INITIAL STUDY

Bonadelle Lacey Ave Residential Project

Prepared for:

City of Hanford - Community Development Department
317 N. Douty Street
Hanford, CA 93230
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PROJECT INFORMATION

This document is the Initial Study for the potential environmental effects of the Bonadelle Lacey Ave Residential Project (Project) proposed in the City of Hanford (City). To accommodate this Project, the City will need to approve an Annexation, Prezone, Planned Unit Development and Tentative Subdivision Map along with an annexation into the City of Hanford. The City of Hanford will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. Copies of all materials referenced in this report are available for review in the project file during regular business hours at the Hanford Community Development Department at 317 N. Douty Street, Hanford, CA 93230.

Project title

Bonadelle Lacey Ave Residential Project

Lead agency name and address

City of Hanford - Community Development Department

317 N. Douty Street

Hanford, CA 93230

Contact person and phone number

Gabrielle Myers
City of Hanford
(559) 585-2578
Email: gmyers@hanford.ca.gov

Project location

The City of Hanford lies in the Central San Joaquin Valley region, in the eastern portion of Kings County (see Figure 1). State Route (SR) 198 runs east-west through the southern portion of the City and SR 43 runs north-south around the eastern boundary. The proposed Project site is located outside but adjacent to the City of Hanford limits, within the City's Sphere of Influence. The proposed development is located on an approximately 16.65-acre site south of Lacey Blvd and west of 12 ½ Avenue (see Figures 1 and 2).

Project sponsor's name/address

Bonadelle Neighborhoods
John Bonadelle, Vice President
7030 N. Fruit, #101
Fresno, CA 93711

General plan designation

Low and Medium Density Residential

Zoning

R-L-5 (Low Density Residential)

R-M Medium-Density Residential

Project Description

The proposed Project includes an annexation and residential development on a 16.65-acre site immediately west of the City of Hanford.

The proposed Project site is within the City's Sphere of Influence and annexation is proposed for the entire 16.65-acre Project site, and includes Assessor Parcel Numbers (APN) 011-010-003, -004, -005, -006, -007, -008 and -009. APNs 011-010-007, -008 and -009 total 2.77 acres in size and are currently developed with rural residences. See Figure 2. No development is proposed for these 2.77 acres.

A Tentative Subdivision Map is proposed for the remaining 13.88 acres, which would divide the site into 78 single family residential lots, ranging in size from 4,172 to 10,367 square feet. See Figure 3. Access roads, lighting, landscaping and other associated improvements will be constructed, per City Standards within the proposed Project site and along the future Aquifer Drive alignment along the eastern site boundary. Construction will include the connection to City water, storm drain and sewer within the development, along with other utilities such as electric and communication lines. Along with the Tentative Subdivision Map, a Planned Unit Development (PUD) may be required to allow for wider garage widths than the small-lot provisions of the City of Hanford's Municipal Code Sections 17.10.100 and 17.12.100 allow. The development of 78 single-family residential units is allowable under the current General Plan Land Use Designation and City of Hanford Zone District.

Site Circulation

Vehicular access to the Project will be from the future alignment of Aquifer Drive (currently called 12 ½ Avenue) and from a residential development to the south, currently in the entitlement process. Each single-family residence will include a two-car garage.

Construction

Proposed Project implementation includes demolishing the rural residence and associated out structures along Lacey Blvd. The Project is anticipated to be developed in one phase over two years.

Existing Conditions and Surrounding Land Uses

The Project site currently supports fallowed agricultural land and a rural residence. Analysis of aerial imagery indicates that the site has been used for agricultural purposes since at least 1994.

The project vicinity is characterized by a mix of urban and agricultural uses. Areas immediately surrounding the project site consist of agricultural lands to the west, rural commercial and agricultural to the east, agriculture and rural residential development to the south, and residential development to the north.

Other Project Approvals

- Approval of a Tentative Subdivision Map by the City of Hanford
- Approval of a Planned Unit Development by the City of Hanford (potential)
- Approval of Annexation by Kings County LAFCo
- Approval of Building Permits by the City of Hanford
- Compliance with Rule 9510 by the San Joaquin Valley Air Pollution Control District
- Storm Water Pollution Prevention Plan by the Central Valley Regional Water Quality Control Board
- Compliance with other federal, state and local requirements

Tribal Consultation

The City of Hanford has not received any Project-specific requests from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Hanford.

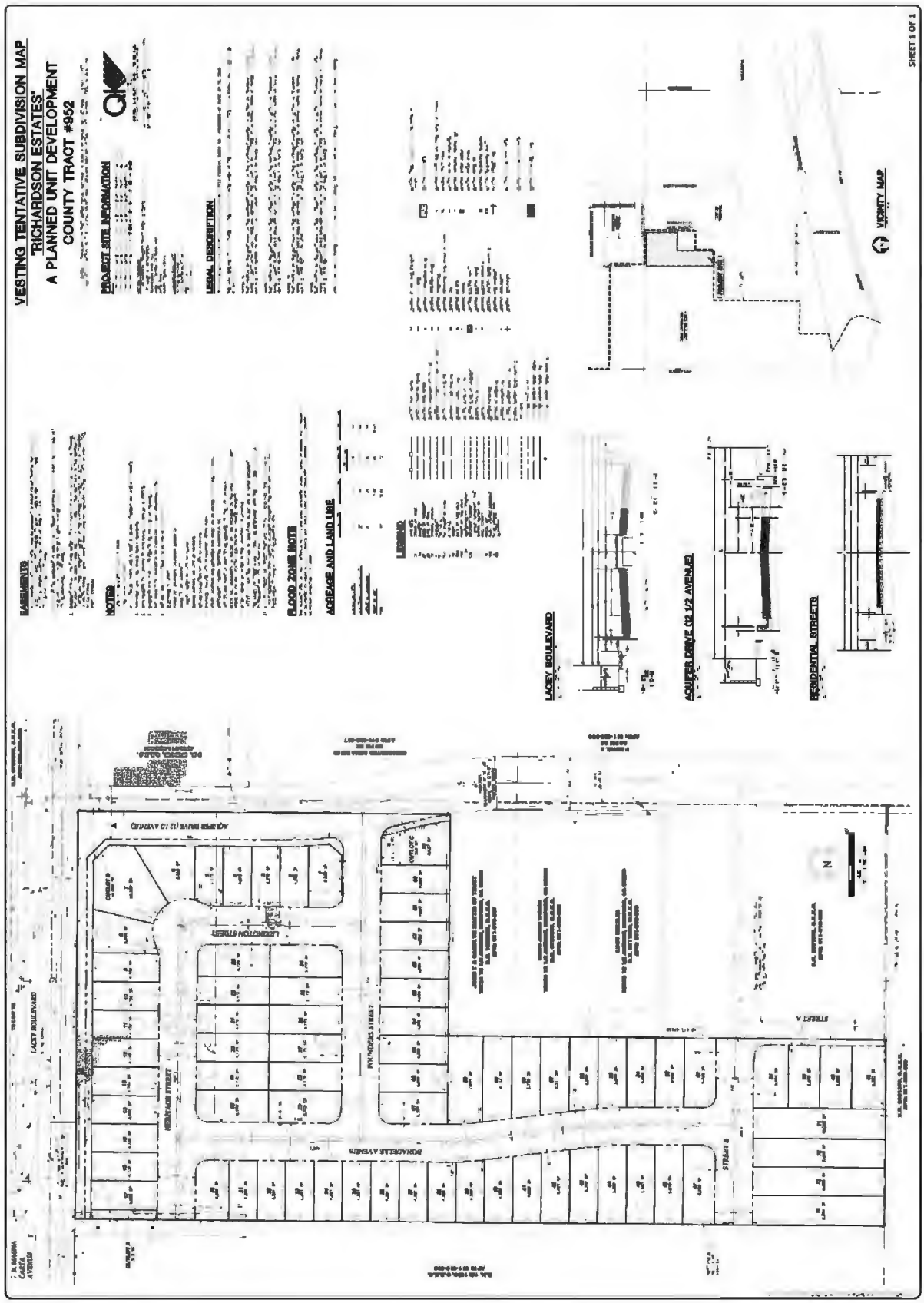
Figure 1 – Location



Figure 2 – Site Aerial



Figure 3 – Site Plan



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION

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.

Gabrielle Myers

Gabrielle Myers
City of Hanford

July 23, 2026

Date

ENVIRONMENTAL CHECKLIST

I. AESTHETICS

Would the project:

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

ENVIRONMENTAL SETTING

The 13.88-acre development area currently supports fallow agriculture and rural residences. The Project vicinity is characterized by a mix of urban and agricultural uses. Areas immediately surrounding the Project site consist of agricultural lands to the west, rural commercial and agricultural to the east, agriculture and rural residential development to the south, and residential development to the north.

RESPONSES

a) Have a substantial adverse effect on a scenic vista?
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. The Project Applicant intends to develop 78 single-family residential units on an approximately 13.88-acre site.

A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The City of Hanford is located in the northern portion of Kings County and is composed of 16.6 square miles of flat land, not covered by water. The only natural waterway is Mussel Slough, remnants of which still exist on the City's western boundary. The People's Ditch, an irrigation canal dug in the 1870's, spans Hanford from north to south. The City does not identify any scenic vistas within the Project area; views consist primarily of broad panoramas of agricultural land.

The land has been designated for Low and Medium-Density Residential development by the City of Hanford General Plan. There are no officially designated or eligible State Scenic Highways near the Project area. There are also no rock outcroppings within the City's General Plan Study Area. The City does have an ordinance protecting trees in Chapter 12.12, Street Trees and Shrubs, of the Municipal Code. However, the Project would be consistent with the tree ordinance. The Project would not substantially damage scenic resources, including, but not limited to, rock outcroppings, trees and historical buildings within a State Scenic Highway. Impacts would be ***less than significant.***

Mitigation Measures: None are required.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and regulations governing scenic quality?

Less than Significant Impact. The proposed Project would alter the existing visual character of public views of the site from fallowed agricultural and a rural residence to fully developed single-family residences. Upon approval of the Annexation, Planned Unit Development and Tentative Subdivision Map, the Project design is subject to the General Plan and zoning standards, which apply to site layout, building design, landscaping, interior street design, lighting, parking and signage.

The improvements such as those proposed by the Project are typical of City urban areas and are generally expected from residents of the City. The development will be required to comply with the General Plan and R-L-5 Low-Density Residential and R-M Medium-Density Residential zone district, except where expressly modified through the planned unit development, and the Tree Ordinance. The proposed improvements would not substantially degrade the visual character of the area and would not diminish the visual quality of the area, as they would be consistent with the existing urban visual setting. The proposed Project itself is not visually imposing against the scale of the existing nearby residential buildings and nature of the surrounding area.

Therefore, the Project would have ***less than significant impacts*** on the visual character of the area.

Mitigation Measures:

None Required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass". Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Spillover light is light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited. Spillover light can adversely affect light-sensitive uses, such as residential neighborhoods at nighttime. Because light dissipates as it travels from the source, the intensity of a light fixture is often increased at the source to compensate for the dissipated light. This can further increase the amount of light that illuminates adjacent uses. Spillover light can be minimized by using only the level of light necessary, and by using cutoff type fixtures or shielded light fixtures, or a combination of fixture types.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare.

Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

Current sources of light in the Project area are from adjacent roadways and nearby residential and agricultural uses. The Project would necessitate street lighting and such lighting that would be subject to City standards, as outlined in the Hanford Municipal Code, Section 17.50.140 – Outdoor Lighting Standards which would reduce regulate light and glare generated from the Project. Accordingly, potential impacts would be considered ***less than significant.***

Mitigation Measures:

None required.

II. AGRICULTURE AND FOREST RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is located outside the City of Hanford limit, within the City of Hanford Sphere of Influence. The site is currently designated by the City of Hanford General Plan for residential development. The City of Hanford is located in northern Kings County within the San Joaquin Valley, California.

RESPONSES

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less Than Significant Impact.

The proposed site is designated as Grazing Land and *Prime Farmland* by the State Farmland Mapping and Monitoring Program (FMMP).[1] No land under Williamson Act contracts occur in the proposed Project area.

The proposed Project site is currently planned for residential development in the General Plan. The 2002 General Plan EIR evaluated the full build-out of the Planning Area and determined that approximately 3,260 acres of Prime Farmland would be converted to urban uses with General Plan buildout. In accordance with the General Plan EIR, the Project would be required to adhere to the Hanford Municipal Code 16.40.110 (Right to Farm) and the proposed goals and agriculture-related policies of the General Plan. The 2002 General Plan includes several self-mitigating policies, including policies and programs in the Land Use, Open Space/Conservation, and Recreation Element, and the Public Facilities Elements which help mitigate impacts on agricultural resources associated with implementation of the General Plan, particularly growth management policies. A brief description of the policy and applicability to the proposed Project is provided below.

Policy LU 1.2 (AQ) – Development in Planning Area B is considered premature until the sewer master plan is implemented and traffic capacity issues have been addressed with the adoption of an implementation plan.

- Does not apply to the proposed Project.

[1] California Important Farmland Finder, Department of Conservation. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed November 2025.

Policy LU 2.2 (AQ) – Very low-density residential development shall be required near the Planning Area Boundary to provide a transition between agricultural or rural areas and urban development.

- This is no longer applicable because the very low-density designation was removed in the 2035 General Plan.

Policy LU 8.1 (AQ) - Appropriate buffers or other effective measures shall be included in development plans to ensure that conflicts such as noise, odor, light and glare, dust, or other potentially significant adverse environmental conditions are minimized.

Program LU 8.1-A (AQ) - Conservation/Open Space zoning shall be applied to undeveloped areas along railroad corridors, consistent with noise contours, to prevent encroachment of residential or other sensitive uses into that area. The extent of the buffer area may be reduced by the installation of physical barriers that have been determined by the City to reduce potentially significant adverse environmental conditions such as noise exposure.

- A conservation barrier exists between the Project site and the rail to the south.

Program LU 8.1-B (AQ) - In order to protect industrial development from intrusion and negative impact of non-compatible uses, proponents of residential projects in proximity to heavy industrial uses or Land Use Designations shall be required to provide the City with a full and complete discussion that addresses their impact on the viability of the existing or proposed industrial development. These discussions shall include noise, hazardous materials, emergency response and evacuation, air quality, odors, light and glare, traffic, and aesthetics.

The City shall adopt a development plan that will allow the relocation of Peoples Ditch into the OS buffer adjacent to the B.N. & S.F. railroad right-of-way between Flint Avenue and Grangeville Blvd.

- Does not apply

Program LU 8.1-D (AQ) - At the time of development proposal, the City shall evaluate the desirability of requiring large lot development, in combination with open space amenities adjacent to 13th Avenue, between Hanford-Armona Road and Houston Avenue. This evaluation should be focused on minimizing potential conflict with the Armona Wastewater Plant disposal ponds.

- Does not apply

Policy LU 21.1 (AQ) - Performance and Development Standards for the Kings Industrial Park shall be continually updated and maintained to encourage and guide consistent development in the Industrial Area.

- Does not apply

Policy LU 23.1 - The City shall continue to develop and experiment with marketing approaches, including the use of the Enterprise Zone Designation and Targeted Industry and Business Study, to attract and keep industry in the City.

- Does not apply

Policy OCR 1.1 (AQ) - Create a greenbelt/open space buffer around the perimeter of the city that provides a clear sense of identity for the City of Hanford.

- Does not apply

Policy OCR 1.2 (AQ) - The City will continue to coordinate land use policies and designations with Kings County to provide for a buffer between the urban area of Hanford and the unincorporated community of Armona.

- Does not apply

Policy OCR 1.3 (AQ) - The City may consider annexing Williamson Act lands if such annexation is necessary to provide for logical urban development and the provision of municipal services.

- Does not apply

Program OCR 1.3 -A (AQ) - The City has included, in the General Plan Land Use Element, an Agricultural designation and has provided definitions which allow for the continued use as agriculture. The Agricultural designation may also be used for preserving open space necessary for public safety around the Hanford Airport and other locations which may be effected by noise or other significant development constraints.

- Agricultural designation removed in 2035 General Plan – does not apply

Program OCR 1.3-B - The City shall prepare and adopt a set of policies that govern the cancellation of Williamson Act contracts, and define the circumstances that the City would be willing to succeed to an active contract.

- Site is not under Williamson Act Contract – does not apply

Policy OCR 6.1 (AQ) - Existing agricultural areas shall be retained in agricultural use until the time that such areas are needed for logical urban expansion.

- Agricultural designation removed – does not apply

Policy PF 1.4 (AQ) - Infrastructure master plans shall limit system design near the urban limit line to provide only enough capacity for very low density development or compatible Public Facilities.

- Does not apply

Policy PF 4.2 - The City shall work cooperatively with other water management agencies to prepare a groundwater management program as needed to ensure sufficient water supply for the build-out of the General Plan.

- Does not apply

The loss of farmland as a result of the General Plan Update was determined to be significant and unavoidable. A statement of overriding considerations was adopted for the significant and unavoidable impacts resulting from agriculture conversion. As such, no new impacts resulting from the conversion of agricultural land will occur with Project implementation. Impacts are considered less than significant.

Mitigation Measures: None Required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project site is currently designated as Low- and Medium Density Residential by the General Plan and as part of the proposed Proejct, will be prezoned to R-L-5 (Low-Density Residential) and R-M (Medium Density Residential). The proposed TSM is an allowable density within the proposed Zone district. The Project parcels are not under Williamson Act Contracts, thus, there is ***no impact***.

Mitigation Measures: None are required.

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

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

No Impact. The proposed Project site is currently fallow agricultural land with a rural residence. The lands immediately surrounding the site are residential and agricultural. No forestland is on-site or in the vicinity. The Project would not conflict with existing zoning for, or cause rezoning of, Forest Land, Timberland or Timberland Zoned Timberland Production, as these designations do not exist

within the City. The Project would not result in the loss of forest land or conversion of forest land to non-forest use, as these designations also do not exist within the City. There is ***no impact.***

Mitigation Measures: None are required.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Less Than Significant. Project development is site specific and will not involve other changes to the existing environment. The site is designated for residential development and agricultural conversion impacts in the City's projected development areas were assessed in the 2002 Hanford General Plan EIR. Impacts were considered significant and unavoidable and a Statement of Overriding Considerations was adopted. There are no new impacts to agricultural conversion with Project implementation. There would be a ***less than significant impac***t.

Mitigation Measures: None are required.

III. AIR QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors or adversely affecting a substantial number of people)?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The climate of the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy, winters. Precipitation is low and temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants and are in part influenced by the surrounding mountains which intercept precipitation and act as a barrier to the passage of cold air and air pollutants.

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either "attainment", "non-

attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O_3, a State and Federal non-attainment area for $PM_{2.5}$, a State non-attainment area for PM_{10}, and Federal and State attainment area for CO, SO_2, NO_2, and Pb.[2]

REGULATORY SETTING

Federal

Clean Air Act

The federal Clean Air Act of 1970 (as amended in 1990) required the U.S. Environmental Protection Agency (EPA) to develop standards for pollutants considered harmful to public health or the environment. Two types of National Ambient Air Quality Standards (NAAQS) were established. Primary standards protect public health, while secondary standards protect public welfare, by including protection against decreased visibility, and damage to animals, crops, landscaping and vegetation, or buildings. NAAQS have been established for six "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb).

State

California Air Resources Board

The California Air Resources Board (CARB) is the state agency responsible for implementing the federal and state Clean Air Acts. CARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen Sulfide (H_2S), and vinyl chloride.

The proposed Project is located within the San Joaquin Valley Air Basin, which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and parts of Kern counties and is managed by the SJVAPCD.

Air basins are classified as attainment, nonattainment, or unclassified. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an

[2] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed December 2025.

unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

Standards and attainment status for listed pollutants in the Air District can be found in Table 1. Note that both state and federal standards are presented.

Table 1
Standards and Attainment Status for Listed Pollutants in the Air District[3]

	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.07 ppm (8-hr avg) 0.09 ppm (1-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.30 ppm (annual avg) 0.18 ppm (1-hr avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1hr avg)
Lead	1.5 µg/m3 (calendar quarter) 0.15 µg/m3 (rolling 3-month avg)	1.5 µg/m3 (30-day avg)
Particulate Matter (PM10)	150 µg/m3 (24-hr avg)	20 µg/m3 (annual avg) 50 µg/m3 (24-hr avg)
Particulate Matter (PM2.5)	15 µg/m3 (annual avg)	35 µg/m3 (24-hr avg) 12 µg/m3 (annual avg)

µg/m3 = micrograms per cubic meter

Additional State regulations include:

CARB Portable Equipment Registration Program – This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

[3] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed December 2025.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act – Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions levels.

In addition, the proposed Project is being evaluated pursuant to CEQA.

Local

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. The SJVAPCD has several rules and regulations that may apply to the Project:

Rule 3135 (Dust Control Plan Fees) – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the SJVAPCD's cost for reviewing these plans and conducting compliance inspections.

Rules 4101 (Visible Emissions) and 4102 (Nuisance) – These rules apply to any source of air contaminants and prohibits the visible emissions of air contaminants or any activity which creates a public nuisance.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) – This rule applies to use of asphalt for paving new roadways or restoring existing roadways disturbed by project activities.

Regulation VIII (Fugitive PM_{10} Prohibitions) – This regulation, a series of eight regulations, is designed to reduce PM_{10} emissions by reducing fugitive dust. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced. The control measures are summarized in Table 2.

Table 2
San Joaquin Valley Air Pollution Control District
Regulation VIII Control Measures for Construction Related Emissions of PM_{10}[4]

The following are required to be implemented at all construction sites:
All disturbed areas, including storage piles, which are not actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressants, covered with a tarp or other similar cover, or vegetative
All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions during construction using water or chemical stabilizer
All land clearing, grubbing, scraping, excavation, land leveling, grading cut and fill, and demolition activities during construction shall be effectively controlled of fugitive dust emissions utilizing application of water or pre-soaking.
When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from top of container shall be maintained.
All operations shall limit, or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site at the end of each workday.
Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

RESPONSES

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. Potential Air Emissions generated by Project implementation estimated using the most recent emission factors and load factors obtained from the California Emissions Estimator Model® (CalEEMod) User's Guide, Emission Factors (EMFAC) model and are presented in Appendix A.

If a Project were to generate criteria pollutants below significance thresholds adopted by the SJVAPCD the Project would be considered to result in a less than significant impact and in compliance with adopted SJVAPCD rules and regulations.

[4] San Joaquin Valley Air Pollution Control District. Current District Rules and Regulations. http://www.valleyair.org/rules/1ruleslist.htm#reg8. Accessed December 2025.

Estimates for both construction and operational emissions; based on the development of 78 housing units in a single phase are presented in Tables 3 and 4 below.

Table 3

Estimated Construction Criteria Pollutant Emissions

	NOx	ROG	PM10	PM2.5	CO	SO2
Maximum annual emissions (tons/year)	1.221	0.605	0.299	0.154	1.586	0.003
SJVAPCD Significance Threshold (tons/year)	**10**	**10**	**15**	**15**	**100**	**27**
Exceeds Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Maximum daily emissions (pounds/day)	6.692	3.313	1.639	0.841	8.689	0.015

Table 4

Estimated Operational Criteria Pollutant Emissions

	NOx	ROG	PM10	PM2.5	CO	SO2
Mobile Emissions (tons/year)	0.429	0.425	0.531	0.139	2.453	0.006
Area Emissions (tons/year)	0.042	0.758	0.105	0.101	1.132	0.003
Energy (tons/year)	0.131	0.007	0.011	0.011	0.056	0.001
Total Operational Emissions (tons/year)	**0.602**	**1.190**	**0.647**	**0.251**	**3.640**	**0.010**
SJVAPCD Significance Threshold	**10**	**10**	**15**	**15**	**100**	**27**

	NOx	ROG	PM10	PM2.5	CO	SO2
Exceeds Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Maximum Daily Emissions (pounds/day)	3.301	6.522	3.544	1.374	19.946	0.054

Source: CalEEMod Output Files, Appendix A

As shown above, the Project's short-term (construction) and long-term (operational) emissions are below SJVAPCD thresholds. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. The impact of the Project would be ***less than significant.***

Mitigation: None are required..

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The San Joaquin basin is in nonattainment for ozone and PM2.5 for federal standards and nonattainment for ozone, PM10 and PM 2.5 for State standards. SJVAPCD nonattainment status is attributed to the regions development history. Past, present, and future development projects contribute to the regions adverse air quality impacts on a cumulative basis. By it's very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project impact on air quality would be considered significant.

To result in a less than significant impact, emissions of nonattainment pollutants must be below the SJVAPCD's regional significance thresholds. This is an approach recommended by the SJVAPCD's in its GAMAQI. The primary pollutants of concern during Project construction and operation are ROG, NOX, PM10, and PM2.5. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for CO, NOX, ROG, SOX, PM10, and PM2.5

Emissions occurring at or near the Project site have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact

level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. The pollutants of concern for localized impact in the SJVAB are NO2, SOx, and CO.

The SJVAPCD has provided guidance for screening localized impacts in the GAMAQI that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a Project exceeds 100 pounds per day of any criteria pollutant, then ambient air quality modeling would be necessary. If the Project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard. Local construction impacts would be short-term in nature lasting only during the duration of construction. As provided in Table 3 above, on-site construction emissions would be less than 100 pounds per day for each of the criteria pollutants. To present a conservative estimate, on-site emissions for on-road construction vehicles were included in the localized analysis. Based on the SJVAPCD's guidance, the construction emissions would not cause an ambient air quality standard violation. Local operational impacts could occur in areas with a single large source of emissions such as a power plant or with multiple sources concentrated in a small area such as a distribution center. Since the proposed Project would be adding a relatively small amount of additional vehicle trips to and from the site compared to currently approved conditions, this analysis includes emissions from these vehicles as new sources of emissions from the proposed Project. Consistent with information presented in the CalEEMod output files (see Appendix A, Section 5.9.1), it was assumed that a maximum of 736 daily trips would occur as a result of the proposed Project. As shown in Table 4 above, Operational modeling of on-site emissions for the proposed Project indicates that the proposed Project would not exceed 100 pounds per day for each of the criteria pollutants. Therefore, based on the SJVAPCD's guidance, the operational emissions would not cause an ambient air quality standard violation. As such, impacts would be ***less than significant***.

Mitigation: None are required..

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Emissions occurring at or near the proposed Project could have the potential to create a localized impact that could expose sensitive receptors to substantial pollutant concentrations. The SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest sensitive receptor to the proposed Project is a single-family residence adjacent to the proposed Project site. Additional sensitive receptors include single-family residences to the north. The Hanford Agriculture School Farm is approximately 0.56 miles to the north while the Future Hope Preschool

is approximately 0.63 miles to the south. The nearest park is Rotary Park, located approximately 1.05 miles northeast of the proposed Project. The SJVAPCD's GAMAQI includes screening thresholds for identifying Projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures would require additional analysis to determine if the preparation of an ambient air quality analysis is needed. The criteria pollutants of concern for localized impact in the Air Basin are PM10, PM2.5, NOX, and CO. There is no localized emission standard for ROG.

As demonstrated in Tables 3 , the proposed Project would not exceed the emission screening thresholds during Project construction. Therefore, the proposed Project's localized criteria pollutant impacts from construction of the Project would be ***less than significant.***

Mitigation: None are required..

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

Less Than Significant Impact. The Project will create temporary localized odors during Project construction, such as odors from diesel-powered equipment and vehicles. These odors will be temporary and would most likely not occur over an extended period of time or concentrated in one location on the Project.

The proposed Project uses are not anticipated to create or emit objectionable odors that would affect a substantial number of people; therefore impacts are considered to be ***less than significant.***

Mitigation: None are required..

IV. BIOLOGICAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairy, cattle, groves, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely rise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

A Biological Evaluation (BE) was performed on behalf of the Project by Colibri Ecological Consulting in December 2025 and is the basis of the impact analysis. The BE report can be found in its entirety in Appendix B.

A search of the California Natural Diversity Database (CNDDB), the Inventory of Rare and Endangered Vascular Plants of California, manuals, reports and references related to plants and animals of the San Joaquin Valley, and other available planning documents and biological studies from the general Project vicinity were utilized. Additionally, a field reconnaissance survey of the Project site was conducted as part of the BE.

Database Searches

The California Natural Diversity Data Base (CNDDB) was queried for special status plant and animal occurrences in the nine USGS 7.5-minute quadrangles containing and surrounding the Project (Riverdale, Laton, Burris Park, Lemoore, Hanford, Remnoy, Stratford, Guernsey, and Waukena). A number of special status plants and animals were returned in the query and are summarized below in Table 5. Sources of information for this table included California's Wildlife, Volumes I, II, and III (Zeiner et. al 1988-1990), California Natural Diversity Data Base (CDFW 2025), The Jepson Manual: Vascular Plants of California, second edition (Baldwin et al 2012), the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025), Calflora.org, and eBird.org.

Table 5

List of Special Status Species Potentially Occurring in the Project Vicinity

SPECIES	STATUS	HABITAT	Potential to Occur
Earlimart Orache (*Atriplex cordulata var. erecticaulis*)	CRPR 1B.2	Saline or alkaline soils in valley and foothill grassland below 230 feet elevation.	**None.** Habitat lacking; the Project site lacked saline or alkaline soils.
Brittlescale (*Atriplex depressa*)	CRPR 1B.2	Alkaline clay soils in valley and foothill grassland, meadows, seeps, playas and in Chenopod scrub below 1050 feet.	**None.** Habitat lacking; the Project site lacks alkaline clay soils.
Lesser Saltscale (*Atriplex minuscula*)	CRPR 1B.1	Sandy alkaline soils in chenopod scrub, playa, and grassland in the San Joaquin Valley below 328 feet elevation.	**None.** Habitat lacking; the Project site lacked alkaline soils.
Subtle Orache (*Atriplex subtilis*)	CRPR 1B.2	Saline depressions below 230 feet elevation.	**None.** Habitat lacking; the Project site lacked saline depressions.
Recurved Larkspur (*Delphinium recurvatum*)	CRPR 1B.2	Grasslands and upland scrub with poorly drained, fine, alkaline soils at 98–1969 feet elevation.	**None.** Habitat lacking; the Project site is lacked alkaline soils.

SPECIES	STATUS	HABITAT	Potential to Occur
Alkali-Sink Goldfields (*Lasthenia chrysantha*)	CRPR 1B.1	Venal pools and wet saline flats below 320 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools or wet saline flats.
Panoche Pepper-grass (*Lepidium jaredii ssp. album*)	CRPR 1B.2	Clay, steep slopes and alkaline soils in valley and foothill grassland from 605-2450 feet elevation.	**None.** Habitat lacking the Project site is below the elevational range of this species.
Mud Nama (*Nama stenocarpa*)	CRPR 2B.2	Intermittently wet areas below 2700 feet elevation.	**None.** Habitat lacking; the Project site lacked intermittently wet areas.
California Alkali Grass (*Puccinellia simplex*)	CRPR 1B.2	Scrub, meadows, seeps, grassland, vernal pools, saline flats, and mineral springs below 3000 feet elevation.	**None.** Habitat lacking; the Project site lacked scrub, meadows, seeps, grassland, vernal pools, saline flats, and mineral springs.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CRPR 1B.2	Ponds, sloughs, and ditches at sea level to 650 feet elevation.	**None.** Habitat lacking; no ponds, sloughs, or ditches were on or near the Project site.

ANIMALS

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
Valley Elderberry Longhorn Beetle (VELB) *(Desmocerus californicus dimorphus)*	FT	Elderberry (*Sambucus* sp.) plants having basal stem diameter greater than 1" at ground level.	**None.** No elderberry shrubs were found in the survey area, and the Project site is outside the currently recognized range of this species.

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*	FT	Vernal pools; some artificial depressions, stock ponds, vernal swales, ephemeral drainages, and seasonal wetlands.	**None.** Habitat lacking; the Project site lacked vernal pools or other potential habitat for this species.
Vernal Pool Tadpole Shrimp *(Lepidurus packardi*)	FE	Vernal pools, clay flats, alkaline pools, and ephemeral stock tanks.	**None**. Suitable habitat in the form of vernal pools is absent from the site and immediately surrounding lands.
California Tiger Salamander- Central California DPS *(Ambystoma californiense)*	FT, CT	Vernal pools or seasonal ponds for breeding; small mammal burrows for upland refugia in natural grasslands.	**None.** Habitat lacking; no vernal pools or seasonal ponds were within the 1.24-mile dispersal distance of this species. Aerial imagery (Google 2025) shows the detention basins in the dispersal range are not regularly inundated during the breeding season for this species.
Western Spadefoot *(Spea hammondii)*	FPT, CSC	Open areas with sandy or gravelly soils and rain pools for breeding.	**None.** Habitat lacking; the Project site has been routinely disked and lacked suitable rain pools for breeding.
Northwestern Pond Turtle (*Actinemys marmorata)*	FPT, CSC	Perennial or nearly perennial ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation with basking sites and suitable upland areas for egg laying.	**None.** Habitat lacking; the Project site and surrounding areas lacked the aquatic habitat this species requires.
Blunt-Nosed Leopard Lizard *(Gambelia sila)*	FE, CE, FP	Upland scrub and sparsely vegetated grassland with small mammal burrows.	**None.** Habitat lacking; the Project site has been routinely disked and was in an urban environment.

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
Swainson's Hawk *(Buteo swainsoni)*	CT	Large trees for nesting with adjacent grasslands, alfalfa fields, or grain fields for foraging.	**None.** While the Project site contains limited foraging habitat for the species, large trees in the survey area are associated with residential development.
Western Snowy Plover (Charadrius nivosus nivosus)	FT, CSC	Sandy beaches, salt pond levees, and shores of large alkali lakes.	**None.** Habitat lacking; the Project site and surrounding areas lacked the types of aquatic-adjacent habitats this species requires.
Burrowing Owl *(Athene cunicularia*)	CSC	Grasslands and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows or burrow surrogates.	**Low.** The Project site contained fallowed agricultural land for foraging and ground squirrel burrows for refugia.
Tricolored Blackbird *(Agelaius tricolor)*	CT, CSC	Vast, open areas with flooded, thorny, or spiny vegetation for nesting; grasslands, seasonal wetlands, weedy agricultural fields, cattle feedlots, or dairies for foraging.	**None.** Habitat lacking; no potential nesting habitat was present in the survey area, and the Project site is too far from any nesting areas to support foraging.
Tipton Kangaroo Rat *(Dipodomys nitratoides*	FE, CE	Grassland and upland scrub with sparse to moderate shrub cover and saline soils; also fallowed agricultural	**None.** Habitat lacking; the Project site has been routinely disked and is not adjacent to

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
nitratoides)		fields adjacent to natural grasslands or upland scrub.	natural grassland or upland scrub.
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Grassland, upland scrub, and some fallowed agricultural lands adjacent to natural grassland or upland scrub with a small mammal prey base and ground squirrel burrows or burrow surrogates for denning.	**None.** This species was historically known from the project vicinity. There are 17 CNDDB occurrences within 10 miles of the Project, including one 2006 occurrence 1.5 miles northeast from project boundaries. The 2006 occurrence is the most recent with the remaining occurrences dating from 2002 back. Urbanization since that time has reduced the suitability of the greater Hanford area, and the project vicinity, for this species. Based on aerial imagery, the nearest remaining blocks of open natural land are over 8 miles west of the site near the Kings River. While the site itself may theoretically provide some foraging and denning opportunities for this species, landscape factors suggest a very low probability of occurrence.

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
Monarch California overwintering population (*Danaus plexippus)*	FPT	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for overwintering such as high humidity, dappled sunlight, access to water an nectar, and protection from wind.	**None.** Habitat lacking; the Project site is not within 1.5 miles of the ocean.

STATE SPECIES OF SPECIAL CONCERN

California Glossy Snake (*Arizona elegans occidentalis*)	CSC	Arid scrub, rocky washes, grasslands, chapparal.	**None.** Habitat lacking; the Project site lacked arid scrub, rocky washes, grasslands and chapparal.
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)	CSC	Nests in freshwater emergent wetlands with dense vegetation and deep water; often along borders of lakes or ponds.	**None.** Habitat lacking; the Project site lacked the freshwater emergent wetlands this species requires.

OCCURRENCE DESIGNATIONS AND STATUS CODES

Present: Species observed on the site at time of field surveys or during recent past.

Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.

Possible: Species not observed on the site, but it could occur there from time to time.

Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient

Absent: Species not observed on the Site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPT	Federally Proposed Threatened	CSC	California Species of Special Concern
FC	Federal Candidate	CFP	California Fully Protected
		CC	California Candidate for Listing

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
CRPR CODES			
1A Plants Presumed Extinct in California		2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere	
1B Plants Rare, Threatened, or Endangered in California and elsewhere			

Reconnaissance Survey

On October 27, 2025, the Project site and a 50-foot buffer surrounding the Project site were walked and thoroughly inspected to evaluate and document the potential for the area to support state- or federally protected resources. An additional buffer of 0.5 mils around the Project site was inspected for potential nesting habitat for special-status raptors. The Project site consisted of developed and ruderal land cover and fallowed agricultural land. Ruderal herbaceous vegetation dominated by nonnative grasses and forbs was distributed throughout the Project site. A single-family residence with a gravel driveway and abandoned accessory buildings were also in the northern portion of the parcel.

The Project did not contain wildlife movement corridors, sensitive natural communities, designated critical habitat, or state or federally protected waters or wetlands.

RESPONSES

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact with Mitigation. As provided in Table 5, ten special status plant species have been documented in the Project vicinity. All ten species are considered absent from the Project due to an absence of suitable habitat and/or soils, the site's being situated outside of the species' distribution, or a combination thereof. Therefore, impacts to special status plants are considered less than significant under CEQA.

Of the sixteen special status animal species that potentially occur in the general vicinity of the site, fifteen are considered absent from the Project site due to the absence of suitable habitat and/or the Project being situated outside of the species' known distribution (see Table 5). The Project is expected to have a less than significant to no impact on these species through construction mortality/disturbance or loss of habitat because there is little or no likelihood that they are present.

Burrowing Owl

Burrowing owl is a member of the family Strigidae recognized as a Species of Special Concern by the CDFW. It occurs primarily in grasslands but can persist and even thrive in agricultural or other developed and disturbed area. Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*). Burrowing owls use burrows for protection from predators, weather, as roosting sites, and dwellings to raise young. It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards. The nesting season begins in March, and incubation lasts 28–30 days. Adults can live up to 8 years in the wild.

There are no CNDDB occurrence records of burrowing owl from within 5 miles of the Project site; however, there are four CNDDB occurrence records from the nine-quad search. Ground squirrel burrows scattered throughout the Project site could support the species. The agricultural field on the Project site and the adjacent idle agricultural lands provide potential foraging habitat. However, the habitat is routinely disturbed, and no sign of burrowing owl was detected during the reconnaissance survey. Therefore, the potential for this species to occur on the Project site is low; however, there is potential for proposed Project implementation to impact burrowing owl. Implementation of Mitigation Measure BIO-1 will reduce any potential impacts to ***less than significant***.

Mitigation Measure:

BIO-1 A pre-construction take avoidance survey shall be conducted by a qualified biologist in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) to ensure that no burrowing owl will be disturbed during the implementation of the Project. A pre-construction take avoidance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential burrowing owl habitat in and within 500 feet of the impact areas. If a burrowing owl or sign of burrowing owl use (e.g., feathers, excrement, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or other measures shall be implemented in consultation with the CDFW.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant Impact. As stated in the BE (see Appendix B), the proposed Project site does not contain any aquatic, water or hydrologic features. There is no riparian habitat or sensitive natural community on-site as the site is currently and has historically been utilized for agricultural production.

As such, there will be ***less than significant impacts.***

Mitigation Measures: None are required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact with Mitigation . As stated in the BE, the Project has the potential to impede the use of nursery sites for native birds protected under the Migratory Bird Treaty Act and California Fish and Game Code. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant effect. Implementation of Mitigation Measure BIO-2 will reduce potential impacts to ***less than significant.***

Mitigation Measures:

BIO-2 To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure

that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 10 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

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

No Impact. According to the BE, the proposed Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance as no trees or biologically sensitive areas will be impacted. The development will also not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan as no such plan has been adopted. As such, there is ***no impact***.

Mitigation Measures: None are required.

V. CULTURAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Cultural Resources are defined as prehistoric or historical archaeological sites as well as historical objects, buildings, or structures. In accordance with 36 Code of Federal Regulations (CFR) §60.4, "historical" in this report applies to cultural resources which are at least 50 years old. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local level in a local register of historical resources, at the state level in the California Register of Historical Resources (CRHR), or at the federal level in the National Register of Historic Places (NRHP). Cultural resources that are determined to be eligible for inclusion in the CRHR are called "historical resources" (California Code of Regulations [CCR] 15064.5[a]). Under this statue the determination of eligibility is partially based

on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3). Cultural resources eligible for inclusion in the NRHP are deemed "historic properties".

A Phase 1 Cultural Resource Assessment was prepared by Hudlow Cultural Resource Associates for the proposed Project dated November 2025, see Appendix C. The assessment included a California Historical Resources Information System (CHRIS) record search by Southern San Joaquin Information Center (SSJIC) for the Project on October 8, 2025. According to the search results, six previous investigations have been conducted within the Project area. No previous surveys have addressed the parcel in question. Two cultural resources are located within one half-mile of the current project area, a historic rail line and a historic agricultural ditch. No cultural resources have previously identified within the current project area.

In addition to the records search, Hudlow Cultural Resource Associates conducted an on-site pedestrian survey of the site on October 22, 2025. During the pedestrian survey the Project was comprised of fallowed agricultural fields and a rural residence.

RESPONSES

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact With Mitigation. One cultural resource was identified, C&B-6. The farmhouse pre-dates 1926. Bonadelle Neighborhoods is proposing to demolish the two-story farmhouse which fronts Lacey Boulevard, and build a single-family residential tract. C&B-6 has several large additions to the south and east elevations of the house and a deteriorating set of outbuildings located to the west of the main house, and is not eligible for nomination to the California Register of Historic Resources.

C&B-6 is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. Criterion 1 of the California Register of Historical Resources does not apply. C&B-6 is not associated with the lives of persons important to local, California, or national history. As such, Criterion 2 of the California Register of Historical Resources does not apply. C&B-6 does not embody the distinctive characteristics of a type, period, region or method of construction or represent the work of a master or possess high artistic values.

C&B-6 is typical, vernacular farmhouse from the early twentieth-century. Criterion 3 of the California Register of Historical Resources does not apply.

C&B-6 will not yield, and does not have the potential to yield, information important to the prehistory or history of the local area, California or the nation. Criterion 4 of the California Register of Historical Resources does not apply, since this Criterion is largely set aside for important resources whose historic or cultural significance is prehistoric in nature or whose value can not be ascertained without archaeological excavation.

As such, C&B-6 is not considered a protected cultural resource. No prehistoric or historic archaeological resources were identified during the pedestrian survey. There are no known protected historical resources on or near the subject property that would be impacted by the proposed Project. There are also no known protected archaeological resources located within the Project area.

Although no significant cultural or archaeological resources, paleontological resources or human remains have been identified in the project area, the possibility exists that such resources or remains may be discovered during Project site preparation, excavation and/or grading activities. Mitigation Measures CUL – 1 and CUL – 2 will be implemented to ensure that Project will result in ***less than significant impacts with mitigation***.

Mitigation Measures:

CUL – 1

Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Hanford, describing the testing program and subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).

CUL – 2

In order to ensure that the proposed project does not impact buried human remains during construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Hanford with documentation identifying construction personnel that will be responsible for on-

site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Kings County coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.

VI. ENERGY

Would the project:

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

ENVIRONMENTAL SETTING

In 2024, California was the fourth-largest total electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports the second-largest amount of electricity of any state.

Energy usage is typically quantified using the British thermal unit (BTU). As a point of reference, the approximately amounts of energy contained in common energy sources are as follows:

Energy Source	BTUs[5]
Gasoline	120,429 per gallon
Natural Gas	1,037 per cubic foot
Electricity	3,412 per kilowatt-hour

Table 6 presents the electrical consumption in California by end-use sector.

[5] U.S. Energy Information Administration. Energy Units and Calculators Explained. https://www.eia.gov/energyexplained/index.php?page=about_energy_units. Accessed December 2025.

Table 6
2018 California Energy Consumption[6]

End User	BTU of energy consumed (in trillions)	Percentage of total consumption
Residential	1,166.6	17.1
Commercial	1,157.7	17.0
Industrial	1,456.7	21.4
Transportation	3,034.0	44.5
Total	**6,815**	--

REGULATORY SETTING

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

California Green Building Standards Code (Title 24, Part II, CALGreen)

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally a volunteer measure, the code became mandatory in 2010 and the most recent update (2025) went on January 1, 2026. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring,

[6] U.S. Energy Information Administration. California State Profile and Energy Estimates. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed December 2025.

carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The 2022 CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building; planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

RESPONSES

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The Project proposes the construction of 78 residential units that will result in additional energy consumption, as discussed below.

Construction

During Project construction there would be an increase in energy consumption related to worker trips and operation of construction equipment. This energy consumption will be short-term and temporary. There are not unusual project characteristics or construction processes that would require use of equipment that will be more energy intensive than used for comparable activities. Construction will include site preparation, building construction, paving and architectural coatings. The primary source of energy for construction will be diesel and gasoline.

All equipment shall conform to current emission standards and related fuel efficiencies including applicable California Air Resources Board (CARB) regulations, California Code of Regulations (Title 13, Motor Vehicles) and Title 24 standards. Compliance with these regulations would ensure that short-term, temporary construction activities do not result in wasteful, inefficient or unnecessary consumption of energy resources.

Operations

Project operation involves the heating, cooling, use of equipment, and vehicle trips. Operation of the 78 residential homes would be required to comply with energy efficiency standards as dictated by State and federal regulations including Tite 24 energy efficiency requirements and adopted energy efficient standards by the California Energy Commission.

Therefore, the Project is expected to comply with all energy efficiency standards and requirements and will have a ***less than significant impact.***

Mitigation Measure: None are Required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. The proposed Project would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued. Part 11, Chapter 4 and 5, of the State's Title 24 energy efficiency standards establishes mandatory measures for residential and nonresidential buildings. Examples of these mandatory measures include solar, electric vehicle (EV) charging infrastructure, bicycle parking, energy efficiency, water efficiency and conservation, and material conservation and resource efficiency. Where applicable, the Project would comply with more stringent local regulations. In addition, the proposed Project would constitute

development within an area planned for residential development. The proposed Project would be well positioned to accommodate the existing and planned population.

The Project would provide connectivity within the Project site and to adjacent uses. Compliance with these aforementioned mandatory measures and Project design features would ensure that the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

For the above reasons, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be ***less than significant.***

Mitigation Measures: None are Required.

VII. GEOLOGY AND SOILS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code	☐	☐	☒	☐

	creating substantial risks to life or property?				
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Hanford is located in the center of the Central Valley, which is a nearly flat northwest-southeast trending basin approximately 450 miles long and approximately 75 miles wide. The City of Hanford is located on soil types characterized by a thick section of sedimentary rock overlying a granitic basement layer. The soil types found in Hanford are not subject to annual flooding or ponding and are considered well-drained. The hazards due to ground-shaking are considered low due to the relative distance of the City from seismic faults. The nearest faults are the San Andreas Fault (approximately 46.5 miles to the southwest of the western boundary of the City) and the White Wolf Fault, located near Arvin and Bakersfield to the southwest in Kern County. The City of Hanford is located in Seismic Zone III, as defined by the California Uniform Building Code.

RESPONSES

a-i) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

a-ii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a-iii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a-iv) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less Than Significant Impact. The proposed Project site is located on an approximately 16.65-acre site, adjacent to the western City limit boundary. The proposed site is not located in an earthquake fault zone as delineated by the 1972 Alquist-Priolo Earthquake Fault Zoning Map Act.[7] The nearest known potentially active fault is the San Andreas Fault, which is approximately 46.5 miles to the southwest of the western boundary of the City. No active faults have been mapped within the Project boundaries, so there is no potential for fault rupture. It is anticipated that the proposed Project site would be subject to some ground acceleration and ground shaking associated with seismic activity during its design life. The proposed Project site would be engineered and constructed in strict accordance with the earthquake resistant design requirements contained in the latest edition of the California Building Code (CBC) for Seismic Zone III, as well as Title 24 of the California Administrative Code, and therefore would avoid potential seismically induced hazards on planned structures.

The proposed Project site has a generally flat topography, which would preclude the likeliness of a landslide. The impact of seismic or landslide hazards on the Project would be ***less than significant.***

Mitigation Measures: None are required.

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

Less Than Significant Impact. Construction activities associated with the Project involve ground preparation work for the new housing development and associated improvements. These activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the Project site. During construction, nuisance flow caused by minor rain could flow off-site. The contractor would be required to employ appropriate sediment and erosion control BMPs as part of a Stormwater Pollution Prevention Plan (SWPPP) that would be required in the California National Pollution Discharge Elimination System (NPDES). As such, any impacts would be considered ***less than significant.***

Mitigation Measures: None are required.

[7] Earthquake Hazard Zones, California Department of Conservation. https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed December 2025.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

Less Than Significant Impact. See Section VI a. above. The site is not at significant risk from ground shaking, liquefaction, or landslide and is otherwise considered geologically stable. The City of Hanford sits on top of a mix of different loam classifications; with the predominant soils in the proposed Project area being Nord fine sandy loam and Nord complex.[8] These soil types are characterized as well drained, with low runoff. These soils also have low shrink/swell potential, which is generally not conducive to liquefaction or expansion. Additionally, liquefaction typically occurs when there is shallow groundwater, low-density non-plastic soils, and high-intensity ground motion. The proposed Project is located on relatively flat agricultural fields and the threat of a landslide occurring on or adjacent to the Project site is considered low.

Subsidence is typically related to over-extraction of groundwater from certain types of geologic formations where the water is partly responsible for supporting the ground surface. The City of Hanford is recognized by the U.S. Geological Service as being in an area of subsidence.[9] The site would be designed in accordance with engineering design standards and structural improvement requirements to withstand the effects of soil settlement and collapsible soils. Engineered compacted fill would likely be used during construction in accordance with building code requirements, which would reduce the potential for lateral spreading or collapse of soils from Project construction.

Impacts are considered ***less than significant***.

Mitigation Measures: None required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

[8] U.S. Department of Agriculture. Natural Resource Conservation Service. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx. Accessed December 2025.

[9] U.S. Geological Service. Areas of Land Subsidence in California. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html Accessed December 2025.

No Impact. The proposed Project does not include the construction, replacement, or disturbance of septic tanks or alternative wastewater disposal systems. The Project will be required to tie into the existing City sewer system (See Utilities section for more details). Therefore, there is ***no impact.***

Mitigation Measures: None are required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation. There are no unique geological features on site or in the area. As identified in the cultural studies performed for the Project site (see Appendix B), there are no known paleontological resources on or near the site; however, mitigation measures have been added that will protect unknown (buried) resources during construction, including paleontological resources. As such, impacts are less than significant with mitigation incorporated.

Mitigation Measures: CUL-1, CUL-2 and CUL-3

VIII. GREENHOUSE GAS EMISSIONS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs are transparent to solar radiation, but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect. Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity. Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO_2), methane (CH_4), ozone, Nitrous Oxide (NO_x), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global climate change could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality and supply. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought periods. There is uncertainty regarding the timing, magnitude, and nature of

the potential changes to water resources as a result of climate change; however, several trends are evident.

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35 percent of the state's useable annual water supply. Snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.

REGULATORY SETTING

Federal

The USEPA Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO_2-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA. On April 17, 2009, the USEPA found that CO_2, CH_4, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

State

California is taking action to reduce GHG emissions. In June 2005, Governor Schwarzenegger signed Executive Order S-3-05 to address climate change and GHG emissions in California. This order sets the following goals for statewide GHG emissions:

- Reduce to 2000 levels by 2010
- Reduce to 1990 levels by 2020
- Reduce to 80 percent below 1990 levels by 2050

In addition, the proposed Project is being evaluated pursuant to CEQA.

Local

San Joaquin Valley Air Pollution Control District (SJVAPCD)

In August 2008, the SJVAPCD adopted the Climate Change Action Plan, which directed the SJVAPCD to develop guidance to assist lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions on global climate change.

In 2009, the SJVAPCD adopted the guidance document: Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA. This document recommends the usage of performance-based standards, otherwise known as Best Performance Standards (BPS), to assess the significance of project-specific greenhouse gas emissions on global climate change during the environmental review process. Projects implementing BPS in accordance with SJVAPCD's guidance would be determined to have a less than significant individual and cumulative impact on greenhouse gas emissions and would not require project specific quantification of greenhouse gas emissions.[10]

RESPONSES

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction: Greenhouse gases would be generated during construction from activities including site demolition, site preparation, grading, building construction, application of architectural coatings, and paving. GHG emissions for the Project were estimated to be approximately 275 metric tons of carbon dioxide equivalent per year (MTCO2E/year) for construction. The analysis was completed utilizing the CalEEMod Modeling Software. The full analysis can be found in Appendix A.

[10] SJVAPCD. Guidance for Assessing and Mitigating Air Quality Impacts. February 19, 2015. Page 112. https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed December 2025

Operation: Implementation of the proposed Project would result in long-term greenhouse gas emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions. Total GHG operational emissions were estimated using the CalEEMod model, which estimates emissions to be approximately 1,020 MTCO2E/year.

The SJVAPCD has not established a numeric threshold for GHG emissions. The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (e.g., a CAP). Neither the City nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, the proposed Project was analyzed for consistency with the 2022 Scoping Plan.

The 2022 Scoping Plan includes key project attributes that reduce operational GHG emissions in Appendix D, Local Actions, of the 2022 Scoping Plan. As discussed in Appendix D of the 2022 Scoping Plan, absent consistency with an adequate, geographically specific GHG reduction plan such as a CEQA-qualified CAP, the first approach the State recommends for determining whether a proposed residential or mixed-use residential development would align with the State's climate goals is to examine whether the Project includes key project attributes that reduce operational GHG emissions. The Project's consistency with key project attributes from the 2022 Scoping Plan that would be applicable to residential and mixed-use development is shown in Table 7.

Table 7

Project Consistency with the 2022 Scoping Plan Key Residential Project Attributes that Reduce GHGs

Priority Areas	Key Project Attribute	Project Consistency
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious standards.	Consistent. CALGreen Code requires provision of infrastructure to accommodate EV chargers. The proposed Project will be consistent with the requirements set forth in the CALGreen Code.
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served	Consistent. The Project site is surrounded by agriculture and residential development. As detailed in the Transportation section of this document, the proposed

	by existing utilities and essential public services (e.g., transit, streets, water, sewer)	Project screens out of VMT analysis due to its small size and consistency with the General Plan Land Use Designation. Additionally, a transit stop is approximately 0.19 miles to the west of the site.
	Does not result in the loss or conversion of natural and working lands.	Consistent. The proposed Project site is fallowed agricultural land and a rural residence. The site has been designated for residential development by the City of Hanford General Plan and is zoned for residential development by the Zoning Ordinance. As such, any impacts resulting from agricultural conversion were assessed at the time the land was designated for residential development. No new conversion impacts would result with Project implementation and the Project is consistent with this key project attribute.
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre) or is in proximity to existing transit stops (within a half mile) or satisfies more detailed and stringent criteria specified in the region's SCS	Consistent. The Project site is located within 0.5 miles of two transit stops. The Centennial at Target stop is approximately 0.41 miles to the east while the Lacey at Four Seasons stop is 0.2 miles to the west. The Project is consistent with this key project attribute.
	Reduces parking requirements by eliminating parking requirements or including maximum	Consistent. The proposed Project would consist of 78 single family residential units and would be consistent with

	allowable parking ratios (i.e,. the ratio of parking spaces to residential units or square feet); or providing residential parking supply at a ratio of less than one parking space per dwelling unit; or for multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	the City's parking requirements for single family homes. Thus, the Project would be consistent with the intent of this key project attribute.
	At least 20% of units included are affordable to lower-income residents.	Consistent. While the Project does not include affordable housing units, the median household income in 2023 in California was $96,334.[11] The median household income in 2023 in the City of Hanford is $73,544, which is approximately 23% less than the state average. Comparatively speaking, residents in the Hanford area have a lower income than the State median. The Project would be consistent with the intent of this key project attribute.
	Results in no net loss of existing affordable units.	Consistent. No affordable housing units would be lost as a result of Project implementation. The Project would be consistent with this key project attribute.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propane or other fossil	Consistent. The proposed Project would be all electric,

[11] United States Census Bureau. QuickFacts. https://www.census.gov/quickfacts/fact/table/hanfordcitycalifornia,CA. Accessed December 2025.

	fuels for space heating, water heating, or indoor cooling.	which is consistent with this key project attribute.

Residential projects that have all of the key project attributes as outlined in Table 7 would be considered to accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals as outlined in the 2022 Scoping Plan. As demonstrated in Table 7, the proposed Project would be consistent with the 2022 Scoping Plan key residential project attributes. As such, the Project's generation of GHG emissions would result in a ***less than significant impact*** on the environment.

Mitigation: None are Required.

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

Less Than Significant Impact. The City of Hanford adopted a Regional Climate Action Plan (CAP) in coordination with Kings County. The CAP includes a GHG inventory, a benchmarking/goal setting project and identified a reduction target for 2020. Although the CAP does not include a target for reduction in 2030, the measures in the plan will continue to provide reductions and help demonstrate continued progress in achieving the SB32 target for 2030.

The Regional CAP included policies that support emission reductions from new development. The Project contains features that been evaluated for consistency with policies in the CAP and found consistent as summarized below in Table 8.

Table 8

Consistency with the Regional Climate Action Plan Policies

E-4.1 Encourage local homebuilders to participate in the New Solar Homes Partnership to install solar PV systems on qualifying new homes. **Consistent.** The proposed Project will comply with the latest CALGreen solar readiness and installation requirements.
E-4.2 Work with the building industry to incorporate designs improving solar readiness into building plans through voluntary green building guidelines. **Consistent.** The proposed Project will comply with the latest CALGreen solar readiness and installation requirements.

E-5.2 Provide project applicants with green building resources, including the SJVAPCD's Best Performance Standards list for GHG reductions, and promote workshops offered by community organizations **Consistent.** The proposed Project would include sustainability features in the project design in accordance with SJVAPCD requirements, CALGreen, and City of Hanford standards.
TL-1.1 Support and encourage mixed-use and medium- and high-density land use categories located within 0.25 miles of a transit stop, park and ride facility, or existing developed areas, by allowing flexible zoning and/or density bonuses for applicable projects. **Consistent**. The Project is located within 0.19 miles of a transit stop. The development and the area surrounding the development provide a range of residential densities.
TL-1.3 Allow live/work developments that permit residents to live at their place of work and thereby reduce VMT and associated GHG emissions. **Consistent.** The proposed Project includes residential uses within close proximity of commercial facilities that will potentially allow employees of the commercial areas to live within walking distance.
TL-2.3 Establish minimum design criteria for bicycle and pedestrian circulation and implement through the design review process. **Consistent.** The proposed Project would provide pedestrian infrastructure connecting to neighboring uses.
TL-2.5 Support land use planning that will promote pedestrian and bicyclist access to and from new development by encouraging land use and subdivision designs that provide safe bicycle and pedestrian circulation, including bicycle parking facilities and internal bicycle and pedestrian routes, where feasible. **Consistent.** The proposed Project would comply with all applicable City design standards related to safe bicycle and pedestrian circulation.
TL-3.4 Support and encourage new development that provides safe routes to adjacent transit stops, where applicable. (Community) **Consistent.** The proposed Project would comply with City design standards that provide a safe route to a nearby transit stop.

Source: King County Association of Governments Regional Climate Action Plan

The proposed Project would incorporate features that would minimize GHG emissions, as summarized above. These feature are consistent with the Regional CAP. As such, the Project will not conflict with plans, policies and regulations pertaining to GHG's, therefore impacts would be considered ***less than significant.***

Mitigation: None are Required.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency	☐	☐	☒	☐

	response plan or emergency evacuation plan?				
g.	Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed Project site is located adjacent to the western City of Hanford City limit in an area that is designated for urban development. in the western portion of the City of Hanford. The site currently supports fallow agricultural land and a rural residence.

RESPONSES

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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

Less Than Significant Impact. The 16.65-acre proposed Project site will be annexed into the City of Hanford with Project approval. A 13.88 portion of the site is proposed to be developed with 78 single family residential units, internal access roads and other related residential improvements.

Lands surrounding the proposed Project are fallow agricultural land, rural residences, single family residential developments and active agriculture.

As the Project development includes residential uses, there is no reasonably foreseeable condition or incident involving the Project that could result in release of hazardous materials into the environment, other than any potential accidental releases of standard fuels, solvents, or chemicals encountered during typical construction of a residential subdivision. Should an accidental hazardous release occur or should the Project encounter hazardous soils, existing regulations for handling hazardous materials require coordination with the California Department of Toxic Substances Control for an appropriate plan of action, which can include studies or testing to determine the nature and extent of contamination, as well as handling and proper disposal. Therefore, potential impacts are ***less than significant.***

The operational phase of the proposed Project would occur after construction is completed and residents move in to occupy the residential structures. The proposed Project will include land uses that are considered compatible with the surrounding uses. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as household and commercial cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur. Therefore, the proposed Project will not create a significant hazard to the public or the environment and any impacts would be ***less than significant***.

Mitigation Measures: None are required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. There are no schools located within the 0.25-mile radius of the proposed Project site. The Hanford Agriculture School Farm is approximately 0.56 miles to the north while the Future Hope Preschool is approximately 0.63 miles to the south. As the proposed Project includes the development of single-family residences, it is not reasonably foreseeable that the proposed Project will cause a significant impact by emitting hazardous waste or bringing hazardous materials within one-quarter mile of an existing or proposed school. Residential land uses do not generate, store, or dispose of significant quantities of hazardous materials. See also Responses *a.* and *b.* above regarding hazardous material handling. There would be a ***less than significant impact.***

Mitigation Measures: None are required.

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

No Impact. A database search was conducted to identify recorded hazardous materials incidents in the Project area. The search included cleanup sites under Federal Superfund (National Priorities List), State Response, and other federal, state, and local agency lists. The proposed Project site is not located on a list

of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Geotracker[12] and Envirostor[13] databases). There is ***no impact.***

Mitigation Measures: None are required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Less Than Significant Impact. There are no private or public airstrips in the Project vicinity. The Hanford Municipal Airport is located approximately 4.5 miles to the southeast of the proposed Project site. Thus, any impacts are ***less than significant***.

Mitigation Measures: None are required.

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

Less than Significant Impact. The Project has been designed for adequate emergency access and has been reviewed by the City. The internal roadways will be designed with sufficient clearances for emergency vehicles to access the entire site. Therefore, the Project will not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Any impacts are ***less than significant***.

Mitigation Measures: None are required.

g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

[12] Geotracker Database, California State Water Resources Control Board. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Hanford. Accessed December 2025..

[13] EnviroStor Database, California Department of Toxic Control Substances. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Hanford. Accessed December 2025.

No Impact. The site is completely surrounded by actively managed agricultural land or residential development and the site itself is developed with fallow agricultural land and a rural residence.. There are no wildlands on or near the Project site. There is ***no impact***.

Mitigation Measures: None are required.

X. HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. Result in substantial erosion or siltation on- or off- site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐

X. HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The City of Hanford is located in the Tulare Lake hydrologic region, specifically within the Kings Sub-basin of the San Joaquin Valley groundwater basin.[14] The Kings Subbasin encompasses approximately 1,530 square miles within Fresno, Tulare and Kings counties. The Kings Subbasin is designated as a critically over-drafted high priority basin by the Department of Water Resources. The existence of overdraft in the Kings Subbasin is documented by historical decline in ground water levels and is confirmed by the historical water budgets presented by the Mid-Kings River Groundwater Sustainability Agency and the Alta Irrigation District.[15] Hanford has a groundwater depth of up to 300 feet below the surface.[16]

RESPONSES

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

[14] City of Hanford, General Plan Update Draft Environmental Impact Report, December 2006. Page 3 – 74.

[15] City of Hanford 2020 Urban Water Management Plan. October 2021. https://www.cityofhanfordca.com/DocumentCenter/View/567/2020-Urban-Water-Management-Plan-PDF. Accessed December 2025.

[16] Ibid.

Less Than Significant Impact. The proposed Project site is currently comprised of fallow agriculture and a rural residence. Grading, excavation and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed Project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively reduce the potential pollution of stormwater by these materials. These same types of common sense, "good housekeeping" procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These Best Management Practices (BMPs) would be required in theStormwater Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction. When properly designed and implemented, these "good-housekeeping" practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the National Pollution Discharge Elimination System (NPDES) Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement.

The City of Hanford will provide water to the Project site and the Project will be required to tie into the City's existing water service infrastructure. The Project will comply with all City ordinances and standards to assure proper grading and drainage. Compliance with all local, state, and federal regulations will prevent violation of water quality standards or waste discharge requirements. The Project will be required to prepare a grading and drainage plan for review and approval by the City Engineer, prior to issuance of building permits. Therefore, any impacts will be ***less than significant***.

Mitigation Measures: None are required.

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

Less Than Significant Impact. Site development will result in an increased demand for water. The City of Hanford relies on groundwater as its sole water supply source. The City currently operates 15 water supply wells, 3.5 million gallons of storage tanks, and over 15,600 individual connections to the City system.[17]

The City of Hanford is part of the Mid-Kings River Groundwater Sustainability Agency (MKRGSA) which prepared a Groundwater Sustainability Plan (GSP) of which the City of Hanford is a participant. The City adopted its latest Urban Water Management Plan (UWMP) in December 2021. The UWMP states that with implementation of the projects and management actions identified in the KREGSA GSP, the City's groundwater supplies are anticipated to be sustainable and available to meet the projected demands of its Public Water System service area.[18] To continue this trajectory, development within the MKRGSA, including the proposed Project, are required to adhere to the provisions of the MKRGSA GSP.

The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. According to the City of Hanford 2020 UWMP the demand for water in 2020 was 11,714 acre feet. In 2020, single family uses used 6,903 AF, which accounted for 59 percent of the total water used. The proposed Project consists of 78 dwelling units and the average household size in Hanford is 3.08 people; therefore, the Project would house approximately 240 people. According to the UWMP, the amount of groundwater predicted to be pumped in 2020 was 11,714 acre feet or 10.4 million gallons per day. The 78-lot subdivision would be expected to use approximately 41,040 gallons of water per day (people (240) x 2020 average gallons per day per person (171)) under normal operation, including domestic and landscape irrigation. This equates to approximately 0.13 acre feet per year. Although the Project would utilize groundwater for domestic purposes, the amount of water used is not considered significant and would not substantially lower the groundwater table of the aquifer or interfere substantially with the recharge of the underground aquifer.

[17] City of Hanford. Water System. https://www.ci.hanford.ca.us/1564/Utility-Division. Accessed January 2026.

[18] Ibid.

Additionally, the site has been planned for residential development in the General Plan and as such, has been accounted for in the City's infrastructure planning documents, including the 2020 UWMP. Thus, the Project demands for groundwater resources have been planned for. Proposed Project implementation would not substantially deplete groundwater supplies and/or otherwise interfere with groundwater recharge efforts being implemented by the City of Hanford. Future demand can be met with continued groundwater pumping and conservation measures. Additionally, compliance with existing State regulations will ensure that impacts to groundwater supply will be ***less than significant.***

Mitigation Measures: None are required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. result in substantial erosion or siltation on- or offsite;

   ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

   iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

   iv. impede or redirect flood flows?

Less Than Significant Impact. Lands surrounding the proposed Project are agricultural row crops, rural residences and single-family developments.

The proposed Project will change drainage patterns of the site through the installation of impervious surfaces and structures (houses, driveways, streets, etc.) and will be required by the City to be graded to facilitate proper stormwater drainage. Storm water during construction will be managed as part of the Storm Water Pollution Prevention Plan (SWPPP). A copy of the SWPPP will be retained on-site during construction.

The proposed Project site is located outside of any Special Flood Hazard Areas or Other Areas of Flood Hazard, as indicated by FEMA flood hazard map 06031C0185C, effective 6/16/2009. The proposed development will be built in accordance with the current City ordinances and California Building Code regarding construction in flood zones. The Project will be designed for adequate storm drainage.

Accordingly, the chance of flooding (and therefore the release of pollutants due to flooding) at the site is remote. Impacts are ***less than significant.***

Mitigation Measures: None are required.

d) In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. As discussed in Impact X(c), the proposed Project site is located outside of any Special Flood Hazard Areas or Other Areas of Flood Hazard. The Project includes development of adequate storm drainage with the construction of a 0.88-acre stormwater basin on-site. The proposed development will be required to prepare and submit a water quality control plan to be implemented during construction, as required by the National Pollutant Discharge Elimination System. This plan will be reviewed and approved by the City Engineer prior to the start of construction.

There are no inland water bodies that could be potentially susceptible to a seiche in the Project vicinity. This precludes the possibility of a seiche inundating the Project site. The Project site is more than 100 miles from the Pacific Ocean, a condition that precludes the possibility of inundation by tsunami. There are no steep slopes that would be susceptible to a mudflow in the Project vicinity, nor are there any volcanically active features that could produce a mudflow in the City of Hanford. This precludes the possibility of a mudflow inundating the Project site. Any impacts are ***less than significant***.

Mitigation Measures: None are required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The Project will not conflict with any water quality control plans or sustainable groundwater management plan. However, as mentioned in Section c., all new development within the City of Hanford Planning Area must conform to standards and plans contained in the Hanford Stormwater Drainage Master Plan. By conforming to all standards and policies as outlined, there will be ***no impacts*** associated with the Project.

Mitigation Measures: None are required.

XI. LAND USE AND PLANNING

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is adjacent to the City limit boundary and within the Hanford Sphere of Influence. The City of Hanford lies in the Central San Joaquin Valley region, in the northwestern portion of Kings County. State Route (SR) 198 runs east-west through the southern portion of the City and SR 43 runs north-south around the eastern boundary. The site is currently designated for low- and medium-density residential with a floating future open space designation by the City of Hanford General Plan.

RESPONSES

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The proposed Project includes annexation of 16.65-acres and development of 78 single-family residential units on a 13.88-acre portion. No development is proposed on the remaining 2.77-acres. The site is adjacent to the western City limit boundary and is within the Sphere of Influence. Lands surrounding the proposed Project are agricultural row crops, rural residences and single-family residential developments.

The proposed Project site has a current land use designation of Low and Medium Density Residential in the General Plan and is proposed to be prezoned R-L-5 Single Family Residential, and R-M Medium

Density Residential, in accordance with the General Plan designation. The Project includes an application for a Planned Unit Development (PUD) to allow greater garage width. The Project will create 78 units on 13.88 acres, which is a density of 5.04 units per acre. As demonstrated below, the proposed density falls within the density allowable under the Land Use Element of the General Plan.

Color	General Plan Designation	Acreage	Density Range/gross acre	Minimum Units	Maximum Units
Yellow	Low-Density Residential	5.08	2-10	10.16	50.8
Orange	Medium-Density Residential	8.38	7-20	58.66	167.6
			Total Number of Residential Units	68.82 (min)	218.4 (max)

The Project would provide housing opportunities for the residents of Hanford and improve access to existing surrounding areas. The proposed development has no characteristics that would physically divide the City of Hanford. Any impacts will be ***less than significant impact.***

Mitigation Measures: None are required.

XII. MINERAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

According to the Hanford 2035 General Plan Background Report, the only significant mineral commodities that have been found within the Hanford Planning Area are sand and gravel for road and building construction. At this time there are no known significant deposits, and no active mines.

RESPONSES

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. There are no known mineral resources in the proposed Project area and the site is not included in a State classified mineral resource zones. No mineral resource locations are within the vicinity of the City of Hanford.[19] Therefore, there is ***no impact***.

Mitigation Measures: None are required.

[19] City of Hanford General Plan Update Background Report, October 2006. Page 9-12.

XIII. NOISE

Would the project:

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

ENVIRONMENTAL SETTING

Noise is often described as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. The City of Hanford is impacted by a multitude of noise sources. Principal noise sources include traffic on roadways, agricultural noise and industrial noise. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities, and they are predominant sources of noise in the City. The Project site is located in an area with a mix of uses. The predominant noise sources in the Project area include traffic on local roadways, residential noise (lawn mowers, audio equipment, voices, etc.), and potential noise from the nearby agricultural land uses.

RESPONSES

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

Short-term (Construction) Noise Impacts

Proposed Project construction related activities will involve temporary noise sources. Typical construction related equipment include graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Table 9 indicates the anticipated noise levels of the typical construction-related equipment (i.e., graders, trenchers, tractors) based on a distance of 50-feet between the equipment and the sensitive noise receptor.[20]

Table 9
Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Dozer	85
Generator	82
Grader	85
Jack Hammer	88
Loader	85
Paver	85
Truck	84

The closest noise sensitive receptors are the residents of the single-family residential properties adjacent to the east. The Hanford Municipal Code (HMC) Section 9.10.060(A)(10) does limit construction noise to

[20] The Noise and Vibration Impact Assessment Manual, Federal Transit Administration, U.S. Department of Transportation. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Table 7-1. Accessed December 2025.

between the hours of 7:00 a.m. and 8:00 p.m. The Project construction will be required to limit construction noise to these hours.

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban environments. Most residents of urban areas recognize this reality and expect to hear construction activities on occasion.

Long-term (Operational) Noise Impacts

The primary source of on-going noise from the Project will be from vehicles traveling on internal access roads and from traffic traveling along Lacey Blvd. The Project will result in an increase in traffic on some roadways in the Project area. However, the relatively low number of new trips associated with the Project is not likely to increase the ambient noise levels by a significant amount. The area is active with vehicles, residential housing, and agricultural land uses, so the proposed Project will not introduce a new significant source of noise that isn't already occurring in the area. The City Municipal Code does not contain specific noise standards for motor vehicles and other noise sources; however, the General Plan contains guidelines that limit exterior noise levels for residential and schools to 60 – 70 dBA CNEL.

Because noise generated from construction would be temporary and operational noise from the residential will be required to comply with HMC Section 9.10, impacts are determined to be ***less than significant.***

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. Construction associated with the proposed Project includes construction of 78 single-family residences. The site construction will also include a park, internal access roads, street lighting, site landscaping and additional related improvements.

The approximate threshold of vibration perception is 65 VdB, while 85 VdB is acceptable only if there are an infrequent number of events per day. Table 10 describes the typical construction equipment vibration levels.[21]

Table 10

Typical Construction Vibration Levels

Equipment	VdB at 25 ft
Small Bulldozer	58
Jackhammer	79

The primary vibration-generating activities associated with the proposed Project would occur when grading of the site is conducted, and when infrastructure such as utilities, and foundations are constructed. Operating cycles for the types of construction equipment used during construction may involve one or two minutes of full power operation followed by three or four minutes at lower power settings. 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).

While there are residences to the east of the proposed Project, vibratory compactors/rollers would be used only on a limited and interval basis during compaction, and would be moving throughout the site, instead of stationary or operated long-term in the same location to the extent it would damage buildings due to longer-term extended use.

Vibration from construction activities will be temporary and not exceed the Federal Transit Administration (FTA) threshold for the nearest rural residences to the Project site. Therefore, the impact is considered ***less than significant.***

Mitigation Measures: None are required.

c) For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

[21] The Noise and Vibration Impact Assessment Manual, Federal Transit Administration, U.S. Department of Transportation. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Table 7-1. Accessed December 2025.

No Impact. According to the Kings County Airport Land Use Plan, the Project is not located in an airport land use plan. The Project is approximately four and one-half miles from the Hanford public airport. The Project is outside the anticipated noise contours as shown on the Airport Compatibility Zone Map in the General Plan Background Report. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

XIV. POPULATION AND HOUSING

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The California Department of Finance determined that as of January 1, 2025, the Hanford population is 61,238.[22] The average household size, as determined in the U.S. Census Bureau was 3.08 persons.[23]

RESPONSES

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

[22] California Department of Finance. Report: 108,000 More Californians in 2024: Total State Population Tops 39.5 Million. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://dof.ca.gov/media/docs/forecasting/Demographics/estimates/E-1_2025_Press_Release.pdf. Accessed December 2025.

[23] Ibid.

Less Than Significant Impacts. The site is currently in agricultural production and contains one rural residence which will be demolished with Project implementation. The Project proposes the construction of 78 new homes, which would provide additional housing for approximately 240 people. The site is currently adjacent to the western City limits of Hanford and is within the Sphere of Influence. The site is designated and zoned for residential development. As such, the increase in population has been accounted for in the City's General Plan and associated General Plan Environmental Impact Report. Entitlements needed to accommodate the proposed Project include Annexation, Prezoning, a Planned Unit Development and a Tentative Subdivision Map.

The City of Hanford's primary industry is agriculture, but there is a sufficient labor force in the area to support many other types of industries, as the regional unemployment rate in August 2025 was 8.9%. The proposed Project will alleviate some overcrowding in the regional population by contributing reliable housing and will additionally provide temporary construction jobs to the local workforce.

In conclusion, the Project implementation will not displace a substantial amount people and instead provide needed housing. Any impacts are considered ***less than significant***.

Mitigation Measures: None are required.

XV. PUBLIC SERVICES

Would the project:

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

ENVIRONMENTAL SETTING

The Hanford Fire Department Station 3 is located at 1070 S. 12th Avenue, approximately 1.15 miles southeast of the Project site. The Hanford Fire Department offers a full range of services including fire/rescue, emergency medical treatment and transport, fire prevention, and hazardous materials first response.

Police protection services are provided by the Hanford Police Department, which is approximately 1.95 miles northeast of the Project site at 425 N. Irwin Street, Hanford. The Hanford Police Department provides a full range of police services.

Educational services are provided by the Hanford Elementary School District (HESD) and the Hanford Joint Union Hish School District (HJUHSD). Hanford Elementary District operates twelve schools within the planning area while HJUHSD operates seven schools.

RESPONSES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Less Than Significant Impact with Mitigation. The Hanford Fire Department (HFD) Station 3, located approximately 1.15 miles to the southeast will provide fire protection services to the proposed development.

The HFD follows the International City/County Management Association (ICMA) Yearbook for guidelines. The Yearbook recommends 1.02 firefighters per 1,000 residents. In 2013, the department had 27 fire suppression personnel for 55,470 residents, a ratio of .49. The station would currently need 58 fire suppression personnel to meet the standard. The addition of 240 residential units proposed with Project development will increase the demand for fire protection services. The existing fire stations are placed to provide optimum service; however, new stations will be needed to support the expanding city. The demand for additional personnel and equipment will be compensated for by the development impact fee of $546.39 per unit of Low-Density Housing. To support the expansion of fire services, the total development impact fee is $42,618.42. The timing of when new fire service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts on a potential future facility would be speculative. As new or expanded fire service facilities become necessary, construction or expansion would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. However, payment of Fire Impact Fees, as described in mitigation measure PUB-1 will ensure impacts associated with new and altered governmental facilities remain ***less than significant.***

Police Protection?

Less Than Significant Impact with Mitigation. The Hanford Police Department (HPD) will provide services to the proposed development. The HPD headquarters are located approximately 2.5 miles northeast of the proposed Project site. The development would increase the demand for police service

with the addition of 240 residential units. The HPD seeks a service standard of 1.1 to 1.2 sworn officers per 1,000 residents. In 2013, the Department had 55 sworn officers for 55,470 residents, a ratio of .99. The Department seeks at least 10 new officers for the growing city. The demand for additional officers and equipment will be compensated by the development impact fee of $296.50 per unit of Low-Density Housing. The total development impact fee for police protection services would be $23,127. The timing of when new police service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts on a potential future facility would be speculative. As new or expanded police service facilities become necessary, construction or expansion Projects would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. Additionally, the impact will be reduced by paying Police Impact Fees to account for the increased demand for police services caused by the Project. Therefore, the impact is ***less than significant*** with the incorporation mitigation measure PUB-2.

Schools?

Less Than Significant Impact Mitigation. The proposed Project is within the Hanford Elementary School District (HESD) and the Hanford Joint Union High School District (HJUHSD) and residents of the proposed Project are within the Simas Elementary, Woodrow Wilson Junior High and Sierra Pacific High School. According to the AUESD, HESD, and HJUHSD Development Fee Justification Study, the residential student generation rates[24] are as follows:

HESD – Grades TK-8 Total: 0.406

HJUHSD – Grades 9-12: 0.180

Since the proposed Project includes the addition of 78 single-family homes, the number of Tk-8 grade students will increase by approximately 32 while the number of 9-12 grade students will increase by approximately 14, for a total of 46 students. The proposed Project site is located within the City's Sphere of Influence and is designated and zoned for residential development. Growth associated with the Project has been planned and expected. In addition to the goals and policies of the City's General Plan, future development is required to pay development impact fees to the school districts at the time of building permit issuance. The City of Hanford charges $4.08 per square foot of residential development. The exact

[24] AUESD, HESD, and HJUHSD Development Fee Justification Study. Odell Planning & Research, Inc. Table B-3. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://resources.finalsite.net/images/v1652275949/hesdk12caus/ruavlzeog3pxdhfpyqjt/FeeStudy2022-HJUHSDHESDAUESDFinal.pdf#:~:text=Based%20upon%20past%20development%20activity%20and%20reasonable,in%20the%20next%20ten%20years%20in%20HESD. Accessed January 2026.

square footage for the housing has yet to be determined, however, the Project will pay its fair share in fees for schools, as outlined in mitigation measure PUB-3. Therefore, the impact is ***less than significant*** with mitigation incorporated.

Parks?

Less Than Significant Impact with Mitigation. The proposed Project includes the construction of a 78 single family residential development. The closest park to the proposed Project is Rotary Park, approximately 1.05 miles to the northeast. The Project will be required to pay City Park facility impact fees to compensate for any service demand increase on existing parks within the Hanford area as described in Mitigation Measure PUB-4. The Project applicant would be required to comply with the Municipal Code and Ordinances. Impacts are ***less than significant*** with mitigation incorporated.

Other public facilities?

Less Than Significant Impact. The proposed Project is within the land use and growth projections identified in the City's General Plan and other infrastructure studies. The Project, therefore, would not result in increased demand for, or impacts on, other public facilities such as library services. Any impacts would be ***less than significant***.

Mitigation Measures:

PUB-1 The Project developer shall be required to pay the Fire Protection Development Impact Fee as detailed by Chapter 15.45 of the Hanford Municipal Code prior to issuance of occupancy permits.

PUB-2 The Project developer shall be required to pay the Police Protection Development Impact Fee as detailed by Chapter 15.46.020 of the Hanford Municipal Code prior to issuance of occupancy permits.

PUB-3 The Project developer shall be required to pay the Hanford Joint Union High School District Development Impact Fee prior to issuance of occupancy permits.

PUB-4 The Project developer shall be required to pay the Park Facilities Impact Fee as detailed by Chapter 15.44.010 of the Hanford Municipal Code prior to issuance of occupancy permits.

XVI. RECREATION

Would the project:

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

ENVIRONMENTAL SETTING

The City has a total of twenty-one parks available for use. These include neighborhood parks, such as Coe Park, community parks, such as Hidden Valley Park, and special use parks, such as the Harris Street Ball Park. These parks are managed by the City of Hanford's Parks and Community Services Department. This department also supervises and coordinates a wide variety of community programs and activities.

RESPONSES

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact with Mitigation. The Project Applicant intends to develop 78 single-family residential units on an approximately 13.88-acre site. No park is proposed with the development and as such, the proposed Project will be subject to pay the park impact fees which will offset the parkland not provided in the development, as detailed in Mitigation Measure PUB-3. The future park

construction will undergo separate environmental review at the time it is developed. Impacts are considered ***less than significant with mitigation incorporated.***

Mitigation Measures: See PUB-3.

XVII. TRANSPORTATION/TRAFFIC

Would the project:

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

ENVIRONMENTAL SETTING

The proposed Project includes the annexation of 16.65 acres and development of 78 residential units on a 13.88-acre portion. Lacey Blvd is to the north of the Project site while Aquifer Drive (currently called Avenue 12 ½) is to the east. State Route 198 is located approximately 0.5 miles to the south.

Lacey Boulevard is an east-west arterial that intersects 11th and 12th Avenues approximately one mile south of Grangeville Boulevard. It operates primarily as a divided four-lane roadway and is classified as an arterial west of 11th Avenue and as a collector east of 11th Avenue. Lacey Boulevard provides access to commercial, residential, and agricultural land uses.

State Route 198 is an east-west state highway that extends from the California Central Coast, through the Central Valley to Sequoia National Park. It functions as a major regional and interregional corridor and operates within the study area as a four-lane expressway.

REGULATORY SETTING

Federal

Federal Transit Administration.

The Federal Transit Administration (FTA) is an authority that provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. The FTA is funded by Title 49 of the United States Code, which states the FTA's interest in fostering the development and revitalization of public transportation.

Americans with Disabilities Act of 1990.

Titles I, II, III, IV, and V of the ADA have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and nonprofit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Standards for Accessible Design, which establish minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

State

Senate Bill (SB) 743.

On September 27, 2013, Governor Jerry Brown signed SB 743 into law and codified a process that changed transportation impact analysis as part of CEQA compliance. SB 743 directs the California Office of Planning and Research (OPR) to administer new CEQA guidance for jurisdictions that removes automobile vehicle delay and LOS or other similar measures of vehicular capacity or traffic congestions from CEQA transportation analysis. Rather, it requires the analysis of VMT or other measures that "promote the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses," to be used as a basis for determining significant impacts to circulation in California. The goal of SB 743 is to appropriately balance the needs of congestion management with statewide goals related to reducing GHG emissions, encourage infill development, and promote public health through active transportation.

Local

City of Hanford Vehicle Miles Traveled (VMT) Guidelines

The City of Hanford has adopted the Vehicle Miles Traveled (VMT) Thresholds and Implementation Guidelines (VMT Guidelines) to address the issue VMT in accordance with CEQA Guidelines. The City VMT Guidelines contains thresholds that can be used to identify when a proposed land use project is

anticipated to result in a less-than-significant impact without conducting a more detailed VMT analysis. Screening thresholds include:

1. Residential and office projects within a Transit Priority Area
2. Locally serving retail projects with a combined area of up to 55,000 square feet
3. Redevelopment projects that result in equal or net reduction in VMT.
4. 100 percent affordable housing projects
5. Projects that are consistent with the General Plan and generate fewer than 1,000 average daily trips

A development project meeting one or more of the above attributes may be presumed to produce a less than significant VMT impact.

RESPONSES

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. The Project consists of the construction of 78 single family residential units as well as on-site circulation-related infrastructure improvements, including new local residential streets.

Vehicular Access: Vehicular access to the Project will be from Aquifer Drive (currently called 12 ½ Avenue) and via the residential development immediately to the south, which is currently undergoing the entitlement process. The Project has been designed to provide future connections to the south of the Project.

LOS Analysis: A traffic study was prepared by VRPA Technologies, Inc., dated March 30, 2026 and is provided in full as Appendix D. The City of Hanford's Transportation Element Policy T29 sets the maximum Level of Service at "E" on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. The City has set a peak hour Level of Service of "D" on all other streets and intersections with the Planned Growth Boundary.

New trips generated by the residential development were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). The resulting Project trip generation is 871 daily trips with 56 AM peak hour trips and 74 PM peak hour trips.

The intersection at 12 ½ Avenue at Lacey Blvd was studied as part of the traffic study under the following scenarios:

- Existing (2026) Conditions
- Opening Year 2027 Without Project
- Opening Year 2027 With Project
- Horizon (Future) Year 2046 Without Project
- Horizon (Future) Year 2046 With Project

Table 11 provides the existing and opening year (with and without the Project) intersection operations.

Table 11

Existing and Opening Year Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING		PEAK HOUR	OPENING YEAR 2027		PEAK HOUR	OPENING YEAR 2027 WITH PROJECT	
				DELAY	LOS		DELAY	LOS		DELAY	LOS
Lacey Blvd & 12 1/2 Ave	One-way Stop	D	AM	15.9	C	AM	16.5	C	AM	15.6	C
			PM	13.9	B	PM	14.7	B	PM	15.8	C

DELAY is measured in seconds
LOS = Level of Service / BOLD denotes LOS standard has been exceeded

For signalized intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.

Horizon Year traffic conditions with and without the Project in the year 2046 (20 years from Opening Year conditions) were estimated by taking the larger of the traffic volumes and applying a growth rate of 2% per year to the existing traffic volumes. Table 12 presents the Horizon Year With and Without Project scenario.

Table 12

Horizon Year Intersection Operations

INTERSECTION	TARGET LOS	CONTROL	HORIZON 2046 WITHOUT PROJECT CONDITIONS		HORIZON 2046 WITH PROJECT CONDITIONS	
			DELAY	LOS	DELAY	LOS
Lacey Blvd & 12 1/2 Ave	D	One-way Stop	24.3	C	23.0	C
			23.5	C	23.5	C

DELAY is measured in seconds
LOS = Level of Service / BOLD denotes LOS standard has been exceeded
For signalized intersections, delay results show the average for the entire intersection. For two-way and All way stop controlled intersections, delay results show the delay for the worst movement.
D*- LOS D was assumed, Traffic Signal was not met.

As demonstrated in Tables 11 and 12, the intersection is calculated to operate at or above the City's LOS minimum of "D" therefore no mitigations are required.

Pedestrian and Cyclist Connectivity: The Hanford Active Transportation Plan Update 2024 (ATP) establishes a long-term vision for improving walking and bicycling in Hanford.[25] The ATP shows that there is a plan for a Class II Bike Lane to be installed on Lacey Blvd, along the proposed Project boundary. It also shows a Tier 3 Pedestrian Priority Corridor along Lacey Blvd, just east of the proposed Project boundary. The Project will install sidewalks along all perimeter streets as well internal local streets in accordance with City development standards as part of the Project design to increase the walkability of the development.

Transit: There are multiple modes of public transportation in and around the City of Hanford. The Amtrak Station is located at 200 Sante Fe Avenue, approximately 1.8 miles to the east of the Project site. Amtrak connects the City of Hanford to over 100 destinations. The Kings Area Rural Transit (KART) provides public transit service to the Cities of Armona, Avenal, Corcoran, Grangeville, Hardwick, Hanford, Kettleman City, Laton, Lemoore, and Stratford. The Project site is located within 0.5 miles of two transit stops. The Centennial at Target stop is approximately 0.41 miles to the east while the Lacey at Four Seasons stop is 0.2 miles to the west. Additionally, the planning for the Kings-Tulare High-Speed Rail Station Transit Oriented Development Project is almost complete and the Final Plan and Report is anticipated in early 2026.

Proposed Project development will not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle or pedestrian facilities. Any impacts are ***less than significant.***

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No Impact. The City of Hanford has adopted the Vehicle Miles Traveled (VMT) Thresholds and Implementation Guidelines (VMT Guidelines) to address the issue VMT in accordance with CEQA Guidelines. The City VMT Guidelines contains thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed VMT analysis. Screening thresholds include:

[25] Hanford Active Transportation Plan. February 2025. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.cityofhanfordca.com/DocumentCenter/View/2071/Hanford-Active-Transportation-Plan-Final-PDF?bidId=. Accessed January 2026.

1. Residential and office projects within a Transit Priority Area

2. Locally serving retail projects with a combined area of up to 55,000 square feet

3. Redevelopment projects that result in equal or net reduction in VMT.

4. 100 percent affordable housing projects

5. Projects that are consistent with the General Plan and generate fewer than 1,000 average daily trips

A development project meeting one or more of the above attributes may be presumed to produce a less than significant VMT impact.

The City of Hanford VMT Guidelines were used to evaluate consistency with CEQA Guidelines Section 15064.3. According to the guidelines, the Project is screened out from further review because will generate fewer than 1,000 daily trips and it is consistent with the General Plan Land Use Designation.

As the residential units proposed with the Project are estimated to generate a maximum of 736 daily trips and the proposed use is consistent with the General Plan Land Use Designation, the Project can be screened out, therefore it will not conflict or be inconsistent with CEQA Guidelines 15064.3. There is ***no impact.***

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed Project has been designed for ease of access, adequate circulation/movement, and is typical of residential developments in the City of Hanford. On-site circulation patterns do not involve high speeds, sharp curves or dangerous intersections. Although there will be an increase in the volume of vehicles accessing the site and surrounding areas, the proposed Project will not present a substantial increase in hazards. Any impacts are considered ***less than significant.***

Mitigation Measures: None are required.

d) Result in inadequate emergency access?

Less Than Significant Impact. The proposed Project does not involve a change to any emergency response plan. The site will remain accessible to emergency vehicles of all sizes. As such, potential impacts are ***less than significant.***

Mitigation Measures: None are required.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

RESPONSES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 section 5020.1(k), or

   ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact with Mitigation Incorporation. In accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, potentially affected Tribes were formally notified of this Project and were given the opportunity to request consultation on the Project. Crawford and Bowen Planning, Inc., on behalf of the City contacted the Native American Heritage Commission, requesting a contact list of applicable Native American Tribes, which was provided. Then Crawford and Bowen Planning, Inc., on behalf of the City, provided letters to the listed Tribes on December 19, 2025, notifying them of the Project and requesting consultation, if desired.

A Cultural Resources Assessment was prepared by Hudlow Cultural Resources Associates dated November 2025 and is provided in Appendix C. As stated in the assessment, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource, nor is it listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. As part of the assessment, a records search was completed by the Southern San Joaquin Valley information Center. Based on the results of the records search, no previously recorded tribal cultural resources are located within the Project. Although no protected historical resources were identified and the presence of remains are not anticipated, cultural resources under the ground surface is possible. The Cultural Resources Assessment included a recommendation for two mitigations previously listed under Cultural Resources, CUL 1 and CUL 2. The City and the Santa Rosa Rancheria Tachi Yokut Tribe have also agreed to an additional mitigation measure that requires the developer/owner to agree to a burial treatment plan prior to any ground disturbing activities, which is included as Mitigation Measure CUL-3. Mitigation Measures CUL-1, CUL-2 and CUL 3 will ensure that impacts will be **less than significant with mitigation.**

Mitigation Measures:

CUL – 3

A burial treatment plan shall be entered into by the Project applicant/property owner prior to any ground disturbing activities.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

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

ENVIRONMENTAL SETTING

The proposed Project will be required to connect to water, sewer, stormwater and wastewater services provided by the City of Hanford and may be subject to water use fees and/or development fees to be provided such service. In addition, the Project will require solid waste disposal services.

Water

The City of Hanford's water supply system is a groundwater system. The city is located within the Tulare Lake Hydrologic Region is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. The system consists of 15 groundwater wells, three storage reservoirs, distribution mains, and fire hydrants. The system does not use surface water.

Solid Waste

Solid waste in the city is collected by a private contractor, Kings Waste Recycling Authority (KWRA). Refuse is sorted at the KWRA facility to recover recyclable materials before being hauled to the landfills in Kettleman Hills. For single-family residential customers, the City has instituted a green waste collection mixed recycle collection program.

Wastewater

The City of Hanford wastewater system provides for the treatment, disposal, and reuse of effluent, which meets all of the state's discharge requirements for the city. The wastewater system consists of a treatment plant and 21 sanitary sewer lift stations located throughout the city. The treatment facility has a capacity of 8 million gallons per day and is located south of Houston Avenue and East of 11th Avenue. The City's wastewater system also pursues water conservation strategies to ensure the long-term reuse of treated disinfected wastewater to reduce the need for groundwater.

RESPONSES

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The proposed Project site is within the City of Hanford Sphere of Influence. Upon Annexation, the Project site will be located within the service territory of the City of Hanford and is currently designated for residential development in the City of Hanford General Plan. Operational discharge flows treated at the City's wastewater treatment facility would be required to comply with applicable water discharge requirements issued by the Central Valley Regional Water Quality Control Board

(RWQCB). Compliance with conditions or permit requirements established by the City as well as water discharge requirements outlined by the Central Valley RWQCB would ensure that wastewater discharges coming from the proposed Project site and treated by the WWTF system would not exceed applicable Central Valley RWQCB wastewater treatment requirements.

As discussed in Section IX, Hydrology and Water Quality, with an increase in the area of impervious surfaces on the Project site, an increase in the amount of storm water runoff is anticipated. The site will be designed so that storm water is collected and deposited in the on-site 0.88-acre stormwater basin. Any additional runoff infrastructure will tie into the City's existing storm drain system. The storm water collection system design will be subject to review and approval by the City Public Works Department. Storm water during construction will be managed as part of the Storm Water Pollution Prevention Plan (SWPPP). A copy of the SWPPP is retained on-site during construction.

Additionally, as the site is designated for residential development, water usage, electricity and natural gas usage and the use of telecommunications facilities has been accounted for is the City's and utility providers long-range planning documents.

Thus, the proposed Project would have a ***less than significant impact.***

Mitigation Measures: None are required.

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

Less Than Significant Impact. Water service would be provided to the Project by the City of Hanford, which relies on groundwater as its sole water supply source. The City is a member of the Kings River East Groundwater Sustainability Agency (MKRGSA). The most recent MKRGSA GSP Annual Report indicates that groundwater levels at Representative Monitoring Sites near the City are above their designated Minimum Thresholds and on track to meet the forecast groundwater level projections and Interim Milestones established for these wells.[26] To continue this trajectory, development within the MKRGSA, including the proposed Project, are required to adhere to the provisions of the MKRGSA groundwater sustainability plan.

Additionally, the City anticipates that its sources of supplies will be available to meet demands on a consistent basis for all year types throughout the planning horizon of the UWMP, as the site is planned

[26] Ibid. Pg 1-3.

for residential development and has been included in the City's infrastructure planning documentation. The proposed development will be required to follow the City's General Plan and Zoning Ordinances which include land use goals, policies, and implementation measures for developments regarding water use. The Project developer will also be required to pay the City of Hanford's water system impact fees. Funds accrued under this fee are used to make capital improvements to the City's water system, including conservation improvements. Impacts are ***less than significant impact.***

Mitigation Measures: None are required.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. The proposed Project will result in wastewater from residential units that will be discharged into the City's existing wastewater treatment system. The wastewater will be typical of other residential developments consisting of bathrooms, kitchen drains, and other similar features. The Project will not discharge any unusual or atypical wastewater that would violate the City's waste discharge requirements. Therefore, assuming compliance with applicable standards and payment of required impact fees and connection charges, the Project would not result in a significant impact related to construction or expansions of existing wastewater treatment facilities. The impact of the Project on wastewater treatment is ***less than significant***.

Mitigation Measures: None are required.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. The City of Hanford, provides weekly curbside solid waste collection services to all households, businesses, and industries within City limits. The Project will result in the generation of additional solid waste typical of residential uses. Because the City's existing infrastructure has the capacity to accommodate the solid waste currently planned in the General Plan for expanded population, it can be inferred that the existing solid waste infrastructure has adequate capacity to serve the proposed Project.

The proposed Project conforms to all applicable statues and regulations related to solid waste disposal and will comply with the adopted policies related to solid waste. The Project would not generate solid waste in excess of State or Local Standards and as such, impacts are ***less than significant***.

Mitigation Measures: None are required.

XX. WILDFIRE

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

ENVIRONMENTAL SETTING

The City of Hanford's planning area is composed of urbanized portions of land and the surrounding agricultural fields. The Project site has ensured fire protection by the Hanford Fire Department, located at 350 W. Grangeville Boulevard, approximately two miles northeast of the site. Given the location of the nearest fire station, approximately one mile to the southeast, response time is expected to be extremely quick in the rare event of a fire event.

RESPONSES

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. The proposed Project is located in an area developed with rural residential, residential and agricultural uses, which precludes the risk of wildfire. The area is flat in nature which would limit the risk of downslope flooding and landslides, and limit any wildfire spread.

According to the Kings County Multi-Jurisdictional Hazard Mitigation Plan, the City of Hanford is not at high risk for Wildfires and the City is not in a State responsibility area or classified as a Fire Hazard Severity Zone, as shown on the Kings County Federal, State, and Local Responsibility Severity Zones Map for Kings County.

The proposed Project does not require the installation or maintenance of associated infrastructure that would increase wildfire risk or result in impacts to the environment. To receive building permits, the proposed Project would be required to be in compliance with the adopted emergency response plan. As such, any wildfire risk to the project structures or people would be ***less than significant.***

Mitigation Measures: None are required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

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

RESPONSES

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the

number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact with Mitigation Incorporated. The proposed Project site is currently undeveloped and surrounded by agricultural and residential land uses. The Project includes an annexation and the development of 78 residential units. As evaluated in this IS/MND, the proposed 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; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures have been included to lessen the significance of potential impacts. Similar mitigation measures would be expected of other projects in the surrounding area, most of which share a similar cultural paleontological and biological resources. Consequently, the incremental effects of the proposed Project, after mitigation, would not contribute to an adverse cumulative impact on these resources. Therefore, the Project would have a ***less than significant impact.***

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All Project- related impacts were determined to be either less than significant, or less than significant after mitigation. The proposed Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc.). Due to buildout of the area and existing land constraints, it is not anticipated that further unplanned substantial residential development will occur in the area in the foreseeable future. As such, Project impacts are not considered to be cumulatively considerable given the lack

of proposed new development in the area and the insignificance of Project-induced impacts. The impact is therefore ***less than significant***.

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

Less Than Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the project may have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated as described in each specific impact area which will reduce all potentially significant impacts to ***less than significant.***

LIST OF PREPARERS

Crawford & Bowen Planning, Inc.

- Emily Bowen, LEED AP, Principal Environmental Planner
- Travis Crawford, AICP, Principal Environmental Planner
- Caroline Gibbons, Associate Environmental Planner

Colibri Ecological Consultants

Hudlow Cultural Resource Associates

Persons and Agencies Consulted

City of Hanford

- Gabrielle Myers, City Planner

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Final Initial Study/Mitigated Negative Declaration (IS/MND) for the Bonadelle Lacey Ave Residential Project. The MMRP lists mitigation measures recommended in the IS/MND for the proposed Project and identifies monitoring and reporting requirements as well as conditions recommended by responsible agencies who commented on the Project.

The first column of the Table identifies the mitigation measure. The second column, entitled "Party Responsible for Implementing Mitigation," names the party responsible for carrying out the required action. The third column, "Implementation Timing," identifies the time the mitigation measure should be initiated. The fourth column, "Party Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last column will be used by the Lead Agency to ensure that individual mitigation measures have been monitored.

Mitigation Measure	Party responsible for Implementing Mitigation	Implementation Timing	Party responsible for Monitoring	Verification (name/date)
Biological Resources				
BIO – 1 A pre-construction take avoidance survey shall be conducted by a qualified biologist in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) to ensure that no burrowing owl will be disturbed during the implementation of the Project. A pre-construction take avoidance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential burrowing owl habitat in and within 500 feet of the impact areas. If a burrowing owl or sign of burrowing owl use (e.g., feathers, excrement, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or other measures shall be implemented in consultation with the CDFW.	Project Applicant/ Developer	Prior to construction	City of Hanford	
BIO-2 To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds	Project Applicant/ Developer	Prior to construction	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Implementation Timing	Party responsible for Monitoring	Verification (name/date)
shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 10 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.				
Cultural Resources				
CUL – 1 Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the	Project Applicant/ Developer	Prior to and during construction	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Implementation Timing	Party responsible for Monitoring	Verification (name/date)
deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Hanford, describing the testing program and subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).				
CUL-2 In order to ensure that the proposed project does not impact buried human remains during construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Hanford with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Kings County coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety	Project Applicant/ Developer	Prior to and during construction	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Implementation Timing	Party responsible for Monitoring	Verification (name/date)
Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.				

Mitigation Measure	Party responsible for Implementing Mitigation	Implementation Timing	Party responsible for Monitoring	Verification (name/date)
Tribal Resources				
CUL-3 A burial treatment plan shall be entered into by the Project applicant/property owner prior to any ground disturbing activities.	Project Applicant	Prior to any ground disturbing activities	City of Hanford	
PUB-1 The Project developer shall be required to pay the Fire Protection Development Impact Fee as detailed by Chapter 15.45 of the Hanford Municipal Code prior to issuance of occupancy permits.	Project Applicant	Prior to the issuance of occupancy permits	City of Hanford	
PUB-2 The Project developer shall be required to pay the Police Protection Development Impact Fee as detailed by Chapter 15.46.020 of the Hanford Municipal Code prior to issuance of occupancy permits.	Project Applicant	Prior to the issuance of occupancy permits	City of Hanford	
PUB-3 The Project developer shall be required to pay the Hanford Joint Union High School District Development Impact Fee prior to issuance of occupancy permits.	Project Applicant	Prior to the issuance of occupancy permits	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Implementation Timing	Party responsible for Monitoring	Verification (name/date)
PUB-4 The Project developer shall be required to pay the Park Facilities Impact Fee as detailed by Chapter 15.44.010 of the Hanford Municipal Code prior to issuance of occupancy permits.	Project Applicant	Prior to the issuance of occupancy permits	City of Hanford	

Appendix A

CalEEMod Output Files

Bonadelle Lacey Residential Project Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Bonadelle Lacey Residential Project
Construction Start Date	6/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.40000
Precipitation (days)	23.0000
Location	36.32573183807162, -119.68410459282347
County	Kings
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2627
EDFZ	9
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.37

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	78.0000	Dwelling Unit	13.8800	152,100	913,603	—	242.000	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.82163	3.21879	29.2127	29.6246	0.06093	1.24251	19.7840	21.0265	1.14311	10.1332	11.2763	—	6,766.32	6,766.32	0.27587	0.05953	1.01057	6,791.51
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	47.7591	47.7334	10.1294	14.0469	0.02404	0.37994	0.22822	0.60816	0.34965	0.05606	0.40571	—	2,701.94	2,701.94	0.10580	0.04218	0.02618	2,717.18
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.44446	3.31312	6.69205	8.68857	0.01469	0.26683	1.37192	1.63876	0.24551	0.59590	0.84141	—	1,653.74	1,653.74	0.06393	0.02498	0.23989	1,663.03
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.62861	0.60464	1.22130	1.58566	0.00268	0.04870	0.25038	0.29907	0.04481	0.10875	0.15356	—	273.796	273.796	0.01058	0.00414	0.03972	275.333

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.82163	3.21879	29.2127	29.6246	0.06093	1.24251	19.7840	21.0265	1.14311	10.1332	11.2763	—	6,766.32	6,766.32	0.27587	0.05953	1.01057	6,791.51

2027	1.36040	1.14917	9.61926	14.2229	0.02404	0.33786	0.22822	0.56608	0.31094	0.05606	0.36699	—	2,721.55	2,721.55	0.10313	0.04156	0.91798	2,737.44
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.40240	1.18189	10.1294	14.0469	0.02404	0.37994	0.22822	0.60816	0.34965	0.05606	0.40571	—	2,701.94	2,701.94	0.10580	0.04218	0.02618	2,717.18
2027	47.7591	47.7334	9.65252	13.9390	0.02404	0.33786	0.22822	0.56608	0.31094	0.05606	0.36699	—	2,695.51	2,695.51	0.10499	0.04218	0.02379	2,710.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.91092	0.76716	6.69205	7.70768	0.01411	0.26683	1.37192	1.63876	0.24551	0.59590	0.84141	—	1,571.35	1,571.35	0.06203	0.01853	0.14334	1,578.57
2027	3.44446	3.31312	5.97535	8.68857	0.01469	0.21177	0.13741	0.34918	0.19488	0.03371	0.22860	—	1,653.74	1,653.74	0.06393	0.02498	0.23989	1,663.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.16624	0.14001	1.22130	1.40665	0.00257	0.04870	0.25038	0.29907	0.04481	0.10875	0.15356	—	260.155	260.155	0.01027	0.00307	0.02373	261.349
2027	0.62861	0.60464	1.09050	1.58566	0.00268	0.03865	0.02508	0.06372	0.03557	0.00615	0.04172	—	273.796	273.796	0.01058	0.00414	0.03972	275.333

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.8107	8.57902	3.94852	38.0161	0.10485	2.65901	2.98553	5.64454	2.56324	0.75675	3.32000	465.400	6,771.28	7,236.69	6.47326	0.24120	12.7768	7,483.17
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.0950	7.87230	4.20384	32.3023	0.10162	2.65695	2.98553	5.64248	2.56169	0.75675	3.31844	465.400	6,452.00	6,917.40	6.50396	0.25533	1.39240	7,157.48
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.17816	6.52173	3.30054	19.9463	0.05403	0.66828	2.87583	3.54411	0.64518	0.72910	1.37427	136.736	5,825.65	5,962.38	4.93476	0.24134	6.02331	6,163.69
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.31001	1.19022	0.60235	3.64019	0.00986	0.12196	0.52484	0.64680	0.11774	0.13306	0.25080	22.6382	964.502	987.140	0.81701	0.03996	0.99723	1,020.47

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.80479	2.65636	2.25308	15.4017	0.03850	0.03353	2.98553	3.01907	0.03161	0.75675	0.78837	—	3,934.71	3,934.71	0.16390	0.21542	11.6875	4,014.69
Area	7.92174	5.88059	0.97641	22.3085	0.06176	2.56734	—	2.56734	2.47350	—	2.47350	423.896	833.011	1,256.91	1.99758	0.00164	—	1,307.34
Energy	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	1,922.95	1,922.95	0.14344	0.00931	—	1,929.31
Water	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Waste	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Total	10.8107	8.57902	3.94852	38.0161	0.10485	2.65901	2.98553	5.64454	2.56324	0.75675	3.32000	465.400	6,771.28	7,236.69	6.47326	0.24120	12.7768	7,483.17
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.49919	2.33806	2.55067	14.1162	0.03546	0.03358	2.98553	3.01911	0.03165	0.75675	0.78841	—	3,627.26	3,627.26	0.19509	0.22965	0.30306	3,700.87
Area	7.51164	5.49216	0.93413	17.8802	0.06157	2.56524	—	2.56524	2.47190	—	2.47190	423.896	821.180	1,245.08	1.99709	0.00155	—	1,295.46
Energy	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	1,922.95	1,922.95	0.14344	0.00931	—	1,929.31
Water	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Waste	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Total	10.0950	7.87230	4.20384	32.3023	0.10162	2.65695	2.98553	5.64248	2.56169	0.75675	3.31844	465.400	6,452.00	6,917.40	6.50396	0.25533	1.39240	7,157.48
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.47831	2.32833	2.35079	13.4396	0.03551	0.03280	2.87583	2.90863	0.03092	0.72910	0.76002	—	3,631.76	3,631.76	0.17408	0.21680	4.93397	3,705.66
Area	4.61571	4.15133	0.23071	6.20072	0.01393	0.57734	—	0.57734	0.55612	—	0.55612	95.2314	190.319	285.550	0.44890	0.00040	—	296.891
Energy	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	1,922.95	1,922.95	0.14344	0.00931	—	1,929.31
Water	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Waste	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Total	7.17816	6.52173	3.30054	19.9463	0.05403	0.66828	2.87583	3.54411	0.64518	0.72910	1.37427	136.736	5,825.65	5,962.38	4.93476	0.24134	6.02331	6,163.69
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.45229	0.42492	0.42902	2.45272	0.00648	0.00599	0.52484	0.53083	0.00564	0.13306	0.13870	—	601.280	601.280	0.02882	0.03589	0.81688	613.514
Area	0.84237	0.75762	0.04210	1.13163	0.00254	0.10536	—	0.10536	0.10149	—	0.10149	15.7666	31.5095	47.2761	0.07432	0.00007	—	49.1537
Energy	0.01536	0.00768	0.13122	0.05584	0.00084	0.01061	—	0.01061	0.01061	—	0.01061	—	318.366	318.366	0.02375	0.00154	—	319.419
Water	—	—	—	—	—	—	—	—	—	—	—	0.96600	13.3472	14.3132	0.09988	0.00245	—	17.5414
Waste	—	—	—	—	—	—	—	—	—	—	—	5.90553	0.00000	5.90553	0.59024	0.00000	—	20.6615
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18035	0.18035
Total	1.31001	1.19022	0.60235	3.64019	0.00986	0.12196	0.52484	0.64680	0.11774	0.13306	0.25080	22.6382	964.502	987.140	0.81701	0.03996	0.99723	1,020.47

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72490	2.28674	20.6515	19.0056	0.03253	0.84309	—	0.84309	0.77564	—	0.77564	—	3,426.59	3,426.59	0.13900	0.02780	—	3,438.35
Demolition	—	—	—	—	—	—	0.00000	0.00000	—	0.00000	0.00000	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14931	0.12530	1.13159	1.04140	0.00178	0.04620	—	0.04620	0.04250	—	0.04250	—	187.759	187.759	0.00762	0.00152	—	188.403
Demolition	—	—	—	—	—	—	0.00000	0.00000	—	0.00000	0.00000	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02725	0.02287	0.20652	0.19006	0.00033	0.00843	—	0.00843	0.00776	—	0.00776	—	31.0856	31.0856	0.00126	0.00025	—	31.1922
Demolition	—	—	—	—	—	—	0.00000	0.00000	—	0.00000	0.00000	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06872	0.06422	0.04213	0.69975	0.00000	0.00000	0.10883	0.10883	0.00000	0.02633	0.02633	—	125.809	125.809	0.00615	0.00450	0.41254	127.715
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00342	0.00314	0.00273	0.03050	0.00000	0.00000	0.00587	0.00587	0.00000	0.00142	0.00142	—	6.33237	6.33237	0.00016	0.00026	0.00975	6.42504
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00062	0.00057	0.00050	0.00557	0.00000	0.00000	0.00107	0.00107	0.00000	0.00026	0.00026	—	1.04840	1.04840	0.00003	0.00004	0.00161	1.06374
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74146	3.14387	29.1635	28.8082	0.04890	1.24251	—	1.24251	1.14311	—	1.14311	—	5,297.94	5,297.94	0.21491	0.04298	—	5,316.12
Dust From Material Movement	—	—	—	—	—	—	19.6570	19.6570	—	10.1024	10.1024	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10251	0.08613	0.79900	0.78927	0.00134	0.03404	—	0.03404	0.03132	—	0.03132	—	145.149	145.149	0.00589	0.00118	—	145.647
Dust From Material Movement	—	—	—	—	—	—	0.53855	0.53855	—	0.27678	0.27678	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01871	0.01572	0.14582	0.14404	0.00024	0.00621	—	0.00621	0.00572	—	0.00572	—	24.0311	24.0311	0.00097	0.00019	—	24.1135
Dust From Material Movement	—	—	—	—	—	—	0.09829	0.09829	—	0.05051	0.05051	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08017	0.07492	0.04915	0.81637	0.00000	0.00000	0.12697	0.12697	0.00000	0.03072	0.03072	—	146.777	146.777	0.00718	0.00525	0.48130	149.001
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00200	0.00183	0.00159	0.01779	0.00000	0.00000	0.00343	0.00343	0.00000	0.00083	0.00083	—	3.69389	3.69389	0.00010	0.00015	0.00569	3.74794
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00036	0.00033	0.00029	0.00325	0.00000	0.00000	0.00063	0.00063	0.00000	0.00015	0.00015	—	0.61156	0.61156	0.00002	0.00003	0.00094	0.62051
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62261	3.04400	27.2253	27.5707	0.06093	1.12137	—	1.12137	1.03166	—	1.03166	—	6,598.58	6,598.58	0.26767	0.05353	—	6,621.22
Dust From Material Movement	—	—	—	—	—	—	9.20359	9.20359	—	3.65375	3.65375	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29775	0.25019	2.23769	2.26608	0.00501	0.09217	—	0.09217	0.08479	—	0.08479	—	542.349	542.349	0.02200	0.00440	—	544.210
Dust From Material Movement	—	—	—	—	—	—	0.75646	0.75646	—	0.30031	0.30031	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05434	0.04566	0.40838	0.41356	0.00091	0.01682	—	0.01682	0.01547	—	0.01547	—	89.7920	89.7920	0.00364	0.00073	—	90.1002
Dust From Material Movement	—	—	—	—	—	—	0.13805	0.13805	—	0.05481	0.05481	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09162	0.08563	0.05617	0.93300	0.00000	0.00000	0.14511	0.14511	0.00000	0.03511	0.03511	—	167.745	167.745	0.00820	0.00600	0.55005	170.287
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00684	0.00628	0.00546	0.06100	0.00000	0.00000	0.01175	0.01175	0.00000	0.00284	0.00284	—	12.6647	12.6647	0.00033	0.00053	0.01950	12.8501
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00125	0.00115	0.00100	0.01113	0.00000	0.00000	0.00214	0.00214	0.00000	0.00052	0.00052	—	2.09679	2.09679	0.00005	0.00009	0.00323	2.12748
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.27993	1.07101	9.85401	12.9664	0.02340	0.37865	—	0.37865	0.34836	—	0.34836	—	2,397.24	2,397.24	0.09724	0.01945	—	2,405.47
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.27993	1.07101	9.85401	12.9664	0.02340	0.37865	—	0.37865	0.34836	—	0.34836	—	2,397.24	2,397.24	0.09724	0.01945	—	2,405.47
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31810	0.26618	2.44904	3.22256	0.00581	0.09411	—	0.09411	0.08658	—	0.08658	—	595.792	595.792	0.02417	0.00483	—	597.836
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05805	0.04858	0.44695	0.58812	0.00106	0.01717	—	0.01717	0.01580	—	0.01580	—	98.6401	98.6401	0.00400	0.00080	—	98.9786
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12864	0.12022	0.07887	1.30993	0.00000	0.00000	0.20374	0.20374	0.00000	0.04929	0.04929	—	235.514	235.514	0.01151	0.00842	0.77228	239.083
Vendor	0.00818	0.00588	0.16223	0.07905	0.00064	0.00129	0.02448	0.02577	0.00129	0.00676	0.00805	—	95.8361	95.8361	0.00156	0.01370	0.23829	100.195
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11502	0.10536	0.10227	0.99792	0.00000	0.00000	0.20374	0.20374	0.00000	0.04929	0.04929	—	208.636	208.636	0.00681	0.00904	0.01999	211.519
Vendor	0.00744	0.00551	0.17316	0.08263	0.00064	0.00129	0.02448	0.02577	0.00129	0.00676	0.00805	—	96.0656	96.0656	0.00175	0.01370	0.00619	100.197
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02905	0.02665	0.02317	0.25897	0.00000	0.00000	0.04986	0.04986	0.00000	0.01206	0.01206	—	53.7673	53.7673	0.00138	0.00225	0.08279	54.5541
Vendor	0.00194	0.00146	0.04178	0.02010	0.00016	0.00032	0.00601	0.00633	0.00032	0.00166	0.00198	—	23.8424	23.8424	0.00039	0.00340	0.02561	24.8920
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00530	0.00486	0.00423	0.04726	0.00000	0.00000	0.00910	0.00910	0.00000	0.00220	0.00220	—	8.90179	8.90179	0.00023	0.00037	0.01371	9.03205
Vendor	0.00035	0.00027	0.00762	0.00367	0.00003	0.00006	0.00110	0.00115	0.00006	0.00030	0.00036	—	3.94737	3.94737	0.00006	0.00056	0.00424	4.12115
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70811	0.59253	5.40300	7.44375	0.01346	0.19365	—	0.19365	0.17815	—	0.17815	—	1,379.14	1,379.14	0.05594	0.01119	—	1,383.87
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12923	0.10814	0.98605	1.35848	0.00246	0.03534	—	0.03534	0.03251	—	0.03251	—	228.332	228.332	0.00926	0.00185	—	229.116
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12183	0.11341	0.07107	1.20853	0.00000	0.00000	0.20374	0.20374	0.00000	0.04929	0.04929	—	230.683	230.683	0.00433	0.00842	0.69533	233.996
Vendor	0.00781	0.00588	0.15726	0.07638	0.00064	0.00129	0.02448	0.02577	0.00129	0.00676	0.00805	—	93.7941	93.7941	0.00156	0.01370	0.22265	98.1369
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10945	0.09979	0.09385	0.92066	0.00000	0.00000	0.20374	0.20374	0.00000	0.04929	0.04929	—	204.405	204.405	0.00619	0.00904	0.01802	207.271
Vendor	0.00744	0.00551	0.16774	0.08042	0.00064	0.00129	0.02448	0.02577	0.00129	0.00676	0.00805	—	94.0262	94.0262	0.00156	0.01370	0.00578	98.1521
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06368	0.05848	0.04915	0.55413	0.00000	0.00000	0.11543	0.11543	0.00000	0.02791	0.02791	—	121.942	121.942	0.00321	0.00484	0.17276	123.638
Vendor	0.00439	0.00317	0.09371	0.04490	0.00037	0.00074	0.01391	0.01465	0.00074	0.00385	0.00459	—	54.0195	54.0195	0.00090	0.00788	0.05505	56.4451
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01162	0.01067	0.00897	0.10113	0.00000	0.00000	0.02107	0.02107	0.00000	0.00509	0.00509	—	20.1889	20.1889	0.00053	0.00080	0.02860	20.4697
Vendor	0.00080	0.00058	0.01710	0.00819	0.00007	0.00014	0.00254	0.00267	0.00014	0.00070	0.00084	—	8.94355	8.94355	0.00015	0.00130	0.00911	9.34513
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87761	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04809	0.04041	0.38051	0.54538	0.00076	0.01634	—	0.01634	0.01503	—	0.01503	—	82.8004	82.8004	0.00336	0.00067	—	83.0845
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00878	0.00737	0.06944	0.09953	0.00014	0.00298	—	0.00298	0.00274	—	0.00274	—	13.7085	13.7085	0.00056	0.00011	—	13.7556
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05847	0.05331	0.05013	0.49181	0.00000	0.00000	0.10883	0.10883	0.00000	0.02633	0.02633	—	109.190	109.190	0.00331	0.00483	0.00962	110.722
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00324	0.00298	0.00250	0.02819	0.00000	0.00000	0.00587	0.00587	0.00000	0.00142	0.00142	—	6.20380	6.20380	0.00016	0.00025	0.00879	6.29010
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00059	0.00054	0.00046	0.00514	0.00000	0.00000	0.00107	0.00107	0.00000	0.00026	0.00026	—	1.02711	1.02711	0.00003	0.00004	0.00146	1.04140
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13715	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	47.6001	47.6001	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00752	0.00621	0.04554	0.06167	0.00009	0.00104	—	0.00104	0.00096	—	0.00096	—	7.31577	7.31577	0.00030	0.00006	—	7.34087
Architectural Coatings	2.60822	2.60822	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00137	0.00113	0.00831	0.01125	0.00002	0.00019	—	0.00019	0.00018	—	0.00018	—	1.21121	1.21121	0.00005	0.00001	—	1.21537
Architectural Coatings	0.47600	0.47600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02189	0.01996	0.01877	0.18413	0.00000	0.00000	0.04075	0.04075	0.00000	0.00986	0.00986	—	40.8809	40.8809	0.00124	0.00181	0.00360	41.4541
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00121	0.00111	0.00094	0.01055	0.00000	0.00000	0.00220	0.00220	0.00000	0.00053	0.00053	—	2.32270	2.32270	0.00006	0.00009	0.00329	2.35502
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00022	0.00020	0.00017	0.00193	0.00000	0.00000	0.00040	0.00040	0.00000	0.00010	0.00010	—	0.38455	0.38455	0.00001	0.00002	0.00054	0.38990
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.80479	2.65636	2.25308	15.4017	0.03850	0.03353	2.98553	3.01907	0.03161	0.75675	0.78837	—	3,934.71	3,934.71	0.16390	0.21542	11.6875	4,014.69
Total	2.80479	2.65636	2.25308	15.4017	0.03850	0.03353	2.98553	3.01907	0.03161	0.75675	0.78837	—	3,934.71	3,934.71	0.16390	0.21542	11.6875	4,014.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.49919	2.33806	2.55067	14.1162	0.03546	0.03358	2.98553	3.01911	0.03165	0.75675	0.78841	—	3,627.26	3,627.26	0.19509	0.22965	0.30306	3,700.87
Total	2.49919	2.33806	2.55067	14.1162	0.03546	0.03358	2.98553	3.01911	0.03165	0.75675	0.78841	—	3,627.26	3,627.26	0.19509	0.22965	0.30306	3,700.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.45229	0.42492	0.42902	2.45272	0.00648	0.00599	0.52484	0.53083	0.00564	0.13306	0.13870	—	601.280	601.280	0.02882	0.03589	0.81688	613.514
Total	0.45229	0.42492	0.42902	2.45272	0.00648	0.00599	0.52484	0.53083	0.00564	0.13306	0.13870	—	601.280	601.280	0.02882	0.03589	0.81688	613.514

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,010.25	1,010.25	0.06267	0.00760	—	1,014.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,010.25	1,010.25	0.06267	0.00760	—	1,014.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,010.25	1,010.25	0.06267	0.00760	—	1,014.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,010.25	1,010.25	0.06267	0.00760	—	1,014.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	167.258	167.258	0.01038	0.00126	—	167.892
Total	—	—	—	—	—	—	—	—	—	—	—	—	167.258	167.258	0.01038	0.00126	—	167.892

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	912.697	912.697	0.08077	0.00172	—	915.228
Total	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	912.697	912.697	0.08077	0.00172	—	915.228

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	912.697	912.697	0.08077	0.00172	—	915.228
Total	0.08414	0.04207	0.71904	0.30597	0.00459	0.05814	—	0.05814	0.05814	—	0.05814	—	912.697	912.697	0.08077	0.00172	—	915.228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01536	0.00768	0.13122	0.05584	0.00084	0.01061	—	0.01061	0.01061	—	0.01061	—	151.107	151.107	0.01337	0.00028	—	151.526
Total	0.01536	0.00768	0.13122	0.05584	0.00084	0.01061	—	0.01061	0.01061	—	0.01061	—	151.107	151.107	0.01337	0.00028	—	151.526

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	3.99588	1.97640	0.93413	17.8802	0.06157	2.56524	—	2.56524	2.47190	—	2.47190	423.896	821.180	1,245.08	1.99709	0.00155	—	1,295.46
Consumer Products	3.25494	3.25494	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.26082	0.26082	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.41010	0.38842	0.04227	4.42828	0.00019	0.00210	—	0.00210	0.00160	—	0.00160	—	11.8316	11.8316	0.00049	0.00010	—	11.8732
Total	7.92174	5.88059	0.97641	22.3085	0.06176	2.56734	—	2.56734	2.47350	—	2.47350	423.896	833.011	1,256.91	1.99758	0.00164	—	1,307.34

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	3.99588	1.97640	0.93413	17.8802	0.06157	2.56524	—	2.56524	2.47190	—	2.47190	423.896	821.180	1,245.08	1.99709	0.00155	—	1,295.46
Consumer Products	3.25494	3.25494	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.26082	0.26082	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	7.51164	5.49216	0.93413	17.8802	0.06157	2.56524	—	2.56524	2.47190	—	2.47190	423.896	821.180	1,245.08	1.99709	0.00155	—	1,295.46
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.16383	0.08103	0.03830	0.73309	0.00252	0.10517	—	0.10517	0.10135	—	0.10135	15.7666	30.5435	46.3101	0.07428	0.00006	—	48.1843
Consumer Products	0.59403	0.59403	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04760	0.04760	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03691	0.03496	0.00380	0.39854	0.00002	0.00019	—	0.00019	0.00014	—	0.00014	—	0.96601	0.96601	0.00004	0.00001	—	0.96941
Total	0.84237	0.75762	0.04210	1.13163	0.00254	0.10536	—	0.10536	0.10149	—	0.10149	15.7666	31.5095	47.2761	0.07432	0.00007	—	49.1537

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Total	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Total	—	—	—	—	—	—	—	—	—	—	—	5.83468	80.6178	86.4525	0.60328	0.01482	—	105.951
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.96600	13.3472	14.3132	0.09988	0.00245	—	17.5414
Total	—	—	—	—	—	—	—	—	—	—	—	0.96600	13.3472	14.3132	0.09988	0.00245	—	17.5414

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796
Total	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796
Total	—	—	—	—	—	—	—	—	—	—	—	35.6697	0.00000	35.6697	3.56506	0.00000	—	124.796
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.90553	0.00000	5.90553	0.59024	0.00000	—	20.6615
Total	—	—	—	—	—	—	—	—	—	—	—	5.90553	0.00000	5.90553	0.59024	0.00000	—	20.6615

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08934	1.08934
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18035	0.18035
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18035	0.18035

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2026	6/29/2026	5.00000	20.0000	—
Site Preparation	Site Preparation	6/30/2026	7/14/2026	5.00000	10.00000	—
Grading	Grading	7/15/2026	8/26/2026	5.00000	30.0000	—
Building Construction	Building Construction	8/27/2026	10/21/2027	5.00000	300.000	—
Paving	Paving	10/22/2027	11/19/2027	5.00000	20.0000	—
Architectural Coating	Architectural Coating	11/20/2027	12/18/2027	5.00000	20.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.000000	8.00000	33.0000	0.73000
Demolition	Excavators	Diesel	Average	3.00000	8.00000	36.0000	0.38000
Demolition	Rubber Tired Dozers	Diesel	Average	2.00000	8.00000	367.000	0.40000
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000

Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	15.0000	10.6000	LDA,LDT1,LDT2
Demolition	Vendor	—	3.50000	HHDT,MHDT
Demolition	Hauling	0.00000	20.0000	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	17.5000	10.6000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	3.50000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	10.6000	LDA,LDT1,LDT2
Grading	Vendor	—	3.50000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	28.0800	10.6000	LDA,LDT1,LDT2
Building Construction	Vendor	8.33820	3.50000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	10.6000	LDA,LDT1,LDT2
Paving	Vendor	—	3.50000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	5.61600	10.6000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	3.50000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	308,003	102,668	0.00000	0.00000	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00000	0.00000	0.00000	—	0.00000
Site Preparation	—	—	15.0000	0.00000	0.00000
Grading	—	—	90.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	0.85950

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Single Family Housing	0.85950	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00000	531.983	0.03300	0.00400
2027	0.00000	531.983	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	736.320	744.120	666.900	265,544	4,179.00	4,223.27	3,785.00	1,507,098

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	0	0
Single Family Housing	Gas Fireplaces	39	39
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0

Single Family Housing	No Fireplaces	39	39
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	4	4
Single Family Housing	Non-Catalytic Wood Stoves	4	4
Single Family Housing	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
308,003	102,668	0.00000	0.00000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	693,144	531.983	0.0330	0.0040	2,847,858

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	3,044,867	17,902,302

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	66.1851	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	31.1600	annual days of extreme heat
Extreme Precipitation	0.65000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	82.4767
AQ-PM	98.8426
AQ-DPM	53.6279
Drinking Water	61.9833
Lead Risk Housing	16.9502
Pesticides	74.0345
Toxic Releases	39.5099
Traffic	26.8625
Effect Indicators	—
CleanUp Sites	17.0773
Groundwater	75.5604
Haz Waste Facilities/Generators	53.5142
Impaired Water Bodies	0.00000
Solid Waste	0.00000

Sensitive Population	—
Asthma	94.5040
Cardio-vascular	98.4048
Low Birth Weights	18.1678
Socioeconomic Factor Indicators	—
Education	46.2288
Housing	36.6540
Linguistic	19.8674
Poverty	43.3291
Unemployment	59.3831

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	61.72205826
Employed	20.45425382
Median HI	54.07416913
Education	—
Bachelor's or higher	41.57577313
High school enrollment	100
Preschool enrollment	3.836776594
Transportation	—
Auto Access	29.34684974
Active commuting	43.06428846
Social	—
2-parent households	54.43346593
Voting	51.52059541

Neighborhood	—
Alcohol availability	81.47055049
Park access	27.33222122
Retail density	48.68471705
Supermarket access	56.69190299
Tree canopy	8.571795201
Housing	—
Homeownership	58.27024253
Housing habitability	83.40818683
Low-inc homeowner severe housing cost burden	81.80418324
Low-inc renter severe housing cost burden	71.24342359
Uncrowded housing	73.51469267
Health Outcomes	—
Insured adults	78.05723085
Arthritis	0.0
Asthma ER Admissions	1.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	30.6
Cognitively Disabled	41.3
Physically Disabled	3.3
Heart Attack ER Admissions	31.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0

Obesity	0.0
Pedestrian Injuries	51.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	19.0
Elderly	15.4
English Speaking	84.4
Foreign-born	15.1
Outdoor Workers	21.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	54.6
Traffic Density	31.4
Traffic Access	0.0
Other Indices	—
Hardship	44.7
Other Decision Support	—
2016 Voting	48.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0000

Healthy Places Index Score for Project Location (b)	41.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	The project includes the development of 78 single family residential units over 13.88 acres of land.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	25.3247	13.8800

Appendix B

Biological Resource Evaluation



Biological Resource Evaluation

November 2025

Hanford Residential Project
Kings County, CA

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Executive Summary

The project applicant is seeking approval for a residential development immediately west of the City of Hanford limits in Kings County, California. The residential development project (Project) will involve constructing 74 single-family residences and a stormwater basin on approximately 13.5 acres that currently support a single-family residence and fallowed agricultural land.

To evaluate whether the Project may affect biological resources under California Environmental Quality Act (CEQA) purview, we (1) obtained lists of special-status species from the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Native Plant Society; (2) reviewed other relevant background information such as aerial imagery and topographic maps; and (3) conducted a field reconnaissance survey at the Project site.

This biological resource evaluation summarizes (1) existing biological conditions on the Project site, (2) the potential for special-status species and regulated habitats to occur on or near the Project site, (3) the potential impacts of the proposed Project on biological resources and regulated habitats, and (4) measures to reduce those potential impacts to less-than-significant levels under CEQA.

We concluded the Project could affect nesting migratory birds and the state candidate for listing as endangered burrowing owl (*Athene cunicularia*). However, effects can be reduced to less-than-significant levels with mitigation.

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Abbreviations

CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CRPR	California Rare Plant Rank
FP	State Fully Protected
FPT	Federally Proposed as Threatened
NRCS	Natural Resources Conservation Service
ST	State listed as Threatened
USC	United States Code

1.0 Introduction

1.1 Background

The project applicant is seeking approval for a residential development (the Project) on approximately 13.5 acres immediately west of the City of Hanford in Kings County, California. The Project site currently supports a single-family residence and fallowed agricultural land.

The purpose of this biological resource evaluation is to assess whether the Project will affect protected biological resources pursuant to California Environmental Quality Act (CEQA) guidelines. Such resources include species of plants or animals listed or proposed for listing under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) as well as those covered under the Migratory Bird Treaty Act (MBTA), the California Native Plant Protection Act, and various other sections of California Fish and Game Code (CFGC). This biological resource evaluation also addresses Project-related impacts to regulated habitats, which are those under the jurisdiction of the United States Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), or California Department of Fish and Wildlife (CDFW).

1.2 Project Description

The proposed Project will involve constructing a residential development on approximately 13.5 acres. The Project will include construction of 74 single-family residences and a 0.82-acre stormwater basin.

1.3 Project Location

The approximately 13.5-acre Project site is at the southwest corner of West Lacey Boulevard and Avenue 12 ½, immediately west of the City of Hanford in northern Kings County, California (Figures 1 and 2).



Figure 1. Project site vicinity map.



Figure 2. Project site map.

1.4 Regulatory Framework

The relevant regulatory requirements and policies that guide the impact analysis of the Project are summarized below.

1.4.1 State Requirements

California Department of Fish and Wildlife Jurisdiction. The CDFW has regulatory jurisdiction over lakes and streams in California. Activities that divert or obstruct the natural flow of a stream; substantially change its bed, channel, or bank; or use any materials (including vegetation) from the streambed may require that the project applicant enter into a Lake and Streambed Alteration Agreement with the CDFW in accordance with California Fish and Game Code [CFGC] Section 1602.

California Endangered Species Act. The CESA of 1970 (CFGC Section 2050 et seq. and California Code of Regulations (CCR) Title 14, Subsections 670.2 and 670.51) prohibits the take of species listed under CESA (14 CCR Subsections 670.2 and 670.5). Take is defined as hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill. Under CESA, state agencies are required to consult with the CDFW when preparing CEQA documents. Consultation ensures that proposed projects or actions do not adversely affect state listed species. During consultation, CDFW determines whether take would occur and identifies "reasonable and prudent alternatives" for the project and conservation of special-status species. CDFW can authorize take of state listed species under Sections 2080.1 and 2081(b) of the CFGC in those cases where it is demonstrated the impacts are minimized and mitigated. Take authorized under section 2081(b) must be minimized and fully mitigated. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Under CESA, CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (CFGC Section 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to the requirements of CESA, a state or local agency reviewing a proposed project within its jurisdiction must determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation. Impacts to species of concern or fully protected species would be considered significant under certain circumstances.

California Environmental Quality Act. The California Environmental Quality Act (CEQA) of 1970 (Subsections 21000–21178) requires that CDFW be consulted

during the CEQA review process regarding impacts of proposed projects on special-status species. Special-status species are defined under CEQA Guidelines subsection 15380(b) and (d) as those listed under FESA and CESA and species that are not currently protected by statute or regulation but would be considered rare, threatened, or endangered under these criteria or by the scientific community. Therefore, species considered rare or endangered are addressed in this biological resource evaluation regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity (CNPS 2025). Plants with Rare Plant Ranks 1A, 1B, 2A, or 2B are considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the CFGC dealing with rare and endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the United States Fish and Wildlife Service (USFWS) or CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

California Native Plant Protection Act. The California Native Plant Protection Act of 1977 (CFGC Sections 1900–1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require the project proponent to notify CDFW at least 10 days in advance of any change in land use, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting birds. CFGC Sections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. CFGC Section 3511 lists birds that are “Fully Protected” as those that may not be taken or possessed except under specific permit.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et. sec.) was established in 1969 and entrusts the SWRCB and nine Regional Water Quality Control Boards (collectively Water Boards) with the responsibility to preserve and enhance all

beneficial uses of California's diverse waters. The Act grants the Water Boards authority to establish water quality objectives and regulate point- and nonpoint-source pollution discharge to the state's surface and ground waters. Under the auspices of the United States Environmental Protection Agency, the Water Boards are responsible for certifying, under Section 401 of the federal Clean Water Act, that activities affecting waters of the United States comply with California water quality standards. The Porter-Cologne Water Quality Control Act addresses all "waters of the State," which are more broadly defined than waters of the Unites States. Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state. They include artificial as well as natural water bodies and federally jurisdictional and federally non-jurisdictional waters. The Water Boards may issue a Waste Discharge Requirement permit for projects that will affect only federally non-jurisdictional waters of the State.

1.4.2 Federal Requirements

Federal Endangered Species Act. The USFWS and the National Oceanographic and Atmospheric Administration's National Marine Fisheries Service enforce the provisions stipulated in the FESA of 1973 (FESA, 16 United States Code [USC] Section 1531 et seq.). Threatened and endangered species on the federal list (50 Code of Federal Regulations [CFR] 17.11 and 17.12) are protected from take unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. Pursuant to the requirements of the FESA, an agency reviewing a proposed action within its jurisdiction must determine whether any federally listed species may be present in the proposed action area and determine whether the proposed action may affect such species. Under the FESA, habitat loss is considered an effect to a species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species that is listed or proposed for listing under the FESA (16 USC Section 1536[3], [4]). Therefore, proposed action-related effects to these species or their habitats would be considered significant and would require mitigation.

Migratory Bird Treaty Act. The federal MBTA (16 USC Section 703, Supp. I, 1989) prohibits killing, possessing, trading, or other forms of take of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. "Take" is defined as the pursuing, hunting, shooting, capturing, collecting, or killing of birds, their nests, eggs, or young (16 USC Section 703 and Section 715n).

This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA specifically protects migratory bird nests from possession, sale, purchase, barter transport, import, and export, and take. For nests, the definition of take per 50 CFR 10.12 is to collect. The MBTA does not include a definition of an "active nest." However, the "Migratory Bird Permit Memorandum" issued by the USFWS in 2003 and updated in 2018 clarifies the MBTA in that regard and states that the removal of nests, without eggs or birds, is legal under the MBTA, provided no possession (which is interpreted as holding the nest with the intent of retaining it) occurs during the destruction (USFWS 2018).

United States Army Corps of Engineers Jurisdiction. Areas meeting the regulatory definition of "waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, the territorial seas, all interstate waters, all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States that are relatively permanent, standing, or continuously flowing bodies of water, and relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to waters of the United States (33 CFR part 328.3). Waters of the United States do not include prior converted cropland, waste treatment systems, ditches, artificially irrigated areas, artificial lakes or ponds, artificial reflecting pools or swimming pools, waterfilled depressions, and swales and erosional features. Under the 2006 Supreme Court ruling *Rapanos v. United States*, waters of the United States include non-navigable tributaries of traditional navigable waters that are relatively permanent. The 2023 Supreme Court ruling *Sackett v. Environmental Protection Agency* removed the significant nexus standard for tributaries and adjacent waters of the United States and requires tributaries and adjacent waters to have a continuous surface connection to a water of the United States. Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual and related Regional Supplement* (USACE 1987 and 2008). Construction activities, including direct removal, filling, hydrologic disruption, or other means in jurisdictional waters are regulated by the USACE. The placement of dredged or fill material into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The State Water Resources Control Board is the state agency, together with the Regional Water Quality Control Boards, charged with implementing water quality certification in California.

2.0 Methods

2.1 Desktop Review

As a framework for the evaluation and reconnaissance survey, we obtained a USFWS species list for the Project (USFWS 2025a, Appendix A). In addition, we searched the California Natural Diversity Database (CNDDB, CDFW 2025, Appendix B) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2025, Appendix C) for records of special-status plant and animal species from the vicinity of the Project site. Regional lists of special-status species were compiled using CNDDB and CNPS database searches confined to the Hanford 7.5-minute United States Geological Survey (USGS) topographic quadrangle, which encompasses the Project site, and the eight surrounding quadrangles (Burris Park, Guernsey, Laton, Lemoore, Remnoy, Riverdale, Stratford, and Waukena). A local list of special-status species was compiled using CNDDB records from within 5 miles of the Project site. Species that lacked a CEQA-recognized special-status designation by state or federal regulatory agencies or public interest groups were omitted from the final list. Species for which the Project site does not provide habitat were eliminated from further consideration. We also reviewed aerial imagery from Google Earth (Google 2025) and other sources, USGS topographic maps, the Web Soil Survey (NRCS 2025), the National Wetlands Inventory (USFWS 2025b), and relevant literature.

2.2 Reconnaissance Survey

Colibri Senior Scientist Amy Hernandez conducted a field reconnaissance survey at the Project site on 27 October 2025. The Project site and a 50-foot buffer (Figure 3) surrounding the Project site were walked and thoroughly inspected to evaluate and document the potential for the area to support state or federally protected resources. All plants except those under cultivation or planted in residential areas and all vertebrate wildlife species observed within the survey area were identified and documented. The survey area was evaluated for the presence of regulated habitats, including lakes, streams, and other waters as defined by the USACE, CDFW, and under the Porter-Cologne Water Quality Control Act. An additional buffer of 0.5 miles around the Project site (Figure 3) was inspected for potential nesting habitat for special-status raptors. The 0.5-mile buffer was surveyed by driving public roads and identifying the presence of large trees or other potentially suitable substrates for nesting raptors as well as open areas that could provide foraging habitat.

2.3 Significance Criteria

CEQA defines "significant effect on the environment" as "a substantial, or potentially substantial, adverse change in the environment" (California Public Resource Code § 21068). Under CEQA Guidelines Section 15065, a Project's effects on biological resources are deemed significant where the Project would do the following:

a) Substantially reduce the habitat of a fish or wildlife species,
b) Cause a fish or wildlife population to drop below self-sustaining levels,
c) Threaten to eliminate a plant or animal community, or
d) Substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria, Appendix G within the CEQA Guidelines includes six additional impacts to consider when analyzing the effects of a project. Under Appendix G, a project's effects on biological resources are deemed significant where the project would do any of the following:

e) 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 CDFW or USFWS;
f) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
g) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
h) 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;
i) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
j) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These criteria were used to determine whether the potential effects of the Project on biological resources qualify as significant.



Figure 3. Reconnaissance survey area map.

3.0 Results

3.1 Desktop Review

The USFWS species list for the Project included 10 species listed as threatened or endangered or proposed for listing under the FESA (USFWS 2025a, Table 1, Appendix A). None of those species could occur on or near the Project site due to the lack of habitat or because the Project site is outside the known range of the species (Table 1). As identified in the species list, the Project site is not within any proposed or designated USFWS critical habitat (USFWS 2025a, Appendix A).

Searching the CNDDB for records of special-status species from the Hanford 7.5-minute USGS topographic quadrangle and the eight surrounding quadrangles produced 93 records of 30 species (Table 1, Appendix B) and two sensitive natural communities. Of the 30 species, three were not considered further because they are not CEQA-recognized as special-status species by state or federal regulatory agencies or public interest groups or are considered extirpated in California (Appendix B). Of the remaining 27 species, three are known from within 5 miles of the Project site (Table 1, Figure 4). None of the species known from within 5 miles could occur on or near the Project site due to lack of habitat. However, one species identified in the nine-quad search has potential to occur on or near the Project site—the state candidate for listing as endangered burrowing owl (*Athene cunicularia*). None of the additional species or sensitive natural communities identified in the nine-quad search could occur on or near the Project site due to lack of habitat (Table 1).

Searching the CNPS inventory of rare and endangered plants of California yielded 11 species (CNPS 2025, Appendix C), 10 of which have a CRPR of 1 or 2 and none of which are also state or federally listed (Table 1). Of those 10 plant species, none could occur on or near the Project site due to the lack of habitat (Table 1).

The Project site is underlain by Nord complex (59.2%) and Nord fine sandy loam (40.8%) (NCRS 2025). The Project site has little topographic relief and is at an elevation of 222–226 feet above mean sea level (Google 2025).

Table 1. Special-status species, their listing status, habitats, and potential to occur on or near the Project site.

Species	Status[1]	Habitat	Potential to Occur[2]
Monarch California overwintering population (*Danaus plexippus*)	FPT	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for overwintering such as high humidity, dappled sunlight, access to water and nectar, and protection from wind	**None.** Habitat lacking; the Project site is not within 1.5 miles of the ocean.
Valley elderberry longhorn beetle	FT	Elderberry (*Sambucus* sp.) plants having basal stem diameter greater than 1" at ground level.	**None.** No elderberry shrubs were found in the survey area, and the Project site is outside the currently recognized range of this species.
Vernal pool fairy shrimp (*Branchinecta lynch*	FT	Vernal pools; some artificial depressions, stock ponds, vernal swales, ephemeral drainages, and seasonal wetlands.	**None.** Habitat lacking; the Project site lacked vernal pools or other potential habitat for this species.
(*Lepidurus packardi*		ephemeral stock tanks.	vernal pools or other potential habitat for this species.

California tiger salamander (*Ambystoma californiense*) – Central Valley Distinct Population Segment	FT, ST	Vernal pools or seasonal ponds for breeding; small mammal burrows for upland refugia in natural grasslands.	**None.** Habitat lacking; no vernal pools or seasonal ponds were within the 1.24-mile dispersal distance of this species. Aerial imagery (Google 2025) shows the detention basins in the dispersal range are not regularly inundated during the breeding season for this species.
Western spadefoot (*Spea hammondii*)	FPT, SSSC	Open areas with sandy or gravelly soils and rain pools for breeding.	**None.** Habitat lacking; the Project site has been routinely disked and lacked suitable rain pools for breeding.
(*Gambelia sila*)		grassland with small mammal burrows.	been routinely disked and was in an urban environment.
Northwestern pond turtle (*Actinemys marmorata*)	FPT, SSSC	Perennial or nearly perennial ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation with basking sites and suitable upland areas for egg laying.	**None.** Habitat lacking; the Project site and surrounding areas lacked the aquatic habitat this species requires.
Burrowing owl (*Athene cunicularia*)	SC	Grasslands and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows or burrow surrogates.	**Low.** The Project site contained fallowed agricultural land for foraging and ground squirrel burrows for refugia.

Swainson's hawk[3] (*Buteo swainsoni*)	ST	Large trees for nesting with adjacent grasslands alfalfa fields, or grain fields for foraging.	**None.** While the Project site contains limited foraging habitat for the species, large trees in the survey area are associated with residential development.
Tricolored blackbird (*Agelaius tricolor*)	ST, SSSC	Vast, open areas with flooded, thorny, or spiny vegetation for nesting; grasslands, seasonal wetlands, weedy agricultural fields, cattle feedlots, or dairies for foraging.	**None.** Habitat lacking; no potential nesting habitat was present in the survey area, and the Project site is too far from any nesting areas to support foraging.
Western snowy plov (*Charadrius nivosus nivosus*)	FT, SSSC	Sandy beaches, salt pond levees, and shores of large alkali lakes.	**None.** Habitat lacking; the Project site and surrounding areas lacked the types of aquatic-adjacent habitats this species requires.
Buena Vista Lake ornate shrew (*Sorex ornatus relictus*)	FE, SSSC	Moist riparian, wetlands, grasslands, and upland scrub with abundant leaf litter and dense herbaceous cover.	**None.** Habitat lacking; the Project site has been routinely disked.
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	FE, SE	Sandy, alkaline, saline, and clay-based soils in upland scrub and grassland.	**None.** Habitat lacking; the Project site has been routinely disked.

San Joaquin kit fox[3] (*Vulpes macrotis mutica*)	FE, ST	Grassland, upland scrub, and some fallowed agricultural lands adjacent to natural grassland or upland scrub with a small mammal prey base and ground squirrel burrows or burrow surrogates for denning.	**None.** Habitat lacking; the Project site is not adjacent to natural grassland or upland scrub.
(*Dipodomys nitratoides nitratoides*)		scrub with sparse to moderate shrub cover and saline soils; also fallowed agricultural fields adjacent to natural grasslands or upland scrub.	the Project site has been routinely disked and is not adjacent to natural grassland or upland scrub.
California glossy snake (*Arizona elegans occidentalis*)	SSSC	Arid scrub, rocky washes, grasslands, chapparal.	**None.** Habitat lacking, the Project site lacked arid scrub, rocky washes, grasslands, and chapparal.
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	SSSC	Nests in freshwater emergent wetlands with dense vegetation and deep water; often along	**None.** Habitat lacking; the Project site lacked the freshwater emergent wetlands
California Rare Plants			
(*Lasthenia chrysantha*)		saline flats below 320 feet elevation.	the Project site lacked vernal pools or wet saline flats.

Brittlescale (*Atriplex depressa*)	1B.2	Alkaline clay soils in valley and foothill grassland, meadows, seeps, playas and in Chenopod scrub below 1050 feet.	**None.** Habitat lacking; the Project site lacks alkaline clay soils.
grass[3] (*Puccinellia simplex*		grassland, vernal pools, saline flats, and mineral springs below 3000 feet elevation.	the Project site lacked scrub, meadows, seeps, grassland, vernal pools, saline flats, and mineral springs.
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*	1B.2	Saline or alkaline soils in valley and foothill grassland below 230 feet	**None.** Habitat lacking; the Project site lacked saline or alkaline soils.
Heartscale (*Atriplex cordulata* var. *cordulata)*	1B.2	Sandy, saline soils in valley and foothill grassland, meadows, seeps and in Chenopod scrub below 1835 feet elevation.	**None.** Habitat lacking; the Project site lacked saline soils.
[illegible] (*Atriplex minuscula*)	[illegible]	[illegible] chenopod scrub, playa, and grassland in the San Joaquin Valley below 328 feet elevation.	[illegible] the Project site lacked alkaline soils.
Mud nama (*Nama stenocarpa*)	2B.2	Intermittently wet areas below 2700 feet elevation.	**None.** Habitat lacking; the Project site lacked intermittently wet areas.
Panoche peppergras (*Lepidium jaredii* ssp *album*)	1B.2	Clay, steep slopes and alkaline soils in valley and foothill grassland from 605-2450 feet elevation.	**None.** Habitat lacking; the Project site is below the elevational range of this species.

Recurved larkspur (*Delphinium recurvatum*)	1B.2	Grasslands and upland scrub with poorly drained, fine, alkaline soils at 98–1969 feet elevation.	**None.** Habitat lacking; the Project site lacked alkaline soils.
Sanford's arrowheac (*Sagittaria sanfordii*	1B.2	Ponds, sloughs, and ditches at sea level to 650 feet elevation.	**None.** Habitat lacking; no ponds, sloughs, or ditches were on or near the Project site.

CDFW (2025), CNPS (2025), USFWS (2025a).

FE = Federally listed as Endangered

FPT = Federally Proposed Threatened

SE = State listed as Endangered

Neither species nor sign observed; conditions marginal for occurrence.

Neither species nor sign observed; conditions highly suitable for occurrence.

CNPS California Rare Plant Rank[1]:

2B – plants rare, threatened, or endangered in California but more common elsewhere.

4 – plants have limited distribution in California.

eat Ranks[1]:

– moderately threatened in California (20-80% of urrences).

[3]Record from within 5 miles of the Project site.



Figure 4. CNDDB occurrence map.

3.2 Reconnaissance Survey

3.2.1 Land Use and Habitats

The Project site consisted of developed and ruderal land cover and fallowed agricultural land (Figures 5 and 6). Ruderal herbaceous vegetation dominated by nonnative grasses and forbs was distributed throughout the Project site (Figures 5 and 7). The southern portion of the Project site consisted of fallowed agricultural land with an alfalfa (*Medicago sativa*) cover crop (Figure 6). The agricultural portion of the Project site was bordered to the east and north by a shallow irrigation ditch (Figure 7). Ornamental trees were distributed in the northern portion of the Project site and along the northern and eastern survey area boundaries (Figures 5, 8, and 9). A single-family residence with a gravel driveway and abandoned accessory buildings were also in the northern portion of the parcel (Figures 8 and 9). California ground squirrel (*Otospermophilus beecheyi*) burrows (Figure 10) were sparsely distributed throughout the Project site.

The site was bordered to the north by residential development (Figures 2 and 6), to the south by a residential development and fallowed agricultural land, to the west by idle agricultural land, and to the east by commercial development, residential development, and idle agricultural land (Figure 2). Aerial imagery indicates the southern portion of the Project site has been used for agricultural production since at least 1994 (Google 2025).



Figure 5. Photograph of the Project site, looking northwest from the southeast corner, showing ruderal vegetation and ornamental trees.



Figure 6. Photograph of the Project site, looking north from the southern boundary, showing fallowed agricultural land and adjacent residential development.



Figure 7. Photograph of the central portion of the Project site, looking south, showing an irrigation ditch lined with ruderal vegetation.



Figure 8. Photograph of the Project site, looking northeast from the western boundary, showing abandoned buildings and ornamental trees.



Figure 9. Photograph of the Project site, looking west from Avenue 12 ½, showing a single-family residence and ornamental trees.



Figure 10. Photograph showing ground squirrel burrows in the central portion of the Project site, looking north.

3.2.2 Plant and Animal Species Observed

A total of 31 plant species (nine native and 22 nonnative), 14 bird species, and one mammal species were observed during the survey (Table 2).

Table 2. Plant and animal species observed during the reconnaissance survey.

Common Name	Scientific Name	Status
Palmer's amaranth	*Amaranthus palmeri*	Native
Canada horseweed	*Erigeron canadensis*	Native
Family Boraginaceae		
London rocket	*Sysimbrium irio*	Nonnative
Family Chenopodiaceae		
Russian thistle	*Salsola tragus*	Nonnative
Alfalfa	*Medicago sativa*	Nonnative
Family Geraniaceae		
Family Junglandaceae		

Northern California black walnut	*Juglans californica*	Native
Cheeseweed mallow	*Malva parviflora*	Nonnative
Bermuda grass	*Cynodon dactylon*	Nonnative
Johnsongrass	*Sorghum halepense*	Nonnative
Family Polygonaceae		
Family Portulacaceae		
Black nightshade	*Solanum nigrum*	Nonnative
Family Zygophyllaceae		
Family Accipitridae		
Killdeer	*Charadrius vociferus*	BTA, CFGC

Family Columbidae		
Family Corvidae		
American kestrel	*Falco sparverius*	BTA, CFGC
House finch	*Haemorhous mexicanus*	BTA, CFGC
Family Passerellidae		
Family Sturnidae		
American robin	*Turdus migratorius*	BTA, CFGC
Mammals		
Birds		

MBTA = Protected under the MBTA (16 USC § 703 et seq.); CFGC = Protected under CFGC §§ 3503 and 3513

3.2.3 Nesting Birds

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the property include, but are not limited to, American robin (*Turdus migratorius*) and house finch (*Haemorhous mexicanus*). Large trees within 0.5 miles of the Project site could provide nesting substrates for raptors.

3.2.4 Regulated Habitats

A shallow, earthen ditch lined the southern portion of the Project site (Figure 7). The ditch was likely created for intra-field irrigation, as it was not connected to a wetland, waterway, or irrigation infrastructure. The ditch is not listed in the National Wetlands Inventory (USFWS 2025b). Aerial imagery (Google 2025) shows the ditch has been subject to ongoing maintenance since it was constructed until at least March 2025. Therefore, the ditch is not likely regulated by the SWRCB. As the feature is not a lake or stream, it is likely not regulated by the CDFW under California Fish and Game Code Section 1600 et sec. As this feature is not a tributaty or adjacent water of a water of the United States, it would not fall under the regulatory jurisdiction of the USACE.

3.3 Special-Status Species

3.3.1 Burrowing Owl

Burrowing owl is a member of the family Strigidae recognized as a Species of Special Concern by the CDFW (CDFW 2025). It occurs primarily in grasslands but can persist and even thrive in agricultural or other developed and disturbed areas (Shuford and Gardali 2008, Rosenberg and Haley 2004). Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*) (Poulin et al. 2020). Burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young (Poulin et al. 2020). It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards (Poulin et al. 2020). The nesting season begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching (Poulin et al. 2020). Adults can live up to 8 years in the wild.

There are no CNDDB occurrence records of burrowing owl from within 5 miles of the Project site (CDFW 2025); however, there are four CNDDB occurrence records from the nine-quad search. Ground squirrel burrows scattered throughout the Project site could support the species. The agricultural field on the Project site and the adjacent idle agricultural lands provide potential foraging habitat. However, the habitat is routinely disturbed, and no sign of burrowing owl was detected during the 27 October 2025 reconnaissance survey. Therefore, the potential for this species to occur on the Project site is low.

4.0 Environmental Impacts

4.1 Significance Determinations

This Project, which will result in permanent impacts to an almond orchard, will not: (1) substantially reduce the habitat of a fish or wildlife species (criterion a) as no such habitat is present on the Project site; (2) cause a fish or wildlife population to drop below self-sustaining levels (criterion b) as no such potentially vulnerable population is known from the area; (3) threaten to eliminate a plant or animal community (criterion c) as no such potentially vulnerable communities are known from the area; (4) substantially reduce the number or restrict the range of a rare or endangered plant or animal (criterion d) as no such potentially vulnerable species are known from the area; (5) have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS (criterion f) as no riparian habitat or other sensitive natural community was present in the survey area; (6) have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (criterion g) as no impacts to wetlands will occur; (7) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (criterion i) as no such ordinances are pertinent to the project; or (8) conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan (criterion j) as no such plan has been adopted. Thus, these significance criteria are not analyzed further.

The remaining statutorily defined criteria provide the framework for Criterion BIO1 and Criterion BIO2 below. These criteria are used to assess the impacts to biological resources stemming from the Project and provide the basis for determinations of significance:

- Criterion BIO1: 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 CDFW or USFWS (significance criterion e).
- Criterion BIO2: 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 (significance criterion h).

4.1.1 Direct and Indirect Effects

4.1.1.1 Potential Effect #1: Have a Substantial Effect on Any Special-Status Species (Criterion BIO1)

The Project could adversely affect, either directly or through habitat modifications, two special-status animal species that occur or may occur on or near the Project site. Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species or substantially modifies its habitat could constitute a significant impact. We recommend that Mitigation Measure BIO1 (below) be included in the conditions of approval to reduce the potential impacts to less-than-significant levels.

Mitigation Measure BIO1. Protect burrowing owl.

1. A pre-construction take avoidance survey shall be conducted by a qualified biologist in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) to ensure that no burrowing owl will be disturbed during the implementation of the Project. A pre-construction take avoidance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential burrowing owl habitat in and within 500 feet of the impact areas.

2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, excrement, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or other measures shall be implemented in consultation with the CDFW.

4.1.1.2 Potential Effect #2: Interfere Substantially with Native Wildlife Movements, Corridors, or Nursery Sites (Criterion BIO3)

The Project has the potential to impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any

activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant effect. We recommend the Mitigation Measure BIO2 (below) be included in the conditions of approval to reduce the potential effects to a less-than-significant level.

Mitigation Measure BIO2. Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.

2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

5.0 Literature Cited

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency, Department of Fish and Game. 36 pages.

California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database (CNDDB) RareFind 5. https://apps.wildlife.ca.gov. Accessed October 2025.

California Native Plant Society, Rare Plant Program (CNPS). 2025. Inventory of Rare and Endangered Plants (online edition, v9.5). California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org. Accessed October 2025.

Google. 2025. Google Earth Pro. Version 7.3.6.10441 (https://www.google.com/earth/download/gep/agree.html). Accessed October and November 2025.

Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture. 2025. Web Soil Survey, National Cooperative Soil Survey: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed October 2025.

Poulin, R. G., L. D. Todd, E. A. Haug, B. A. Millsap, and M. S. Martell. 2020. Burrowing Owl (*Athene cunicularia*), version 1.0. In Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.burowl.01.

Rosenberg, D. K., and Haley, K. L. 2004. The ecology of Burrowing Owls in the agroecosystem of the Imperial Valley, California. Studies in Avian Biology 27:120–135.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

United States Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation Manual. Wetland Research Program Technical Report Y-87-1.

_____. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ERDC/EL TR-08-28. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046489.pdf. Accessed October 2025.

United States Fish and Wildlife Service (USFWS). 2018. Migratory Bird Permit Memorandum: Destruction and Relocation of Migratory Bird Nest Contents. FWS/DMBM/AMB/068029, 4 pages.

_____. 2025a. IPaC: Information for Planning and Conservation. https://ecos.fws.gov/ipac/. Accessed October 2025.

_____. 2025b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/. Accessed October 2025.

Appendix A. USFWS list of threatened and endangered species.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kings County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Buena Vista Lake Shrew Sorex ornatus relictus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1610	**Endangered**
Fresno Kangaroo Rat Dipodomys nitratoides exilis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5150	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat Dipodomys nitratoides nitratoides Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7247	Endangered

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Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard Gambelia silus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625	Endangered
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
Western Spadefoot Spea hammondii **No critical habitat has been designated for this species.**	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found **There is proposed critical habitat for this species. Your location does not overlap the critical habitat.** https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found **There is final critical habitat for this species. Your location does not overlap the critical habitat.** https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found **There is final critical habitat for this species. Your location does not overlap the critical habitat.** https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

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Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

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Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Belding's Savannah Sparrow Passerculus sandwichensis beldingi This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole Icterus bullockii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull Larus californicus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Northern Harrier Circus hudsonius This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker Dryobates nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

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1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

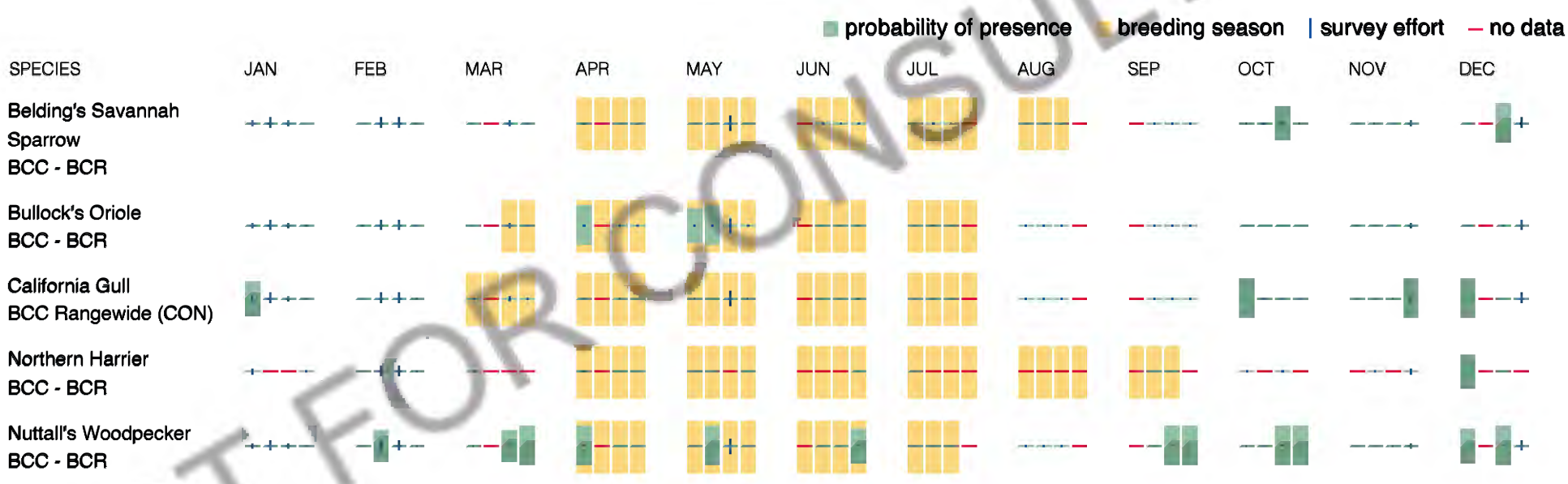
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper Interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

NOT FOR CONSULTATION

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix B. CNDDB occurrence records.

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Hanford (3611936) OR Burris Park (3611945) OR Laton (3611946) OR Guernsey (3611926) OR Lemoore (3611937) OR Remnoy (3611935) OR Riverdale (3611947) OR Stratford (3611927) OR Waukena (3611925))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali-sink goldfields *Lasthenia chrysantha*	PDAST5L030	None	None	G2	S2	1B.1
blunt-nosed leopard lizard *Gambelia sila*	ARACF07010	Endangered	Endangered	G1	S2	FP
brittlescale *Atriplex depressa*	PDCHE042L0	None	None	G2	S2	1B.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California alkali grass *Puccinellia simplex*	PMPOA53110	None	None	G2	S2	1B.2
California glossy snake *Arizona elegans occidentalis*	ARADB01017	None	None	G5T2	S2	SSC
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	AAAAA01181	Threatened	Threatened	G3T3	S3	WL
Crotch's bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G2	S2	
Earlimart orache *Atriplex cordulata var. erecticaulis*	PDCHE042V0	None	None	GNRT1	S1	1B.2
hoary bat *Lasiurus cinereus*	AMACC05032	None	None	G3G4	S4	
lesser saltscale *Atriplex minuscula*	PDCHE042M0	None	None	G2	S2	1B.1
mud nama *Nama stenocarpa*	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
northwestern pond turtle *Actinemys marmorata*	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Panoche pepper-grass *Lepidium jaredii ssp. album*	PDBRA1M0G2	None	None	G2G3T2T3	S2S3	1B.2
recurved larkspur *Delphinium recurvatum*	PDRAN0B1J0	None	None	G2?	S2	1B.2
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S3	
San Joaquin tiger beetle *Cicindela tranquebarica joaquinensis*	IICOL0220E	None	None	G5T1	S1	
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
subtle orache *Atriplex subtilis*	PDCHE042T0	None	None	G1	S1	1B.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S4	
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	AMAFD03152	Endangered	Endangered	G2T1T2	S2	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S2	SSC
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T3	S3	
Valley Sacaton Grassland *Valley Sacaton Grassland*	CTT42120CA	None	None	G1	S1.1	
Valley Sink Scrub *Valley Sink Scrub*	CTT36210CA	None	None	G1	S1.1	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G3	S3	
western ridged mussel *Gonidea angulata*	IMBIV19010	None	None	G3	S2	
western snowy plover *Anarhynchus nivosus nivosus*	ABNNB03031	Threatened	None	G3T3	S3	SSC
western spadefoot *Spea hammondii*	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
yellow-headed blackbird *Xanthocephalus xanthocephalus*	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 32

Appendix C. CNPS plant list.

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

11 matches found. Click on scientific name for details

Search Criteria: , 9-Quad include [3611935:3611926:3611925:3611945:3611936:3611937:3611947:3611946:3611927]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Atriplex cordulata var. *erecticaulis*	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	None	None	GNRT1	S1	1B.2	Yes	2001-01-01	 © 2009 Robert E. Preston, Ph.D.
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2009 Zoya Akulova
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	(Apr)Jun-Sep(Oct)	None	None	G1	S1	1B.2	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2	1B.2	Yes	1988-01-01	No Photo Available

Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30	 © 2009 California State University, Stanislaus
Lasthenia ferrisiae	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2009 Zoya Akulova
Lepidium jaredii ssp. *album*	Panoche pepper-grass	Brassicaceae	annual herb	Feb-Jun	None	None	G2G3T2T3	S2S3	1B.2	Yes	1994-01-01	 © 2015 Debra L. Cook
Nama stenocarpa	mud nama	Namaceae	annual/perennial herb	Jan-Jul	None	None	G4G5	S1S2	2B.2		1994-01-01	No Photo Available
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15	 © 2017 Chris Winchell
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook

Showing 1 to 11 of 11 entries

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Suggested Citation

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Appendix C

Cultural Study

A
PHASE I CULTURAL RESOURCE SURVEY
FOR PROPERTY LOCATED AT LACEY BOULEVARD AND 12 1/2 AVENUE,
CITY OF HANFORD, CALIFORNIA

Submitted to:

Crawford and Bowen Planning, Inc.
113 N. Church Street, Suite #302
Visalia, California 93291

Keywords:
Hanford 7.5' Quadrangle, City of Hanford,
California Environmental Quality Act

Submitted by:
Hudlow Cultural Resource Associates
1405 Sutter Lane
Bakersfield, California 93309

Author:
Scott M. Hudlow

November 2025

Management Summary

At the request of Crawford and Bowen Planning, Inc., a Phase I Cultural Resource Survey was conducted on an approximate 14-acre parcel, located at the southwest corner of Lacey Boulevard and 12 ½ Avenue in the City of Hanford, California. The Phase I Cultural Resource Survey consisted of an archaeological survey and a cultural resource record search.

One cultural resource was identified, C&B-6. The farmhouse pre-dates 1926. Bonadelle Neighborhoods is proposing to demolish the two-story farmhouse which fronts Lacey Boulevard, and build a single-family residential tract.

C&B-6 has several large additions to the south and east elevations of the house and a deteriorating set of outbuidlings located to the west of the main house, and is not eligible for nomination to the California Register of Historic Resources.

C&B-6 is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. Criterion 1 of the California Register of Historical Resources does not apply.

C&B-6 is not associated with the lives of persons important to local, California, or national history. As such, Criterion 2 of the California Register of Historical Resources does not apply.

C&B-6 does not embody the distinctive characteristics of a type, period, region or method of construction or represent the work of a master or possess high artistic values. C&B-6 is typical, vernacular farmhouse from the early twentieth-century. Criterion 3 of the California Register of Historical Resources does not apply.

C&B-6 will not yield, and does not have the potential to yield, information important to the prehistory or history of the local area, California or the nation. Criterion 4 of the California Register of Historical Resources does not apply, since this Criterion is largely set aside for important resources whose historic or cultural significance is prehistoric in nature or whose value can not be ascertained without archaeological excavation.

No further work is required. If archaeological resources are encountered during the course of construction, a buffer zone of at least 50 feet in diameter should be established surrounding any cultural resources that are encountered during the course of construction and a qualified archaeologist should be consulted for further evaluation, before ground disturbance activities continue in the area surrounding the inadvertent discovery.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5.

The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

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1.0 Introduction

At the request of Crawford and Bowen Planning, *Hudlow Cultural Resource Associates* conducted a Phase I Cultural Resource Survey in accordance with the California Environmental Quality Act for a proposed single-family residential development for Bonadelle Neighborhoods. The approximate 14-acre tract lies at the southwest corner of Lacey Boulevard and 12½ Avenue in the City of Hanford, California. This project is being undertaken in accordance with the California Environmental Quality Act (CEQA) with the City of Hanford responsible as Lead Agency to implement CEQA. The Phase I Cultural Resource Survey consisted of a pedestrian survey and a cultural resource record search.

CEQA is a California statute passed in 1970. Governor Ronald Reagan signed it into law, after the federal government passed the National Environmental Policy Act (NEPA). CEQA institutes a statewide policy of environmental protection. CEQA does not directly regulate land uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and, in a departure from NEPA, adopt all feasible measures to mitigate those impacts. CEQA makes environmental protection a mandatory part of every California state and local agency's decision making process.

CEQA was signed into law in 1970, in a time of increasing public concern for the environment. The statute required that for any public project, the government must conduct an environmental study to examine what impacts the project might have on things like air/water quality, noise, transportation, biological resources, or cultural resources, and generate an Environmental Impact Report (EIR) documenting the impacts as well as any potential and planned mitigations. In 1972, state courts interpreted a public project as a development project that needed government approval.

In 1969, NEPA passed into law. It is similar to CEQA in that both statutes set forth a policy of environmental protection, and a protocol by which all agencies in their respective jurisdictions make environmental protection part of their decision making process. NEPA is narrower in scope than CEQA. NEPA applies only to projects receiving federal funding or approval by federal agencies, while CEQA applies to projects receiving any form of state or local approval, permit, or oversight. Thus, development projects in California funded only by private sources and not requiring approval by a federal agency would be exempt from NEPA; but would likely be subject to CEQA.

The CEQA statute, California Public Resources Code § 21000 et seq., codifies a statewide policy of environmental protection. According to CEQA, state and local agencies must give consideration to environmental protection

in regulating public and private activities and should not approve projects for which feasible and environmentally superior mitigation measures or alternatives exist.

CEQA mandates actions that all state and local agencies must do to advance this policy. Specifically, for any project under CEQA's jurisdiction with potentially significant environmental impacts, agencies must identify mitigation measures and alternatives by preparing an Environmental Impact Report and must approve projects with feasible mitigation measures and the environmentally superior alternative. The California Natural Resources Agency promulgates the CEQA Guidelines, California Code of Regulations Title 14 § 15000 et seq., which detail the protocol by which state and local agencies must comply with CEQA requirements. CEQA originally applied to only public projects, but California Supreme Court interpretation of the statute, as well as later revisions, expanded CEQA's jurisdiction to nearly all projects within California, including those proposed by private businesses and individuals. § 21002.1 states "Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." For private projects, CEQA applies when a discretionary government permit or other entitlement for use is necessary.

The lead agency, the City of Hanford, is responsible for conducting the CEQA review and has final approval of the project. The City of Hanford is also responsible for coordinating with the project applicant, public, and associated agencies during the CEQA process.

2.0 Project Location

The project area is in the City of Hanford, California. It is a portion of the W ½ of the NW ¼ of the NE ¼ of Section 34, T.18S., R.21E., Mount Diablo Baseline and Meridian, as displayed on the United States Geological Survey (USGS) Hanford 7.5-minute quadrangle map (Figure 1). The proposed single-family residential development is located at the southwest corner of 12 ½th and Lacey Boulevard, in the City of Hanford, California.

3.0 Record Search

A record search of the project area and the environs within one half-mile radius was conducted at the Southern San Joaquin Valley Information Center. Scott M. Hudlow conducted the record search, RS# 25-424, on October 8, 2025. The record search revealed that six cultural resource surveys have been conducted within one half-mile radius of the project area. No previous surveys have addressed the parcel in question. Two cultural resources are located within one half-mile of the current project area, a historic rail line and a historic agricultural ditch (Appendix II). No cultural resources have previously identified within the current project area.

4.0 Environmental Background

The project area is located at an elevation of 245 feet above mean sea level in the Great Central Valley, which is composed of two valleys-the Sacramento Valley and the San Joaquin Valley. The parcel is located south of the Kings River and it is surrounded on three side by Mussel Slough. The project area is an alfalfa field and a house lot, which is planted with a variety of decorative floral species. No native vegetation survives (Figures 2 and 3).

5.0 Prehistoric Archaeological Context

A limited amount of archaeological research has been conducted in the southern San Joaquin Valley. Thus, consensus on a generally agreed upon regional cultural chronology has yet to be developed. Most cultural sequences can be summarized into several distinct time periods: Early, Middle, and Late. Sequences differ in their inclusion of various "horizons," "technologies," or "stages." A prehistoric archaeological summary of the southern San Joaquin Valley is available in Moratto (Moratto 1984).

Despite the preoccupation with chronological issues in most of the previous research, most suggested chronological sequences are borrowed from other regions with minor modifications based on sparse local data.

The following chronology is based on Parr and Osborne's Paleo-Indian, Proto-Archaic, Archaic, Post-Archaic periods (Parr and Osborne 1992:44-47). Most existing chronologies focus on stylistic changes of time-sensitive artifacts such as projectile points and beads rather than addressing the socioeconomic factors, which produced the myriad variations. In doing so, these attempts have encountered similar difficulties. These cultural changes are implied as environmentally determined, rather than economically driven.

Paleo-Indians, whom roamed the region approximately 12,000 years ago, were highly mobile individuals. Their subsistence is assumed to have been primarily big game, which was more plentiful 12,000 years ago than in the late twentieth century. However, in the Great Basin and California, Paleo people were also foragers who exploited a wide range of resources. Berries, seeds, and small game were also consumed. Their technology was portable, including manos (Parr and Osborne 1992:44). The paleo period is characterized by fluted Clovis and Folsom points, which have been identified throughout North America. The Tulare Lake region in Kings County has yielded several Paleo-Indian sites, which have included fluted points, scrapers, chipped crescents, and Lake Mojave-type points (Morratto 1984:81-2).

The Proto-Archaic period, which dates from approximately 11,000 to 8,000 years ago, was characterized by a reduction in mobility and conversely an increase in sedentism. This period is classified as the Western Pluvial Lake Tradition or the Proto-Archaic, of which the San Dieguito complex is a major aspect (Moratto 1984: 90-99; Warren 1967). An archaeological site along Buena

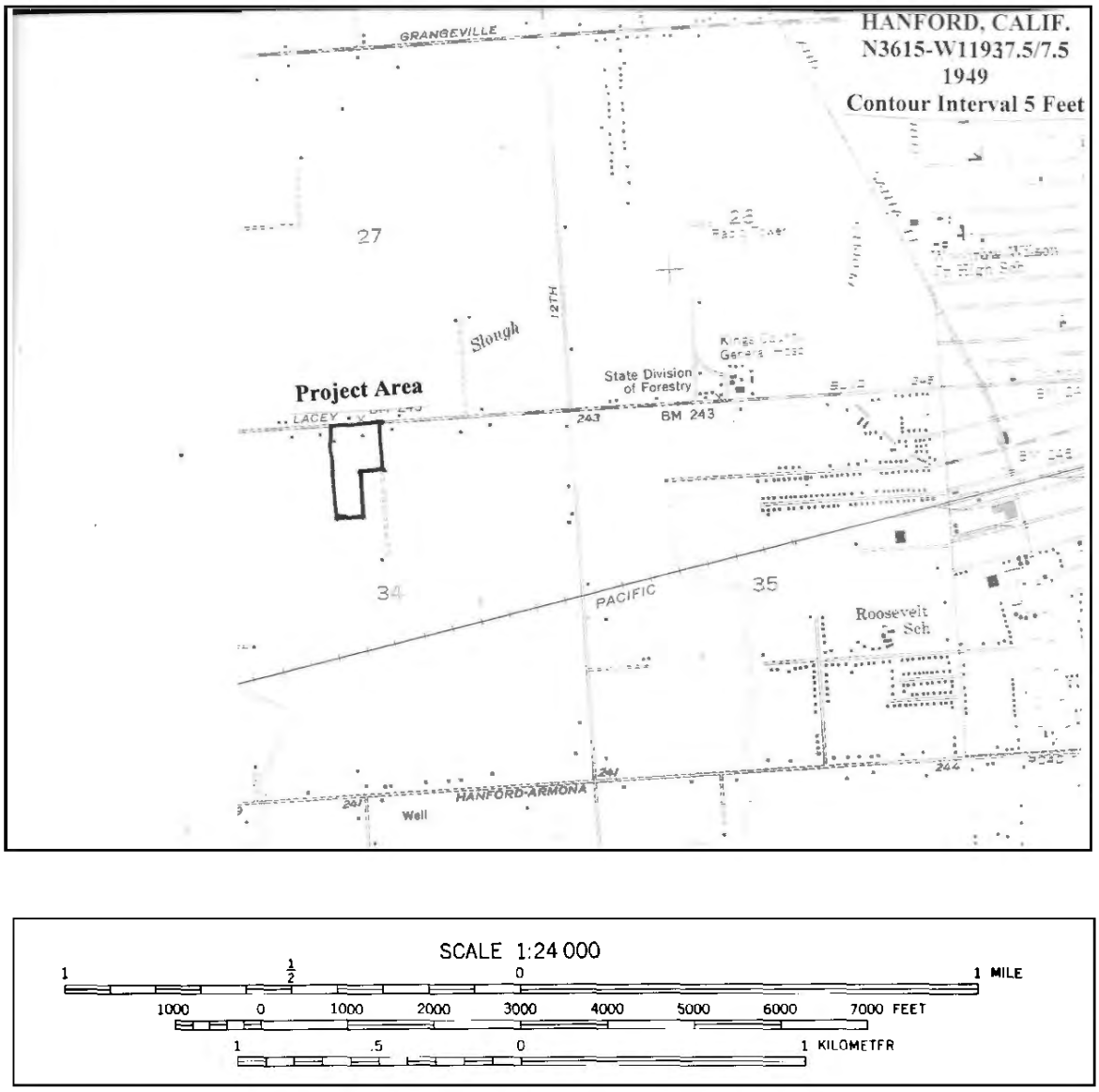


Figure 1
Project Area Location Map

Vista Lake in southwestern Kern County displays a similar assemblage to the San Dieguito type site. Claude Warren proposes that a majority of Proto-Archaic southern California could be culturally classified as the San Dieguito Complex (Warren 1967). The Buena Vista Lake site yielded manos, millingstones, large stemmed and foliate points, a mortar, and red ochre. During this period, subsistence patterns began to change. Hunting focused on smaller game and plant collecting became more integral. Large stemmed, lancelote (foliate) projectile points represents lithic technology. Millingstones become more prevalent. The increased sedentism possibly began to create regional stylistic and cultural differences not evident in the paleo period.

The Archaic period persisted in California for the next 4000 years. In 1959, Warren and McKusiak proposed a three-phase chronological sequence based on a small sample of burial data for the Archaic period (Moratto 1984:189; Parr and Osborne 1992:47). It is distinguished by increased sedentism and extensive seed and plant exploitation. Millingstones, shaped through use, were abundant. Bedrock manos and metates were the most prevalent types of millingstones (Parr and Osborne 1992:45). The central valley began to develop distinct cultural variations, which can be distinguished by different regions throughout the valley, including Madera County.

In the Post-Archaic period enormous cultural variations began manifesting themselves throughout the entire San Joaquin Valley. This period extends into the contact period in the seventeenth, eighteenth and nineteenth centuries. Sedentary village life was emblematic of the Post-Archaic period, although hunting and gathering continued as the primary subsistence strategy. Agriculture was absent in California, partially due to the dense, predictable, and easily exploitable natural resources. The ancestral Yokuts have possibly been in the valley for the last three thousand years, and by the eighteenth century were the largest pre-contact population, approximately 40,000 individuals, in California (Moratto 1984).

6.0 Ethnographic Background

The Yokuts are a Penutian-speaking, non-political cultural group. Penutian speakers inhabited the San Joaquin Valley, the Bay Area, and the central Sierra Nevada Mountains. The Yokuts are split into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts.

The southern San Joaquin Valley in the Hanford area was home to the Yokuts tribelet, Tachi. The tribelet had approximately 550 people, had a special name for themselves, and spoke a unique dialect of Yokuts. Land was owned, collectively, and every group member enjoyed the right to utilize food resources. The Tachi occupied the area surrounding the now-extinct Tulare Lake (Latta 1999).

The Southern Valley Yokuts had a mixed economy emphasizing fishing, hunting, fowling, and collecting shellfish, roots, and seeds. Fish were the most



Figure 2
Project Area, View to the Southwest

prevalent resource and was a productive activity throughout the entire year. Fish were caught in many different manners, including nets, conical basket traps, catching with bare hands, shooting with bows and arrows, and stunning fish with mild floral toxins. Geese, ducks, mud hens and other waterfowl were caught in snares, long-handled nets, stuffed decoys, and brushing brush to trick the birds to fly low into waiting hunters. Mussels were gathered and steamed on beds of tule. Turtles and dogs were consumed (Wallace 1978:449-450).

Wild seeds and roots provided a large portion of the Yokuts' diet. Tule seeds, grass seeds, fiddleneck, alfilaria were also consumed. Acorns, the staple crop for many California native cultures, were not common in the San Joaquin Valley. Acorns were traded into the area. Land mammals, such as rabbits, ground squirrels, antelope and tule elk, were not taken often (Wallace 1978:450).

The Yokuts occupied permanent structures in permanent villages for most of the year. During the late and early summer, families left for several months to gather seeds and plant foods, shifting camp locations when changing crops. Several different types of fiber-covered structures were common in Yokuts settlements. The largest was a communal tule mat-covered, wedge-shaped



Figure 3
Project Area, View to the Northeast

structure, which could house upward of ten individuals. These structures were established in a row, with the village chief's house in the middle and his messenger's houses were located at the ends of the house row. Dance houses and assembly buildings were located outside the village living area (Nabokov and Easton 1989:301).

The Yokuts also built smaller, oval, single-family tule dwellings. These houses were covered with tall mohya stalks or with sewn tule mats. Bent-pole ribs that met a ridgepole held by two crotched poles framed these small houses. The Yokuts also built a cone-shaped dwelling, which was framed with poles tied together with a hoop and then covered with tule or grass. These cone-shaped dwellings were large enough to contain multiple fireplaces (Nabokov and Easton 1989:301). Other structures included mat-covered granaries for storing food supplies, and a dirt-covered, communally owned sweathouse.

Clothing was minimal, men wore a breechclout or were naked. Women wore a narrow-fringed apron. Cold temperatures brought out rabbitskin or mud hen blankets. Moccasins were worn in certain places; however, most people went barefoot. Men wore no head coverings, but women wore basketry caps

when they carried burden baskets on their heads. Hair was worn long. Women wore tattoos from the corners of the mouth to the chin; both men and women had ear and nose piercings. Bone, wood or shell ornaments were inserted (Wallace 1978:450-451).

Tule dominated the Yokut's material culture. It was used for many purposes, including sleeping mats, wall coverings, cradles, and basketry. Ceramics are uncommon to Yokuts culture as is true throughout most California native cultures. Basketry was common to Yokuts culture. Yokuts made cooking containers, conical burden baskets, flat winnowing trays, seed beaters, and necked water bottles. Yokuts also manufactured wooden digging sticks, fire drills, mush stirrers, and sinew-backed bows. Knives, projectile points, and scraping tools were chipped from imported lithic materials including obsidian, chert, and chalcedony. Stone mortars and pestles were secured in trade. Cordage was manufactured from milkweed fibers, animal skins were tanned, and awls were made from bone. Marine shells, particularly olivella shells, were used in the manufacture of money and articles of personal adornment. Shells were acquired from the Chumash along the coast (Wallace 1978:451-453).

The basic social and economic unit was the nuclear family. Lineages were organized along patrilineal lines. Yokuts fathers transmitted totems, particular to each paternal lineage, to each of his children. The totem was an animal or bird that no member would kill or eat and that was dreamed of and prayed to. The mother's totem was not passed to her offspring; but was treated with respect. Families sharing the same totem formed an exogamous lineage. The lineage had no formal leader nor did it own land. The lineage was a mechanism for transmitting offices and performing ceremonial functions. The lineages formed two moieties, East and West, which consisted of several different lineages. Moieties were customarily exogamous. Children followed the paternal moiety. Certain official positions within the villages were associated with certain totems. The most important was the Eagle lineage from which the village chief was appointed. A member of the Dove lineage acted as the chief's assistant. He supervised food distribution and gave commands during ceremonies. Another hereditary position was common to the Magpie lineage, was that of spokesman or crier.

7.0 Historic Context

Kings County was formed from Fresno County in 1893; however, it was settled in the 1850s, soon after California joined the United States after the passage of the Compromise of 1850. The Compromise of 1850 allowed California to join the Union as a free state even though a major portion of the state lay beneath the Missouri Compromise line; and was potentially subject to southern settlement and slavery. Americans had long been visiting and working in California prior to the admission of California into the Union.

The European settlement of California began in 1769, after the Spanish moved north from Baja California into Alta California. Father Junipero Serra, a

Franciscan friar founded Mission San Diego de Alcala, beginning California active European settlement. However, Spanish mission efforts were focused on California's coastal regions. Spanish exploration of the San Joaquin Valley region begins in the 1770s. In 1772, Pedro Fages arrived in the San Joaquin Valley searching for army deserters. Father Francisco Garces, a Franciscan priest, soon visited the vicinity in 1776. The Spanish empire collapsed in 1820; Spain's former Central and South American colonies became independent nations. As a result, California became Mexican territory. California stayed in Mexican hands until the Mexican-American War. Mexican California remained a coastal society with little interest in settling in California's hot, dry interior valleys.

American exploration of the San Joaquin Valley begins in the 1820s with Jedediah Smith, Kit Carson, and Joseph Walker looking for commercial opportunities. The United States government began exploring California in the 1830s. Soon, the Americans will be searching for intercontinental railroad routes to link the eastern and western halves of the continent.

The defeat of the Mexicans during the Mexican-American War and the subsequent discovery of gold will drastically alter the complicated political realities of the west. The Mexican-American War was ostensible fought to settle a boundary dispute with the Mexicans over the western boundary of the newly-annexed state of Texas, which had fought a successful rebellion against the Mexican Army in the mid-1830s. The Republic of Texas was an independent country for nine years until Texas was annexed by the United States in 1845. One major outcome of the Mexican-American War was that Mexico rescinded its claims to much of the American southwest. In 1848 these territories were folded into the United States, including California.

In January 1848, the discovery of gold in Coloma, California changed the settlement of California, forever. In the summer of 1848, when the gold strike was publicly announced, the overnight settlement of California began. The Mexican population of California was small and limited to the coasts and a few of southern California's interior valleys. A sizable native population settled the remainder of California; Fresno County was Yokuts territory. The Gold Rush tipped the balance of native communities throughout California, as many of California's natives were decimated.

In 1856, Fresno County was created from the northern half of Tulare County. The original county seat was at Millerton. The west side of Fresno County was largely the northern half of Tulare Lake, which no longer exists, due to farming and damming of the rivers, which fed the lake. Settlement of the western portion of Fresno County was abetted by the arrival of the Southern Pacific (SP) Railroad in 1877. The Southern Pacific was originally built from San Francisco to Bakersfield. The Hanford townsite was named for the SP paymaster, James Madison Hanford, who was originally from New York. Hanford made his way to California during the Gold Rush. The city of Hanford

was oriented along the rail line. Hanford was incorporated in 1891; and became the county seat of Kings County in 1893.

Hanford sits at the center of a rich agricultural region, farming the former Tulare Lake basin and the region. Farmers and cattle ranchers settled the valley. Wheat was originally the major agricultural crop. H.G. Lacey built an early flour processing mill in Hanford. Cattle ranchers and shepherds grazed their animals throughout the region until 1903, when the laws changed.

8.0 Field Procedures and Methods

On October 22, 2025, Scott M. Hudlow (for qualifications see Appendix I) conducted a pedestrian archaeological survey of the entire proposed project area. Hudlow surveyed in north/south transects across the entire parcel in 10-meter (33 feet) intervals.

9.0 Report of Archaeological Findings

One cultural resource was identified, C&B-6. C&B-6 is a two-story early twentieth century late Victorian farmhouse. The house and farm predates 1926, when it was displayed on a USGS Hanford quadrangle map (Figure 4). The two-story house is set back from Lacey Boulevard (Figure 5). This late Victorian house is the center of a large agricultural complex that is largely located directly to the west of the house that includes four standing outbuildings. A ditch separates the house and work complex from the adjacent fields. The complex is shaded by an interesting mixture of pines, palms, eucalyptus, pecans, and walnuts.

The frame house rests on a raised poured-in-place and is covered with a pyramidal roof pierced with a single north-facing dormer window and is clad with horizontal shiplap siding. A large porch is attached to the north elevation, which is supported by unadorned columns. A low, wooden rail surrounds the porch's flat roof, giving the appearance of a two-story porch. The porch has closed eaves, echoing the closed eaves under the house's pyramidal roof. The porch shelters an off-center entrance, which is flanked by a pair of large decorative replacement windows on the north elevation. The entrance on the north elevation is also a replacement door. The west elevation has a second porch that is also raised on a poured-in-place foundation. The second porch is not attached to the porch on the north elevation, and it has a shed roof. The porch shelters two large replacement windows on the west elevation (Figure 6). The porch does not extend across the entire west elevation; instead it is incorporated into a breakfast nook/sunroom that is an addition located in the southwest corner of the house (Figure 7).

The sunroom/breakfast nook incorporates the southern edge of the porch (see Figure 7). The sunroom is well-lit with north-, south-, and west-facing windows. A side entrance is located under the side porch accessing the side porch on the west elevation. The sunroom addition is covered with a pyramidal

roof with open eaves and a large second-story bay window is located on the second floor (see Figure 7). The bay window is covered with a shed roof, and is possibly an addition built over the breakfast nook/sunroof, and not part of the construction of the breakfast nook/sunroom construction.

The south elevation has another one-story addition attached to it, expanding the house to the south (Figure 8). The addition, which is covered with a pyramidal roof, has two doors and a closet for a hot water heater. Both entrances have stepped, brick landing areas. In the southwest corner is the first of the two doors; oddly, it is covered with a shed roof that descends to the west. The door is flanked to the west with a triple window unit, which is also possibly an addition. The hot water heater closet is located to the east. East of the hot

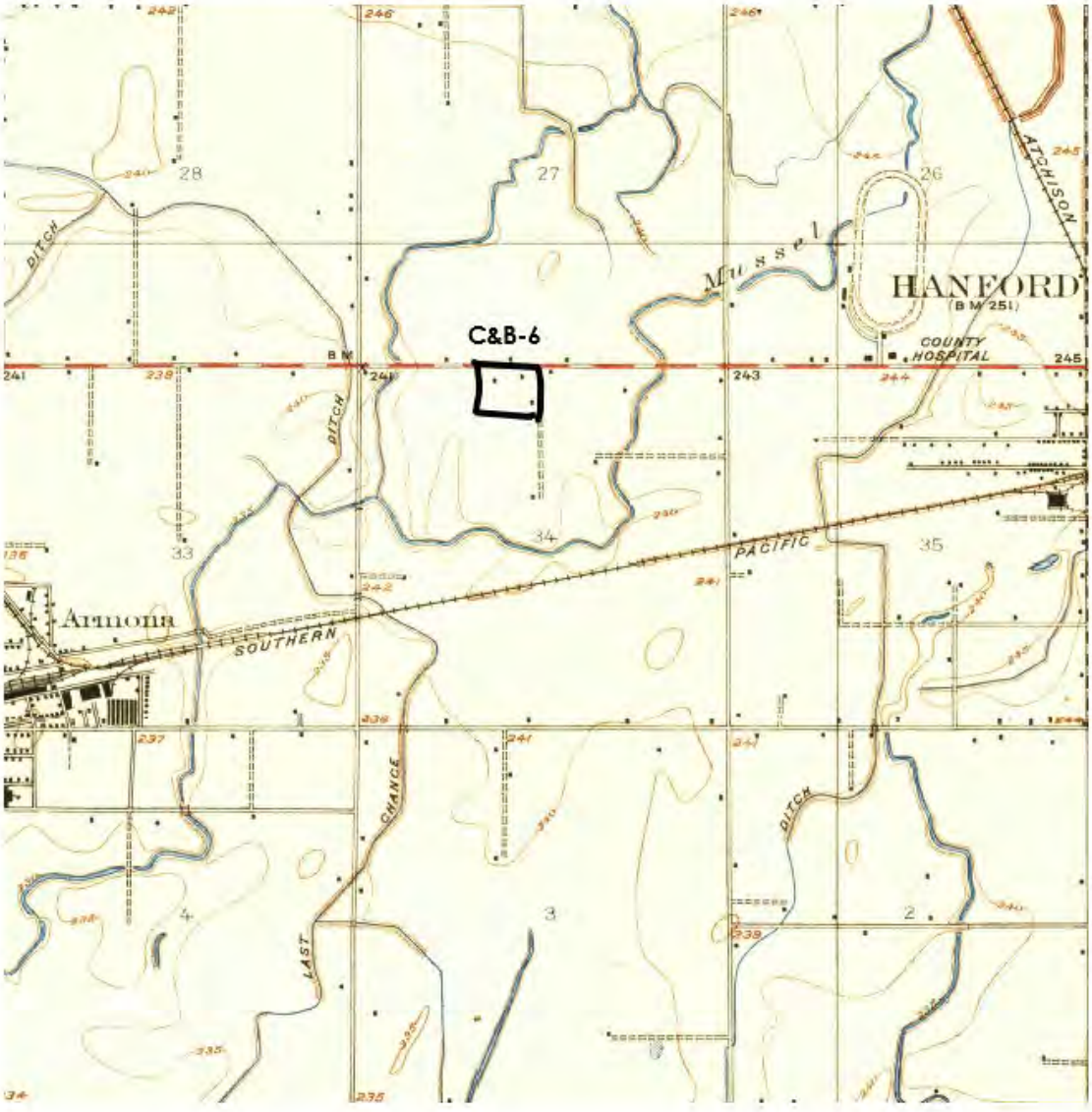


Figure 4
1926 USGS Hanford Quadrangle Map



Figure 5
C&B-6, View to the Southeast



Figure 6
C&B-6, View to the Southeast, West Elevation

water heater is a second entrance. It is flanked by a pair of windows; the window to the west is possibly a bathroom window and the eastern window piercing is a full-size window. A window pierces the east elevation of the addition. These window have replacement sash, which is common throughout the house. This rear addition is probably a kitchen/bath addition to accommodate a growing family. The east elevation is pierced with four windows, which flank an external brick, whitewashed chimney. The small chimney, probably indicates the location of the house's social space.



Figure 7
C&B-6, View to the Southeast, West Elevation, Sunroom/Breakfast Nook



Figure 8
C&B-6, View to the Southeast, North and East Elevations, View to the Northwest

A large outbuilding complex is located to the west of the house. However, a pair of outbuildings are located to the southeast of the house. These two attached work/storage buildings are covered with gabled roofs, clad with board and batten cladding. The work complex to the west has three and a foundation. A pile of bricks possibly indicate the location of another building. The first building is an agricultural building, the second building is for storage, and the third building is a large three-car garage. The foundation is located in the northwest corner of the property. It had a centered entrance on the south elevation, and the building was raised on sills. A large concrete pad is attached to the building's west elevation. A twisted metal roof is present as well as remnants of plaster walls. The building was surrounded by a small fence. Concrete post molds indicate the location of a clothes line.

10.0 Management Recommendations

At the request of Crawford and Bowen Planning, Inc., a Phase I Cultural Resource Survey was conducted on an approximate 14-acre parcel, located at the southwest corner of Lacey Boulevard and 12 ½ Avenue in the City of Hanford, California. The Phase I Cultural Resource Survey consisted of an archaeological survey and a cultural resource record search.

One cultural resource was identified, C&B-6. The farmhouse pre-dates 1926. Bonadelle Neighborhoods is proposing to demolish the two-story farmhouse which fronts Lacey Boulevard, and build a single-family residential tract.

C&B-6 has several large additions to the south and east elevations of the house and a deteriorating set of outbuidlings located to the west of the main house, and is not eligible for nomination to the California Register of Historic Resources.

C&B-6 is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. Criterion 1 of the California Register of Historical Resources does not apply.

C&B-6 is not associated with the lives of persons important to local, California, or national history. As such, Criterion 2 of the California Register of Historical Resources does not apply.

C&B-6 does not embody the distinctive characteristics of a type, period, region or method of construction or represent the work of a master or possess high artistic values. C&B-6 is typical, vernacular farmhouse from the early twentieth-century. Criterion 3 of the California Register of Historical Resources does not apply.

C&B-6 will not yield, and does not have the potential to yield, information important to the prehistory or history of the local area, California or the nation. Criterion 4 of the California Register of Historical Resources does not apply, since this Criterion is largely set aside for important resources whose historic or cultural significance is prehistoric in nature or whose value can not be ascertained without archaeological excavation.

No further work is required. If archaeological resources are encountered during the course of construction, a buffer zone of at least 50 feet in diameter should be established surrounding any cultural resources that are encountered during the course of construction and a qualified archaeologist should be consulted for further evaluation, before ground disturbance activities continue in the area surrounding the inadvertent discovery.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

11.0 References

Latta, Frank F.
1999 *Handbook of Yokuts Indians*. Coyote Press, Salinas, California.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, Orlando, Florida.

Nabokov, Peter and Robert Easton
1989 *Native American Architecture*. Oxford University Press, New York, New York.

Parr, Robert E. and Richard Osborne
1992 *Route Adoption Study for Highway 58, Kern County, California.* Report on file, Southern San Joaquin Archaeological Information Center, California State University, Bakersfield, Bakersfield, California.

Wallace, William J.
1978 "Southern Valley Yokuts" in *Handbook of North American Indians*. Vol. 8, California, Robert F. Heizer, ed. Washington, D.C.: Smithsonian Institution, pp. 437-445.

Warren, Claude N. and M. B. McKusiak
1959 A Burial Complex from the southern San Joaquin Valley. Los Angeles: *University of California, Los Angeles, Archaeological Survey Annual Report, 1959*: 17-26.

Warren, Claude N.
1967 "The San Dieguito Complex: A Review and Hypothesis" *American Antiquity* 32(2): 168-185.

Appendix I

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1405 Sutter Lane
Bakersfield, California 93309
(661) 834-9183

Education

The George Washington University
M.A. American Studies, 1993
Specialization in Historical Archaeology
and Architectural History

University of California, Berkeley
B.A. History, 1987
B.A. Anthropology, 1987
Specialization in Historical Archaeology
and Colonial History

Public Service

3/94-12/02 *Historic Preservation Commission*. City of Bakersfield, Bakersfield, California 93305.

7/97-12/01 *Newsletter Editor. California History Action,* newsletter for the California Council for the Promotion of History.

Relevant Work Experience

8/96- *Adjutant Faculty*. Bakersfield College, 1801 Panorama Drive, Bakersfield, California, 93305. Teach History 17A, Introduction to American History and Anthropology 5, Introduction to North American Indians.

Owner, Sole Proprietorship. Hudlow Cultural Resource Associates. 1405 Sutter Lane, Bakersfield California 93309. Operate small cultural resource management business. Manage contracts, respond to RFP's, bill clients, manage temporary employees. Conduct Phase I archaeological and architectural surveys for private and public clients; including the cultural resource survey, documentary photography, measured drawings, mapping of structures, filing of survey forms, historic research, assessing impact and writing reports. Evaluated archaeological and architectural sites and properties in lieu of their eligibility for the National Register of Historic Places in association with Section 106 and 110 requirements of the National Historic Preservation Act of 1966 and CEQA (California Environmental Quality Act).

Full resume is available upon request.

Appendix II

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
KI-00028	NADB-R - 1140863	1995	Hatoff, Brian, Voss, Barb, Waechter, Sharon, Bente, Vance, and Wee, Stephen	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project	Woodward-Clyde Consultants	16-000067, 16-000068
KI-00042		1981	O'Connor, Denise and Clayton, A.B.	Archaeological Survey Report for an Interchange at 12th Avenue on Route 198, Kings County 06-KIN-198, R16.4/R17.4 06100-178200	Caltrans	
KI-00105		2001	Wren, Donald G.	A Cultural Resource Study New Hanford High School Hanford Learning Center Project Hanford, California	Individual Consultant	
KI-00114		2001	Cherry, Nikki	Nine Telecommunication Sites for Section 106 Review	Arcadis Geraghty & Miller, Inc.	
KI-00192	Caltrans - 06-Kin-198, PM R16.9 (KP R27.2) EA 06-48750; Submitter - Contract No. 06A0852, Task 22	2007	Lanner, David and Wohlgemuth, Eric	Archaeological Survey Report for the 12th Avenue Interchange on State Route 198, Hanford, Kings County, California	Far Western Anthropological Research Group, Inc.	
KI-00194		2009	Allan, James M., Arrigoni, Aimee, Cook, Angela, and Estes, Allen	Historic Property Survey Report , 12th Avenue Widening Project, Hanford, Kings County, California	William Self Associates, Inc.	16-000234, 16-000235, 16-000236, 16-000237, 16-000238, 16-000239, 16-000240, 16-000241, 16-000242, 16-000243, 16-000244
KI-00194A		2009	Arrigoni, Aimee, Cook, Angela, and Estes, Allen	Historical Resources Evaluation Report for the 12th Avenue Widening Project, Hanford - Kings County, California	William Self Associates, Inc.	
KI-00194B		2009	Arrigoni, Aimee, Cook, Angela, Estes, Allen, and Schaeffer, Jeffrey	Archaeological Survey Report for the 12th Avenue Widening Project, Hanford - Kings County, California	William Self Associates, Inc.	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-16-000122	CA-KIN-000117H	Resource Name - San Joaquin Valley Railroad, Southern Pacific Railroad; OHP Z-number - KIN-Z00002	Structure, Site	Historic	AH07; HP37	2001 (Bai "Tom" Tang, CRM Tech); 2013 (A. Gardner, L. Bennett, S. Lewis, Far Western Anthropological Research Group, Inc.); 2017 (Jessica Jones, Applied EarthWorks, Inc.)	KI-00109, KI-00245, KI-00310
P-16-000128	CA-KIN-000191H	Resource Name - CRM TECH 675-6H; Last Chance Ditch	Structure	Historic	HP20	2001 (Bai "Tom" Tang, Daniel Ballester, CRM Tech); 2017 (Jessica Jones, Applied EarthWorks, Inc)	KI-00109, KI-00310

Appendix D

Traffic Impact Study

Lacey Blvd/12 ½ Ave Residential Development

Traffic Impact Analysis
March 30, 2026

Prepared by:
VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722

Lacey Blvd/12 ½ Ave Residential Development Traffic Impact Analysis

Study Team

- ✓ Georgiena Vivian, President, VRPA Technologies, Inc., gvivian@vrpatech.com, Ph: (559) 259-9257
- ✓ Erik Ruehr, Director of Traffic Engineering, VRPA Technologies, Inc., eruehr@vrpatech.com, Ph: (858) 566-1766
- ✓ Jeff Stine, Senior Transportation Planner, VRPA Technologies, Inc., jstine@vrpatech.com, Ph: (858) 566-1766
- ✓ Michiel Gallanosa, Engineering Technician, VRPA Technologies, Inc., mgallanosa@vrpatech.com, Ph: (559) 271-1200

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1.0 Introduction

1.1 Description of the Region/Project

This Traffic Impact Analysis (TIA) has been prepared for the purpose of analyzing traffic conditions related to the proposed Lacey Blvd/12 ½ Residential Development (the Project) in the City of Hanford. The TIA is intended to identify the extent to which the Project would affect traffic operations that may indicate a need for improvements within the study area and/or other measures to address traffic operations.

The project calls for the development of 75 single-family residential units located on the southwest corner of Lacey Blvd and 12 ½ Avenue in the City of Hanford. Figure 1-1 shows the regional context of the Project site while Figure 1-2 shows the Project location. Figure 1-3 shows the site plan of the proposed Project.

1.1.1 *Project Access*

The Project has one primary access point, located along the west side of 12 ½ Avenue.

1.1.2 *Study Area*

The study intersections included in this TIA are listed below and shown in Figure 1-2. The study intersections were developed in consultation with the City of Hanford.

Intersections

- ✓ 1 – Lacey Blvd and 12 ½ Ave

1.1.3 *Study Scenarios*

This TIA includes level of service (LOS) analysis for the following traffic scenarios (Study Scenarios):

- ✓ Existing (2026) Conditions
- ✓ Opening Year 2027 Without Project
- ✓ Opening Year 2027 With Project
- ✓ Horizon (Future) Year 2046 Without Project
- ✓ Horizon (Future) Year 2046 With Project

1.2 Methodology

This TIA was prepared using general principles outlined in the City of Hanford's Traffic Impact Analysis Guidelines. A Traffic Impact Analysis Scoping Document was prepared and a copy is included in Appendix C.

In analyzing street and intersection capacities, the Level of Service (LOS) methodologies are applied. LOS standards are applied by transportation agencies to quantitatively assess a street and highway system's performance. In addition, safety concerns are analyzed to determine the need for appropriate mitigation resulting from increased traffic near sensitive uses and other evaluations such as the need for signalized intersections or other improvements. Guidelines incorporated in the Highway Capacity Manual (HCM), 7th Edition, were also used in the development of this TIA.

1.2.1 *Intersection Analysis*

Intersection LOS analysis was conducted using the Synchro software program. Synchro supports HCM methodologies and is deemed an acceptable program by City of Hanford. LOS can be determined for both signalized and unsignalized intersections.

Tables 2-2 and 2-3 define LOS "A" to "F" by indicating the ranges in the amounts of average delay for a vehicle at signalized and unsignalized intersections for each level of service ranging from LOS "A" to "F". When an intersection does not meet target LOS standards (LOS A, B, C, or D), analysis is conducted to determine whether improvements are needed.

In addition, for unsignalized intersections that do not meet acceptable LOS standards, an evaluation would be conducted to determine whether signal warrants would indicate the need for a traffic signal. Signal warrants are numerical thresholds used by traffic engineers to determine whether a traffic signal is needed. If signal warrants are not met, the typical conclusion is that the intersection is operating at an acceptable LOS. The California Manual on Uniform Traffic Control Devices (California MUTCD) introduces standards for determining the need for traffic signals. The California MUTCD indicates that the satisfaction of one or more traffic signal warrants does not in itself require the installation of a traffic signal. In addition to the warrant analysis, an engineering study of the current or expected traffic conditions should be conducted to determine whether the installation of a traffic signal is justified.

1.3 Policies to Maintain Level of Service

In accordance with standard TIA practice, the goal of the project is to achieve a target LOS D or better for street segments and intersections.

1.4 VMT Analysis

A vehicle miles traveled (VMT) analysis will not be needed since the project is consistent with the City of Hanford's General Plan.

Table 1-1
Signalized Intersections Level of Service Definitions
(Highway Capacity Manual)

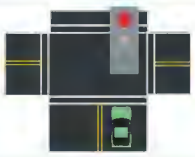
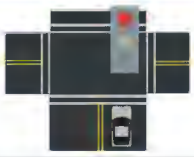
LEVEL OF SERVICE	DEFINITION		AVERAGE TOTAL DELAY (sec/veh)
A	Describes operations with very low delay. This level of service occurs when there is no conflicting traffic for a minor street.		≤ 10.0
B	Describes operations with moderately low delay. This level generally occurs with a small amount of conflicting traffic causing higher levels of average delay.		> 10.0 - 20.0
C	Describes operations with average delays. These higher delays may result from a moderate amount of minor street traffic. Queues begin to get longer.		> 20.0 - 35.0
D	Describes a crowded operation, with below average delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from shorter gaps on the mainline and an increase of minor street traffic. The queues of vehicles are increasing.		> 35.0 - 55.0
E	Describes operations at or near capacity. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor gaps for the minor street to cross and large queues.		> 55.0 - 80.0
F	Describes operations that are at the failure point. This level, considered to be unacceptable to most drivers, often occurs with over- saturation, that is, when arrival flow rates exceed the capacity of the intersection. Insufficient gaps of suitable size exist to allow minor traffic to cross the intersection safely.		> 80.0

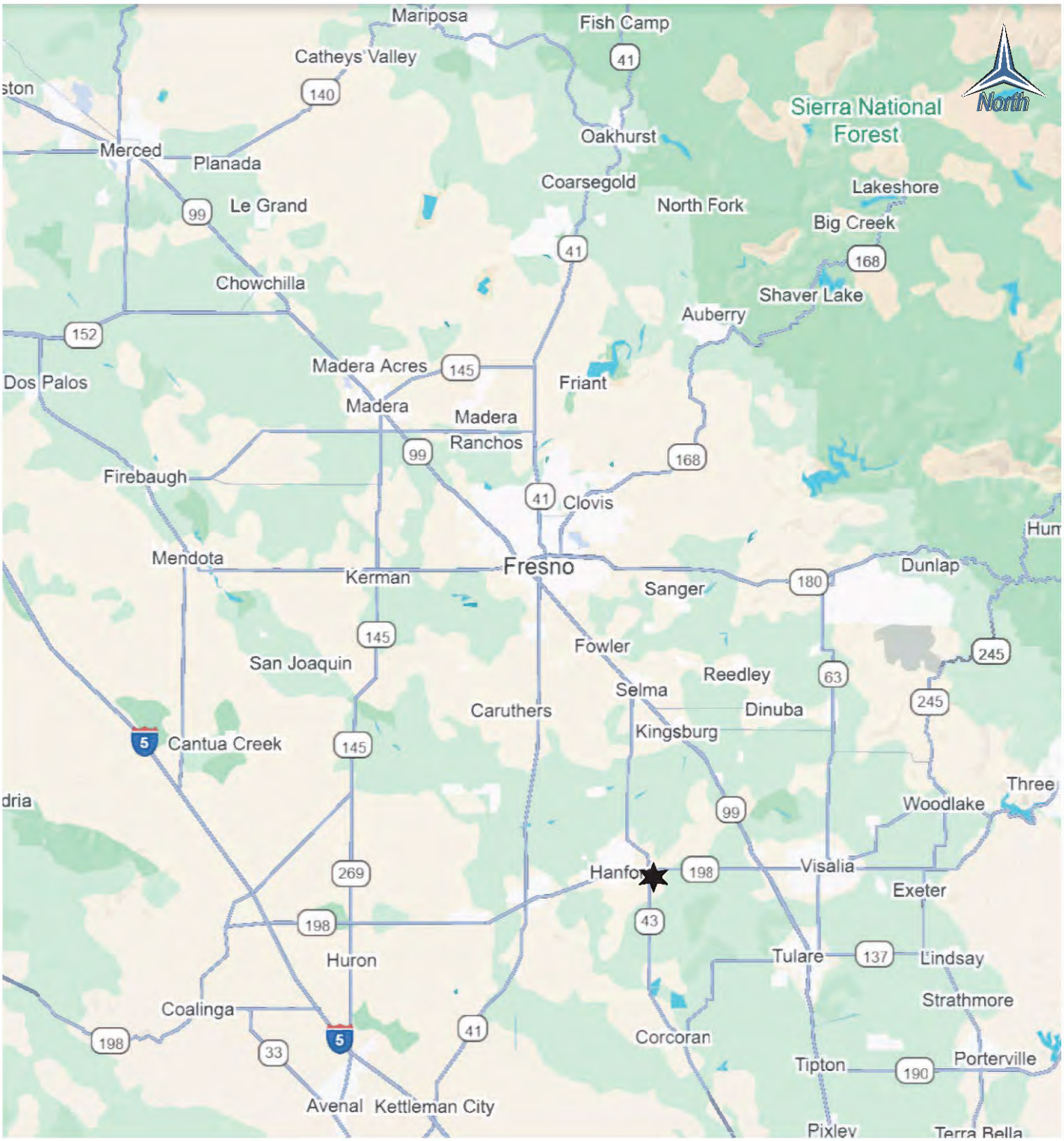
Table 1-2
Unsignalized Intersections Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	No delay for stop-controlled approaches. 	0 - 10.0
B	Describes operations with minor delay. 	> 10.0 - 15.0
C	Describes operations with moderate delays. 	> 15.0 - 25.0
D	Describes operations with some delays. 	> 25.0 - 35.0
E	Describes operations with high delays and long queues. 	> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers. 	> 50.0

Lacey / 12 1/2 Ave Residential Development

Regional Location

Figure 1-1



LEGEND

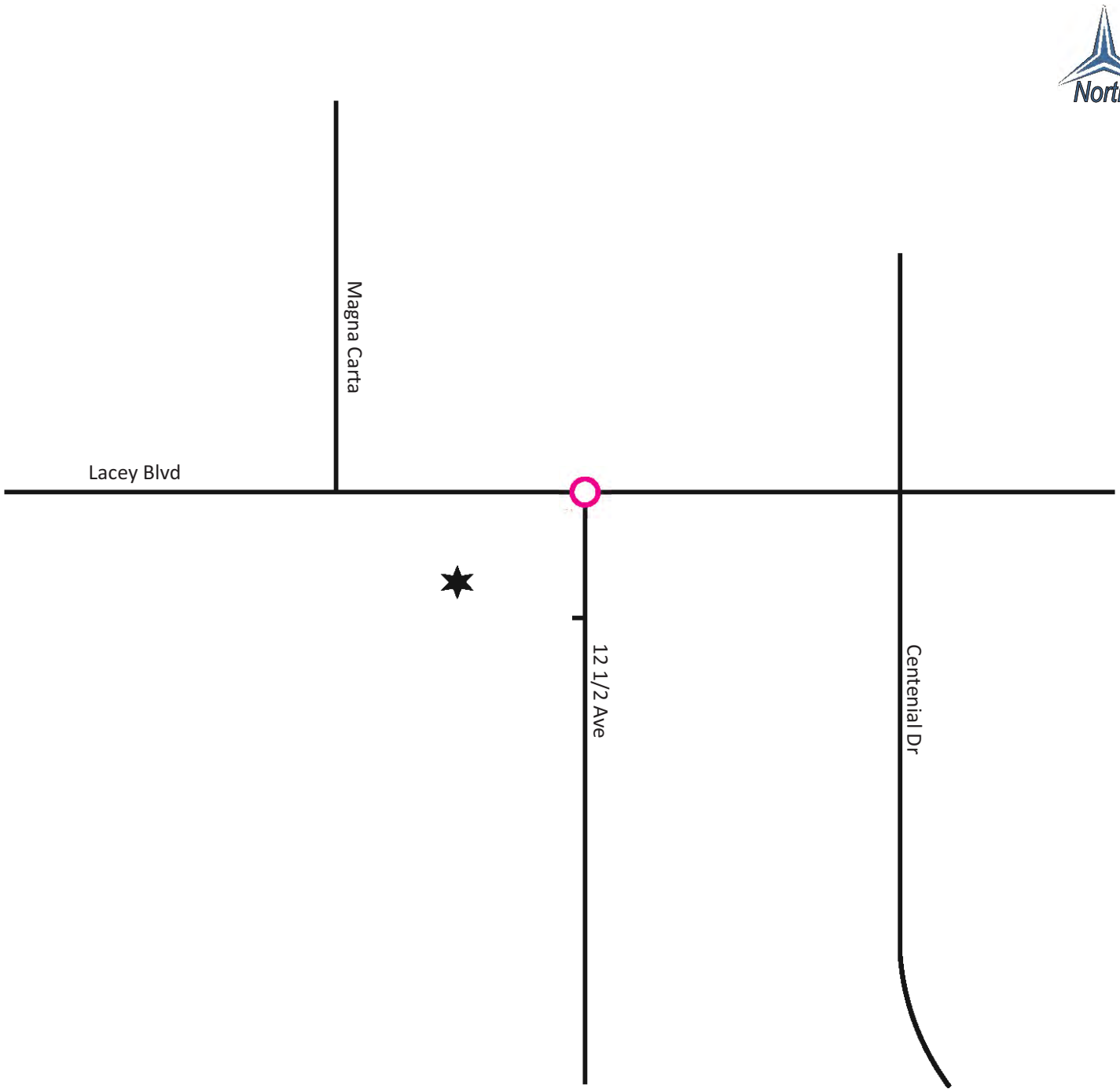
★ Project Location

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Project Location

Figure 1-2



LEGEND

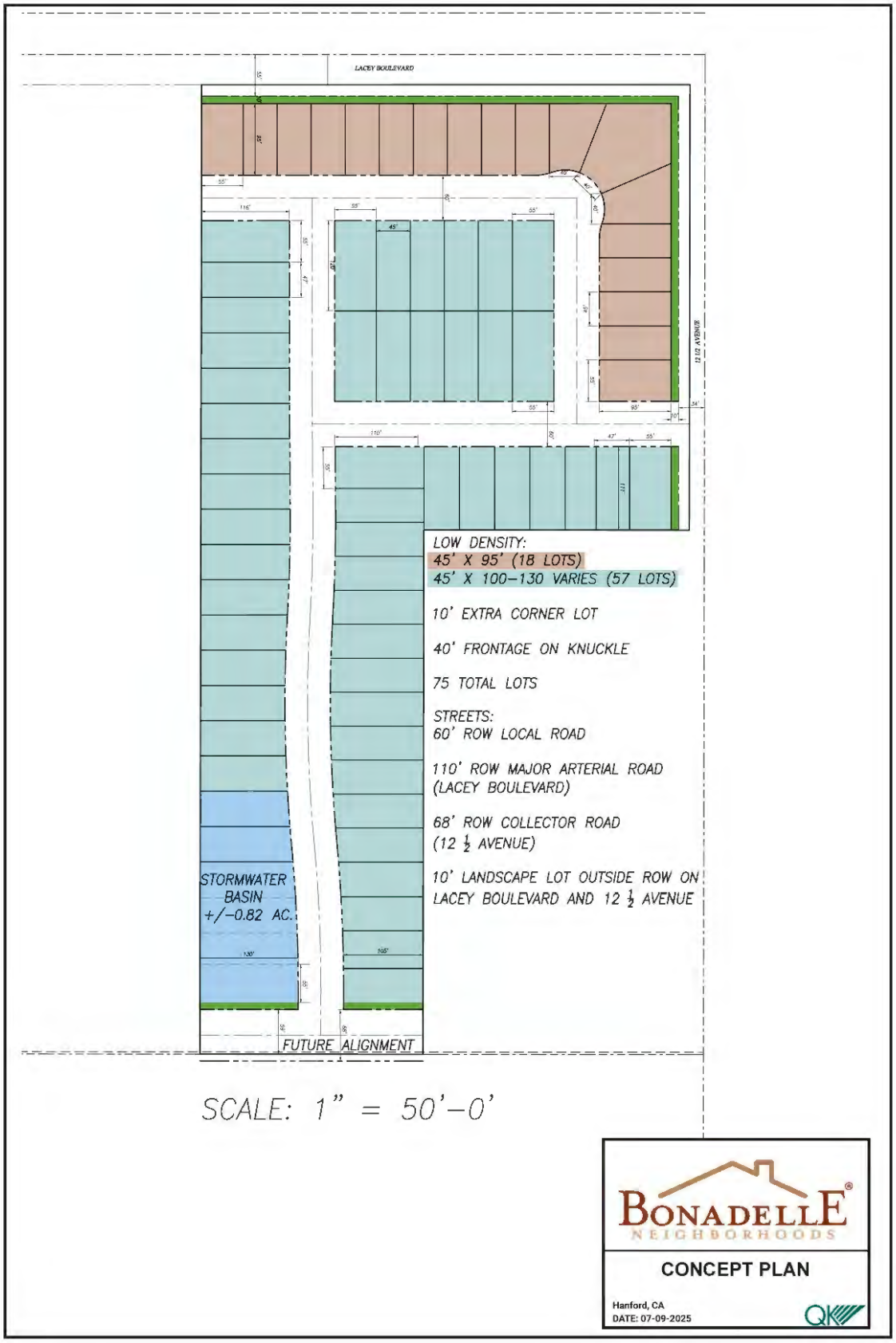
Project Location | Study Area Intersection | Existing Roadway

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Site Plan

Figure 1-3



2.0 Project Traffic

2.1 Trip Generation

To assess the impact that the Project may have on the surrounding roadway network, the first step is to determine Project trip generation. Project trip generation was determined using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). The considerations described above led to the recommended trip generation for weekday AM (7:00-9:00am) and PM (4:00-6:00pm) peak hours shown in Table 2-1.

Table 2-1

Hanford Residential Development

Trip Generation - Total Vehicles

LAND USE/ ITE LAND USE CODE	QUANTITY	DAILY TRIP ENDS (ADT)		WEEKDAY AM PEAK HOUR					WEEKDAY PM PEAK HOUR				
		RATE	VOLUME	RATE	IN:OUT SPLIT	VOLUME			RATE	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL			IN	OUT	TOTAL
Single Family Residential (210)	75 Units	9.09	871	0.70	27:73	15	41	56	0.93	62:38	46	28	74
TOTAL EXTERNAL TRIP GENERATION			**871**			**15**	**41**	**56**			**46**	**28**	**74**

2.2 Trip Distribution

Project trip distribution percentages are shown in Figure 2-1. These percentages are based upon knowledge of the study area, engineering judgement, prevailing traffic patterns in the study area, major routes, population centers, and other existing development.

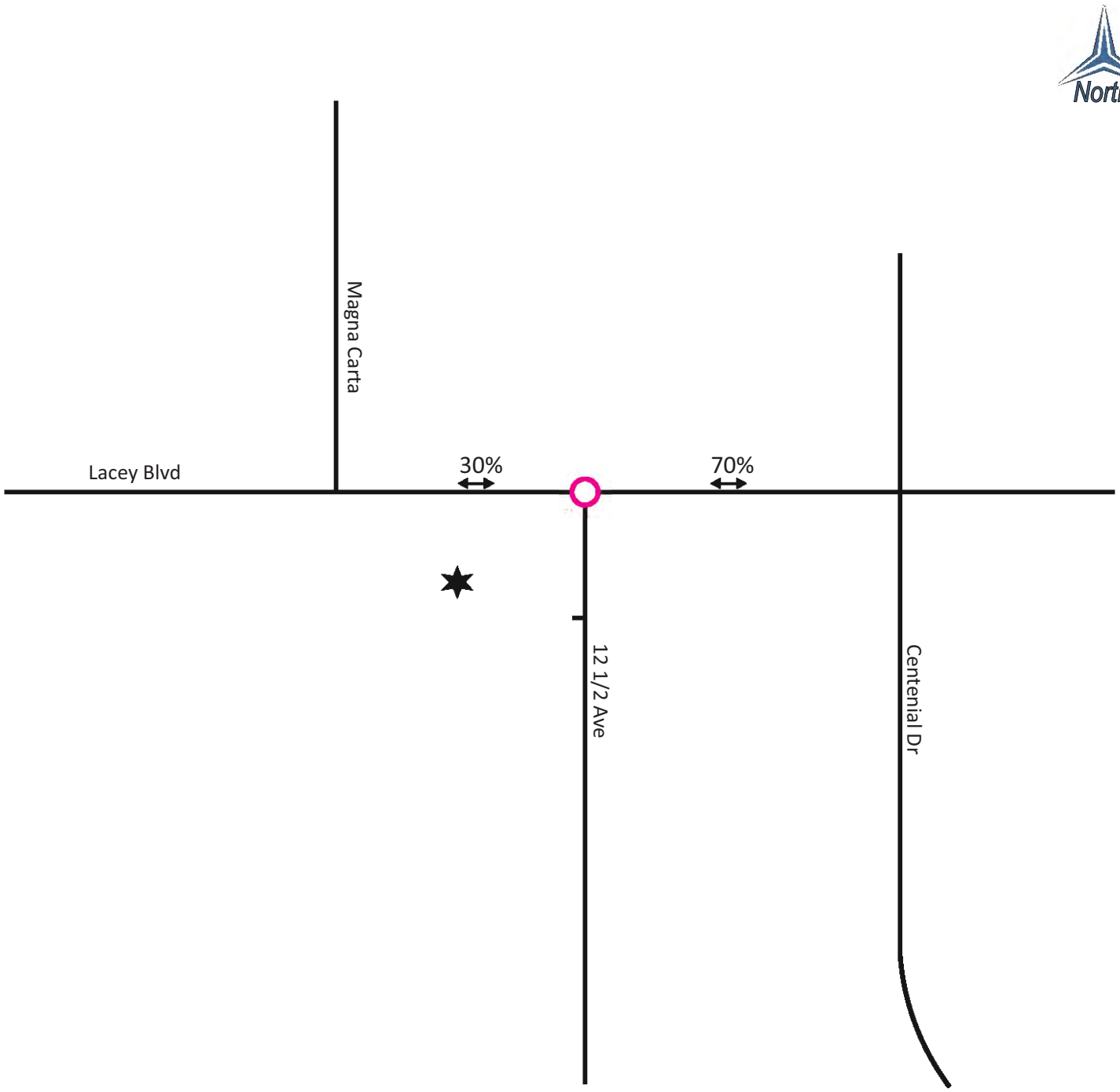
2.3 Project Traffic

Project traffic as shown in Table 2-1 was distributed to the roadway system using the trip distribution percentages shown in Figure 2-1. A graphical representation of the resulting AM and PM peak hour Project trips is shown in Figures 2-2, and 2-3.

Lacey / 12 1/2 Ave Residential Development

Trip Distribution

Figure 2-1



LEGEND

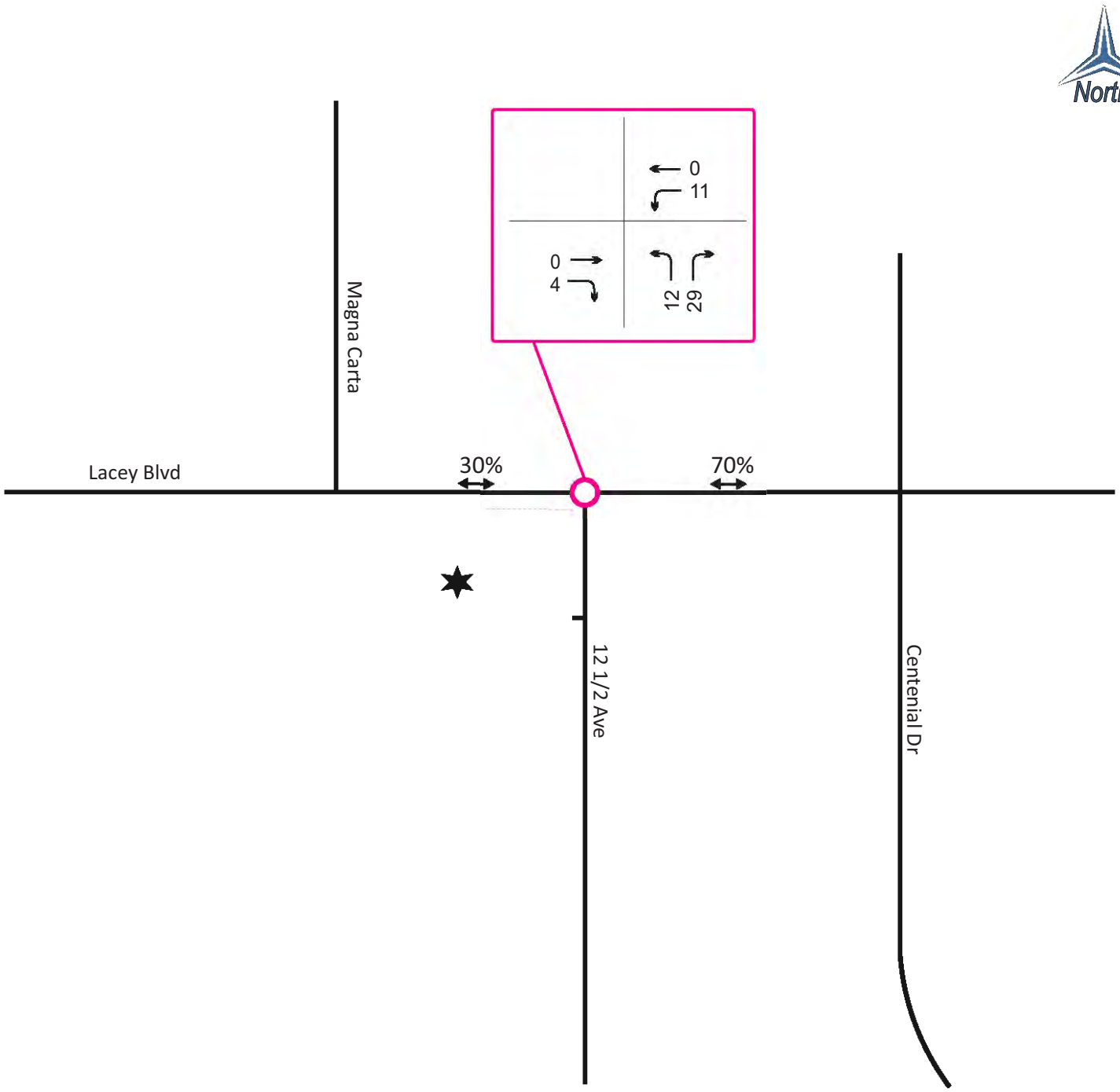
Project Location | Project Intersection | xx% Trip Distribution

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Project AM Peak Hour Trips

Exhibit 5



LEGEND

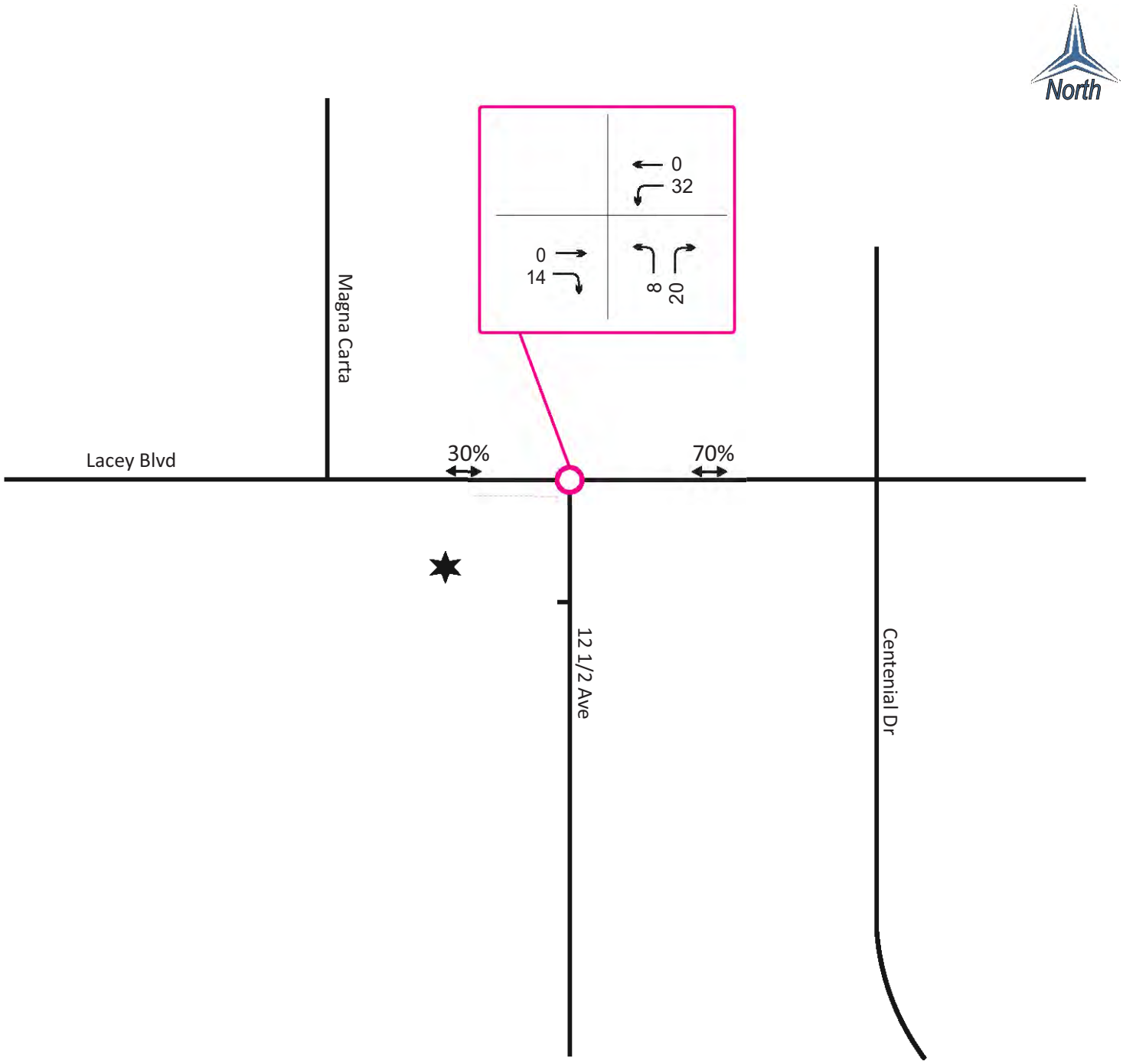
Project Location Project Intersection XX Peak Hour Project Trips

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Project PM Peak Hour Trips

Figure 2-3



LEGEND

★ Project Location ○ Project Intersection ← XX Peak Hour Project Trips

VRPA TECHNOLOGIES, INC.

Table 2-2
Lacey Blvd - 12 1/2 Ave Residential Development
Existing and Opening Year Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING		PEAK HOUR	OPENING YEAR 2027		PEAK HOUR	OPENING YEAR 2027 WITH PROJECT	
				DELAY	LOS		DELAY	LOS		DELAY	LOS
Lacey Blvd & 12 1/2 Ave	One-way Stop	D	AM	15.9	C	AM	16.5	C	AM	15.6	C
			PM	13.9	B	PM	14.7	B	PM	15.8	C

DELAY is measured in seconds
LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.

Table 2-3
Lacey Blvd - 12 1/2 Avenue Residential Development
Existing and Opening Year Queuing Operations

INTERSECTION	CONTROL	AVAILABLE STORAGE(FT.)	LANE	EXISTING CONDITIONS		CONTROL	OPENING YEAR 2027		OPENING YEAR 2027 WITH PROJECT	
				AM	PM		AM	PM	AM	PM
Lacey Blvd & 12 1/2 Ave	One Way Stop	150	West Bound Left	25*	25*	One Way Stop	25*	25*	25*	25*

Queue shown is 95th percentile summary and is measured in feet
25* Denotes Minimum Length

3.0 Traffic Impacts

3.1 Existing Traffic and Level of Service (LOS)

Existing AM and PM peak hour turning movements were collected by National Data & Surveying Services (NDS) on March 5, 2026, at the following project study intersections:

- ✓ 1 – Lacey Blvd and 12 ½ Ave

All intersection turning movement counts were conducted for the peak hour periods of 7:00-9:00 AM and 4:00-6:00 PM. Existing roadway lane geometry is shown in Figure 3-1. Existing traffic is shown in Figures 3-2 and 3-3. Traffic count data worksheets are provided in Appendix A.

Intersection operations for Existing Traffic conditions are shown in Table 2-2.

3.2 Opening Year Traffic Conditions

Traffic conditions without the Project for the assumed opening year of 2027 were estimated by applying a growth rate of 2% per year to the existing traffic volumes as shown in figures 3-4 and 3-5. Project traffic, as calculated in Chapter 2, was added to Opening Year (2027) traffic to determine Opening Year (2027) With Project traffic as shown in Figures 3-6, and 3-7.

Intersection operations for Opening Year with and without the project are shown in Table 2-2.

3.3 Horizon (Future) Year Traffic Conditions

Horizon Year traffic conditions with and without the Project in the Year 2046 (20 years from Opening Year conditions) were estimated by taking the larger of the traffic volumes from the following condition:

- ✓ Applying a growth rate of 2% per year to the existing traffic volumes

The resulting traffic for the Horizon Year Without Project scenario is shown in Figures 3-8 and 3-9.

Project traffic, as calculated in Chapter 2, was added to Horizon Year traffic to determine Horizon Year With Project traffic as shown in Figures 3-10 and 3-11.

Intersection operations for Horizon Year conditions With and Without Project traffic are shown in Table 3-2.

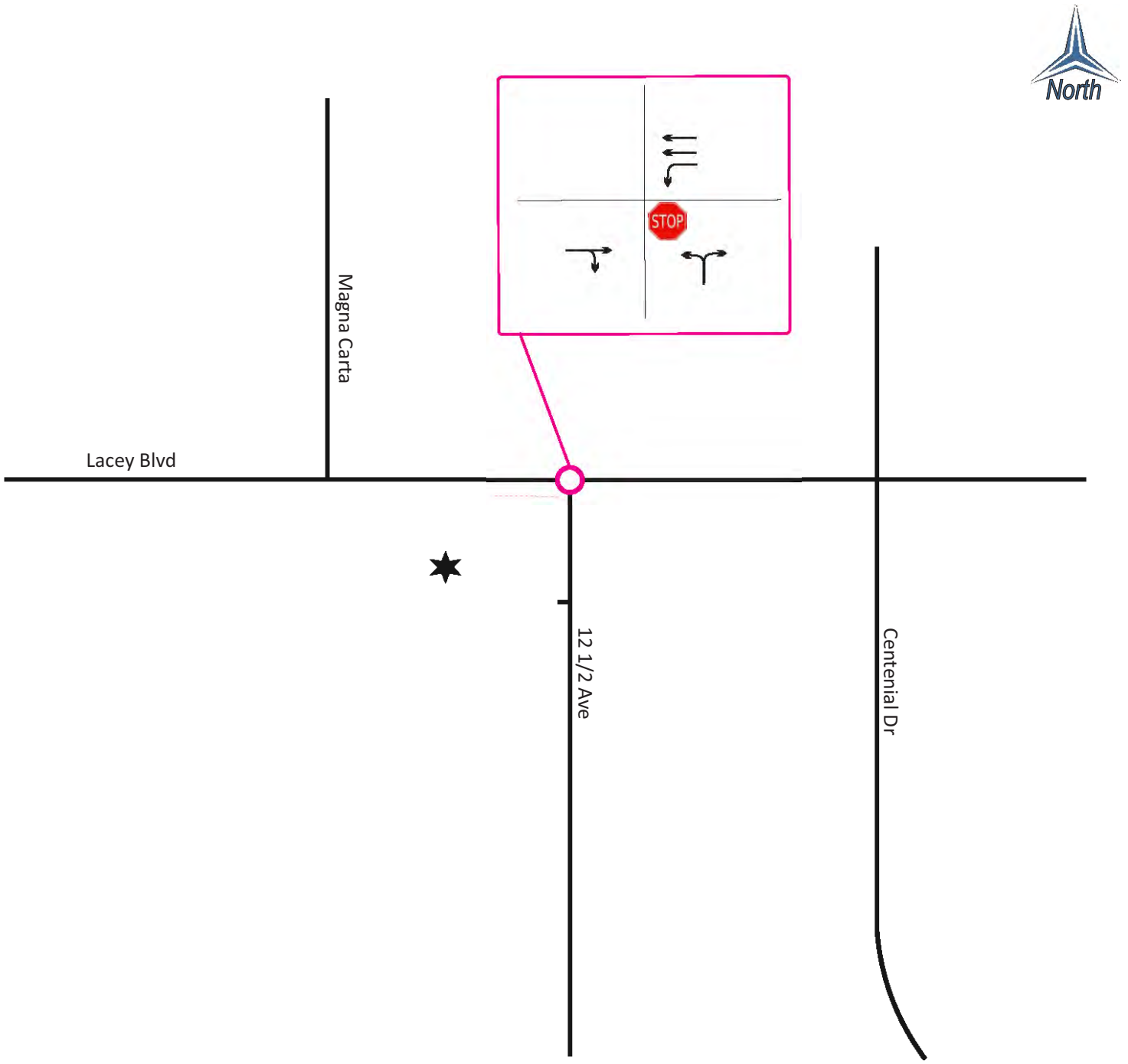
3.4 Queuing Analysis

Table 3-3 provides a queue length summary for left and right turn lanes at the study intersection for all scenarios. Queuing analysis was performed at study intersections utilizing the Synchro software program. Synchro provides the 95th percentile queue for signalized intersections and shows the length of the queue in feet. Queue length for stop-controlled intersections was calculated by multiplying the Synchro output vehicle for each intersection leg by 25-feet to determine the total queue length.

Lacey / 12 1/2 Ave Residential Development

Existing (2026) Lane Geometry

Figure 3-1



LEGEND

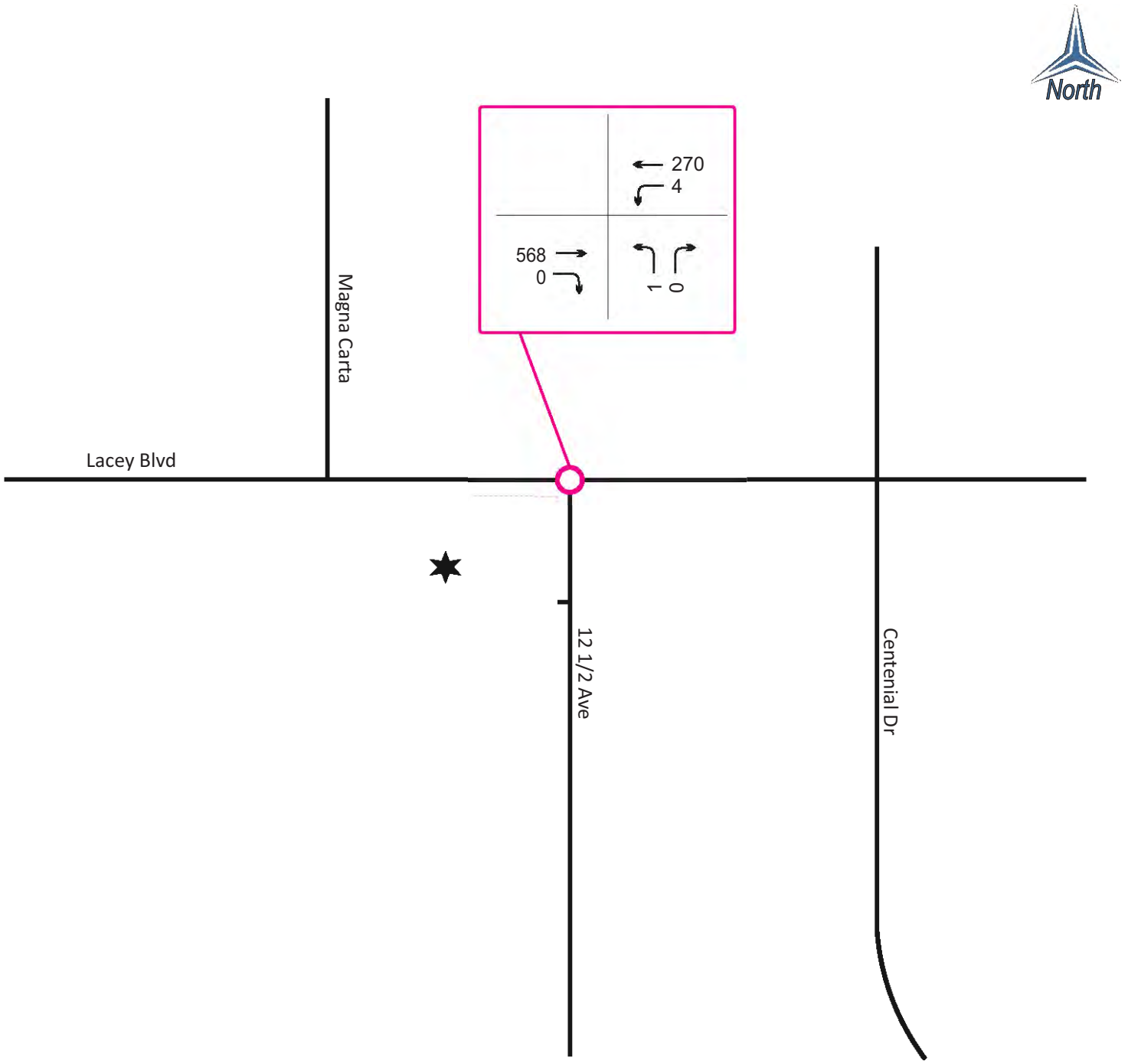
Project Location | Project Intersection | Lane Geometry | Stop Sign

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Existing (2026) AM Peak Hour Traffic

Figure 3-2



LEGEND

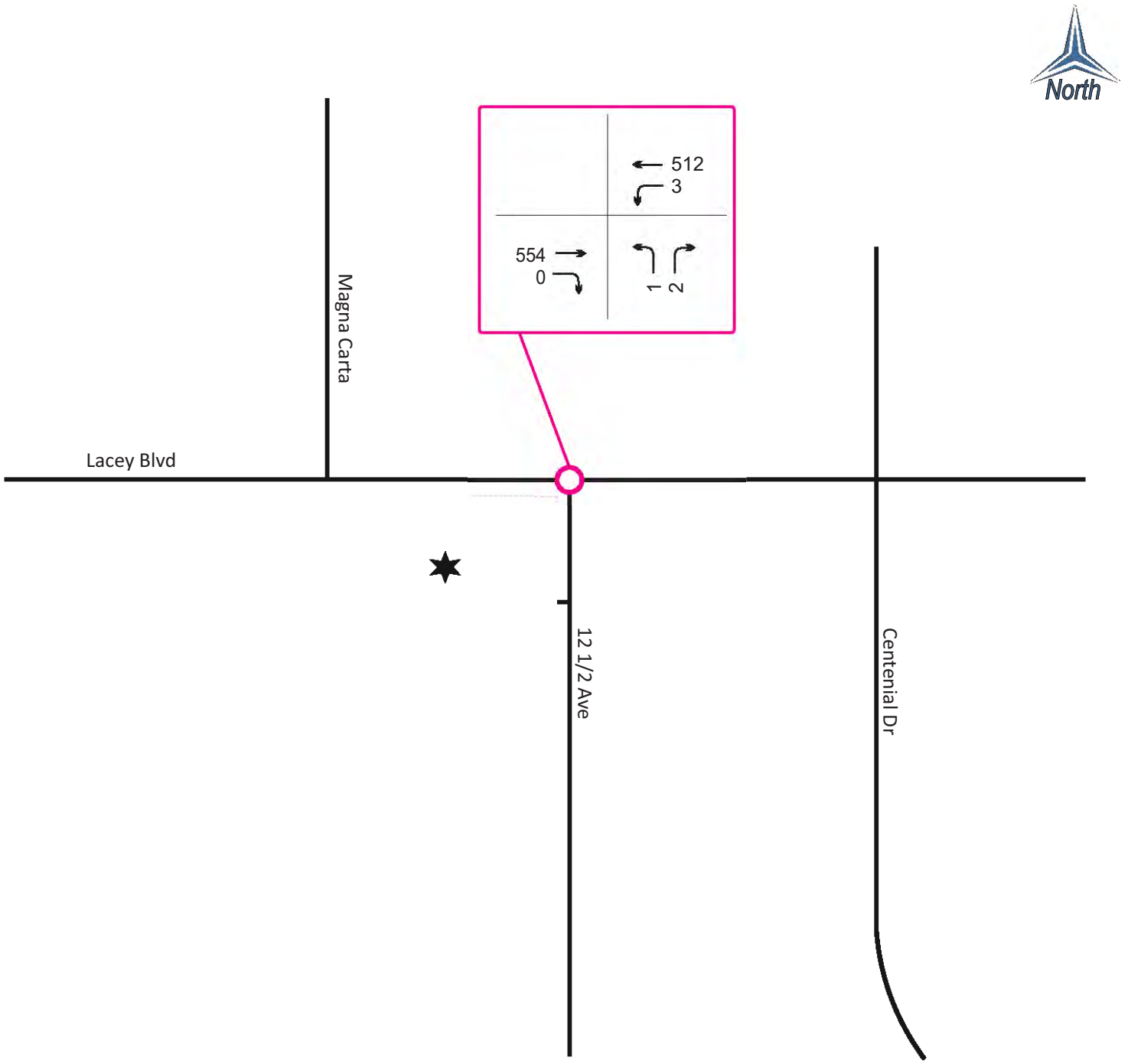
Project Location | Project Intersection | XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Existing (2026) PM Peak Hour Traffic

Figure 3-3



LEGEND

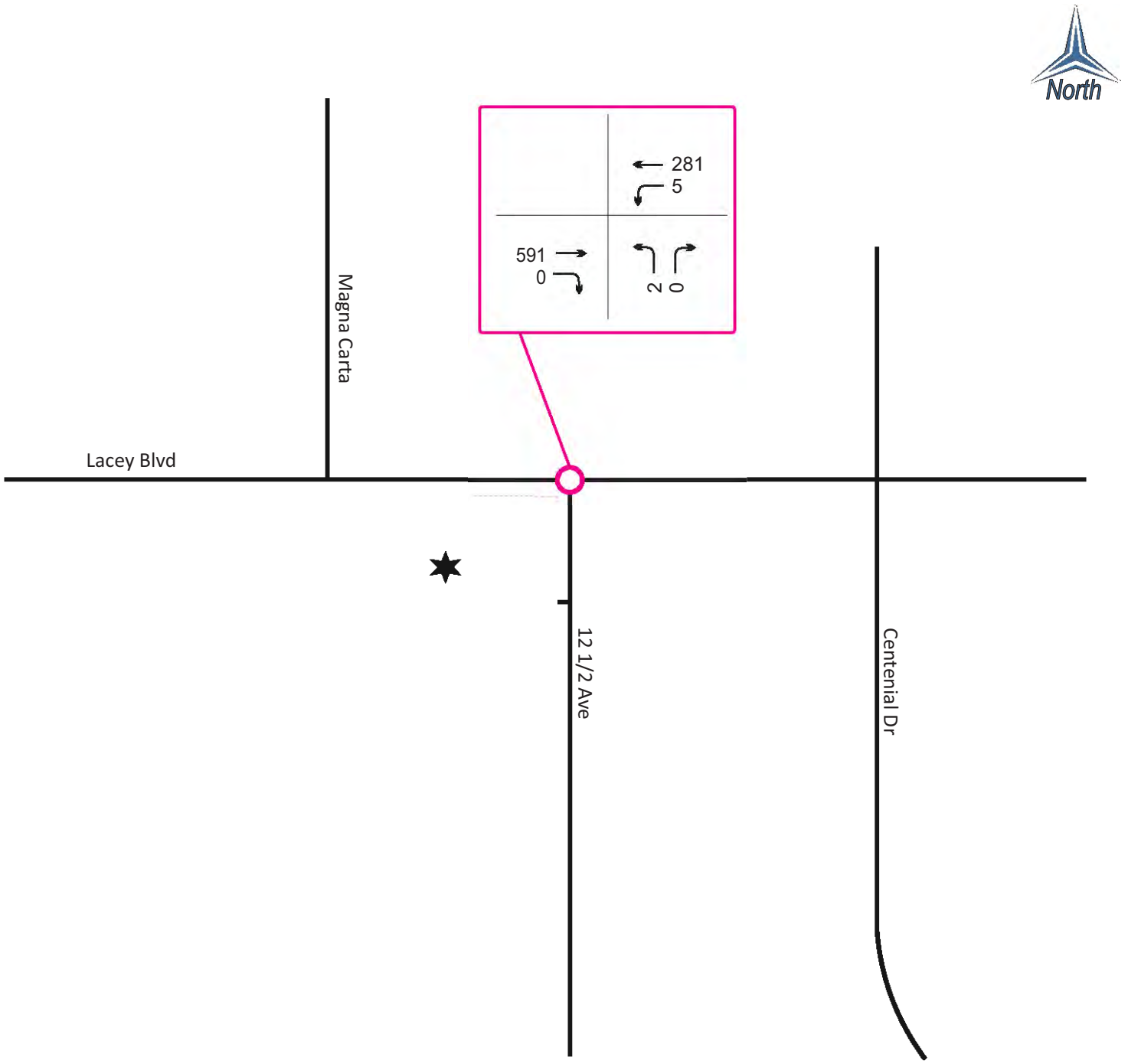
Project Location Project Intersection XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Opening Year (2027) AM Peak Hour Traffic

Figure 3-4



LEGEND

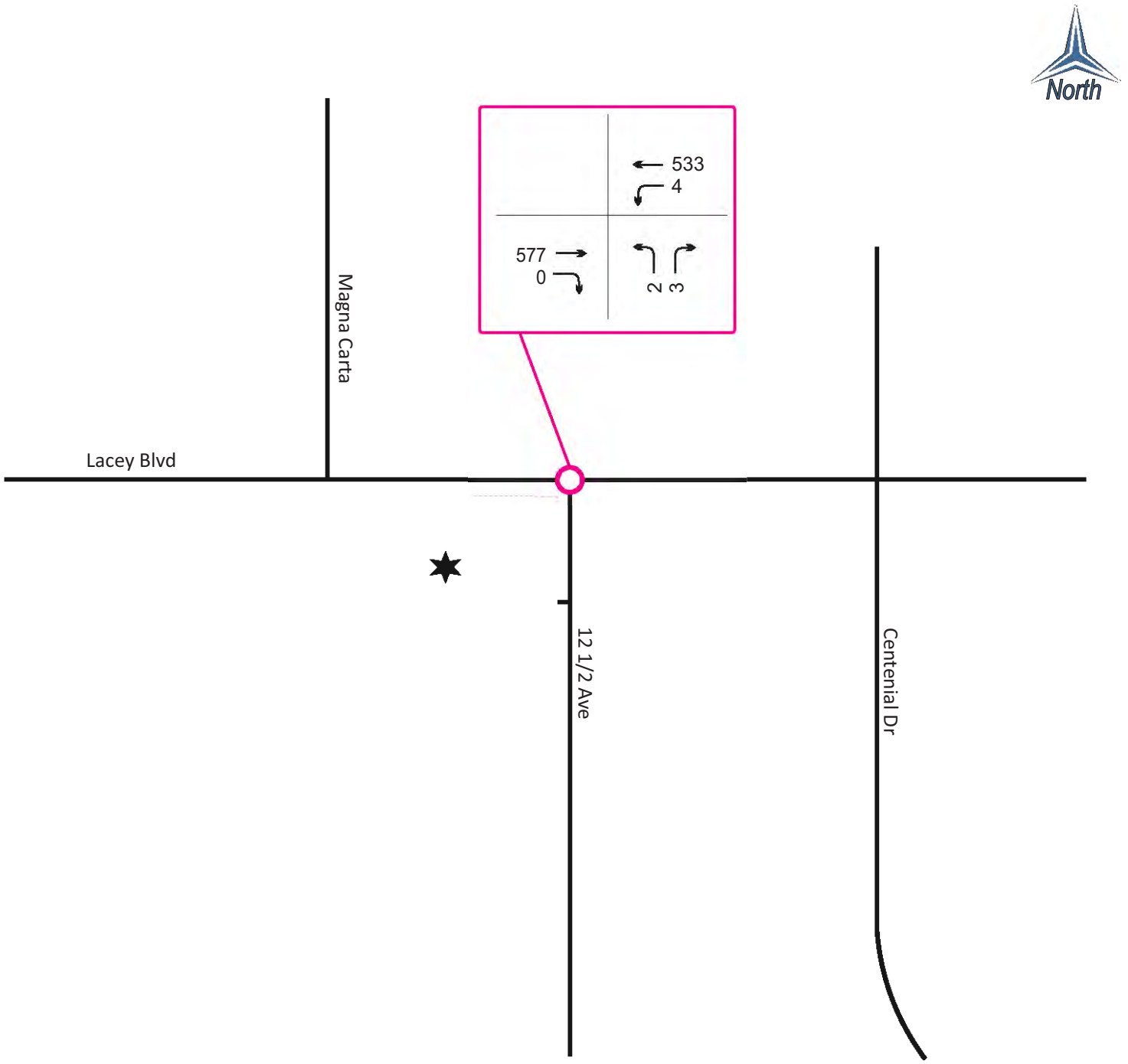
Project Location Project Intersection XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Opening Year (2027) PM Peak Hour Traffic

Figure 3-5



LEGEND

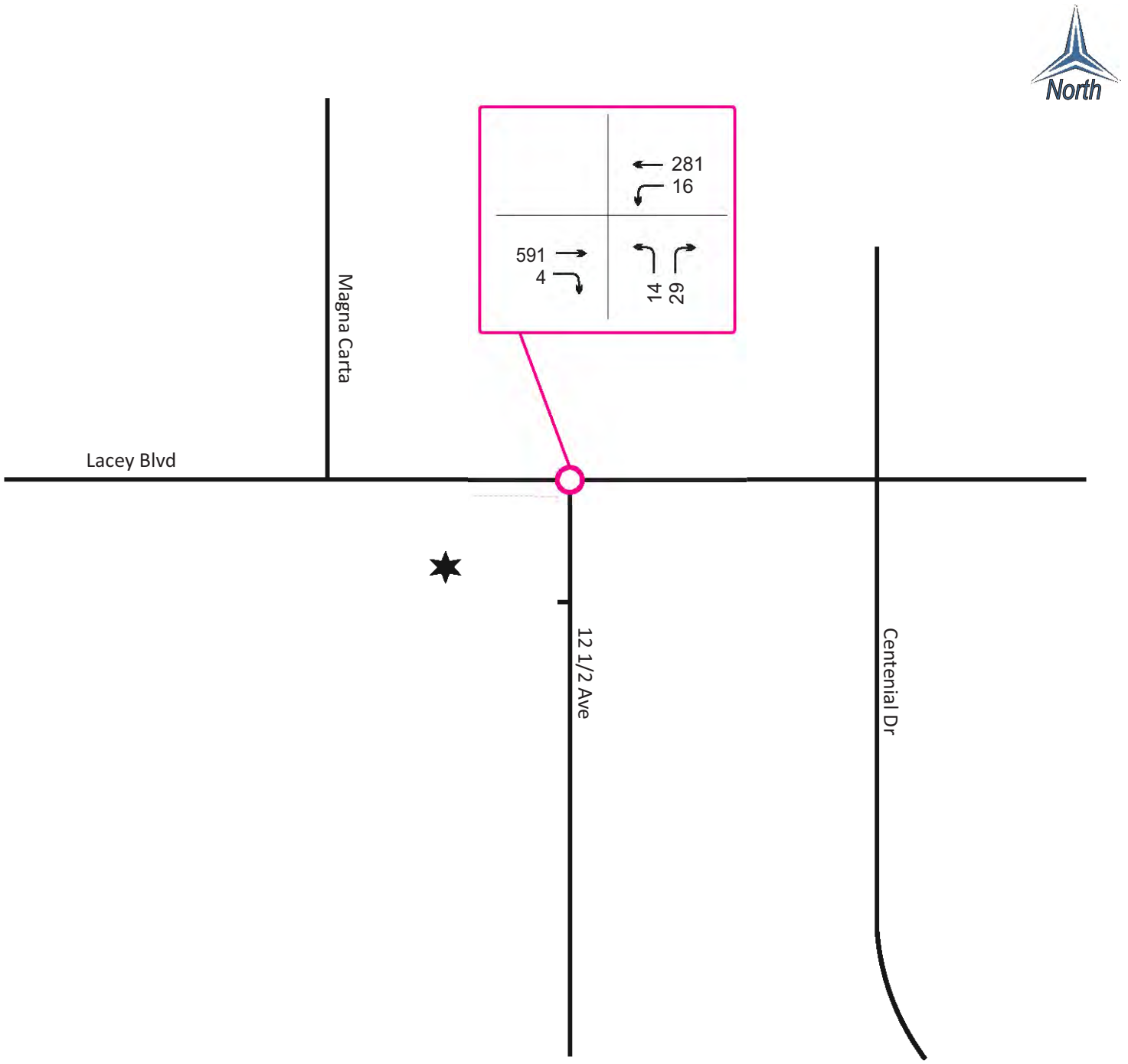
Project Location Project Intersection XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Opening Year (2027) Plus Project AM Peak Hour Traffic

Figure 3-6



LEGEND

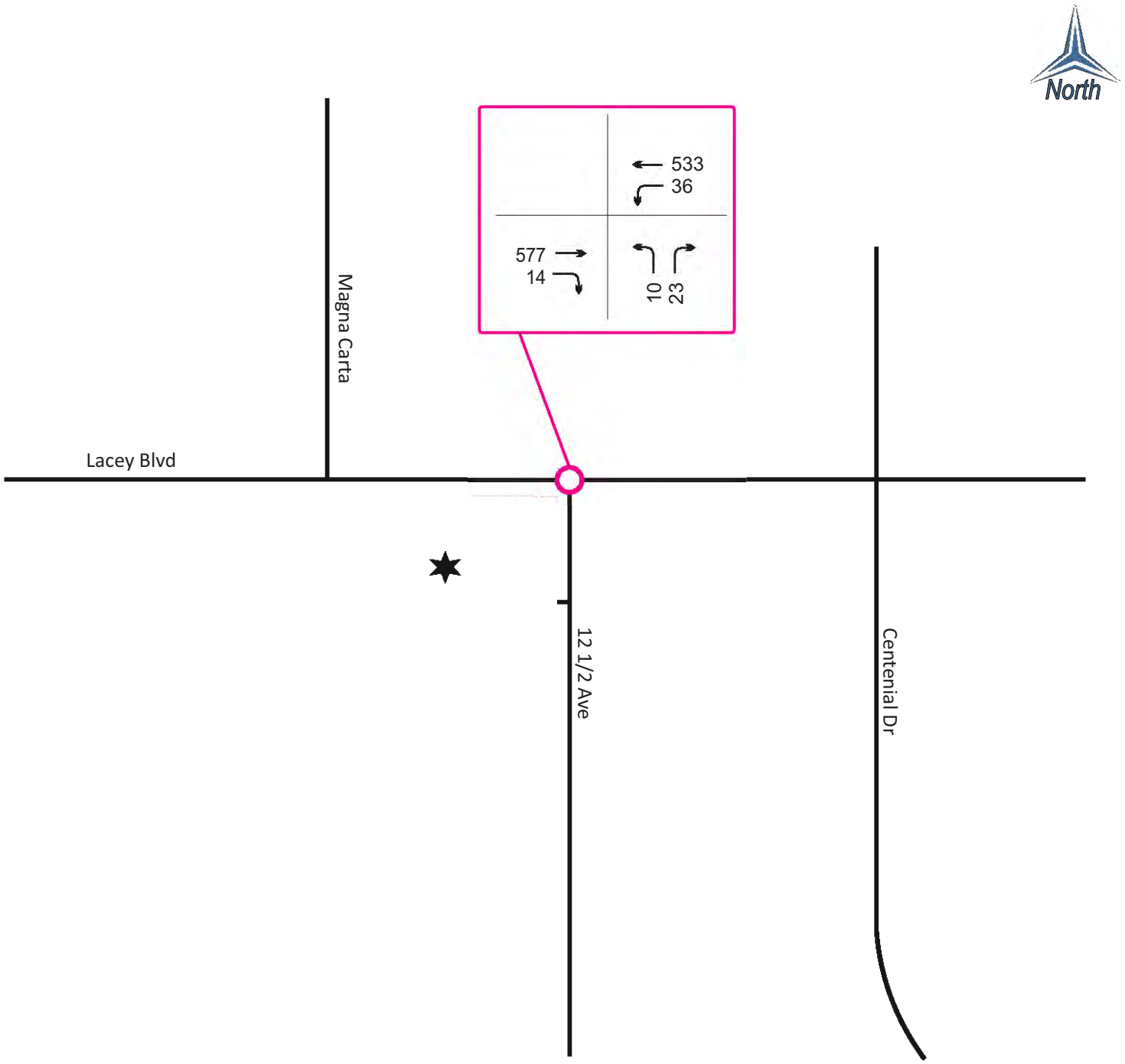
Project Location | Project Intersection | XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Ave Residential Development

Opening Year (2027) Plus Project PM Peak Hour Traffic

Figure 3-7



LEGEND

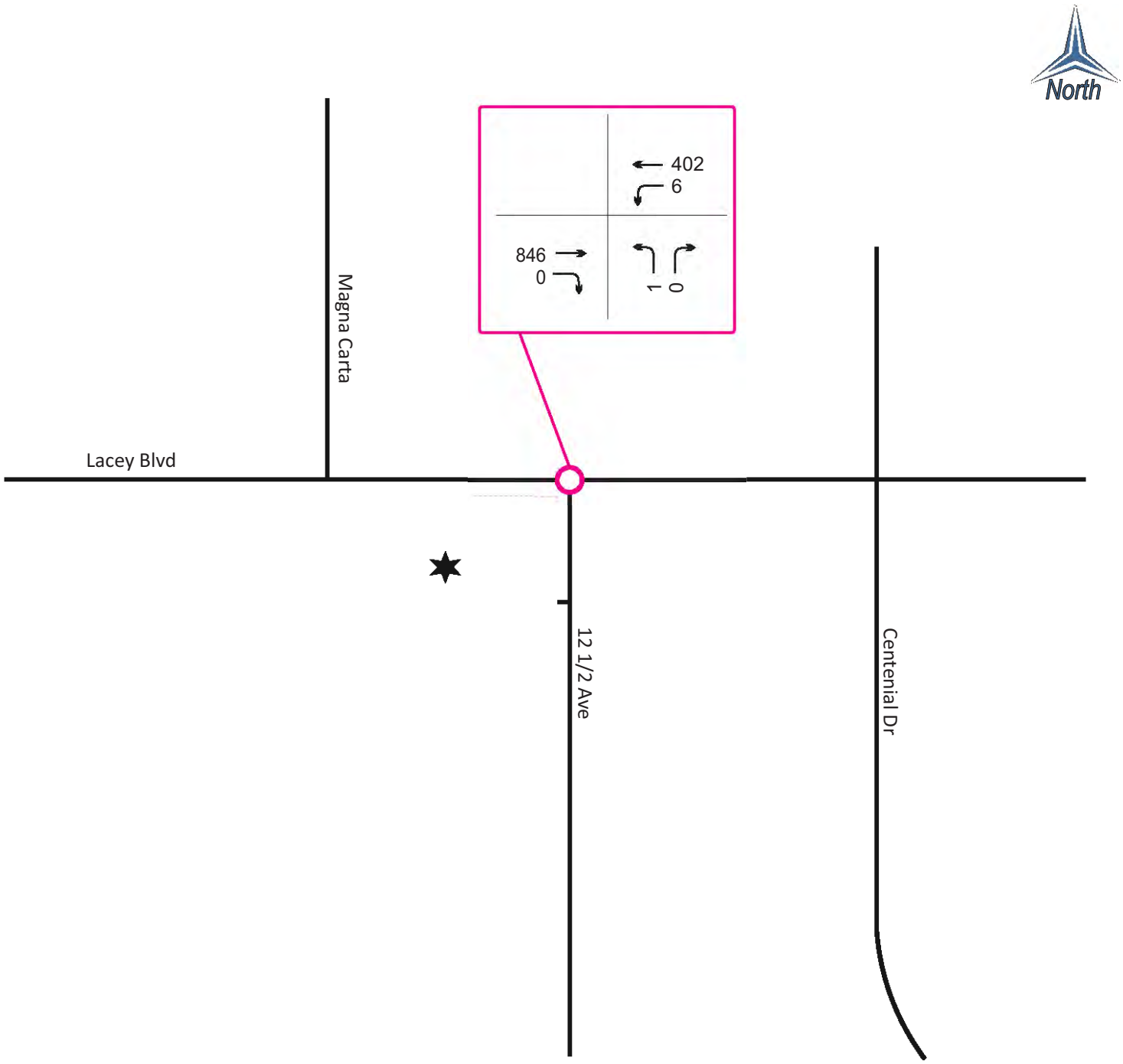
Project Location | Project Intersection | XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Residential Development

Horizon Year (2046) AM Peak Hour Traffic

Figure 3-8



LEGEND

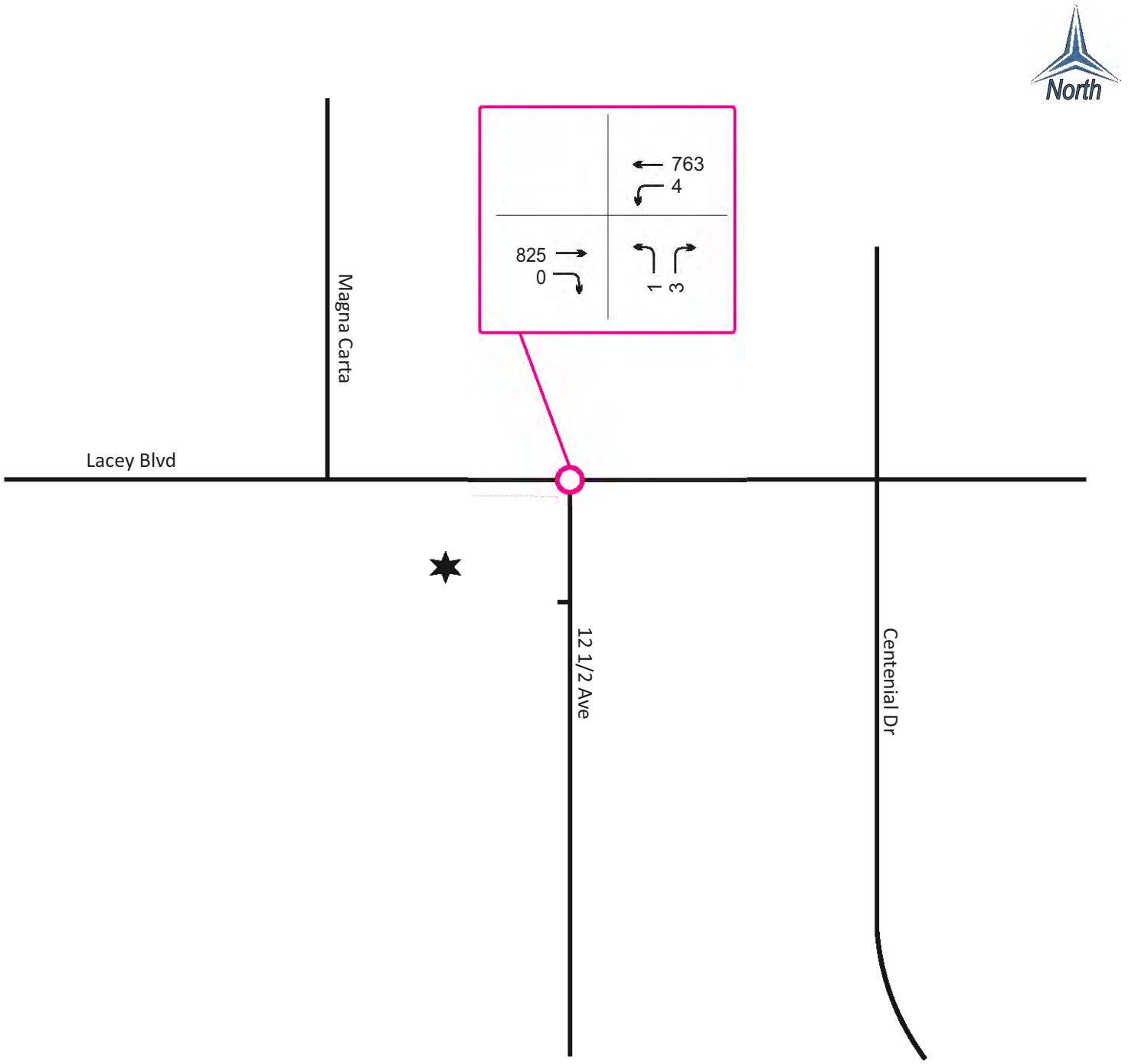
Project Location Project Intersection XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Residential Development

Horizon Year (2046) PM Peak Hour Traffic

Figure 3-9



LEGEND

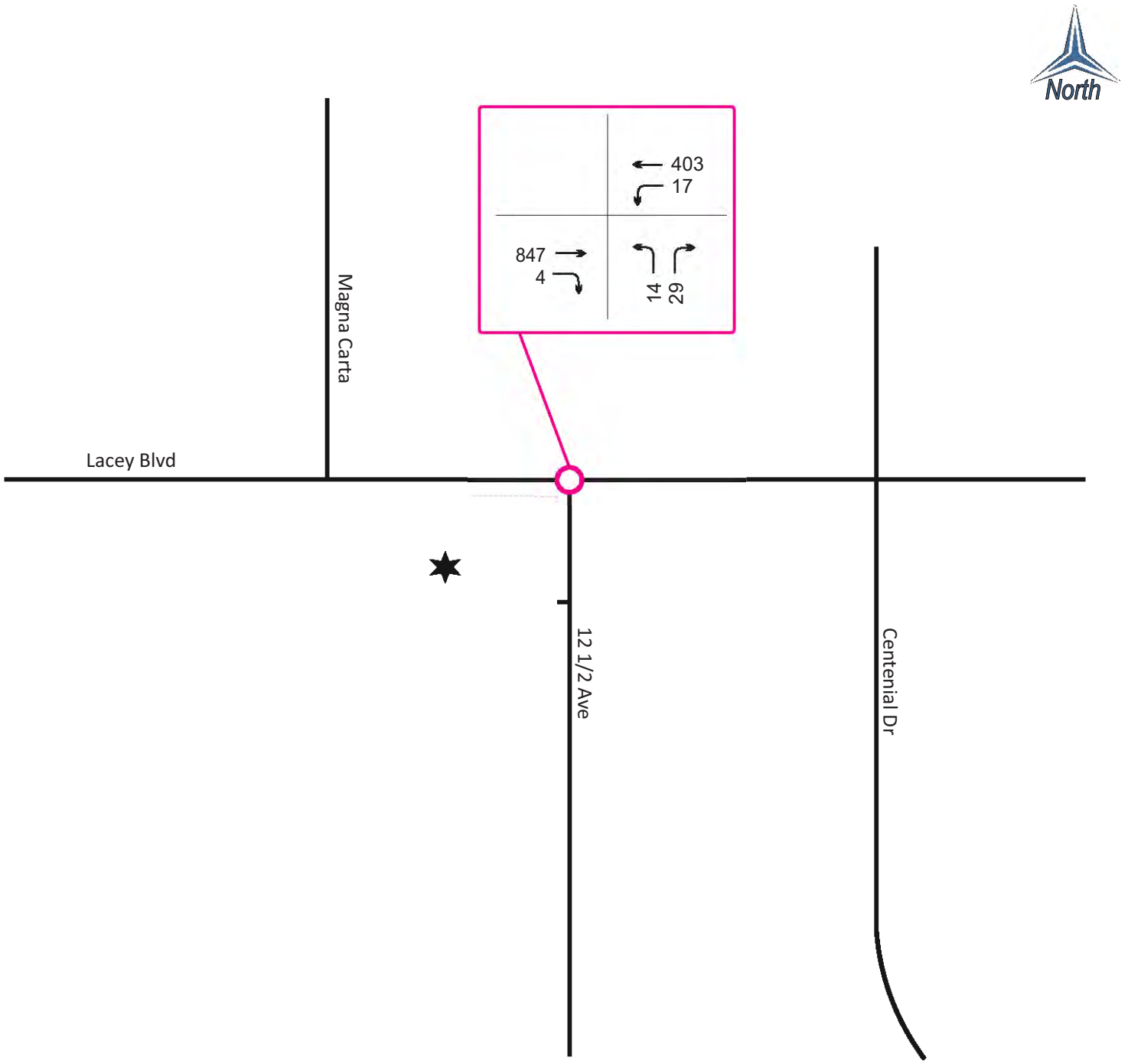
Project Location Project Intersection XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Residential Development

Horizon Year (2046) Plus Project AM Peak Hour Traffic

Figure 3-10



LEGEND

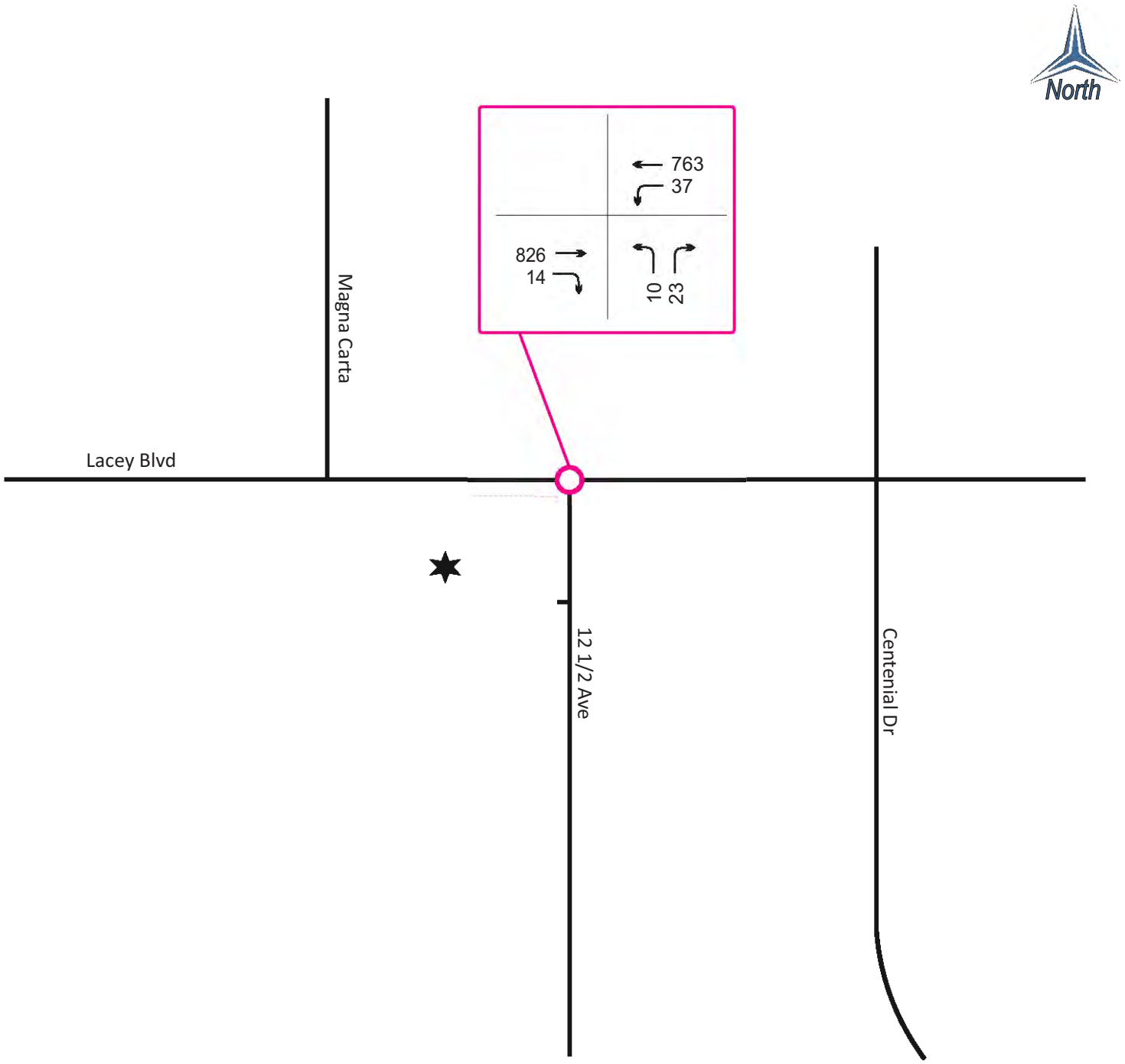
Project Location Project Intersection XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Lacey / 12 1/2 Residential Development

Horizon Year (2046) Plus Project PM Peak Hour Traffic

Figure 3-11



LEGEND

Project Location | Project Intersection | XX Peak Hour Traffic

VRPA TECHNOLOGIES, INC.

Table 3-1
Lacey Blvd - 12 1/2 Avenue Residential Development
Future Intersection Operations

INTERSECTION	TARGET LOS	CONTROL	HORIZON 2046 WITHOUT PROJECT CONDITIONS		HORIZON 2046 WITH PROJECT CONDITIONS	
			DELAY	LOS	DELAY	LOS
Lacey Blvd & 12 1/2 Ave	D	One-way Stop	24.3	C	23.0	C
			23.5	C	23.5	C

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized intersections, delay results show the average for the entire intersection. For two-way and All way stop controlled intersections, delay results show the delay for the worst movement.

D*- LOS D was assumed, Traffic Signal was not met.

Table 3-2
Lacey Blvd - 12 1/2 Avenue Residential Development
Future Queuing Operations

INTERSECTION	AVAILABLE STORAGE(FT.)	LANE	CONTROL	HORIZON 2046 WITHOUT PROJECT CONDITIONS		HORIZON 2046 WITH PROJECT CONDITIONS	
				AM	PM	AM	PM
Lacey Blvd & 12 1/2 Ave	150	West Bound Left	One Way Stop	25*	25*	25*	25*

Queue shown is 95th percentile summary and is measured in feet

25* Denotes Minimum Length

4.0 Mitigation

Based on the results of Tables 2-1 and 3-2, the study area intersection is expected to operate at level of service C or better in all future scenarios. Therefore, no mitigation measures are needed.

Appendix A

Traffic Count Data Worksheets

Prepared by National Data & Surveying Services

12 1/2 Ave & W Lacey Blvd

Peak Hour Turning Movement Count

ID: 26-090017-001
City: Hanford

Day: Thursday
Date: 3/5/2026

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	4:00 PM - 06:00 PM

12 1/2 Ave – SOUTHBOUND

	Right	Through	Left	U-Turn	Departing
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0
(red)	0	0	0	0	

W Lacey Blvd – EASTBOUND

	AM	NOON	PM	(red)
Departing	271	0	514	
U-Turn	0	0	1	0
Left	0	0	0	0
Through	568	0	554	1
Right	0	0	0	0

W Lacey Blvd – WESTBOUND

	(red)	PM	NOON	AM
Right	0	0	0	0
Through	2	512	0	270
Left	1	3	0	4
U-Turn	0	5	0	2
Departing		561	0	570

12 1/2 Ave – NORTHBOUND

	Departing	U-Turn	Left	Through	Right
(red)		0	0	1	0
PM	3	0	1	0	2
NOON	0	0	0	0	0
AM	4	0	1	0	0

CONTROL

No Control

	AM	NOON	PM
TEV	845	0	1078
PHF	0.88		0.92

Cars (AM)

Approach	U-Turn	Left	Through	Right
Southbound	0	0	0	0
Eastbound		0	562	0
Westbound		4	265	0
Northbound		1	0	0

HT (AM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	6	0
Westbound	0	5	0
Northbound	0	0	0

Cars (NOON)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	0	0

HT (NOON)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	0	0

Cars (PM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	547	0
Westbound	3	508	0
Northbound	1	0	2

HT (PM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	7	0
Westbound	0	4	0
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound	0	0	0
North	Westbound	0	0	0
South	Eastbound	0	0	0
South	Westbound	0	0	1
West	Southbound	0	0	0
West	Northbound	0	0	0
East	Southbound	0	0	0
East	Northbound	0	0	0
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

Appendix B

Synchro Worksheets

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	568	0	4	270	1	0
Future Vol, veh/h	568	0	4	270	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	645	0	5	307	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	645	0	808	645
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	163	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	938	-	334	471
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	938	-	333	471
Mov Cap-2 Maneuver	-	-	-	-	333	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	850	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.13	15.86
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	333	-	-	938	-
HCM Lane V/C Ratio	0.003	-	-	0.005	-
HCM Ctrl Dly (s/v)	15.9	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	554	0	3	512	1	2
Future Vol, veh/h	554	0	3	512	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	602	0	3	557	1	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	602	0	887	602
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	285	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	973	-	299	499
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	973	-	298	499
Mov Cap-2 Maneuver	-	-	-	-	298	-
Stage 1	-	-	-	-	544	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.05	13.92
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	-	-	973	-
HCM Lane V/C Ratio	0.008	-	-	0.003	-
HCM Ctrl Dly (s/v)	13.9	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	591	0	5	281	2	0
Future Vol, veh/h	591	0	5	281	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	672	0	6	319	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	672	0	843	672
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	171	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	917	-	318	455
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	842	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	917	-	316	455
Mov Cap-2 Maneuver	-	-	-	-	316	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	842	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.16	16.47
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	316	-	-	917	-
HCM Lane V/C Ratio	0.007	-	-	0.006	-
HCM Ctrl Dly (s/v)	16.5	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	577	0	4	533	2	3
Future Vol, veh/h	577	0	4	533	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	627	0	4	579	2	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	627	0	926	627
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	953	-	283	482
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	727	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	953	-	281	482
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.07	14.73
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	375	-	-	953	-
HCM Lane V/C Ratio	0.014	-	-	0.005	-
HCM Ctrl Dly (s/v)	14.7	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	591	4	16	281	14	29
Future Vol, veh/h	591	4	16	281	14	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	672	5	18	319	16	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	676	0	870	674
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	196	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	913	-	306	454
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	913	-	300	454
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	818	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.49	15.59
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	389	-	-	913	-
HCM Lane V/C Ratio	0.126	-	-	0.02	-
HCM Ctrl Dly (s/v)	15.6	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	577	14	36	533	10	23
Future Vol, veh/h	577	14	36	533	10	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	627	15	39	579	11	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	642	0	1003	635
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	368	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	940	-	253	478
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	940	-	243	478
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.57	15.79
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	940	-
HCM Lane V/C Ratio	0.097	-	-	0.042	-
HCM Ctrl Dly (s/v)	15.8	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	846	0	6	402	1	0
Future Vol, veh/h	846	0	6	402	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	961	0	7	457	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	961	0	1203	961
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	242	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	714	-	190	310
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	714	-	188	310
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	776	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.15	24.28
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	-	-	714	-
HCM Lane V/C Ratio	0.006	-	-	0.01	-
HCM Ctrl Dly (s/v)	24.3	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	825	0	4	763	1	3
Future Vol, veh/h	825	0	4	763	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	897	0	4	829	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	897	0	1320	897
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	755	-	160	338
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	755	-	159	338
Mov Cap-2 Maneuver	-	-	-	-	159	-
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	629	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.05	18.88
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	264	-	-	755	-
HCM Lane V/C Ratio	0.016	-	-	0.006	-
HCM Ctrl Dly (s/v)	18.9	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	847	4	17	403	14	29
Future Vol, veh/h	847	4	17	403	14	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	963	5	19	458	16	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	967	0	1232	965
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	268	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	710	-	182	308
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	710	-	177	308
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.41	23.01
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	-	-	710	-
HCM Lane V/C Ratio	0.197	-	-	0.027	-
HCM Ctrl Dly (s/v)	23	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	826	14	37	763	10	23
Future Vol, veh/h	826	14	37	763	10	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	898	15	40	829	11	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	913	0	1401	905
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	495	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	744	-	142	334
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	744	-	135	334
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.47	23.47
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	231	-	-	744	-
HCM Lane V/C Ratio	0.156	-	-	0.054	-
HCM Ctrl Dly (s/v)	23.5	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Appendix C

TIA Scoping Form

TIA SCOPING FORM

This completed Scoping Form must be submitted to City staff for review before initiation of the TIA:

A. Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Lacey Blvd / Ave 12 1/2 Residential
Project Opening Year:	2027; The TIA report will also analyze a horizon year of 2046.
Ambient Growth Rate (%)	2% per year
Project Description:	75 single-family residential units

	Consultant	Developer
Name:	Erik Ruehr VRPA Technologies	Lily Duran Bonadelle Neighborhoods
Address:	4630 W. Jennifer, ste 105 Fresno, CA 93722	7830 N. Fruit #101 Fresno, CA 93711
Telephone:	858/344-7151	559/435-9700
Email:	eruehr@vrpatech.com	lily@bonadelle.com

B. Trip Generation Information:

Source of Trip Generation Data: ITE Trip Generation Manual, 12th Edition

Current General Plan Land Use	Proposed General Plan Land Use
Medium Family Residential	Medium Family Residential

Current Zoning	Proposed Zoning
Medium Family Residential	Medium Family Residential

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Peak Hour:	N/A	N/A	N/A	15	41	56
PM Peak Hour:	N/A	N/A	N/A	46	28	74

Trip Internalization: ☐ Yes ☒ No	Percentage (if Yes)
Pass-By Allowance: ☐ Yes ☒ No	Percentage (if Yes)
Diverted Trips Allowance: ☐ Yes ☒ No	Percentage (if Yes)

Potential Screening Checks:

Is your project screened from a Local Transportation Analysis (LTA), pursuant to the criteria in Section 2.1 of the guidelines?

☐ Yes ☒ No

LTA Screening Justification:

Since the project has a peak hour trip generation of between 50 and 100, a Focused LTA will be required based on Section 3 of the TIA Guidelines.

Is your project screened from a VMT analysis, as per the criteria in Section 7.0 of the guidelines?

☒ Yes ☐ No

VMT Screening Justification:

The General Plan Land Use is Medium Density Residential and the proposed land use is Medium Density Residential. Therefore, the project is consistent with the General Plan. Since it generates less than 1,000 daily trips it is screened out of requiring a VMT analysis.

Level of Service Analysis Scoping:

Project Trip Distribution Percentages (Attach exhibit for detailed distribution):

See exhibits.

North	South	East	West

- Attach list of Approved and Pending Projects that need to be considered (provided by City staff and adjacent jurisdictions) Millenium Estates (detailed information to be provided by City)
- Attach list of study intersections (see exhibits)
- Attach site plan (see exhibits)
- Note other specific items to be addressed:
  a. Site access : Analysis of turn lanes and traffic operations
  b. On-site circulation : Analysis of traffic operations on internal roadways
  c. Parking :
  d. Consistency with Plans supporting Bikes/Pedestrians/Transit
  e. Other Ave 12 1/2 is an unimproved road. Improvements will be analyzed.
- Date of Traffic Counts N/A
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased) Project will be built in a single phase of 75 homes.

- Existing (2026)
- Opening Year (2027)
- Opening Year Plus Project (2027)
- Cumulative Conditions (2027)
- Cumulative Conditions Plus Project (2027
- Horizon Year (2046)
- Horizon Year Plus Project (2046)

Vehicle Miles Traveled Analysis Scoping:

For projects that are not screened, identify the following:

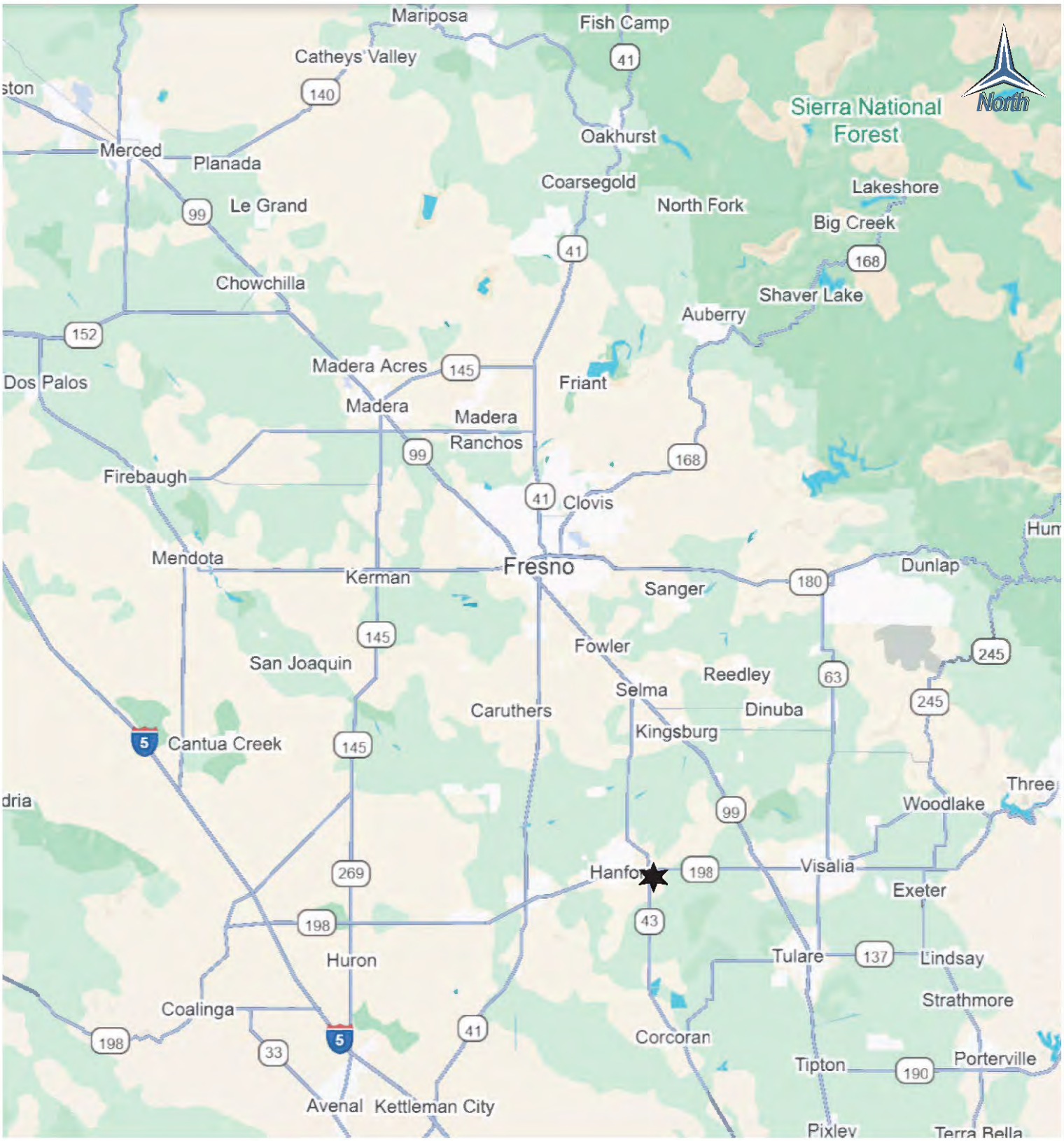
- Travel Demand Forecasting Model Used: _____
- Attach City of Hanford VMT Screening Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Any other specific issues to be addressed in the LTA or VMT analysis, apart from those stated in the Guidelines?

Hanford Residential Development

Regional Location

Exhibit 1



LEGEND

★ Project Location

VRPA TECHNOLOGIES, INC.

Hanford Residential Development

Site Plan

Exhibit 2

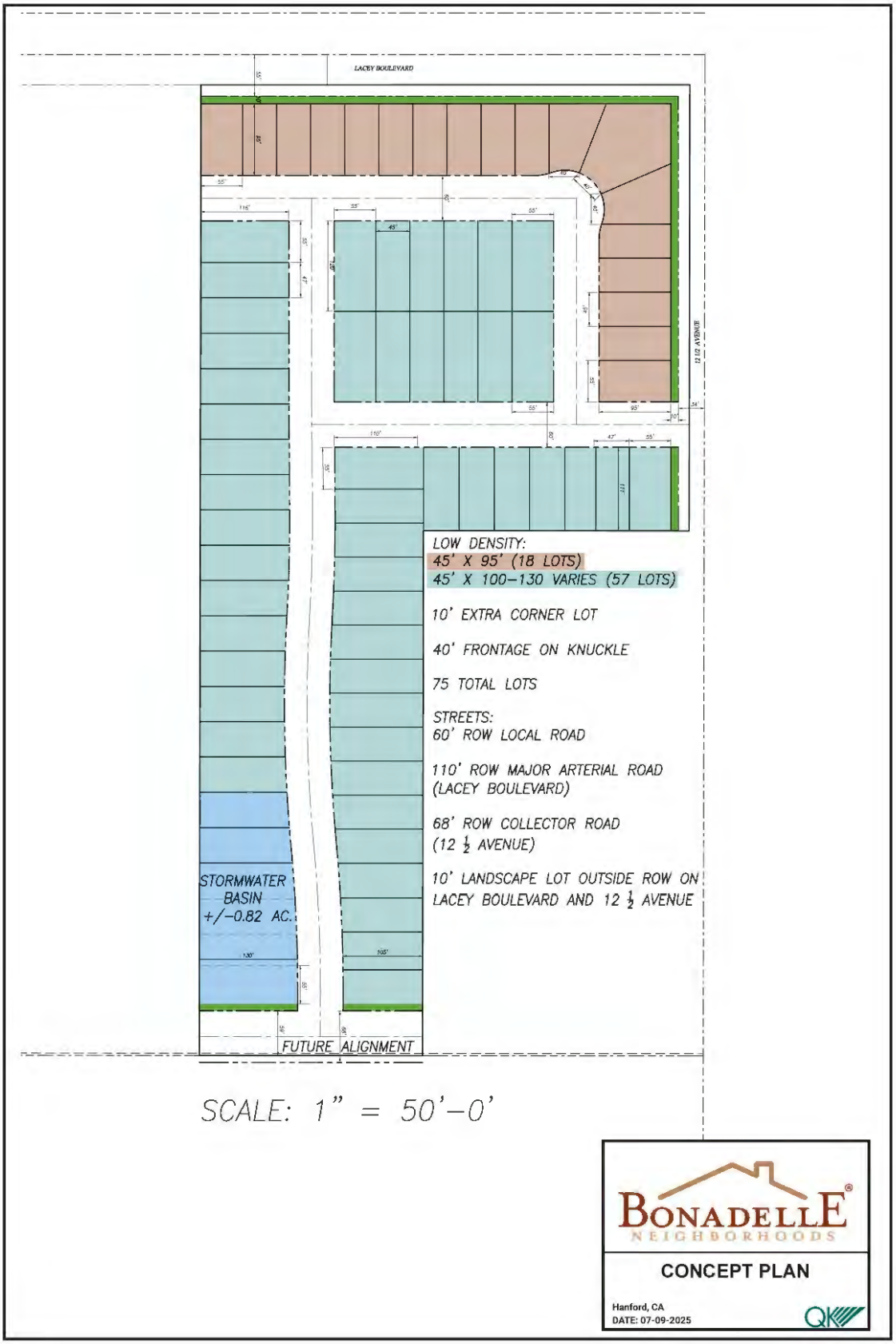


Exhibit 3

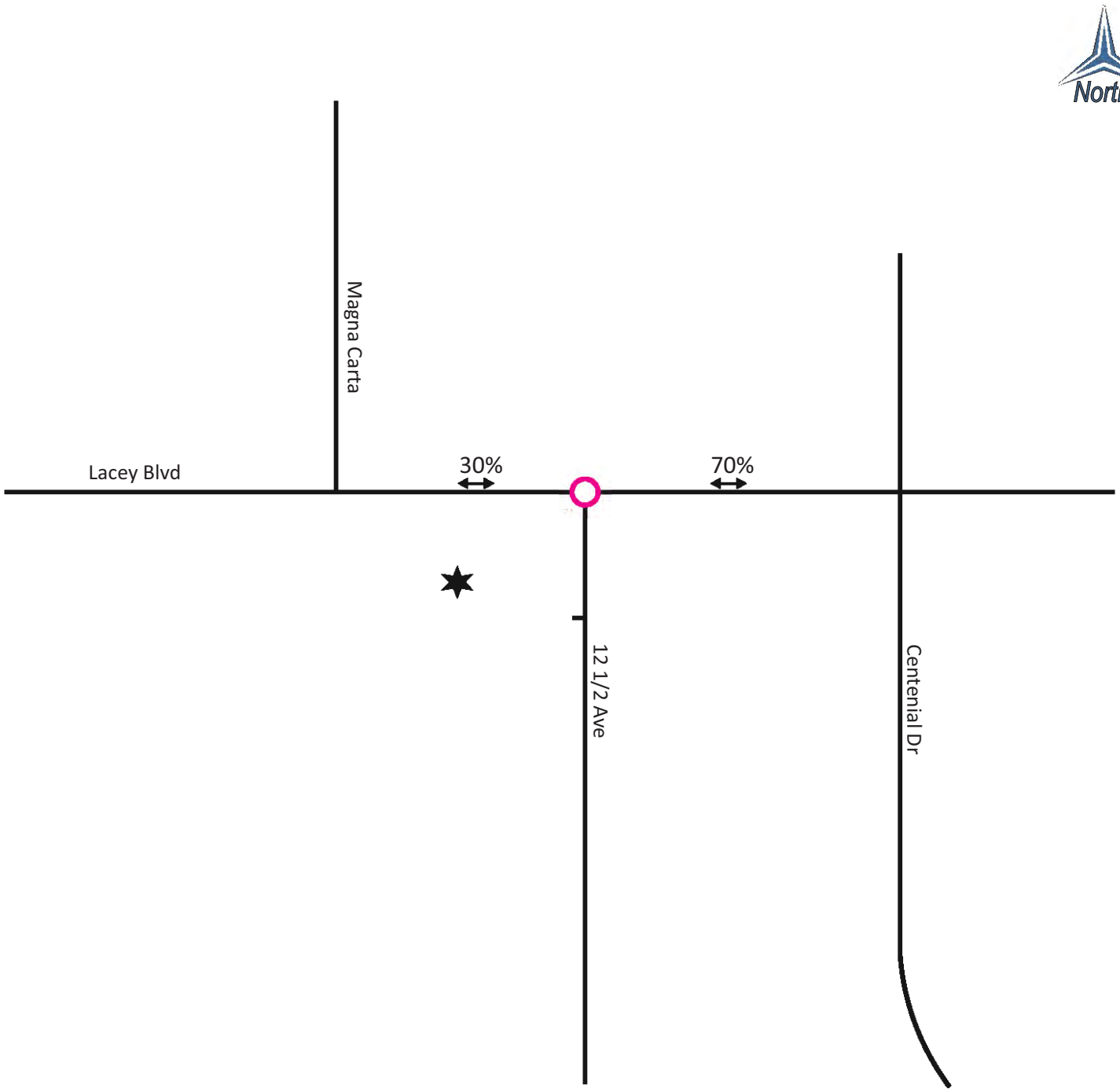
Hanford Residential Development

Trip Generation - Total Vehicles

LAND USE/ ITE LAND USE CODE	QUANTITY	DAILY TRIP ENDS (ADT)		WEEKDAY AM PEAK HOUR					WEEKDAY PM PEAK HOUR				
		RATE	VOLUME	RATE	IN:OUT SPLIT	VOLUME			RATE	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL			IN	OUT	TOTAL
Single Family Residential (210)	75 Units	9.09	871	0.70	27:73	15	41	56	0.93	62:38	46	28	74
TOTAL EXTERNAL TRIP GENERATION			**871**			**15**	**41**	**56**			**46**	**28**	**74**

Hanford Residential Development
Trip Distribution

Exhibit 4



LEGEND

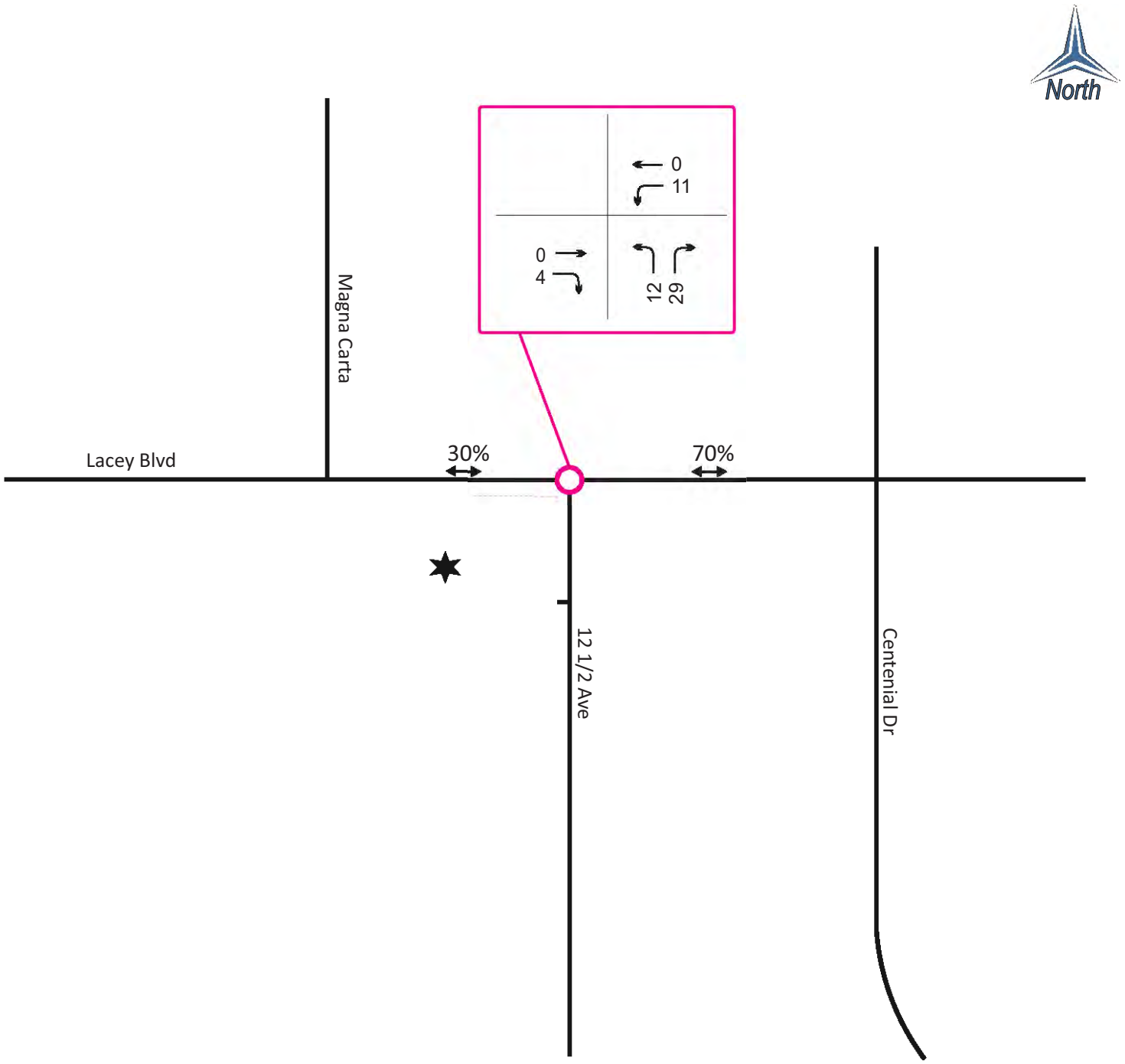
Project Location | Project Intersection | xx% Trip Distribution

VRPA TECHNOLOGIES, INC.

Hanford Residential Development

Project AM Peak Hour Trips

Exhibit 5



LEGEND

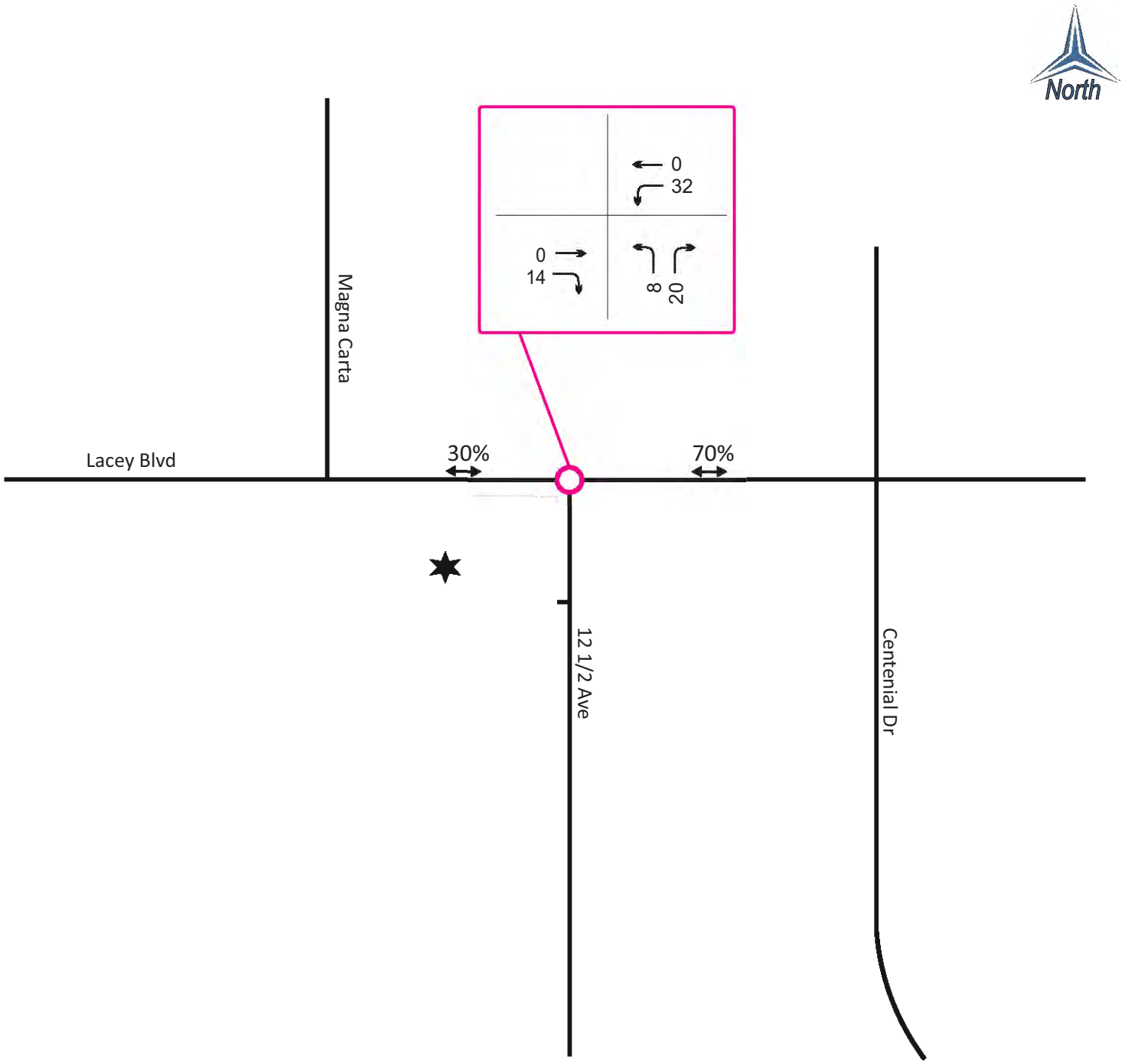
Project Location | Project Intersection | xx% Trip Distribution

VRPA TECHNOLOGIES, INC.

Hanford Residential Development

Project PM Peak Hour Trips

Exhibit 5



LEGEND

★ Project Location ○ Project Intersection xx% ↔ Trip Distribution

VRPA TECHNOLOGIES, INC.