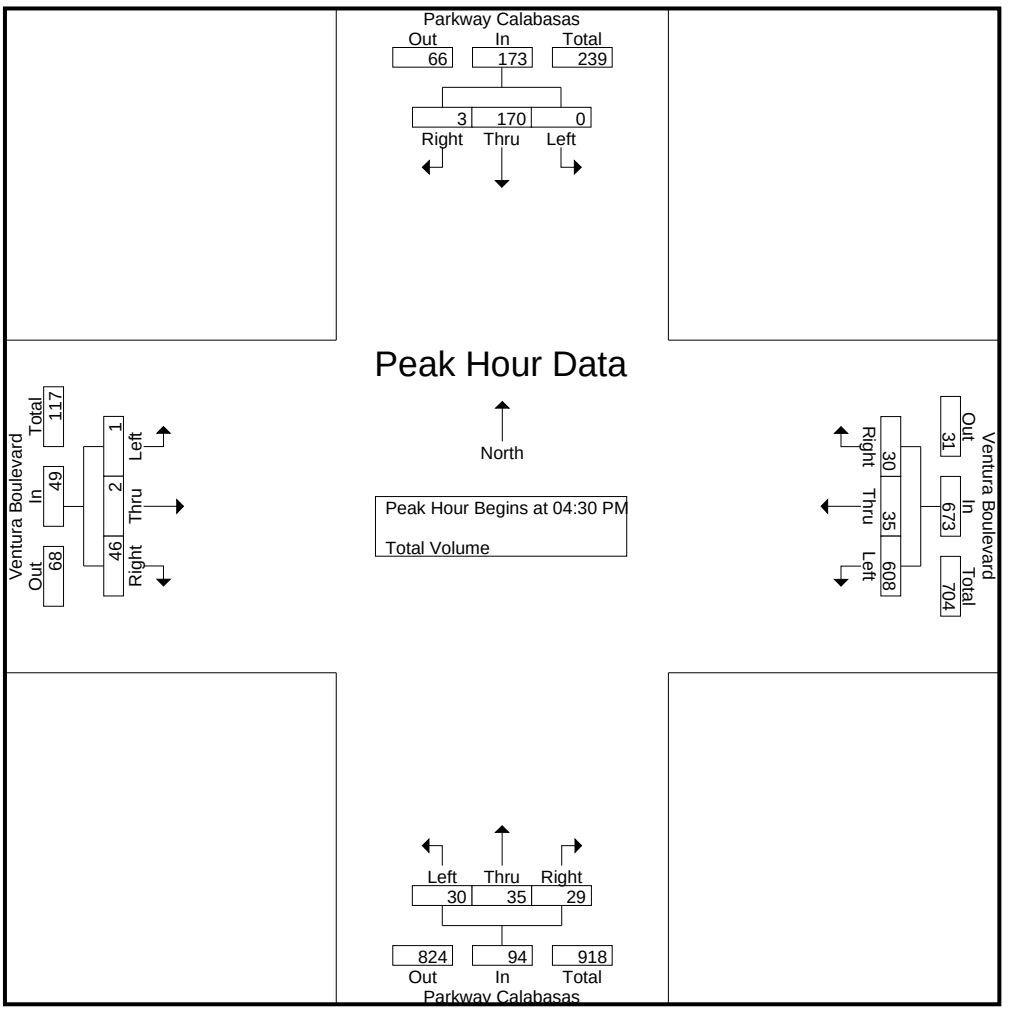
Weather: Clear

File Name : CLA_Parkway Calabasas_Ventura_PM
Site Code : 10521210
Start Date : 5/11/2021
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:

	04:45 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	0	53	0	53	**190**	10	**18**	**218**	3	**12**	**29**	**44**	0	**1**	12	13
+15 mins.	0	**55**	**1**	**56**	141	7	9	157	3	4	11	18	1	0	14	15
+30 mins.	0	37	1	38	153	**12**	10	175	**7**	12	8	27	0	0	**20**	**20**
+45 mins.	0	38	1	39	146	9	6	161	2	6	8	16	**2**	0	9	11
Total Volume	0	183	3	186	630	38	43	711	15	34	56	105	3	1	55	59
% App. Total	0	98.4	1.6		88.6	5.3	6		14.3	32.4	53.3		5.1	1.7	93.2	
PHF	.000	.832	.750	.830	.829	.792	.597	.815	.536	.708	.483	.597	.375	.250	.688	.738

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County of Los Angeles
N/S: Old Scandia Lane
E/W: Ventura Boulevard
Weather: Clear

File Name : CLA_Old Scandia_Ventura_AM
Site Code : 10521210
Start Date : 5/11/2021
Page No : 1

Groups Printed- Total Volume

	Old Scandia Lane Southbound			Ventura Boulevard Westbound			Ventura Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	6	0	6	4	8	12	18
07:15 AM	0	1	1	8	1	9	4	10	14	24
07:30 AM	0	1	1	7	0	7	5	14	19	27
07:45 AM	0	4	4	1	0	1	8	13	21	26
Total	0	6	6	22	1	23	21	45	66	95
08:00 AM	0	0	0	11	0	11	7	25	32	43
08:15 AM	0	0	0	1	0	1	5	15	20	21
08:30 AM	0	1	1	4	0	4	3	20	23	28
08:45 AM	0	3	3	6	0	6	4	19	23	32
Total	0	4	4	22	0	22	19	79	98	124
Grand Total	0	10	10	44	1	45	40	124	164	219
Apprch %	0	100		97.8	2.2		24.4	75.6		
Total %	0	4.6	4.6	20.1	0.5	20.5	18.3	56.6	74.9	

	Old Scandia Lane Southbound			Ventura Boulevard Westbound			Ventura Boulevard 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 08:00 AM										
08:00 AM	0	0	0	**11**	0	**11**	**7**	**25**	**32**	**43**
08:15 AM	0	0	0	1	0	1	5	15	20	21
08:30 AM	0	1	1	4	0	4	3	20	23	28
08:45 AM	0	**3**	**3**	6	0	6	4	19	23	32
Total Volume	0	4	4	22	0	22	19	79	98	124
% App. Total	0	100		100	0		19.4	80.6		
PHF	.000	.333	.333	.500	.000	.500	.679	.790	.766	.721

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File Name : CLA_Old Scandia_Ventura_AM
Site Code : 10521210
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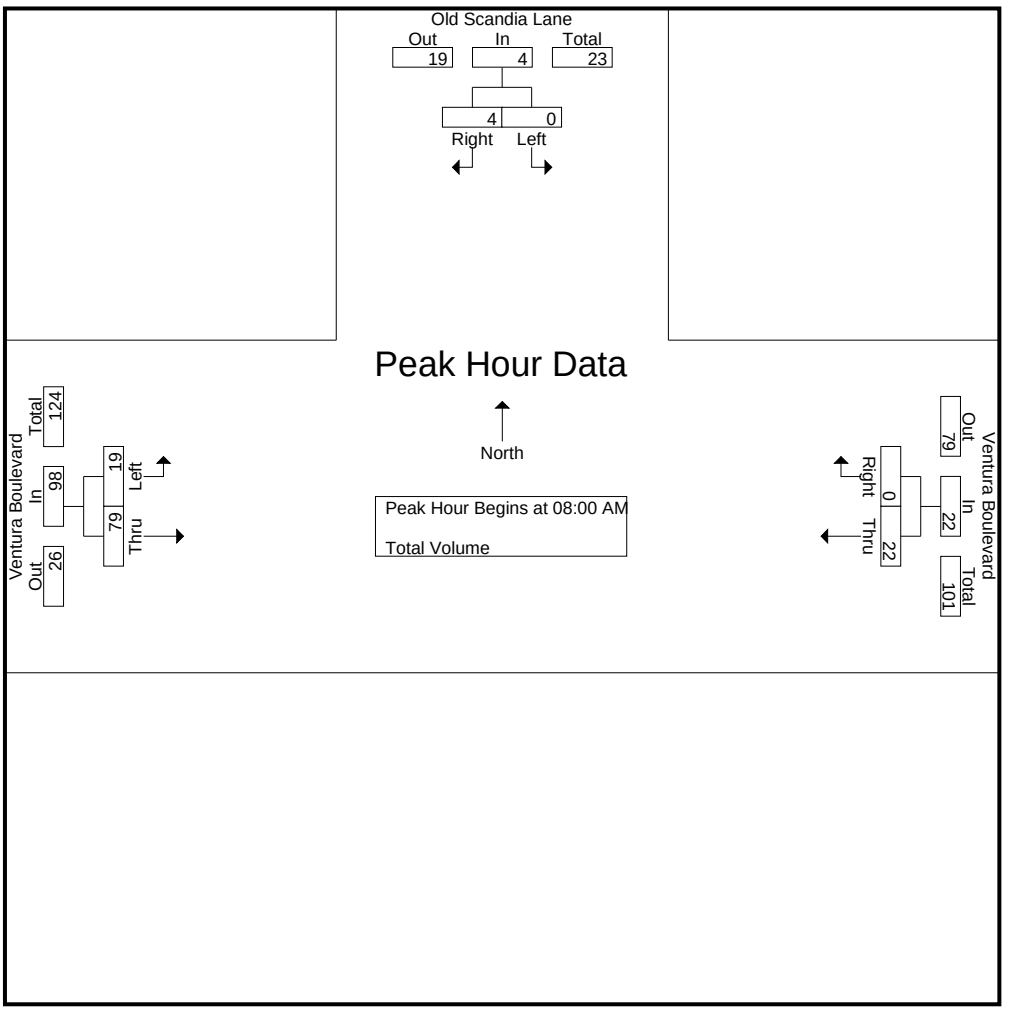
Page No : 2



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			07:15 AM			08:00 AM		
+0 mins.	0	0	0	8	**1**	9	**7**	**25**	**32**
+15 mins.	0	1	1	7	0	7	5	15	20
+30 mins.	0	1	1	1	0	1	3	20	23
+45 mins.	0	**4**	**4**	**11**	0	**11**	4	19	23
Total Volume	0	6	6	27	1	28	19	79	98
% App. Total	0	100		96.4	3.6		19.4	80.6	
PHF	.000	.375	.375	.614	.250	.636	.679	.790	.766

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Weather: Clear

File Name : CLA_Old Scandia_Ventura_pm
Site Code : 10521210
Start Date : 5/11/2021
Page No : 1

Groups Printed- Total Volume

	Old Scandia Lane Southbound			Ventura Boulevard Westbound			Ventura Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	12	12	21	2	23	5	12	17	52
04:15 PM	0	3	3	18	0	18	4	15	19	40
04:30 PM	0	11	11	21	0	21	3	9	12	44
04:45 PM	0	6	6	13	0	13	2	6	8	27
Total	0	32	32	73	2	75	14	42	56	163
05:00 PM	1	5	6	32	0	32	0	11	11	49
05:15 PM	0	3	3	21	0	21	1	5	6	30
05:30 PM	0	4	4	23	0	23	3	8	11	38
05:45 PM	0	2	2	12	0	12	0	9	9	23
Total	1	14	15	88	0	88	4	33	37	140
Grand Total	1	46	47	161	2	163	18	75	93	303
Apprch %	2.1	97.9		98.8	1.2		19.4	80.6		
Total %	0.3	15.2	15.5	53.1	0.7	53.8	5.9	24.8	30.7	

	Old Scandia Lane Southbound			Ventura Boulevard Westbound			Ventura Boulevard 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	0	**12**	**12**	**21**	**2**	**23**	**5**	12	17	**52**
04:15 PM	0	3	3	18	0	18	4	**15**	**19**	40
04:30 PM	0	11	11	21	0	21	3	9	12	44
04:45 PM	0	6	6	13	0	13	2	6	8	27
Total Volume	0	32	32	73	2	75	14	42	56	163
% App. Total	0	100		97.3	2.7		25	75		
PHF	.000	.667	.667	.869	.250	.815	.700	.700	.737	.784

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County of Los Angeles
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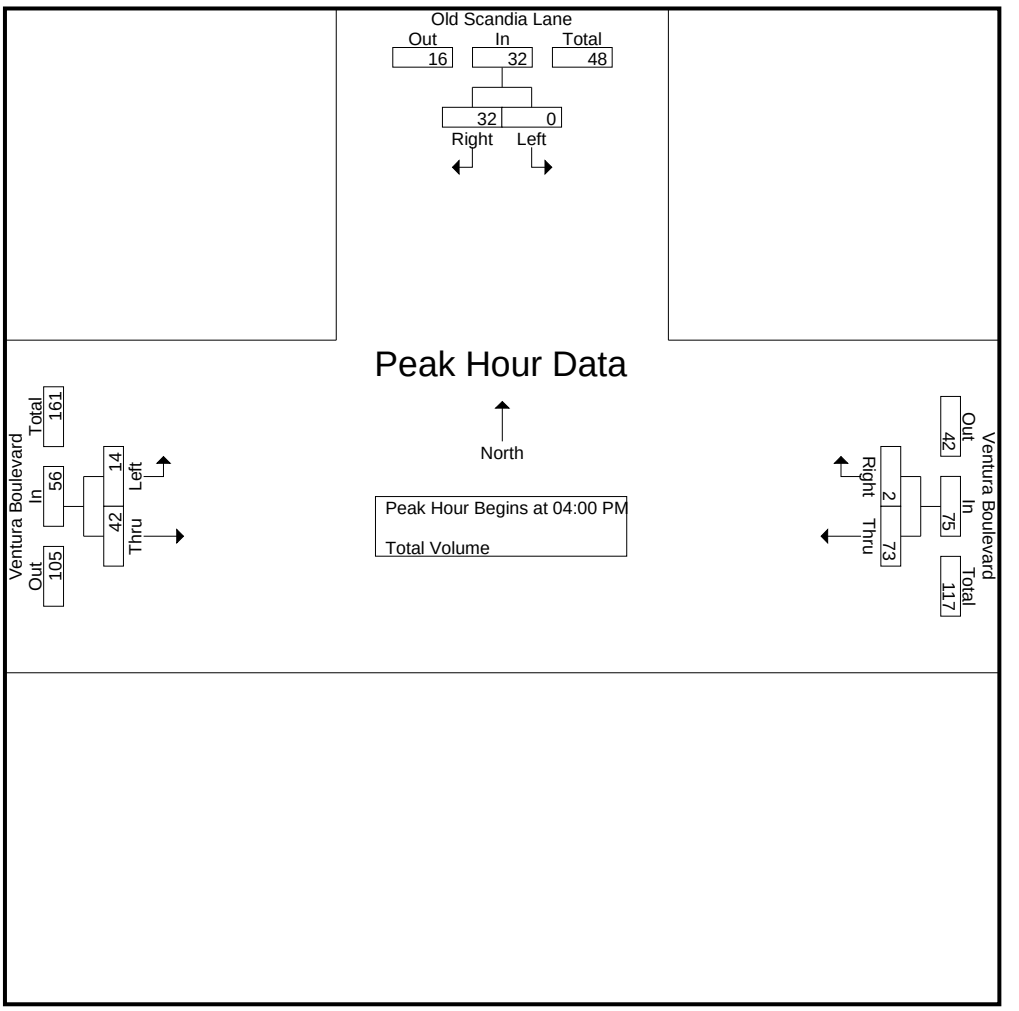
File Name : CLA_Old Scandia_Ventura_pm
Site Code : 10521210
Start Date : 5/11/2021
Page No : 2



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			04:45 PM			04:00 PM		
+0 mins.	0	**12**	**12**	13	0	13	**5**	12	17
+15 mins.	0	3	3	**32**	0	**32**	4	**15**	**19**
+30 mins.	0	11	11	21	0	21	3	9	12
+45 mins.	0	6	6	23	0	23	2	6	8
Total Volume	0	32	32	89	0	89	14	42	56
% App. Total	0	100		100	0		25	75	
PHF	.000	.667	.667	.695	.000	.695	.700	.700	.737

Appendix A-3

Traffic Count calculations & Adjustment Factors

Parkway Calabasas (NS) / Ventura Boulevard (EW)

2018 Traffic Count Data

Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Parkway Calabasas (NS) / Ventura Boulevard (EW)	AM	57	62	73	3	33	2	0	1	53	618	55	70	1,027	0.94
	PM	14	37	38	11	125	1	2	3	162	733	29	35	1,190	0.92

Projected 2020 Traffic Count Data (Using Growth Rate of 0.41% Per Year or 1.0082 from 2018 to 2020)

Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Parkway Calabasas (NS) / Ventura Boulevard (EW)	AM	58	63	74	4	34	3	0	2	54	624	56	71	1,043	0.94
	PM	15	38	39	12	127	2	3	4	164	740	30	36	1,210	0.92

Projected 2021 Traffic Count Data (Using Growth Rate of 0.21% Per Year or 1.0021 from 2020 to 2021)

Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Parkway Calabasas (NS) / Ventura Boulevard (EW)	AM	59	64	75	5	35	4	0	3	55	626	57	72	1,055	0.94
	PM	16	39	40	13	128	3	4	5	165	742	31	37	1,223	0.92

Newly Collected 2021 Traffic Count Data

Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Parkway Calabasas (NS) / Ventura Boulevard (EW)	AM	7	46	64	6	37	1	2	1	28	674	42	60	968	0.968
	PM	30	35	29	0	170	3	1	2	46	608	35	30	989	0.896

	AM	PM
2021 Projected Traffic Volume from 2018 Counts	1,055	1,223
2021 Collected Traffic Volume from Field Data	968	989
Adjustment Factor	**1.0899**	**1.2366**

Adjusted 2021 Traffic Count Data for use in Study

Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Parkway Calabasas (NS) / Ventura Boulevard (EW)	AM	8	51	70	7	41	2	3	2	31	735	46	66	1,062	0.94
	PM	38	44	36	0	211	4	2	3	57	752	44	38	1,229	0.92

Old Scandia Lane (NS) / Ventura Boulevard (EW)

Newly Collected 2021 Traffic Count Data

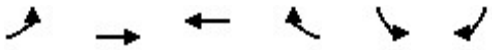
Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Old Scandia Lane (NS) / Ventura Boulevard (EW)	AM	0	0	0	0	0	4	19	79	0	0	22	0	124	0.721
	PM	0	0	0	0	0	32	14	42	0	0	73	2	163	0.784

Adjusted 2021 Traffic Count Data for use in Study

Study Intersection	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	PHF
Old Scandia Lane (NS) / Ventura Boulevard (EW)	AM	0	0	0	0	0	5	21	87	0	0	24	0	137	0.721
	PM	0	0	0	0	0	40	18	52	0	0	91	3	204	0.784

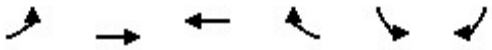
Appendix B

Intersection LOS Analysis Sheets – Existing Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	1863	0	1611	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	1863	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		325	318		554	
Travel Time (s)		7.4	7.2		12.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	21	87	24	0	0	5
Future Volume (vph)	21	87	24	0	0	5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	29	121	33	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	121	33	0	7	0

Intersection Summary

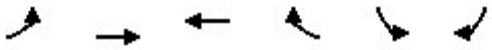
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	87	24	0	0	5
Future Vol, veh/h	21	87	24	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	121	33	0	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	212	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	179	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	776	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	852	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1579	-	-	-	762	1041
Mov Cap-2 Maneuver	-	-	-	-	762	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	852	-

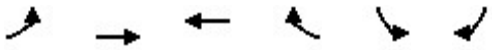
Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	1041
HCM Lane V/C Ratio	0.018	-	-	-	0.007
HCM Control Delay (s)	7.3	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	1855	0	1611	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	1855	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		325	318		554	
Travel Time (s)		7.4	7.2		12.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	18	52	91	3	0	40
Future Volume (vph)	18	52	91	3	0	40
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	23	67	117	4	0	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	67	121	0	51	0

Intersection Summary

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	52	91	3	0	40
Future Vol, veh/h	18	52	91	3	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	67	117	4	0	51

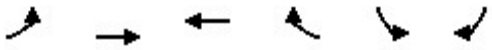
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	121	0	-	0	232	119
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	113	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1467	-	-	-	756	933
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1467	-	-	-	744	933
Mov Cap-2 Maneuver	-	-	-	-	744	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	912	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1467	-	-	-	933
HCM Lane V/C Ratio	0.016	-	-	-	0.055
HCM Control Delay (s)	7.5	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

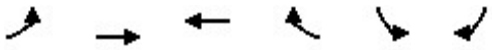
Appendix C

Intersection LOS Analysis Sheets – Project Opening Year (2022)
With Project Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	1863	0	1611	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	1863	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		325	318		554	
Travel Time (s)		7.4	7.2		12.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	30	87	24	0	0	14
Future Volume (vph)	30	87	24	0	0	14
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	42	121	33	0	0	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	121	33	0	19	0

Intersection Summary

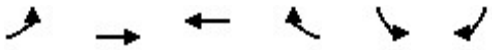
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	87	24	0	0	14
Future Vol, veh/h	30	87	24	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	121	33	0	0	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	238	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	750	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1579	-	-	-	730	1041
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	829	-

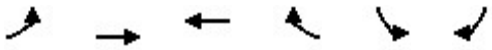
Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	1041
HCM Lane V/C Ratio	0.026	-	-	-	0.019
HCM Control Delay (s)	7.3	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	1855	0	1611	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	1855	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		325	318		554	
Travel Time (s)		7.4	7.2		12.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	31	52	91	3	0	53
Future Volume (vph)	31	52	91	3	0	53
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	40	67	117	4	0	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	67	121	0	68	0

Intersection Summary

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	52	91	3	0	53
Future Vol, veh/h	31	52	91	3	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	67	117	4	0	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	121	0	-	0	266	119
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	147	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1467	-	-	-	723	933
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1467	-	-	-	703	933
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1467	-	-	-	933
HCM Lane V/C Ratio	0.027	-	-	-	0.073
HCM Control Delay (s)	7.5	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

MARK PESTRELLA, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

March 22, 2022

IN REPLY PLEASE
REFER TO FILE: T-4

Ingo Giani
Trojan Storage
1732 Aviation Blvd, Suite 217
Redondo Beach, CA 90278

Dear Ingo Giani:

5050 SCANDIA LANE, TROJAN CALABASAS SELF-STORAGE
TRAFFIC STUDY – OCTOBER 28, 2021
UNINCORPORATED CALABASAS AREA

Public Works has reviewed the Traffic Study (TS) dated October 28, 2021, for the proposed project consists of the construction of 1,334 self-storage units on approximately 3.72 acres located at 5050 Scandia Lane in the unincorporated Calabasas.

Project's Transportation Impact

According to the TS, the project will have a less than significant transportation impact to the unincorporated County. We generally agree with the findings in the TS.

Project's Cumulative Transportation Impact

According to the TS, the project will not have a significant cumulative transportation impact in the area. We generally agree with the findings in the TS.

According to the TS, the project does not require a construction phase analysis. We generally agree with the findings in the TS.

According to the TS, the project does not require a local residential street cut-through analysis. We generally agree with the findings in the TS.

Project's Site Access Analysis

The following study location was evaluated:

- Old Scandia Lane/Ventura Boulevard

Vehicular queueing at the following study location is projected to provide adequate storage at the study location in the cumulative condition:

- Old Scandia Lane/Ventura Boulevard

The project shall provide ingress and egress access for all driveways within the project boundaries.

Other Jurisdictions

We recommend the project applicant consult with California Department of Transportation regarding any potential transportation impacts within its jurisdiction.

If you have any questions, please contact Mr. Kent Tsujii, Traffic Safety and Mobility Division, at (626) 300-4776 or ktsujii@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA, PE
Director of Public Works

AMIR IBRAHIM
Principal Engineer
Traffic Safety and Mobility Division

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bc: Land Development (Suarez, Lasso)

APPENDIX G

AB 52 TRIBAL CORRESPONDENCE

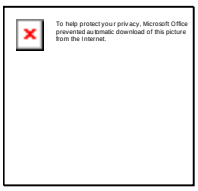
Graham, Kiana

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Friday, February 10, 2023 4:27 PM
To: Clark Taylor
Subject: Re: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

Hello Clark

Here is the contact information Pat Tumamait natchumash@yahoo.com

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org



The region where Gabrieleño culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. "The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area " . "That's a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleño, the community simply would not have survived."

On Thu, Feb 9, 2023 at 9:38 AM Clark Taylor <CTaylor@planning.lacounty.gov> wrote:

Can you provide contact information?

CLARK R. TAYLOR, AICP (he/him/his)

SENIOR PLANNER, Coastal Development Services

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Wednesday, February 8, 2023 4:15 PM
To: Clark Taylor <CTaylor@planning.lacounty.gov>
Subject: Re: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

Hello Clark

I believe it is the Chumash tribe.

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Covina, CA 91723

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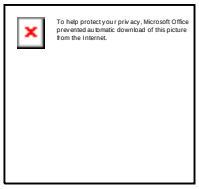

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On Tue, Feb 7, 2023 at 10:09 AM Clark Taylor <CTaylor@planning.lacounty.gov> wrote:

Hello,

I am following up with you again to see if you can tell me to which tribe the consultation has been referred to? We still need to schedule an AB52 consultation for this project and I did not get a response to my previous request below.

If the matter is now out of your hands and I should consult with someone else, please let me know.

CLARK R. TAYLOR, AICP (he/him/his)
SENIOR PLANNER, Coastal Development Services

From: Clark Taylor
Sent: Thursday, December 15, 2022 10:43 AM
To: Gabrieleno Administration <admin@gabrielenoindians.org>
Cc: Robert Glaser <rglaser@planning.lacounty.gov>; Samuel Dea <sdea@planning.lacounty.gov>
Subject: RE: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

Hello,

Thank you for letting me know. Would it be possible for you tell me which Tribe Director Salas would like to defer the project to? I would like to be able to reach out to them to coordinate a meeting.

Thank you in advance for your help.

CLARK R. TAYLOR, AICP (he/him/his)

SENIOR PLANNER, Coastal Development Services

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Thursday, December 15, 2022 10:09 AM
To: Clark Taylor <CTaylor@planning.lacounty.gov>
Subject: Re: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

CAUTION: External Email. Proceed Responsibly.

Good morning Clark

We are going to go ahead and cancel today's meeting. Chairman Salas looked more into the project location and would like to defer the project to the Tribe of the area.

Thank you

Admin Specialist
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PO Box 393
Covina, CA 91723

Office: 844-390-0787

website: www.gabrielenoindians.org

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On Wed, Dec 14, 2022 at 9:36 AM Clark Taylor <CTaylor@planning.lacounty.gov> wrote:

Hi Brandy,

Because some time has passed, I wanted to send a reminder that we have a conference call scheduled tomorrow, December 15, 200, at 11:00am for the AB52 Consultation for the address listed in the subject line.

You have provided the call in numbers below. From LA County, you can expect myself, Clark Taylor (case planner), my Supervisor Robert Glaser (tentative), and our AB52 Coordinator, Samuel Dea.

Thank you and I look forward to speaking with you and your team about this project.

CLARK R. TAYLOR, AICP (he/him/his)

SENIOR PLANNER, Coastal Development Services

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Tuesday, October 25, 2022 11:51 AM
To: Clark Taylor <CTaylor@planning.lacounty.gov>
Subject: Re: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

Hello Clark

Yes we still have the December 15th date open. We will put you down for a phone call on December 15th at 11am. Here is our dial in number (626)343-5588 Passcode 1234.

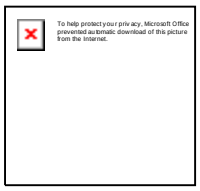
Thank you

Brandy Salas

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723

Office: 844-390-0787

website: www.gabrielenoindians.org



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On Tue, Oct 25, 2022 at 10:03 AM Clark Taylor <CTaylor@planning.lacounty.gov> wrote:

Hello,

Thank you for your response. If it is still open, I would like to schedule a consultation meeting for December 15, 2022 at 11:00am. Will that work?

I can send a calendar invite with the meeting information. We typically use Microsoft Teams for virtual meetings but if you need to use Zoom or something else, please let me know.

Thank you and I look forward to speaking with you about this project.

CLARK R. TAYLOR, AICP (he/him/his)

SENIOR PLANNER, Coastal Development Services

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Wednesday, October 19, 2022 10:39 AM
To: Clark Taylor <CTaylor@planning.lacounty.gov>
Subject: Re: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

Hello Clark

Unfortunately Chairman Salas's schedule is fully booked this month and next month. The next time Chairman Salas is available for a phone call will be on December 8th at 3pm and December 15th at 11am. Please let us know which time works best for you.

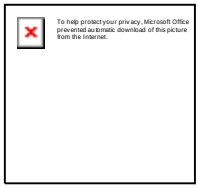
Thank you

Brandy Salas

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723

Office: 844-390-0787

website: www.gabrielenoindians.org



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On Wed, Oct 19, 2022 at 9:31 AM Clark Taylor <CTaylor@planning.lacounty.gov> wrote:

Hello Ms. Salas.

Thank you for your response. I would like to schedule a consultation meeting so that we can be sure to do what is necessary to protect tribal cultural resources.

Would you be okay with a virtual meeting? If so, will any of the following times work? I think we should plan on one hour.

Monday, October 31 at 1:00pm

Tuesday, November 1 at 11:00am, 1:00pm, or 2:00pm

Wednesday, November 2 at 11:00am, 1:00pm, 2:00pm or 3:00pm

If any of those times work for you, please let me know and I will send a calendar invite. If not, we can propose some new dates.

Thank you.

CLARK R. TAYLOR, AICP (he/him/his)

SENIOR PLANNER, Coastal Development Services

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Wednesday, October 5, 2022 3:09 PM
To: Clark Taylor <CTaylor@planning.lacounty.gov>
Subject: Trojan Self Storage Project NO.2020-00422 located: 5050 Old Scandia Lane, Calabasas, Ca 91302

Hello Clark Taylor,

Thank you for your letter dated September 29,2022. Please see the attachment below.

Thank you

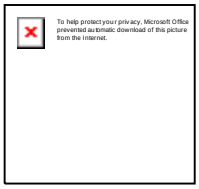
Sincerely,

Savannah Salas

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723

Office: 844-390-0787

website: www.gabrielenoindians.org



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