



INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FOR THE

EASTON SUBDIVISION PROJECT

SEPTEMBER 1, 2026

Prepared for:

City of Modesto
1010 10th Street
Modesto, CA 95354
(209) 577-5200

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818



D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



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Proposed Mitigated Negative Declaration Village One – Easton Subdivision Project

Lead Agency: City of Modesto
1010 10th Street
Modesto, CA 95354
(209) 577-5200

Project Title: Village One – Easton Subdivision Project

Project Location: The Project site is an approximately 19.0-acre site within the 1,850-acre Village One Specific Plan (VOSP) planning area, which has been annexed into the incorporated limits of the City of Modesto. The Project site is located about 4.75 miles northeast of Modesto's downtown core. State Route 99 is located five miles to the west. Claribel Road (State Route 219) is two miles to the north. The Project site is located on the east side of Claus Road, north of Milnes Road, and west of the BNSF (formerly Santa Fe) railroad. The Project site comprises a subdivision of Assessor's Parcel Number 014-014-005.

Project Description: The proposed Project consists of a General Plan Amendment to change the land use designation of the Project site from Business-Commercial-Residential (BCR) to Village Residential (VR); a Specific Plan Amendment to the Village One Specific Plan (VOSP) to change the land use designation of the Specific Plan's Easton subdivision from Business Park (BP) to Village Residential (VR); a Rezone of the Project site from Specific Plan-Holding (SP-H) to Specific Plan (SP); the adoption of Precise Plan 35 North; and a Tentative Subdivision Map creating 127 residential lots, one park lot, and one public access and public utility easement (PUE) lot. Lot sizes vary and include sizes ranging from approximately 50'x80' for interior lots and 55'x80' for corner lots. The proposed 127 units on approximately 19.0 acres would result in a density of approximately 6.68 dwelling units per gross acre, which is slightly above the average density of 6.5 dwelling units per gross acre identified for the Village Residential designation in the VOSP; the requested Specific Plan Amendment would establish the density applicable to the Project site.

The park site (0.80 acres) is located on the central portion of the Project site. The development would include internal roadways, landscaping, and storm drainage. The residential lots contain proposed setbacks for 15' for porches, 20' for garages, 10' for rear, 5' for sides, and 10' for corners.

Primary vehicular access to the Project site would be provided from Milnes Road to the south, with internal circulation consisting of a connected network of five streets serving the residential units and the park lot. A 20' public access lot is located at the west end of Circle A to provide emergency access from the subdivision to Claus Road. The proposed Project includes sidewalk and landscaping frontage along Milnes Road, and an access into the subdivision on Circle A from Milnes Road. All improvements will be installed in accordance with the City of Modesto Standards. The storm drainage disposal will be within park/basin Lot B and conducted by a collection system and connect to the existing City of Modesto system. Sanitary sewer will connect to the existing City of Modesto system. Domestic water will connect to the existing City of Modesto system. Tree planting will be performed in accordance with the City of Modesto ordinances. The subdivision's erosion control plan will also be completed per the City of Modesto ordinances. The City of Modesto will own and maintain all public right-of-way (Milnes Road). All roads within the development are private and will be owned and maintained by the developer. Street lighting will be in accordance with the City of Modesto standards and maintained by the City of Modesto. The internal roadways are designed to be 48' wide and sidewalks are designed to be 5' wide.

Findings: In accordance with the California Environmental Quality Act, the City of Modesto has prepared an Initial Study to determine whether the proposed project may have a significant adverse effect on the environment. The Initial Study and Proposed Mitigated Negative Declaration reflect the independent judgment of City of Modesto staff. On the basis of the Initial Study, the City of Modesto hereby finds:

Although the proposed project could have a significant adverse effect on the environment, there will not be a significant adverse effect in this case because the project has incorporated specific provisions to reduce impacts to a less than significant level and/or the mitigation measures described herein have been added to the project. A Mitigated Negative Declaration has thus been prepared.

The Initial Study, which provides the basis and reasons for this determination, is attached and/or referenced herein and is hereby made a part of this document.

Signature _____

Date _____

Proposed New Mitigation Measures:

Because the Project site is located within the approved Village One Specific Plan (VOSP), for which there is a certified EIR, the proposed Project is bound by the relevant existing VOSP EIR mitigation measures. In addition, there are specific new mitigation measures that were created based on this environmental evaluation and are specific to the proposed Project. The following are new Mitigation Measures that are extracted from the Initial Study. These measures are designed to avoid or minimize potentially significant impacts, and thereby reduce them to an insignificant level. Based on the analysis and conclusions of the Initial Study, the impacts of proposed project would be mitigated to less-than-significant levels with the implementation of the new mitigation measures presented below combined with the existing approved mitigation measures in the VOSP EIR.

BIOLOGICAL RESOURCES

Mitigation Measure BIO-1: No more than 30 days prior to the start of ground-disturbing activities, a qualified biologist shall conduct a reconnaissance-level survey of the Project site and a 500-foot buffer for burrowing owl and, if activities occur during the nesting season (February 1 through August 31), for active nests of birds protected under the Migratory Bird Treaty Act and California Fish and Game Code sections 3503, 3503.5, and 3513. If burrowing owl or an active nest is detected, the biologist shall establish a no-disturbance buffer appropriate to the species and the activity, in coordination with the California Department of Fish and Wildlife, and the buffer shall be maintained until the biologist determines that the young have fledged or the burrow is no longer occupied. Survey results shall be submitted to the City prior to issuance of a grading permit.

HAZARDS AND HAZARDOUS MATERIALS

Mitigation Measure HAZ-1: Prior to issuance of a grading permit, the applicant shall retain a qualified environmental professional to collect and analyze representative shallow soil samples from the Project site for organochlorine pesticides and arsenic, and for any other constituents identified as potentially present by a Phase I Environmental Site Assessment. If concentrations exceed applicable residential environmental screening levels, the applicant shall prepare and implement a soil management and remediation plan, subject to review by the City and oversight by the Stanislaus County Department of Environmental Resources or the Department of Toxic Substances Control, prior to issuance of a grading permit.

NOISE

Mitigation Measure NOI-1: Noise barriers shall be constructed along the Project's BNSF railroad, Milnes Road, and Claus Road frontages so that exterior noise levels within the rear yards of the homes do not exceed the City of Modesto's normally acceptable exterior noise exposure limit of 65 dBA Ldn. The barrier heights and locations set out below, and shown graphically in Figure 2 of the Noise and Vibration Assessment (Appendix B to the Initial Study), were derived for the lot layout evaluated in Appendix B and shall be the presumptive design for the Project. Prior to approval of improvement plans, a qualified acoustical consultant shall confirm the required barrier heights and stationing against the final approved map and shall identify any adjustments necessary to achieve the 65 dBA Ldn standard where the approved lot layout, pad elevations, or rear yard depths differ from those evaluated in Appendix B. Where a required barrier height cannot be achieved under the City's fence height standards, the consultant shall identify an alternative achieving the same standard, such as a combination of berm and wall. The barriers shall be shown on the improvement plans and final map to the satisfaction of the City.

- **BNSF Railroad Frontage:** Noise barrier walls shall be constructed along the lot lines backing onto (parallel with) the BNSF rail line, with the following minimum top-of-wall elevations (as referenced to the yard grades), in order to meet the City's normally acceptable noise exposure limit:
 - Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 350 feet north of the Milnes Road centerline.
 - Noise barriers with a top of wall height of 10 feet above yard grades between approximately 350 and 550 feet north of the Milnes Road centerline.
 - Noise barriers with a top of wall height of 8 feet above yard grades between approximately 550 and 850 feet north of the Milnes Road centerline.
 - Noise barriers with a top of wall height of 6 feet above yard grades between approximately 850 feet north of the Milnes Road centerline and the northeastern corner of the site, with this 6-foot-tall noise barrier extended approximately 160 feet along the northern site property line.
- **Milnes Road Frontage:** Noise barrier walls shall be constructed along the lot lines backing on (parallel with) Milnes Road with the following minimum top of wall elevations (as referenced to the yard grades):
 - Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 400 feet west of the BNSF railroad centerline.
 - Noise barriers with a top of wall height of 10 feet above yard grades between approximately 400 and 530 feet and 590 and 700 feet west of the BNSF railroad at-grade crossing.

- Noise barriers with a top of wall height of 8 feet above yard grades between approximately 600 feet west of the BNSF railroad at-grade crossing and the southwest (Milnes and Claus Road) corner of the site.
- Noise barriers with a top of wall height of 8 feet above yard grades should be extended perpendicular to Milnes Road along the access road frontage for approximately 100 feet on either side of this roadway.
- Claus Road Frontage: Noise barrier walls with a minimum top-of-wall elevation of 9 feet as referenced to the yard grades shall be constructed along the lot lines backing onto (parallel with) Claus Road. An 8-foot-tall noise barrier shall extend across the northern edge of the site to the termination of the 6-foot-tall noise barrier wall extending from the eastern (railroad facing) side of the site.
- To be effective as a barrier to noise, the noise barrier walls shall be built without cracks or gaps in the face or large or continuous gaps at the base or where they adjoin the homes or each other. The walls shall also have a minimum surface weight of 3.0 lbs. per sq. ft. Small, dispersed, gaps in the base of the walls for landscape irrigation or drainage, which do not compose more than 0.5% of the wall area, are acceptable.
 - For a wood wall to meet these requirements, the fence shall be double faced with butted vertical fence boards on each side with a continuous layer of 1/2" plywood. Using the plywood ensures continued effectiveness of the barrier with age, since wood slats alone have a tendency to warp and separate with age allowing gaps to form and the barrier effect of the wall to diminish. Other acceptable materials include, but are not limited to, masonry block and pre-cast concrete panels.

Mitigation Measure NOI-2: The following measures shall be incorporated into the Project on-site construction operations:

- Noise-generating construction activities within the Project area shall comply with the time restrictions of Title 4, Chapter 9 of the Modesto Municipal Code.
- All noise-producing Project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.
- All mobile or fixed noise-producing equipment used on the Project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while during Project activity.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from the existing residences to the west and south.
- Project area and site access road speed limits shall be established and enforced during the construction period.
- If unusual circumstances or emergencies prevent certain Project construction activities from complying with the Modesto requirements, then a noise control plan shall be developed to ensure that sufficient mitigation is implemented during Project construction to ensure adverse noise impacts are avoided.
- Notification of construction hours and durations shall be provided to the existing residences to the west and south of the Project site.

Mitigation Measure NOI-3: The following measures shall be incorporated into the design:

- Forced-air mechanical ventilation, satisfactory to the Building Official, shall be provided for all residences having partial or full line of sight to Claus Road, Milnes Road, or the BNSF rail line, so that occupants may keep windows and doors closed for acoustic isolation.
- Air conditioning shall be provided for all residences of this development to allow occupants to close doors and windows as desired for acoustic isolation.
- Sound-rated windows and doors shall be provided as necessary to achieve an interior noise level of 45 dBA Ldn or less in all residences and, at residences facing or perpendicular to the BNSF rail line, recurring maximum train passby levels of 50 dBA Lmax or less in bedrooms and 55 dBA Lmax or less in other habitable rooms. As estimated in Appendix B, this is anticipated to require Sound Transmission Class (STC) ratings of approximately 30 to 36 at upper-floor facades facing or perpendicular to Claus Road, and approximately 28 to 34 at first-floor facades and 38 to 45 at second-floor facades facing or perpendicular to the BNSF rail line. These ranges were estimated for the building types and setbacks evaluated in Appendix B and are provided as design guidance; the governing requirement is achievement of the interior noise levels stated above, as demonstrated by the unit-by-unit analysis required below.
- Residences on the lots at the southeastern corner of the Project site nearest the Milnes Road at-grade rail crossing, which would be exposed to recurring maximum levels of up to 97 dBA Lmax30, shall incorporate additional acoustic design and sound control measures as necessary to achieve the interior standards identified above. Such measures may include sound-rated exterior wall construction, acoustical caulking, insulation, and acoustical vents; orienting large windows and doors away from the rail line; locating bedrooms away from the rail frontage; and locating single-story homes closest to the rail line.
- The specific determination of exterior wall assemblies and window and door STC ratings shall be made on a unit-by-unit basis during project design by a qualified acoustical consultant. The results of that analysis, including a description of the necessary noise control treatments, shall be submitted to the City with the building plans and approved prior to issuance of a building permit.

TRIBAL CULTURAL RESOURCES

Mitigation Measure TCR-1: If a potential tribal cultural resource, archaeological deposit, or human remains is encountered during ground-disturbing activities, all work within 100 feet of the find shall halt and the City shall be notified immediately. A qualified archaeologist shall evaluate the find and, if it may constitute a tribal cultural resource, the City shall notify and consult with the culturally affiliated California Native American tribe(s) regarding treatment, which may include preservation in place, avoidance, capping, or data recovery, and regarding tribal monitoring of the remaining ground disturbance in the vicinity of the find. Work in the affected area shall not resume until the City has authorized it in writing. In the event human remains are encountered, the Stanislaus County Coroner shall be contacted and the procedures of Health and Safety Code section 7050.5 and Public Resources Code section 5097.98 shall be followed.

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INITIAL STUDY CHECKLIST

PROJECT TITLE

Village One – Easton Subdivision Project

LEAD AGENCY NAME AND ADDRESS

City of Modesto
1010 10th Street
Modesto, CA 95354
(209) 577-5200

PROJECT APPLICANT

John Pronoitis
NRB Investment, LLC
1701 W. March Ln. Suite D
Stockton, CA 95207
(209) 473-1106

PROJECT BACKGROUND AND PREVIOUS ENVIRONMENTAL REVIEW

Village One Specific Plan

The Village One Specific Plan (VOSP) was adopted by the City of Modesto to guide the development of the first in a series of neo-traditional urban villages in the City of Modesto's Sphere of Influence. The VOSP Environmental Impact Report (EIR) (SCH No. 1990103247) was subsequently certified and adopted by the City of Modesto on October 25, 1990. The VOSP incorporates neo-traditional planning concepts through development of a pedestrian-oriented village that focuses community life within the Village area by orienting the residential neighborhoods to a central Village Center. This center, which contains commercial, civic, cultural, and recreational uses, will make pedestrian access available to residents of Village One through a highly interconnected street system providing a direct connection to the Village Center.

The VOSP includes multiple land use designations—including Village Center, Multi-Family Residential, Senior Housing, Village Residential, Very Low Density Residential, Industrial/Business Park, General Commercial, Community Facilities, Public Parks, and Professional Office—that together create a balanced, interconnected Village district. The VOSP also includes adopted development standards, design guidelines, and infrastructure requirements necessary to coordinate build-out of parcels within the VOSP planning area.

Proposed Modification to General Plan

The requested General Plan Amendment would change the land use designation of the Project's Easton subdivision from Business-Commercial-Residential (BCR) to Village Residential (VR). This amendment is requested alongside a Specific Plan Amendment to enable the City's consideration of a proposed community consisting of 127 residential units, 1 public access and public utility easement (PUE) lot, and 1 park lot.

Proposed Modification to VOSP

The requested Specific Plan Amendment would change the land use designation of the Project's Easton subdivision from Business Park (BP) to Village Residential (VR). This amendment is

requested to enable the City's consideration of a proposed community consisting of 127 residential units, 1 public access and public utility easement (PUE) lot, and 1 park lot.

PROJECT LOCATION

The Project site is an approximately 19.0-acre site within the 1,850-acre Village One planning area, which has been annexed into the incorporated limits of the City of Modesto. The Project site is located on the east side of Claus Road, north of Milnes Road, and west of the Santa Fe railroad. Figure 1 provides the Regional Location, and Figure 2 provides a Project Vicinity Map.

PROJECT SETTING

Assessor's Parcel Number

The VOSP has 170 separate parcels within the 1,850-acre planning area, of which the Project site includes a subdivision of parcel 014-014-005.

Surrounding Uses

Surrounding land uses include a commercial undeveloped strip and residential uses to the west; the Santa Fe railroad, dairy and agricultural uses to the east; almond orchards, industrial and residential uses to the south, and agricultural uses to the north.

Existing Site Conditions

The Project site primarily consists of row crops and contains no existing structures, pavement, or landscaping. There is a stockpile on the northeast corner of the Project site. The Project site contains drainage ditches along the eastern and southern perimeters.

Figure 3 contains the proposed site plan for the Project site.

Site Topography

The Project site is generally flat, with minimal topographic variation across the Project site. Elevations remain consistent throughout the site, and there are no notable natural topographic features such as hills or ravines. As described above, agricultural drainage ditches are present along the eastern and southern site perimeters. The flat topography is typical of the surrounding area and poses no significant constraints to development.

Figure 4 provides an aerial photo of the Project site.

EXISTING AND PROPOSED GENERAL PLAN DESIGNATION

The Project site is currently designated as Business-Commercial-Residential (BCR). The requested General Plan Amendment would change the land use designation of the Project's Easton subdivision from Business-Commercial-Residential (BCR) to Village Residential (VR). Figure 5 depicts the existing and proposed General Plan Land Use designations.

Business Commercial Residential (BCR) - Existing

The Business-Commercial-Residential (BCR) land use designation is intended to provide for a combination of land uses, including Business Park, Commercial and Residential, in close proximity in order to reduce vehicle trips. This designation is intended to accommodate employment-intensive uses, and medium-high-density residential uses, with a variety of goods and services readily available. The desired result is compact and walkable development that integrates a mix of land uses such that opportunities to live near employment, shopping and service centers are created.

Village Residential (VR) - Planned

The Village Residential (VR) land use designation provides for the development of urban “villages.” Villages are to be comprised of mixed-use, compact, pedestrian- and transit-oriented neighborhoods that are intended to accommodate a variety of residential product types, such as detached houses on small lots, multi-family housing, and senior housing, in addition to neighborhood-serving non-residential uses. This designation may be applied to areas throughout the Planned Urbanizing Area. As areas designated Village Residential are entitled, annexed, and developed, the General Plan land use designation should be changed to Residential. The residential density within a Comprehensive Planning District (CPD) is typically 6.6 dwelling units per gross acre for the entire district. Approximately four (4) percent of lands designated Village Residential shall be devoted to commercial uses, with a guiding Floor-Area-Ratio intensity of 0.35.

EXISTING AND PROPOSED VILLAGE ONE SPECIFIC PLAN LAND USE DESIGNATION

The Project site is currently designated as Business Park (BP). The requested Specific Plan Amendment would change the land use designation of the Project’s Easton subdivision from Business Park (BP) to Village Residential (VR). Figure 6 depicts the existing and proposed Specific Plan Land Use designations. Figure 7 depicts the Easton subdivision land uses.

Industrial/Business Park (BP) - Existing

The Industrial/Business Park (BP) land-use designation is applied in the area to the east of Claus Road, calling for a mixture of employment-generating office and industrial uses. The maximum overall Floor-Area-Ratio is 0.25.

Village Residential (VR) - Planned

The Village Residential (VR) designation permits an average density of 6.5 dwelling units per gross acre for single-family residential development. Lands within Precise Plan areas designated as noise setback areas were not included in the calculation of dwelling unit yield.

ZONING DESIGNATION

Specific Plan-Holding (SP-H) - Existing

The Project site has a zoning designation of Specific Plan-Holding (SP-H). As described in the City of Modesto Municipal Code, the purpose and intent of the SP-H Zone is to assist in the orderly transition of property from long-term agricultural use to urban development in areas to be developed as a part of the City’s Specific Plan process, as well as to provide reasonable opportunities to use property that has been annexed to the City of Modesto prior to full implementation of an adopted Specific Plan.

The Project includes a Rezone of the Project site from SP-H to SP Specific Plan. This zoning district will implement the Village Residential land use designation through Precise Plan 35 North. Precise Plan 35 was adopted by Ordinance No. 3777-C.S. on January 23, 2024, and this project will be a second Precise Plan for the area north of the Crossing Project. Precise Plan 35 North will implement the principles of the Specific Plan in this specific area by providing development standards and use allowances. Figure 8 depicts the existing and proposed zoning designations for the Project site and surrounding properties.

PROJECT DESCRIPTION

The proposed Project consists of a General Plan Amendment to change the land use designation of the Project site from Business-Commercial-Residential (BCR) to Village Residential (VR); a Specific Plan Amendment to the Village One Specific Plan (VOSP) to change the land use designation of the Specific Plan's Easton subdivision from Business Park (BP) to Village Residential (VR); a Rezone of the Project site from Specific Plan-Holding (SP-H) to Specific Plan (SP); the adoption of Precise Plan 35 North, and a Tentative Subdivision Map creating 127 residential lots, one park lot, and one public access and public utility easement lot. This amendment is necessary to allow future consideration of the development of a residential subdivision on the approximately 19.0-acre Project site.

According to the preliminary site plan, the proposed Project consists of 127 residential units, 1 public access and public utility easement (PUE) lot, and 1 park lot (0.80 acres). The development would include internal roadways, landscaping, and storm drainage. The proposed 127 units on approximately 19.0 acres would result in a density of approximately 6.68 dwelling units per gross acre, which is slightly above the average density of 6.5 dwelling units per gross acre identified for the Village Residential designation in the VOSP. As discussed in Section XI, Land Use and Planning, the requested Specific Plan Amendment would establish the density applicable to the Project site.

Primary vehicular access to the Project site would be provided from Milnes Road to the south, with internal circulation consisting of a connected network of five streets serving the residential units and park lot. Pedestrian circulation would be accommodated through internal walkways linking residential units and the park lot.

Utility improvements would include extensions and connections to existing water, sewer, and storm drainage infrastructure located in surrounding public rights-of-way. Dry utilities such as electricity, communications, and gas would be extended underground to serve the residential buildings and ancillary facilities.

Related Future Development. The Parklane (The Crossings) development is anticipated on the adjoining property south of Milnes Road, east of Claus Road, and west of the BNSF rail line. As currently described, Parklane would subdivide approximately 127.51 acres into 527 residential lots and would require a General Plan Amendment changing the land use designation from Business-Commercial-Residential (BCR) to Residential (R), an amendment to the Village One Specific Plan Land Use Diagram changing the designation from Business Park (BP) to Residential (R), a Final Development Plan, and an amendment to Precise Plan 35 South. Parklane is under separate ownership and is not a component of the proposed Project. It is identified here because it is a reasonably foreseeable future project in the immediate vicinity, and its effects are addressed in the cumulative analysis in Section XXI, Mandatory Findings of Significance. The Noise and Vibration Assessment in Appendix B evaluates the Parklane site together with the Project site.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

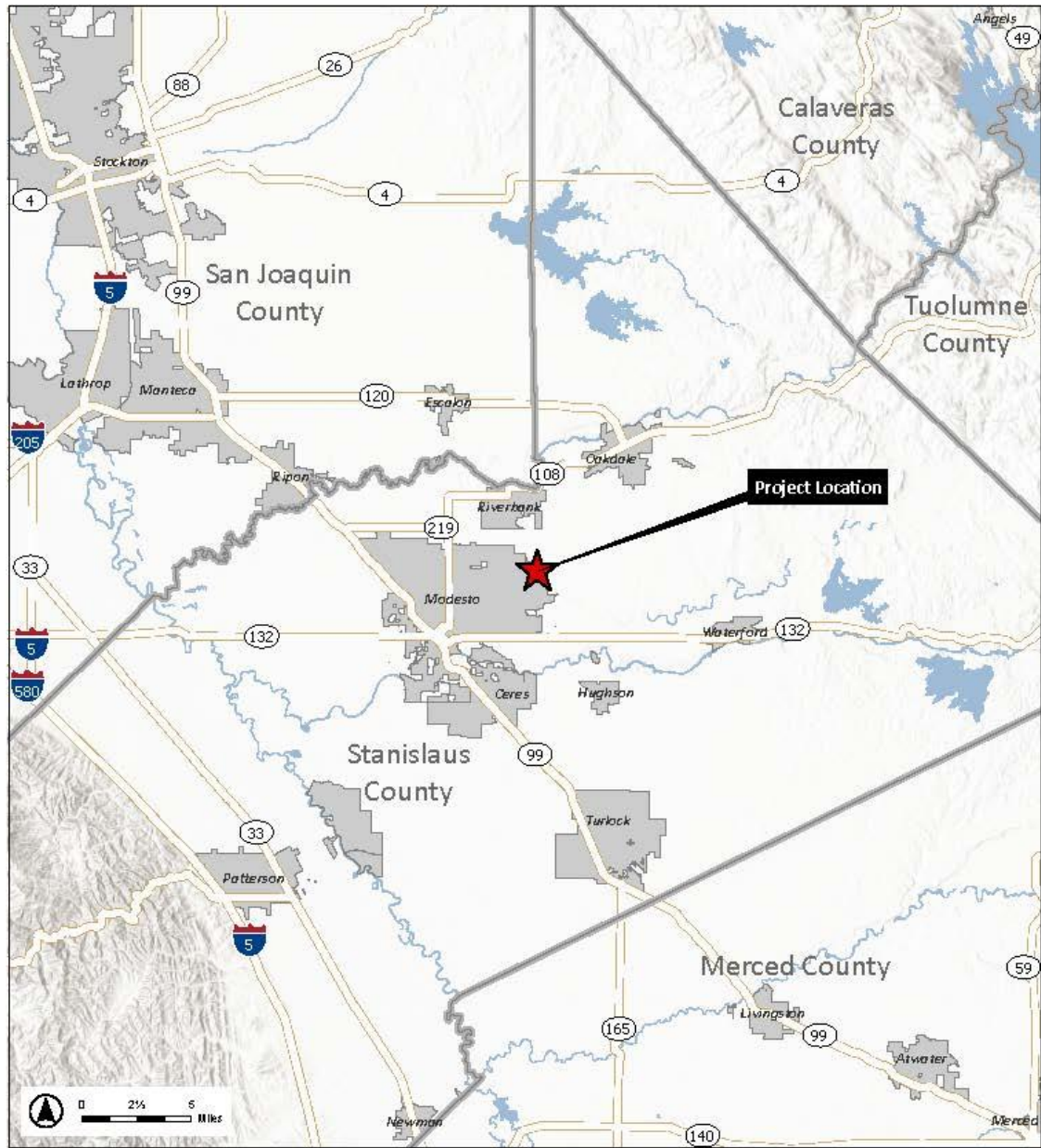
The City of Modesto will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050. Actions that would be required by the City include, but are not limited to the following:

- Adoption of a Mitigated Negative Declaration;
- Approval of City of Modesto General Plan Amendment

- Approval of City of Modesto Village One Specific Plan Amendment.
- Approval of a Rezone from Specific Plan-Holding (SP-H) to Specific Plan (SP);
- Approval of a Tentative Subdivision Map creating 127 residential lots, one park lot, and one public access and public utility easement lot;
- Adoption of Precise Plan 25 North;
- Adoption of a Mitigation Monitoring and Reporting Program;
- Approval of improvement plans, grading and encroachment permits, and a final map; and,

The following agencies may be required to issue permits or approve certain aspects of the proposed project:

- Central Valley Regional Water Quality Control Board (CVRWQCB) – Storm Water Pollution Prevention Plan (SWPPP) for construction activities pursuant to the applicable statewide Construction General Permit.
- Central Valley Flood Protection Board – Encroachment permit, if required; and,
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Confirmation of compliance with applicable Air District rules, including Rule 9510 Indirect Source Review.



Legend

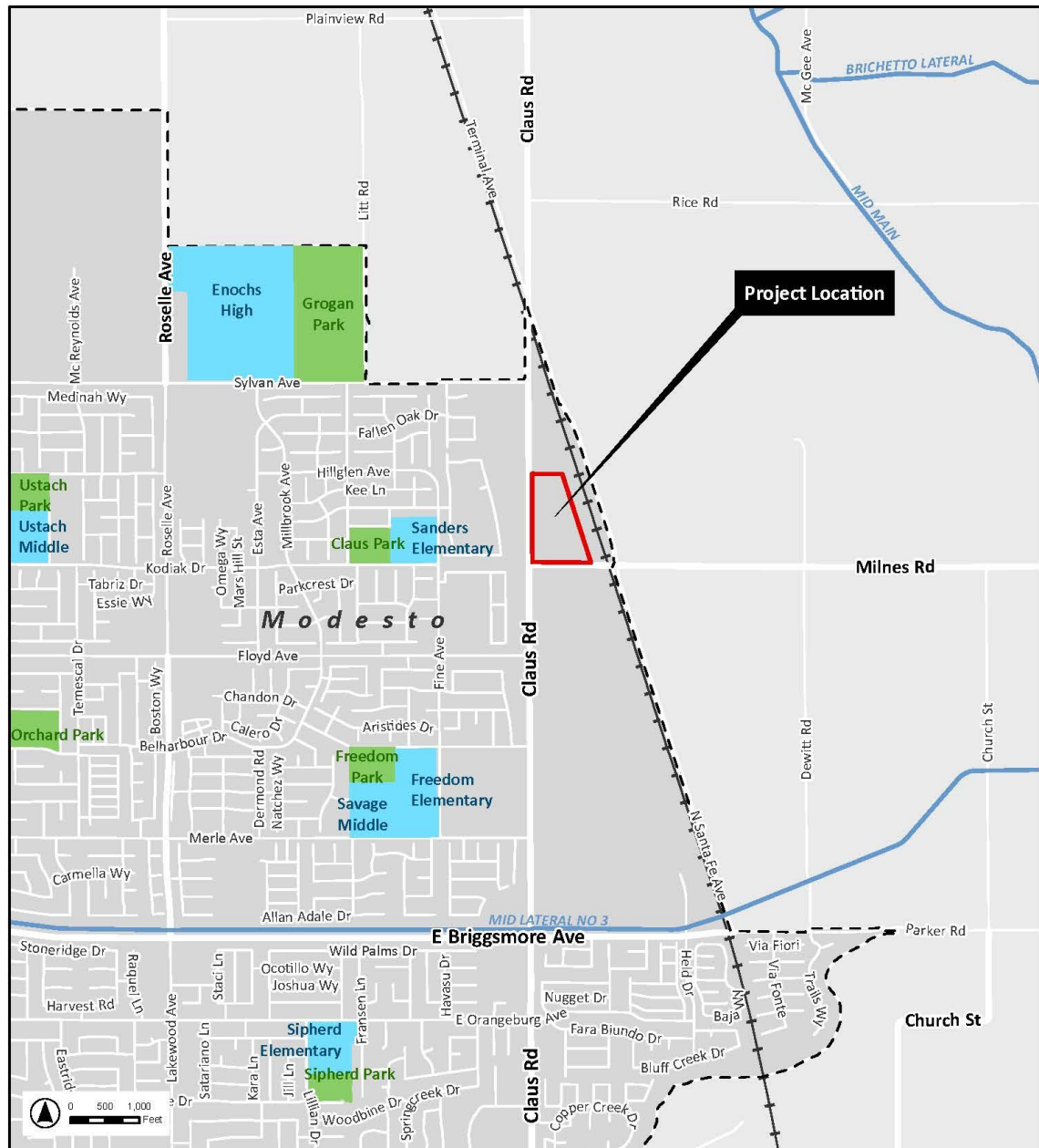
-  Project Location
-  Incorporated Area
-  County Boundary

**EASTON SUBDIVISION
MODESTO, CALIFORNIA**

Figure 1. Regional Map

Sources: California State Geopoint, USGS Transportation Dataset. Map Date: June 1, 2020.

DE NOVO PLANNING GROUP
A LEVO USE PLANNING, DESIGN, AND ENGINEERING FIRM



Project Boundary

City of Modesto

Park

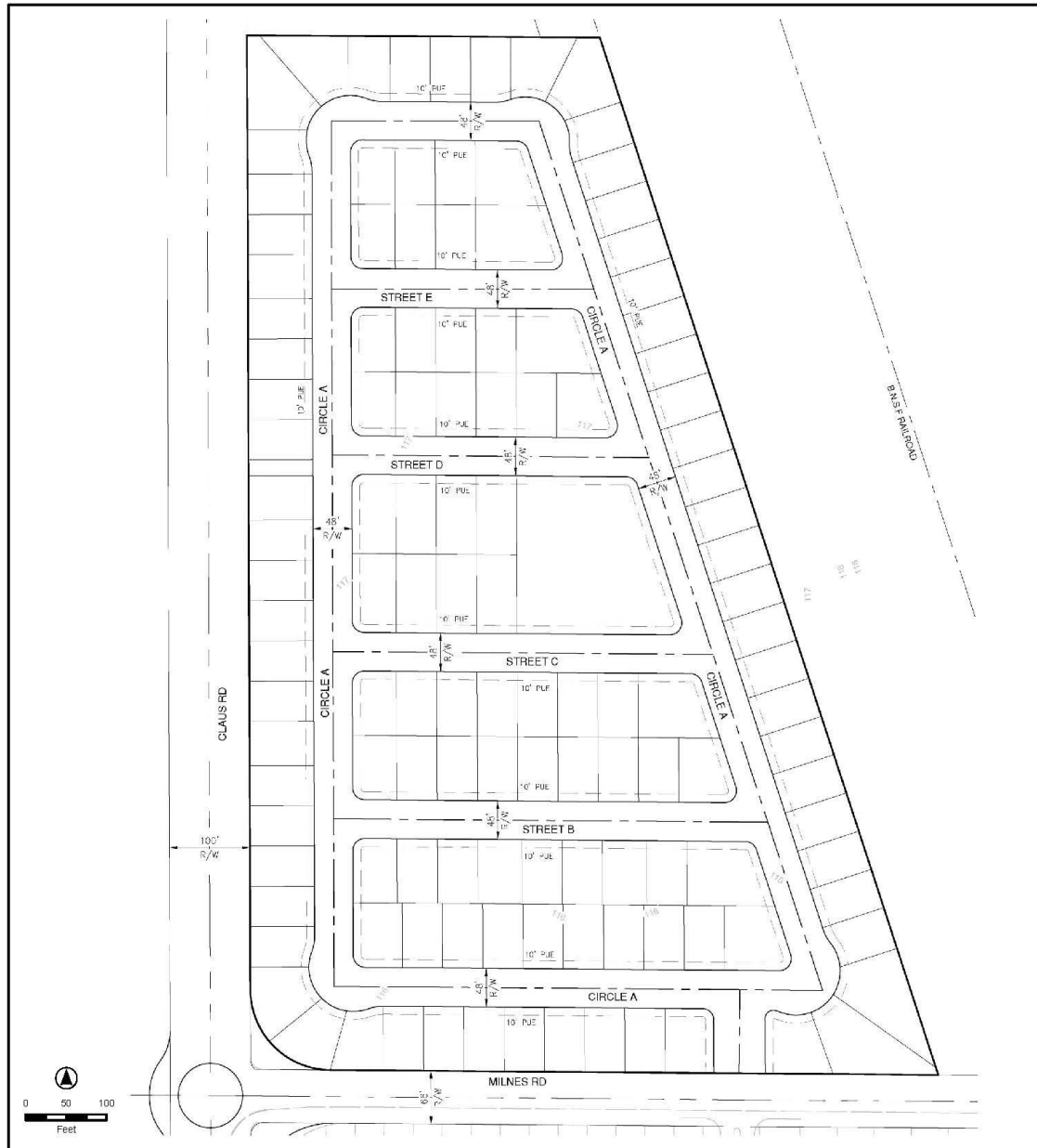
School

**EASTON SUBDIVISION
MODESTO, CALIFORNIA**

Figure 2. Project Location

Sources: Stanislaus County GIS; California Protected Areas Database 2025b.
California School Campus Database 2021. Map date: June 3, 2026.

DE NOVO PLANNING GROUP
A LAND USE PLANNING, DESIGN, AND ENVIRONMENTAL FIRM



**EASTON SUBDIVISION
MODESTO, CALIFORNIA**

Figure 3. Site Plan

Source: Westwood Professional Services, Inc., 2/27/2025. Map date: June 3, 2026.

DE NOVO PLANNING GROUP
A LAND USE PLANNING, DESIGN, AND ENVIRONMENTAL FIRM



Sources: Stanislaus County GIS; Vivid Advanced/Vantor Imagery, 9/6/2025. Map date: June 4, 2026.

DE NOVO PLANNING GROUP
A LAND USE PLANNING, DESIGN, AND ENVIRONMENTAL FIRM

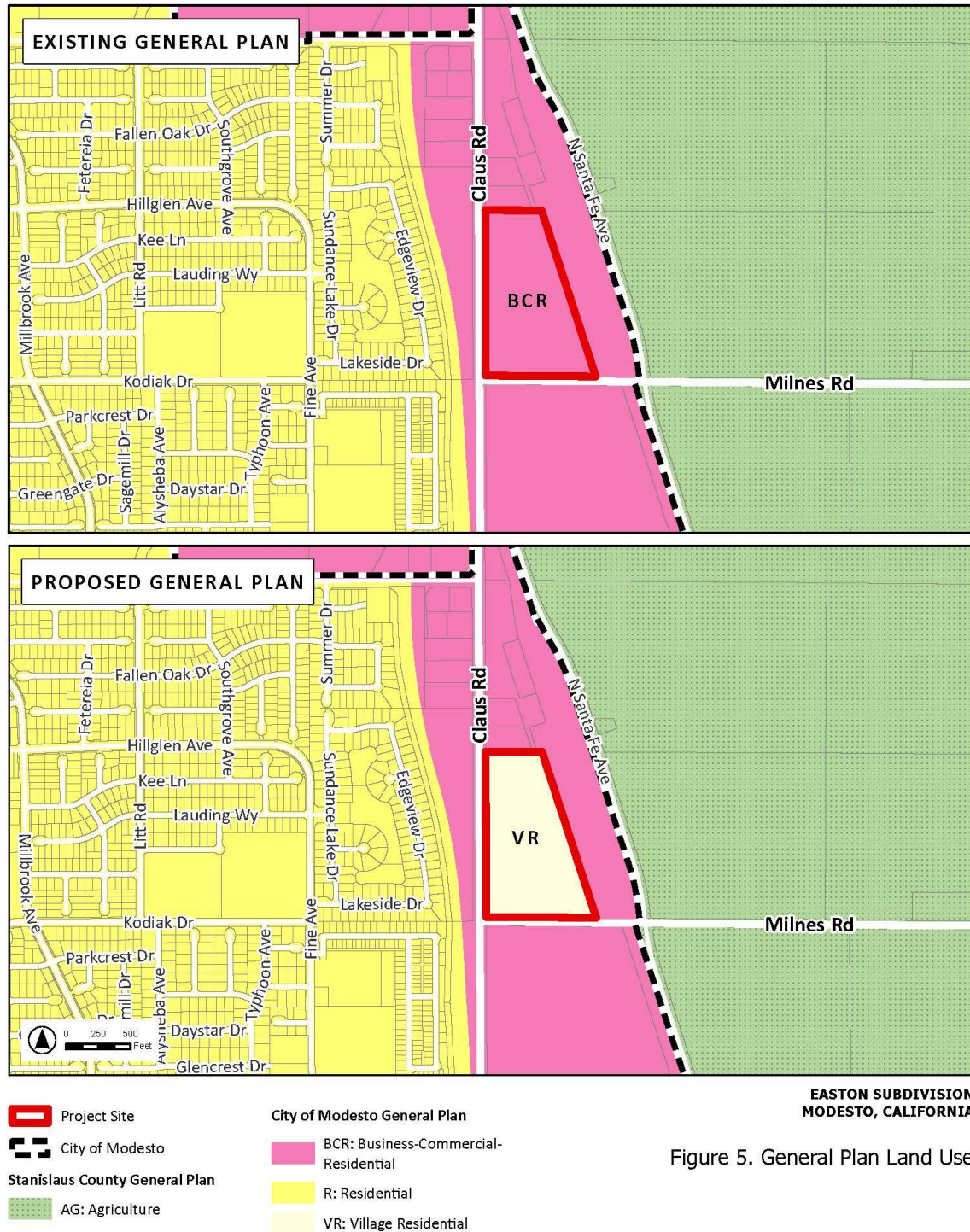
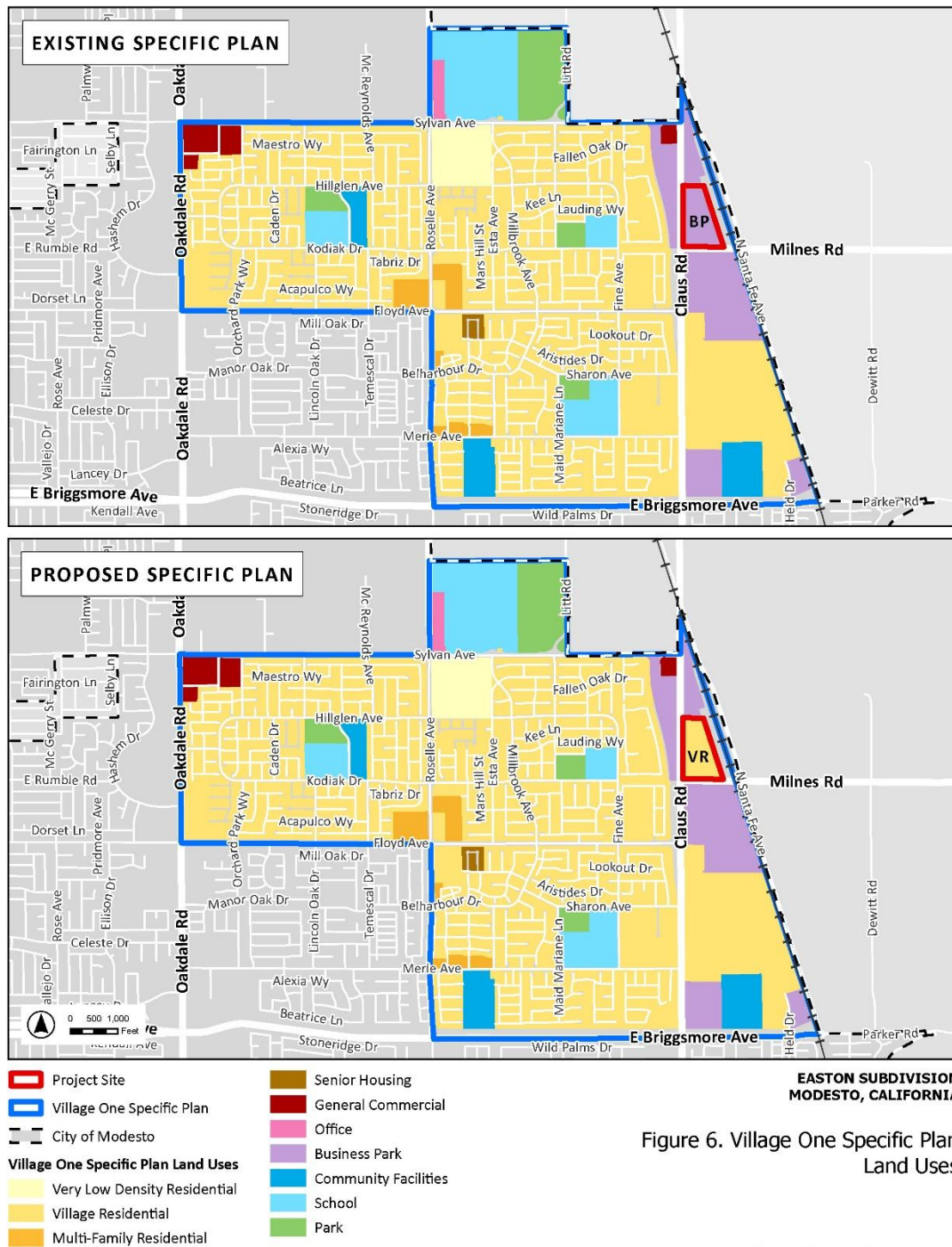


Figure 5. General Plan Land Use

Sources: Stanislaus County GIS; City of Modesto General Plan. Map date: June 8, 2026.

DE NOVO PLANNING GROUP
A LAND USE PLANNING, DESIGN, AND ENVIRONMENTAL FIRM



Sources: Stanislaus County GIS; Village One Specific Plan. Map date: September 1, 2026.



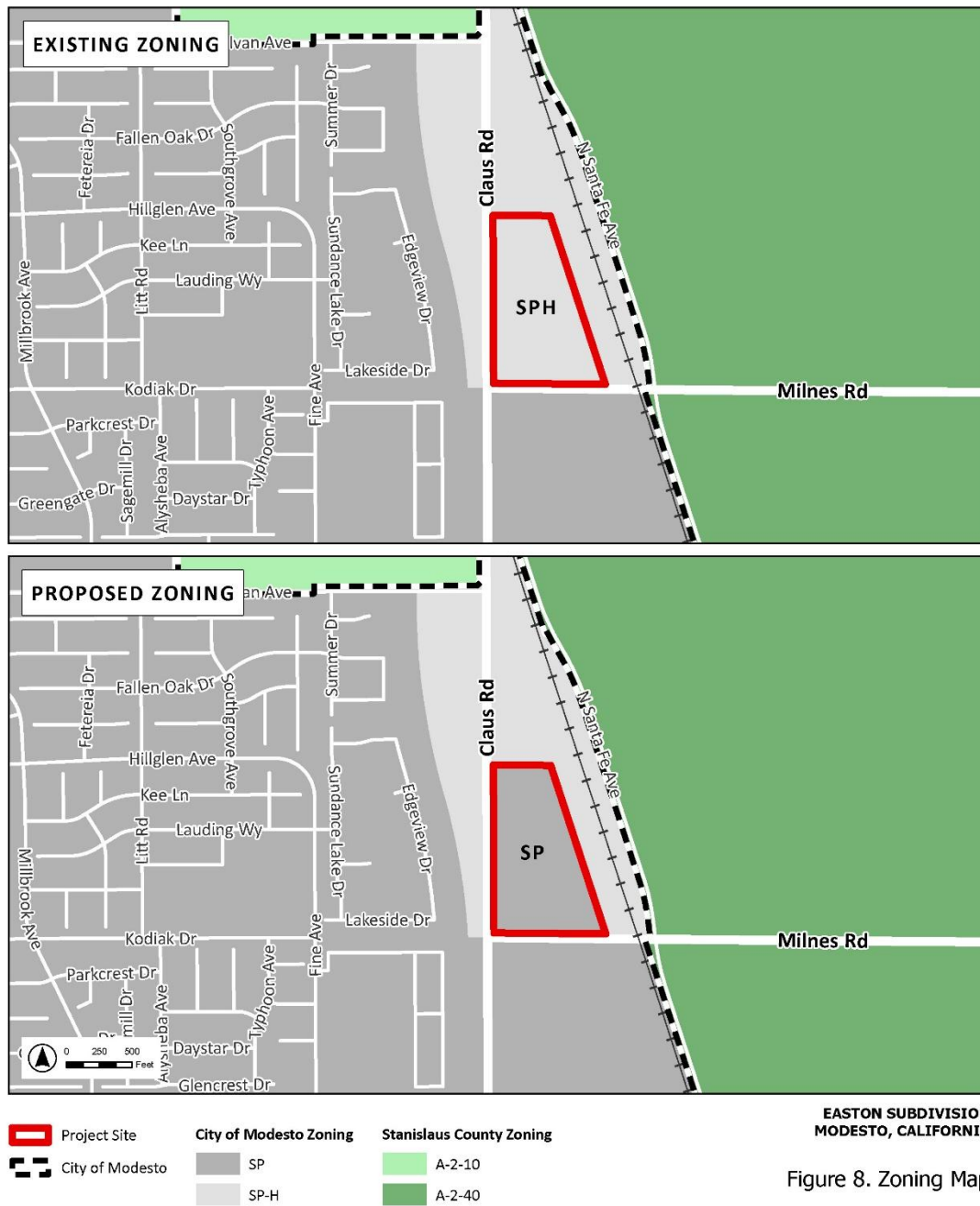
- - - North Basin Park
- Residential Lot
- Park/Basin
- Street
- Landscape/PUE

**EASTON SUBDIVISION
MODESTO, CALIFORNIA**

Figure 7. Easton Subdivision Land Uses

Source: LAND CONCERN, Landscape Architecture, 4/30/2025. Map date: June 8, 2026.

DE NOVO PLANNING GROUP
A LAND USE PLANNING, DESIGN, AND ENVIRONMENTAL FIRM



Sources: Stanislaus County GIS; City of Modesto General Plan. Map date: September 1, 2026.

DE NOVO PLANNING GROUP
A LAND USE, PLANNING, DESIGN, AND ENVIRONMENTAL FIRM

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factor checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" unless mitigated, as indicated by the checklist and discussion on the following pages. All remaining factors were determined to result in no impact or a less than significant impact.

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

DETERMINATION

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

Signature

Date

EVALUATION INSTRUCTIONS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significant.

EVALUATION OF ENVIRONMENTAL IMPACTS

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- **Potentially Significant Impact.** This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- **Less than Significant with Mitigation Incorporated.** This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- **Less than Significant Impact.** A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- **No Impact.** These issues were either identified as having no impact on the environment, or they are not relevant to the project.

The Project site is designated for physical development in the General Plan and Village One Specific Plan (VOSP) and was analyzed as such under the General Plan EIR and VOSP EIR. The CEQA Guidelines have tiering provisions that allow for more streamlined analysis of environmental effects when a project is within the scope of a certified EIR. The proposed Project has certain environmental impacts that are within the scope of the General Plan and VOSP EIRs, and others that are not. For example, impacts to agricultural resources do not change if the site is developed for commercial or residential use. Other impacts that are not affected by the change of use include Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hydrology and Water Quality, Mineral Resources, Tribal Cultural Resources, and Wildfire. For these topics, the analysis is focused on determining whether there would be project-specific impacts that are either 1) peculiar to the project or the parcel on which the project is located; 2) were not previously analyzed as significant effects in a prior environmental document; 3) are potentially significant off-site impacts and cumulative impacts that were not previously discussed in the prior environmental documents; and 4) are now determined to have a more severe impact than discussed in the previous environmental documents due to substantial new information. For all other topics, the focus of the analysis is on the effect that the change of use would have relative to what was expected under the General Plan and VOSP EIRs.

The General Plan EIR referenced throughout this Initial Study is the Environmental Impact Report prepared for the Modesto Urban Area General Plan, and section references are to that document. As explained in that EIR, the five-year certification period for the City's 2019 General Plan Master EIR has lapsed, and the City elected to prepare a new program-level EIR pursuant to CEQA Guidelines Section 15168 rather than renew or re-evaluate the Master EIR. This Initial Study does not tier from the program EIR in lieu of project-level review, and it does not rely on the streamlining provisions of Public Resources Code Section 21083.3 or CEQA Guidelines Section 15183. Each checklist question below is answered on the basis of project-specific evidence, and mitigation is imposed where necessary to reduce a project-level effect to a less than significant level. The program EIR and the VOSP EIR are used as sources of environmental

setting information and as the record of the plan-level effects the City has previously considered, including those significant and unavoidable effects for which the City has adopted statements of overriding considerations.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 21 environmental topic areas.

I. AESTHETICS

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

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcel in the VOSP. The determination of aesthetic impacts will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

Impacts to aesthetics were analyzed in Section 3.1, Aesthetics and Visual Resources, of the General Plan EIR (Impacts 3.1-1 through 3.1-3). Aesthetic impacts related to scenic vistas, scenic resources, visual character, and light and glare were determined to be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

Responses to Checklist Questions

Response a): The General Plan does not designate specific scenic vistas on the Project site or vicinity. There are no scenic vistas on the Project site. Therefore, there is ***no impact*** related to a scenic vista.

Response b): The Project site is not located within view of a state scenic highway. Interstate 5 (I-5) is the only highway section in Stanislaus County listed as a Designated Scenic Highway by

the Caltrans Scenic Highway Mapping System. This highway segment runs north-south adjacent to the California Aqueduct along the western hills of the Central Valley. The City of Modesto is located approximately 25 miles east of I-5, and the Project site is not visible from this highway segment. Therefore, there is ***no impact*** related to a state scenic highway.

Response c): Impacts related to a change in visual character are largely subjective and difficult to quantify. People have varying reactions to the visual quality of a project or project features; what may be considered aesthetically pleasing to some may not be to others. The Project site is located near a mix of agricultural, industrial, and residential land. Implementation of the proposed Project would change the existing visual character of the Project site from a primarily agricultural site consisting of row crops to a residential site consistent with the visual character of Modesto's urbanized environment. Although this would result in a change in the visual character of the site from agricultural land to a built residential environment, this change is consistent with the surrounding urban context and existing General Plan development patterns. The change in visual quality and character of the Project site from agricultural land to urban uses was previously anticipated and approved for the Project site through the adoption of the General Plan EIR and VOSP. The proposed Project would not introduce new visual elements or intensify land use in a manner that would alter the visual environment beyond what is currently present or anticipated in the General Plan or VOSP. As such, the project would have a ***less than significant*** impact on visual character and would be consistent with the conclusions of the General Plan EIR and VOSP.

Response d): Implementation of the proposed Project would introduce new sources of light and glare into the agricultural Project site. New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Project site and from vehicles parked at the site. There is also the potential for reflective building materials and windows to result in increases in daytime glare. There is no existing development within the Project site. New residential development would create new sources of light that are consistent with urban development; however, impacts would be less than significant with existing development standards for light fixtures applied to subsequent projects, such as shielding lights. The City has existing standards that require a street lighting plan to be completed as part of the improvement plans for review and approval by the City. All proposed outdoor lighting would be required to meet applicable City standards regulating outdoor lighting in order to minimize impacts on adjacent properties. Additionally, all outdoor lighting sources of 1,000 lumens or greater must be fully shielded. Implementation of the City's existing lighting standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a ***less than significant*** level.

II. AGRICULTURE AND FORESTRY RESOURCES

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcel in the VOSP. The determination of agricultural impacts will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

The Modesto General Plan EIR evaluated potential impacts to agricultural resources, including the conversion of Prime Farmland and conflicts with existing agricultural zoning, in Section 3.2, Agricultural and Forest Resources (Impacts 3.2-1 through 3.2-3). The General Plan EIR concluded that the loss of Prime Farmland and conflicts with agricultural zoning would result in significant and unavoidable impacts, while other indirect impacts to farmland were found to be less than significant. No impacts on forest land were identified.

This analysis incorporates the findings of the General Plan EIR and provides a streamlined review to assess whether the proposed Project would result in any new or more severe impacts. Specifically, the analysis evaluates whether there are project-specific effects that are: (1) unique to this site; (2) not previously identified as significant in earlier environmental reviews; (3) potentially significant off-site or cumulative impacts not previously addressed; or (4) more severe than previously disclosed due to new information. The determination of agricultural impacts is guided primarily by the Modesto General Plan and its associated EIR, which serve as the basis for evaluating consistency and potential environmental effects related to farmland conversion.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy AL-8: To reduce development pressures on agricultural lands, higher density development and infilling shall be encouraged. (County General Plan, Ag Element, Policy 2.4)
- Policy AL-12: If a subsequent project is within the Baseline Developed Area or Downtown Area as identified on the General Plan Growth Strategy Diagram (Figure II-1), consider the project to have minimal effect on the conversion of agricultural lands, and no mitigation for that impact will be required. (UAGP Policy VII-D.3[a])
- Policy AL-16: Do not annex agricultural land unless urban development consistent with the General Plan has been approved by the City. (UAGP Policy VII-D.4[a])
- Policy AL-17: Support the continuation of agricultural uses on lands designated for urban uses until urban development is imminent. (UAGP Policy VII-D.4[b])
- Policy AL-18: Encourage the County to retain agricultural uses on land surrounding the General Plan area and on lands within the General Plan area pending their annexation to the City or development by mutual agreement with the County. (UAGP Policy VII-D.4[c])
- Policy AL-19: Where necessary to promote planned City growth, encourage development of those agricultural lands that are already compromised by adjacent urban development or contain property required for the extension of infrastructure or other public facilities, before considering urban development on agricultural lands that are not subject to such urban pressures. (UAGP Policy VII-D.4[d])
- Policy AL-20: For any subsequent project that is adjacent to existing agricultural use, the project proponent may incorporate measures to reduce the potential for conflicts with agricultural use. Potential measures to be implemented may include the following:
 - Include a buffer zone of sufficient width between proposed residences and the agricultural use; and,
 - Inform residents about the possible exposure to agricultural chemicals. (UAGP Policy VII-D.4[e])

Responses to Checklist Questions

Response a): The proposed Project includes a General Plan Amendment, a Specific Plan Amendment, and a Rezone to revise the land use and zoning designations established by the General Plan and the VOSP for the 19.0-acre Project site. The potential for the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) was addressed in the EIR for the previously approved VOSP.

The proposed Project is within the boundary of the VOSP and proposes a General Plan Amendment that would change the land use designation from BCR to VR, as well as a Specific Plan Amendment that would change the land use designation from BP to VR. This change of use would result in the same physical environmental impact that was already anticipated in the VOSP, which assumes that the Project site would convert from an agricultural use to an urban use. The proposed amendments do not cause an impact greater than what has already been considered in the EIR for the VOSP.

Development of the site would extend the urbanized area incrementally northward and eastward as originally anticipated in the General Plan and VOSP. The VOSP EIR concluded that the loss of Prime Farmland resulting from build-out of the VOSP would be a significant, irreversible, and unavoidable impact of the plan, and mitigation was recommended to minimize the impact to the extent feasible. The City Council considered farmland mitigation programs and adopted a statement of overriding considerations for the conversion of Prime Farmland within the VOSP planning area, including the Project site. Because the proposed Project would convert the same acreage from agricultural to urban use as was previously analyzed and approved, and would not extend urban conversion beyond the area already studied, it would not result in a new significant effect or a substantial increase in the severity of the significant effect previously identified. Relative to the previously approved plans, therefore, the impact of the proposed Project is ***less than significant*** relative to this issue.

Response b): The Project site has been annexed into the city of Modesto and is not under a Williamson Act contract. The proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Implementation of the proposed Project would have ***no impact*** relative to this issue.

Response c): The Project site is not designated as forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526). The proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. Implementation of the proposed Project would have ***no impact*** relative to this issue.

Response d): The Project site is not designated as forest land. The proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. Implementation of the proposed Project would have ***no impact*** relative to this issue.

Response e): The Project site does not contain forest land, and there is no forest land in the vicinity of the Project site. Although the Project would result in the conversion of farmland to non-farmland, this impact was anticipated in the Modesto General Plan and the VOSP. The proposed Project does not involve any other changes in the existing environment not disclosed under the previous responses which, due to their location or nature, could result in additional conversion of farmland, to non-agricultural use, or conversion of forest land to non-forest use. Implementation of the proposed Project would have ***no impact*** relative to this issue.

III. AIR QUALITY

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcel in the VOSP. The determination of air quality impacts will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

Impacts to air quality were analyzed in Section 3.3, Air Quality, of the General Plan EIR (Impacts 3.3-1 through 3.3-3). The General Plan EIR found that impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be significant and unavoidable, and that impacts related to conflict with implementation of an applicable air quality plan, violation of air quality standards, a cumulatively considerable net increase of criteria pollutants, or creation of objectionable odors would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy AQ-65. Implement measures to reduce motor vehicle use and related ozone precursor and PM₁₀ emissions through changes to the transportation infrastructure. Potential measures to be implemented may include those shown in Section V-2 of the Final Master Environmental Impact Report. (Policy VII.H.2.a)
- Policy AQ-66. Implement measures to reduce vehicle use and associated emissions related to existing and future land use development in the City of Modesto. Potential measures to be implemented may include those shown in Section V-2 of the Final Master Environmental Impact Report. (Policy VII.H.2.b)
- Policy AQ-67. Implement measures to reduce emissions associated with energy use by residences and businesses. Potential measures to be implemented may include those shown in Section V-2 of the Draft Master EIR. (Policy VII.H.2.c)

The following policies are intended to accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the City of Modesto.

- Policy AQ-79. Determine project air quality impacts using analysis methods and significance thresholds recommended by the SJVAPCD. (Policy VII.H.2.o)
- Policy AQ-80. Ensure that identified air quality impacts are consistently and fairly mitigated. (Policy VII.H.2.p)
- Policy AQ-81. Ensure all air quality mitigation measures are feasible, implementable, and cost effective. (Policy VII.H.2.q)
- Policy AQ-82. Identify the cumulative transportation and air quality impacts of all General Plan amendments approved during the previous year. (Policy VII.H.2.r)
- Policy AQ-83. Reduce the air quality impacts of development projects that may be insignificant by themselves but cumulatively are significant. (Policy VII.H.2.s)
- Policy AQ-84. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties. (Policy VII.H.2.t)
- Policy AQ-85. Review of new development shall be coordinated with SJVAPCD staff to ensure all projects subject to the SJVAPCD Rule 9510 (Indirect Source Review) comply fully with the rule. This rule fulfills the SJVAPCD's emissions reduction commitments in the PM₁₀ and Ozone Attainment Plans through emission reductions from the construction and use of development projects through design features and onsite measures. Rule 9510 applies to any application that seeks to gain a final discretionary approval for a development project, or any portion thereof, which meets certain minimum thresholds. (Policy VII.H.2.u)

The following policies are consistent with the SJVAPCD Air Quality Guidelines for General Plans and are intended to integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources and to create a healthier and more livable environment.

- Policy AQ-89. Consider air quality when planning the land uses and transportation systems to accommodate the expected growth in this community. (Policy VII.H.2.y)
- Policy AQ-90. All transportation improvement projects to be included in regional transportation plans (TRP, RTIP, CMP, etc.) should be consistent with air quality goals and policies of the General Plan. (Policy VII.H.2.z)
- Policy AQ-91. Consult with transit providers to determine project impacts on long-range transit plans and ensure that impacts are mitigated where feasible. (Policy VII.H.2.aa)
- Policy AQ-92. Work with the Housing Authority, transit providers, and developers to encourage the construction of low-income housing developments that use transit-oriented and pedestrian-oriented design principles. (Policy VII.H.2.bb)
- Policy AQ-93. Work with Caltrans and the Regional Transportation Planning Agency to minimize the air quality, mobility, and social impacts of large-scale transportation projects on existing neighborhoods. (Policy VII.H.2.cc)

The following policies are consistent with the SJVAPCD Air Quality Guidelines for General Plans and are intended to reduce emissions of PM₁₀ and other particulates with local control potential.

- Policy AQ-100. Reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible in accordance with the requirements of SJVAPCD Regulation VIII. Regulation VIII was adopted to reduce the amount of particulate matter suspended in the atmosphere as a result of emissions generated from anthropogenic (man-made) fugitive dust sources. (Policy VII.H.2.jj)
- Policy AQ-101. Require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions in accordance with the requirements of SJVAPCD Regulation VIII and are appropriate to the scale and intensity of use. (Policy VII.H.2.kk)
- Policy AQ-102. Reduce PM₁₀ emissions from City-maintained roads to the maximum extent feasible (Policy VII.H.2.ll)

The following controls are required to be implemented at all construction sites.

- Policy AQ-103. Effectively stabilize dust emissions using water, chemical stabilizer/suppressant, cover with a tarp or other suitable cover or vegetative ground cover, all disturbed areas, including storage piles, which are not being actively utilized for construction purposes. (Policy VII.H.2.mm)
- Policy AQ-104. Effectively stabilize dust emissions using water, chemical stabilizer/suppressant, all onsite unpaved roads, and off-site unpaved access roads. (Policy VII.H.2.nn)
- Policy AQ-105. Effectively control fugitive dust emissions utilizing application of water or by presoaking all land clearing, grubbing scraping, excavation, land leveling, grading, cut & fill, and demolition activities. (Policy VII.H.2.oo)
- Policy AQ-106. Wet all exterior surfaces of buildings that are more than six stories tall during demolition. (Policy VII.H.2.pp)
- Policy AQ-107. When materials are transported off site, cover all materials, or effectively wet them to limit visible dust emissions, and maintain at least six inches of freeboard space from the top of the container. (Policy VII.H.2.qq)
- Policy AQ-108. Limit operations 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 blower devices is expressly forbidden.) (Policy VII.H.2.rr)
- Policy AQ-109. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, effectively stabilize said piles for fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. (Policy VII.H.2.ss)
- Policy AQ-110. Within urban areas, immediately remove trackout when it extends 50 or more feet from the site at the end of each workday. (Policy VII.H.2.tt)

- Policy AQ-111. Prevent carryout and trackout for any site with 150 or more vehicle trips per day. (Policy VII.H.2.uu)

The following measures should be implemented at construction sites when required to mitigate significant PM₁₀ impacts (note, these measures are to be implemented in addition to Regulation VIII requirements).

- Policy AQ-112. Limit traffic speeds on unpaved roads to 15 mph. (Policy VII.H.2.vv)
- Policy AQ-113. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent (1%). (Policy VII.H.2.ww)
- Policy AQ-114. Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site. (Policy VII.H.2.xx)
- Policy AQ-115. Install wind breaks at windward side(s) of construction areas. (Policy VII.H.2.yy)
- Policy AQ-116. Suspend excavation and grading activity when winds exceed 20 mph (regardless of windspeed, an owner/operator must comply with Regulation VIII's 20 percent (20%) opacity limitation). (Policy VII.H.2.zz)
- Policy AQ-117. Limit the area subject to excavation, grading, and other construction activity at any one time. (Policy VII.H.2.aaa)

Responses to Checklist Questions

Responses a), b): Less than Significant. The proposed Project would be both a direct and indirect source of air pollution. Direct sources of pollution include area, energy, and water and waste sources, due to development of the on-site buildings and associated infrastructure. Indirect sources of pollution would be due to the generation of trips of vehicles traveling to and from the Project site.

Operational Impacts

CalEEMod™ (v.2022.1) was used to model operational emissions of the proposed Project. Table Air-1 shows proposed Project emissions as provided by CalEEMod. Further detail is provided in Appendix A. The City, in its discretion as lead agency, has elected to utilize air quality emissions thresholds provided by the SJVAPCD (which are based on substantial factual and scientific data) to determine whether the proposed Project would result in excessive contributions to regional air quality conditions. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. The SJVAPCD has established operations related emissions thresholds of significance as follows: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of sulfur oxides (SO_x), 15 tons per year particulate matter of 10 microns or less in size (PM₁₀), and 15 tons per year particulate matter of 2.5 microns or less in size (PM_{2.5}). If the proposed Project's emissions are found to exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project would have a significant impact on air quality, and all feasible mitigation is required to be implemented to reduce emissions to the less-than-significant levels. As shown in Table AIR-1, operational emissions would not exceed any of the SJVACPD operational thresholds of

significance.

Table AIR-1: Operational Project Generated Emissions (tons per year)

POLLUTANT	CO	NOx	ROG	SOx	PM ₁₀	PM _{2.5}
THRESHOLD	100	10	10	27	15	15
EMISSIONS	7	1	2	<1	1	1
EXCEEDS THRESHOLD?	N	N	N	N	N	N

SOURCES: CALHEMOD (v.2022.1)

Construction Impacts

Separately, emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Construction-related activities would result in Project-generated emissions from demolition, site preparation, grading, paving, building construction, and architectural coatings. CalHEMOD™ (v.2022.1) was used to estimate construction emissions for the proposed Project. Table AIR-2, below, provides the construction criteria pollutant emissions associated with construction of the proposed Project and compared against the SJVAPCD's construction related emissions thresholds. Further detail is provided in Appendix A.

Table AIR-2: Maximum Construction Project Generated Emissions (tons per year)

POLLUTANT	CO	NOx	ROG	SOx	PM ₁₀	PM _{2.5}
THRESHOLD	100	10	10	27	15	15
EMISSIONS	2	1	1	<1	<1	<1
EXCEEDS THRESHOLD?	N	N	N	N	N	N

SOURCES: CALHEMOD (v.2022.1)

If the proposed Project's emissions are found to exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project would have a significant impact on air quality, and all feasible mitigation would be required to be implemented to reduce emissions to the less-than-significant levels. As shown in Table AIR-2, Project maximum construction emissions would not exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related control measures in accordance with their rules and regulations. These construction-related control measures are not reflected in the estimated Project construction emissions presented in Table AIR-2. Thus, this analysis can be viewed as conservative, and implementation of these control measures (provided in further detail below) would further reduce proposed Project construction related emissions compared to the emissions presented in Table AIR-2.

The first step to implement the required construction-related control measures is to prepare a Dust Control Plan that meets all the applicable requirements of SJVAPCD Rule 8021. All construction activities are required to implement dust control measures, as required by SJVAPCD Rules 8011-8081, to limit Visible Dust Emissions to 20% opacity or less. Dust control measures include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites as required by the applicable rules. The dust control practices listed below are the control measures required by SJVAPCD Regulation VIII (Rules 8011 through 8081) and are consistent with the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), adopted March 19, 2015. These practices shall be imposed on the Project as standard conditions of approval, shall be

incorporated into the Project's Dust Control Plan submitted to and approved by the SJVAPCD prior to issuance of a grading permit, and shall be verified by the City of Modesto through construction inspection and by the SJVAPCD through its Regulation VIII compliance and enforcement program. Documentation of SJVAPCD approval of the Dust Control Plan shall be provided to the City prior to the commencement of ground-disturbing activities:

- a. *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.*
- b. *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
- c. *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking.*
- d. *When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.*
- e. *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. 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 blower devices is expressly forbidden.*
- f. *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.*
- g. *Limit traffic speeds on unpaved roads to 15 mph.*
- h. *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.*

The proposed Project would be required to comply with all applicable federal, State, SJVAPCD, and other local laws, regulations and requirements, as well as implement the control measures provided by the SJVAPCD, to reduce construction-related PM₁₀ emissions.

CONCLUSION

The proposed Project would not exceed any applicable criteria air pollutant thresholds during construction or operation. Furthermore, the proposed Project would be required to comply with all applicable federal, State, SJVAPCD, and other local laws, regulations and requirements, as well as implement the control measures provided by the SJVAPCD, which would further reduce construction-related PM₁₀ emissions. Compliance with these existing rules, laws and regulations would further reduce the Project's impacts with respect to criteria pollutant emissions. This is a ***less than significant*** impact.

Response c): Less than Significant. A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at extremely low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. EPA regulate 188 air toxics, also known as hazardous air pollutants. The U.S. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, the U.S. EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial, and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table Air-3 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

Table Air-3: CARB Minimum Separation Recommendations on Siting Sensitive Land Uses

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

The Project site is not within 1,000 feet of any of the source categories identified above. Moreover, the proposed Project's residential uses do not propose any land uses that generate notable sources of TACs. The applicable SJVAPCD significance threshold for carcinogenic TACs is an increased cancer risk of 10 in one million or greater for the maximally exposed individual (GAMAQI, 2015). Because the Project would not site any TAC-emitting source and no existing TAC source is located within 1,000 feet of the site, the Project would not approach this threshold, and no health risk assessment is required. Separately, the SJVAPCD recommends that an ambient air quality analysis be performed where a project would generate criteria pollutant emissions from on-site sources exceeding 100 pounds per day. Maximum on-site emissions would not exceed 100 pounds per day for any criteria pollutant, and therefore no ambient air quality analysis is therefore required. With respect to localized carbon monoxide (CO) concentrations, a CO hotspot analysis is not required. Since the proposed Project would not generate a significant risk of public exposure to TACs, the proposed Project would have a ***less than significant*** impact relative to exposure of sensitive receptors to toxic air contaminants.

Response d): Less than Significant.

Operational Impacts

Operation of the proposed Project would not result in other emissions, such as those leading to odors, which would adversely affect a substantial number of people. Examples of facilities that are known producers of operational odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant. Given their nature and scope, the proposed Project proposes residential and park uses, which would not generate odors that would adversely affect a substantial number of people. The proposed land uses may generate odors related to trash containers typical of a suburban residential subdivision. But solid waste would be removed on a weekly basis consistent with standard practices and applicable City requirements, and would not accumulate or decompose to the magnitude that would generate a public nuisance. In addition, SJVAPCD Rule 4102 Nuisance prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.

Construction Impacts

People in the immediate vicinity of construction activities may be subject to temporary odors typically associated with construction activities (diesel exhaust, hot asphalt, etc.). However, any odors generated by construction activities would be minor and would be short and temporary in duration.

As such, the Project would not result in substantial emissions (such as those leading to odors) during construction or operation that would adversely affect a substantial number of people. The Project would result in a ***less than significant*** impact.

IV. BIOLOGICAL RESOURCES

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?		X		
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 US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?				X

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of biological impacts will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

Impacts on biological resources are analyzed in Section 3.4, Biological Resources, of the General Plan EIR (Impacts 3.4-1 through 3.4-5). As discussed in the General Plan EIR, there is low potential for impacts on sensitive wildlife and plant habitats within the Baseline Developed Area, and impacts to special-status species, sensitive natural communities and riparian habitat, wetlands, wildlife movement, and conflict with biological resource ordinances or policies would be less than significant. The General Plan EIR also found there would be no impacts involving conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy SWPH-11: For proposed development consistent with the adopted Urban Area General Plan on lands within the Baseline Developed Area and Downtown, exclusive of lands within the Dry Creek and Tuolumne River Comprehensive Planning Districts, an assessment of whether any potential habitat for special-status species is present within proposed development areas shall be made. No further biological study is warranted unless habitat is present or if specific information concerning the known or potential presence of significant biological resources is identified in future updates of the California Natural Diversity Database, or through formal or informal input received from resource agencies or other qualified sources. (UAGP Policy VII-E.2[a])
- Policy SWPH-12: For all lands within the Planned Urbanizing Area, site-specific surveys shall be conducted by a qualified biologist to determine whether any sensitive natural communities or species are present within the proposed development area. These studies shall particularly focus on proposed development within any lands included within a potential biological resource study area as delineated on Figure V-7-1 in the Final Program Environmental Impact Report (Riparian Corridor Diagram). Prior to considering development applications, the City shall coordinate with the USFWS and CDFW regarding listed species and potential for impacts. The City shall employ the measures recommended by the USFWS and/or CDFW to avoid an incidental take.

Conduct surveys at the appropriate season to best determine the likelihood of occurrence and should employ accepted methodologies as determined by CDFW and USFWS. The results of such surveys should be recorded onto the City's existing biological resources map for future planning purposes. (UAGP Policy VII-E.3[a])

Responses to Checklist Questions

Response a): The Project site was surveyed by Steve McMurtry, Principal Biologist, on July 1, 2026. The survey consisted of a reconnaissance level survey that was intended to assess existing conditions on and in the vicinity of the Project site. Prior to the field survey, a records search of the CNDDDB, IPAC, and CNPS was performed.

The Project site consists of vacant agricultural land that has historically been disturbed and does not contain suitable foraging or nesting habitat for most special-status wildlife species. The absence of natural vegetation and the urban context of the surrounding area limit the site's potential to support sensitive plant species. No special-status plants or wildlife species are anticipated to occur on-site due to the lack of habitat. However, given their mobility, there is limited potential for special-status bird species to occur transiently within the site. In particular, burrowing owls are known to have nesting sites in the broader region and could potentially utilize nearby areas. The California Fish and Game Code Section 3503 prohibits the destruction of active nests and eggs of birds, while Section 3513 provides additional protection for migratory nongame birds. Consistent with General Plan Policy SWPH-12, and with implementation of Mitigation Measure BIO-1, impacts to special-status species would be reduced to ***less than significant*** levels.

Mitigation Measure BIO-1: *No more than 30 days prior to the start of ground-disturbing activities, a qualified biologist shall conduct a reconnaissance-level survey of the Project site and a 500-foot buffer for burrowing owl and, if activities occur during the nesting season (February 1 through August 31), for active nests of birds protected under the*

Migratory Bird Treaty Act and California Fish and Game Code sections 3503, 3503.5, and 3513. If burrowing owl or an active nest is detected, the biologist shall establish a no-disturbance buffer appropriate to the species and the activity, in coordination with the California Department of Fish and Wildlife, and the buffer shall be maintained until the biologist determines that the young have fledged or the burrow is no longer occupied. Survey results shall be submitted to the City prior to issuance of a grading permit.

Response b): There is no riparian habitat on the Project site, therefore, implementation of the proposed Project would have ***no impact*** on riparian habitats or natural communities.

Response c): There is no wetland habitat on the Project site. The agricultural drainage ditches along the eastern and southern perimeters are not protected wetlands. Implementation of the proposed Project would have ***no impact*** on wetlands.

Response d): There are no identified wildlife corridors or wildlife nursery sites on, or adjacent to, the Project site. Therefore, the proposed Project would have ***no impact*** relative to this topic.

Response e): The Project site is a part of the VOSP planning area and is within the urbanized area of the City of Modesto. The proposed Project would not conflict with General Plan policies or other existing standards or ordinances intended to protect biological resources. Implementation of this Project would have a ***less than significant impact*** relative to this issue.

Response f): The City of Modesto is not located within an approved local, regional, or State habitat conservation plan. Therefore, implementation of the proposed Project would have ***no impact***.

V. CULTURAL RESOURCES

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on culturally significant resources will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

The General Plan EIR analyzes cultural and tribal cultural resources impacts in Section 3.5, Cultural and Tribal Cultural Resources (Impacts 3.5-1 through 3.5-3). As discussed in the General Plan EIR, areas of high probability for archaeological resources are located within the riparian corridors along the Tuolumne River, Dry Creek, and the Stanislaus River. Areas outside of riparian corridors where soils have been previously excavated have a low probability for archaeological resources. At the plan level, the General Plan EIR concluded that impacts on historical and archaeological resources (Impact 3.5-1) would be significant and unavoidable, and that impacts related to the disturbance of human remains (Impact 3.5-2) and to tribal cultural resources (Impact 3.5-3) would be less than significant with implementation of General Plan policies and actions.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy AH-19. Any project subject to CEQA that involves substantial earth-disturbing activities should require consultation by the applicant for the purposes of determining archaeological and cultural resources impacts and creating appropriate mitigation to address such impacts. (UAGP Policy VII.F.3[a])
- Policy AH-20. Any project that involves earth-disturbing activities within previously undisturbed soils in an area determined to be archaeologically or culturally sensitive by the City of Modesto through consultation with Native American tribes or bands and a qualified archaeologist should be subject to archaeological and Native American monitoring during all ground-disturbing activities. (UAGP Policy VII.F.3[b])
- Policy AH-21. Any project that involves earth-disturbing activities within previously undisturbed soils in an area determined to be archaeologically or culturally sensitive by the City of Modesto through consultation with Native American tribes or bands and a qualified archaeologist should be required to carry out the following mitigation measures, at a minimum:

1. If prehistoric archaeological remains are discovered during project construction (inadvertent discoveries), all work in the area of the find shall cease, and a qualified archaeologist should be retained by the project sponsor to investigate the find and make recommendations as to treatment and mitigation. In the event of the discovery of a burial, human bone, or suspected human bone all excavation or grading in the vicinity of the find should halt immediately and the area of the find should be protected and the project applicant immediately should notify the County Coroner of the find and comply with the provisions of California Health and Safety Code Section 7050.5, including California Public Resources Code Section 5097.98, if applicable. If human remains are identified, the project sponsor should also retain a Native American monitor.
2. A qualified archaeological monitor should be present and should have the authority to stop and redirect grading activities, in consultation with the Native Americans and their designated monitors, to evaluate the significance of any Native American archaeological resources discovered on the property.
3. Native American monitors from the appropriate Native American Tribes, as determined by the NAHC should be allowed to monitor all groundbreaking activities, including all archaeological testing and data recovery excavations that are likely to affect Native American resources, as determined by a qualified archaeologist. The project proponent should be responsible for compensating Native American monitors. If human remains are discovered, the NAHC should assign a Most Likely Descendent (MLD); and,
4. The landowner agrees to relinquish ownership of all Native American human remains and associated burial artifacts that are found within the project area, to the appropriate Native American MLD, as assigned by the NAHC, for proper treatment and disposition. The MLD will decide whether or not standard archaeological analysis will be allowed on human remains and associated artifacts from burials.
5. If paleontological resources are discovered during earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find, and the City's Planning Manager shall be notified. A qualified paleontologist shall evaluate the resource and prepare a proposed mitigation plan in accordance with Society of Vertebrate Paleontology guidelines. The proposed mitigation plan may include a field survey of additional construction areas, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations determined by the lead agency to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. (UAGP Policy VII.F.3[c])

Responses to Checklist Questions

Response a), b): The proposed Project is within the VOSP planning area, which was surveyed for cultural resources as part of the certified EIR. As described in the EIR for the VOSP, there is a low probability for cultural artifacts to be found. Given that the proposed Project is within the boundaries of the VOSP planning area, the same conclusions regarding the likelihood of finding cultural artifacts apply to the proposed project and that likelihood is relatively low. In addition,

the proposed Project site is currently vacant and undeveloped. As such, the project would not result in the alteration or demolition of any potentially historic structure, nor would it affect any resource over 50 years old that has been identified as historically significant.

The site is not located within or near a known riparian corridor and based on prior environmental review conducted for the City's General Plan, the potential for archaeological resources in this area is considered low. Nevertheless, the project would remain subject to General Plan Policies AH-19 through AH-21, and to Mitigation Measure TCR-1, which provide protocols for the discovery of archaeological materials or human remains during any future site work. Compliance with applicable State regulations, including California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98, and CEQA Guidelines Section 15064.5(e), would also be required in the event of an unexpected discovery. Therefore, the proposed Project would not result in significant impacts related to cultural or historic resources and would be consistent with the level of analysis previously conducted in the General Plan EIR. Therefore, the proposed Project's impact would be *less than significant*.

Response c): Indications suggest that humans have occupied Stanislaus County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097.98 sets out specific stop-work and notification procedures to follow if human remains are inadvertently discovered during Project implementation.

While no human remains are documented on or near the Project site, the VOSP states that development within the planning area, including the Project site, would adhere to the existing Modesto General Plan policies regarding the discovery of human remains at a project site. The Modesto General Plan states that if human remains are discovered, the project sponsors would immediately contact the Stanislaus County Coroner's Office, who would contact the Native American Heritage Commission to notify the appropriate closest descendant. Construction activities that inadvertently discover human remains would be required to implement these standards. Implementation of the proposed Project would have a *less than significant* impact relative to this topic.

VI. ENERGY

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

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcel in the VOSP. The determination of energy impacts will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

The General Plan EIR discusses energy consumption and conservation in Section 3.7, Greenhouse Gases, Climate Change, and Energy (Impact 3.7-2). The General Plan EIR found that energy impacts related to wasteful, inefficient, or unnecessary consumption of energy, and potential conflicts with state or local plans for renewable energy or energy efficiency, would be less than significant with compliance with applicable building codes and energy standards.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy VII.I.2.[a] Require shade trees, where feasible and appropriate, in landscape plans for all new development proposals. Mature trees have lower water needs. Develop shade-tree specifications for development projects, including appropriate types of trees (size, deciduous or evergreen, absence or lower branches, etc.), locations (e.g., distance from structures), density (i.e. within a subdivision or parking lot), and orientation (trees on the west side of a building generally provide the most benefit) for use in landscape plans.
- Policy VII.I.2.[b] Require the planting of large-canopy species in new development areas in such a way that they grow to full size without damaging streets and sidewalks (including, but not limited to, deep watering until roots are established, proper fertilizers, root barriers, and structured soils).
- Policy VII.I.2.[c] Discourage removal of street trees unless they are badly diseased and have become a threat to public safety. If a tree must be removed, it should be replaced no later than the end of the next planting season with a large-canopy species.
- Policy VII.I.2.[d] The goal of the street tree maintenance program is to maintain trees in the best possible health by ensuring that newly planted trees are cared for in such a way as to prevent or minimize sidewalk and street damage (including, but not limited to, deep watering until roots are well established, proper fertilizers, root barriers, and structured soils), pruning to remove mistletoe, pruning to prevent the tree from leaning, and using measures to control disease.

- Policy VII.I.2.[e] Encourage the Modesto and Turlock Irrigation Districts to establish and promote a program whereby existing residential and commercial building owners are provided incentives to increase the number of shade trees in developed parts of the City. Provide information on types of trees and planting locations to maximize energy savings from the program.
- Policy VII.I.2.[f] Coordinate with the Modesto and Turlock Irrigation Districts (for electricity) and Pacific Gas & Electric Company (for natural gas) on all new, large-scale, development proposals.
- Policy VII.I.2.[g] Encourage the use of solar energy systems for residential, agricultural, parks, public buildings, and business purposes as provided in Government Code Section 65850.5.
- Policy VII.I.2.[h] Design and orient new buildings and lots in new subdivisions to maximize solar energy.
- Policy VII.I.2.[i] Approve applications for solar energy systems in accordance with State law.
- Policy VII.I.2.[j] Support the State of California's commitment to the "Renewable Portfolio Standard," which requires electrical utility providers to obtain one-third (33%) of their electricity from renewable energy sources by 2020.
- Policy VII.I.2.[k] Reduce heat gain from pavement by minimizing street rights-of-way and pavement widths. Reinstate the use of parkway strips with trees, where feasible, to provide shading of streets.
- Policy VII.I.2.[l] Consider purchasing clean-fuel / alternative-fuel fleet vehicles.
- Policy VII.I.2.[m] Work with the local energy providers and developers on voluntary incentive-based programs to encourage the use of energy efficient designs and equipment.

Responses to Checklist Questions

Response a-b): Appendix G of the State CEQA Guidelines requires consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]) in the event a significant energy impact is identified. The means to achieve the goal of conserving energy include, among others, decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed Project would be considered "wasteful, inefficient, and unnecessary" if it were to violate applicable state or federal energy standards and/or otherwise result in significant energy inefficiencies, atypical energy intensiveness of materials, cause significant, unmitigated impacts that would disrupt local and regional energy supplies or generate requirements for additional capacity that could not be efficiently achieved, or conflict or create an inconsistency with an applicable energy plan, policy, or regulation that was adopted for purposes of mitigating environmental impacts.

The proposed Project includes the construction of 127 residential units. The amount of energy used at the Project site would directly correlate to the size of the proposed units, the energy consumption of associated unit appliances, and outdoor lighting. Other major sources of

proposed Project energy consumption include fuel used by vehicle trips generated during project construction and operation, and fuel used by off-road construction vehicles during construction.

The following discussion provides calculated levels of energy use expected for the proposed project, based on commonly used modelling software (i.e., CalEEMod v.2022.1 and the California Air Resource Board's EMFAC2025). It should be noted that many of the assumptions provided by CalEEMod are conservative relative to the proposed project. Therefore, this discussion provides a conservative estimate of proposed Project emissions.

Electricity and Natural Gas

Electricity and natural gas used by the proposed Project would be used primarily to power on-site buildings. Total annual unmitigated and mitigated electricity (kWh) and natural gas (kBTU) usage associated with the operation of the proposed Project are shown in Table ENERGY-1, below (as provided by CalEEMod). The proposed Project incorporates feasible mitigation to reduce the proposed project's operational electricity and natural gas consumption.

According to Calico's *Appendix A: Calculation Details for CalEEMod*, CalEEMod uses the California Commercial End Use Survey (CEUS) database to develop energy intensity value for non-residential buildings. The energy use from residential land uses is calculated based on the Residential Appliance Saturation Survey (RASS). Similar to CEUS, this is a comprehensive energy use assessment that includes the end use for various climate zones in California.

Table ENERGY-1: Project Operational Natural Gas and Electricity Usage

<i>Emissions</i>	<i>Natural Gas (kBTU/year)</i>	<i>Electricity (kWh/year)</i>
Single Family Housing	2,146,428	1,114,348
Total	2,146,428	1,114,348

SOURCE: CAL EEMOD (v.2022.1).

On-Road Vehicles (Operation)

The proposed Project would generate vehicle trips during its operational phase. According to the CalEEMod modeling results, the proposed Project would generate approximately 1,199 daily vehicles trips. In order to calculate operational on-road vehicle energy usage and emissions, default trip lengths generated by CalEEMod were used, which are based on the project location and urbanization level parameters selected within CalEEMod (i.e., "San Joaquin Valley Air Pollution Control District" project location and "Urban" setting, respectively). These values are provided by the individual districts or use a default average for the state, depending on the location of the proposed project. Using fleet mix data provide by CalEEMod (v.2022.1), and Year 2029 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2025, the proposed Project would generate approximately 133,560 total annual gallons of gasoline and 20,880 gallons of diesel fuel per year. De Novo derived a weighted MPG for operational on-road vehicles of approximately 24 MPG.

On-Road Vehicles (Construction)

The proposed Project would also generate on-road vehicle trips during project construction (from construction workers, vendors, and haulers). The Project site is essentially flat, and it is anticipated that the Project site can be balanced on site, meaning that there would be no cut and fill (i.e., import/export). Estimates of vehicle fuel consumed were derived based on the assumed

construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2028 gasoline MPG factors provided by EMFAC2025. Consumption from this source is anticipated to be approximately 126 gallons of gasoline and 27,714 gallons of diesel fuel.

Off-Road Vehicles (Construction)

Off-road construction vehicles would use diesel fuel during the construction phase of the proposed project. A non-exhaustive list of off-road construction vehicles expected to be used during the construction phase of the proposed Project includes: cranes, forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO₂ emissions expected to be generated by the proposed Project (as provided by the CalEEMod output), and a CO₂ to diesel fuel conversion factor (provided by the U.S. Energy Information Administration), the proposed Project would use up to a total of approximately 12,372 gallons of diesel fuel for off-road construction vehicles, with 3,856 gasoline fuel gallons, and 16,228 diesel fuel gallons. Detailed calculations are provided in Appendix A.

Other

The proposed Project landscape maintenance activities would generally require the use fossil fuel (i.e., gasoline) energy. For example, lawn mowers require the use of fuel for power. As an approximation, it is estimated that landscape care maintenance could require approximately two individuals one full day per week, or 822 hours per year. Assuming an average of approximately 0.5 gallons of gasoline used per person-hour, the proposed Project would require the use of approximately 416 gallons of gasoline per year to power landscape maintenance equipment.

The proposed Project could also use other sources of energy not identified here. Examples of other energy sources include alternative and/or renewable energy (such as solar PV) and/or on-site stationary sources (such as on-site diesel generators) for electricity generation. However, the proposed Project does not propose to use other sources of energy at this time.

Conclusion

The proposed Project would use energy resources for the operation of project buildings (electricity and natural gas), for on-road vehicle trips (e.g., gasoline and diesel fuel) generated by the proposed project, and from off-road construction activities associated with the proposed Project (e.g., diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through Statewide and local measures.

The proposed Project would be in compliance with all applicable federal, state, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g., solar and wind) within its energy portfolio. PG&E is expected to achieve at least a 50% mix of renewable energy by 2030. Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards ("part 6"), would be applicable to the proposed project. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g., the Pavley Bill and the Low Carbon Fuel Standard) are improving vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

As a result, the proposed Project would not result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of the proposed Project including construction, operations, maintenance, and/or removal. PG&E, the electricity and natural gas provider to the Project site, maintains sufficient capacity to serve the proposed project. The proposed Project would comply with all existing energy standards, including those established by the City of Modesto, and would not result in significant adverse impacts on energy resources. Therefore, the proposed Project would not be expected to cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by Appendix G of the CEQA Guidelines. This is a *less than significant* impact.

VII. GEOLOGY AND SOILS

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on geology and soils will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

The General Plan EIR discusses geology, soils, and mineral resources impacts in Section 3.6, Geology and Soils (Impacts 3.6-1 through 3.6-7). The General Plan EIR found that impacts related to exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides would be less than

significant. The General Plan EIR also found that impacts related to substantial soil erosion or the loss of topsoil, unstable soils, expansive soils, soil adequacy for wastewater disposal systems, paleontological resources, and mineral resources would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy GSM-1: Continue to use building codes as the primary tool for reducing seismic risk in structures. The current version of the California Building Code, as adopted by the City of Modesto, is intended to ensure that buildings resist major earthquakes of the intensity or severity of the strongest experience in California, without collapse, but with some structural as well as nonstructural damage. In most structures, it is expected that structural damage could be limited to repairable damage, even in a major earthquake. (UAGP Policy VII.K[a])
- Policy GSM-2: Require all new buildings in the City to be built to the seismic requirements of the current adopted California Building Code. (UAGP Policy VII.K[b])
- Policy GSM-3: Continue to explore measures to induce building owners to upgrade and retrofit structures to render them seismically safe. (UAGP Policy VII.K[c])
- Policy GSM-4: Enforce provisions of the Alquist-Priolo Earthquake Fault Zoning Act. (UAGP Policy VII.K[d])
- Policy GSM-5: Any construction that occurs as a result of the General Plan must conform to the current California Building Code regulations, which address seismic safety of new structures and slope requirements. As appropriate, require a geotechnical analysis prior to tentative map approval in order to ascertain site-specific subsurface information necessary to estimate foundation conditions. These geotechnical studies should reference and make use of the most recent regional geologic maps available from the California Department of Conservation Division of Mines and Geology. (UAGP Policy VII.N[a])
- Policy GSM-6: Discourage development on lands that are subject to landslides. (UAGP Policy VII.N[b])
- Policy GSM-7: New public roads in areas subject to landslides should be designed to minimize landslide risks. (UAGP Policy VII.N[c])
- Policy GSM-8: All building permits should be reviewed to ensure compliance with the current adopted edition of the California Fire Code, California Building Code, California Mechanical Code, California Electrical Code, California Plumbing Code, Title 19, Title 24, and the City of Modesto Municipal Code. (UAGP Policy VII.N[d])
- Policy GSM-9: Include “best management practices” in the erosion control program, as appropriate, given the specific circumstances of the site and/or project. Table 9-2 in the Program Environmental Impact Report presents examples of best management practices. (UAGP Policy VII.N[f])

- Policy GSM-10: Design sediment control basins to capture eroded sediments and contain them on the project sites shall be designed consistent with the criteria outlined in Table 9-3 in the Program Environmental Impact Report. (UAGP Policy VII.N[g])
- Policy GSM-11: Promote public awareness of the following local routes for the public's use in evacuating the City in the event of an emergency.
 - State Highways 99, 132, 219, and 108
 - Briggsmore Avenue
 - Claus Road
 - Standiford/Sylvan Avenue
 - Scenic Drive
 - Pelandale Avenue
 - Ninth Street
 - Paradise Road
 - Carpenter Road (UAGP Policy VII.N[h])
- Policy GSM-12: City plans and policies shall not interfere with any emergency evacuation and response plans. This would include the continued maintenance of adequate police and fire services, and identified emergency evacuation routes (UAGP Figure VII-3). (UAGP Policy VII.N[i])
- Policy GSM-13: Ensure the provision of adequate and accessible evacuation routes. (UAGP Policy VII.N[j])

Existing Setting

The proposed Project is in the central portion of the Great Valley Geomorphic Province of California, an alluvial plain roughly 50 miles wide and 400 miles long. The Great Valley is a deep structural basin that has been slowly filling with sediment nearly continuously for about 160 million years. These sediments consist of continental sedimentary rocks and alluvial deposits. The Great Valley is bounded on the east by the Sierra Nevada and on the west by the Coast Range mountains. More specifically, the site is located at the northern end of the San Joaquin Valley, an alluvial valley and plain developed along the San Joaquin River and its tributaries. Regionally, the project area is underlain by Quaternary-aged poorly sorted clay, silt, sand, and gravel.

Responses to Checklist Questions

Response a.i), a.ii), a.iii), a.iv), c): The Project site is not located within an Alquist-Priolo Earthquake Fault Zone, and no known active faults traverse the site. As such, the potential for surface fault rupture is considered low. The Project site lies within a geologically stable region of Modesto, characterized by relatively flat terrain and no nearby steep slopes. The Project site is located in a flat area and is not subject to landslides or slope instability. Liquefaction potential would be evaluated in the site-specific geotechnical investigation required by General Plan Policy GSM-5 would be implemented through the California Building Code and the City's grading and building permit review.

Development and structural improvements on the Project site would be required to comply with applicable California Building Code standards and City regulations addressing seismic safety. Based on the site's location and the absence of significant geologic hazards, risks associated with ground shaking, liquefaction, landslides, or unstable soils are expected to be minimal. Therefore, the Project's impact would be *less than significant*.

Response b): The potential for erosion generally increases because of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover; thus, there is the potential for erosion associated with construction activities or through the operational phase of a project. However, the EIR for the VOSP adequately considers the potential geological risks and impacts regarding erosion within the VOSP planning area and has been adopted by the City of Modesto. Given that the Project site is within the VOSP planning area, it can be concluded that geologic conditions would remain the same and therefore the Project's impact would not be greater than that already considered in the VOSP. Furthermore, construction of the proposed Project would adhere to General Plan Policies GSM-9 and GSM-10, which require the use of industry-standard best practices for erosion control and sediment containment. These measures would minimize the potential for loss of topsoil during grading and earthwork associated with development of the proposed Project. In addition, compliance with the National Pollutant Discharge Elimination System (NPDES) program would require preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would incorporate Best Management Practices (BMPs) to control sediment and reduce erosion during construction activities. Therefore, potential impacts related to substantial soil erosion or the loss of topsoil would be less than significant. Therefore, the proposed Project would result in *less than significant* impact related to substantial soil erosion or the loss of topsoil.

Response d): The City of Modesto General Plan EIR identifies the presence of expansive soils as a potential geotechnical concern but concludes that associated risks can be adequately addressed through adherence to applicable building standards. General Plan Policy GSM-1 requires that all developments conform to current building codes, which include measures to address soil conditions such as expansion potential. The Project includes physical development, including infrastructure improvements, which would be subject to all applicable City of Modesto codes, standards, and policies, including those related to site preparation, building safety, and geotechnical conditions. Compliance with these regulations would ensure that potential impacts related to soil conditions remain less than significant. Implementation of the proposed Project would not result in any new or more severe environmental impacts beyond those already evaluated in the Modesto General Plan EIR. As such, impacts would be *less than significant*.

Response e): The proposed Project has been designed to connect to the existing City sewer system, and septic systems will not be used. Therefore, *no impact* would occur related to soils incapable of adequately supporting the use of septic tanks.

Response f): Known paleontological resources or sites are not located on the Project site. Additionally, unique geologic features are not located on the Project site. Furthermore, the proposed Project would be subject to applicable General Plan policies, including Policy AH-21, which addresses the protection of paleontological resources in the event of an unanticipated discovery. Therefore, the project would not result in any new or more severe impacts beyond those previously evaluated in the General Plan EIR. As such, impacts would be *less than significant*.

VIII. GREENHOUSE GAS EMISSIONS

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?			X	

Prior Environmental Impacts

The General Plan EIR discusses greenhouse gas and energy impacts in Section 3.7, Greenhouse Gases, Climate Change, and Energy (Impacts 3.7-1 and 3.7-2). The General Plan EIR found impacts related to generation of greenhouse gases and conflict with a greenhouse gas reduction plan to be significant and unavoidable. The General Plan EIR found impacts related to the wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency, to be less than significant.

The following describes the analysis included in the General Plan EIR and provides a streamlined review to determine whether there would be project-specific impacts that are either 1) peculiar to the project or the parcel on which the project is located; 2) were not previously analyzed as significant effects in a prior environmental document; 3) are potentially significant off-site impacts and cumulative impacts that were not previously discussed in the prior environmental documents; and 4) are now determined to have a more severe impact than discussed in the previous environmental documents due to substantial new information.

Existing Setting

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change, in the context of this discussion, is the change in global climate that is a result of human activities (e.g., burning fossil fuels, deforestation, reforestation, urbanization, desertification) that have increased the volume of greenhouse gases (GHG) present in the atmosphere and have thereby caused the earth's atmosphere to heat up.

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining 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.

Emissions of GHGs 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 the industrial sector (California Air Resources Board, 2025).

Responses to Checklist Questions

Response a): Less than Significant. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing,

utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the proposed Project would contribute to increases in GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO₂ and other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O), from mobile sources and utility usage.

The proposed Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)TM. CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO₂ equivalent units of measure (i.e., MT CO₂e), based on the global warming potential of the individual pollutants.

SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are summarized in Table GHG-1. These emissions include all worker vehicles, vendor vehicles, hauler vehicles, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on input from the project proponents, the proposed Project is assumed to commence construction in 2028 and finish in 2029. It should be noted that this schedule is an approximation and may change over time. A regularized construction schedule was utilized for modelling purposes for the sake of simplicity.

Table GHG-1: Maximum Construction GHG Emissions (Average MT CO₂e/year)

YEAR	BIO- CO ₂	NON-BIO- CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
2028	0.0	388.3	388.3	<1	<1	391.1
2029	0.0	154.2	154.2	<1	<1	155.5
Total	0.0	542.5	542.5	0	0	546.6
30-year Amortized						18.2

SOURCE: CALEEMOD (v.2022.1)

As presented in the table above, short-term construction emissions of GHGs are estimated at a total of 546.6 MTCO₂e and a 30-amortized total of 18.2 MTCO₂e.

OPERATIONAL GHG EMISSIONS

The operational GHG emissions estimate for the proposed Project includes on-site area, energy, mobile, waste, and water emissions generated by the project during its operation. Estimated GHG emissions associated with the proposed Project are summarized in Table GHG-2, below. It should be noted that CalEEMod does not account for Governor Newsom's Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035. Additionally, the CalEEMod modeling conducted does not account for the incorporation of additional Renewables Portfolio Standard attainment beyond CalEEMod defaults, incorporation of AB 341, and incorporation of Title 24 requirements

for the EV charging stations. This is anticipated to substantially reduce the operational emissions associated with passenger vehicles (i.e., mobile emissions), energy emissions, and waste emissions, over time, including prior the 2035 final implementation year. Therefore, the operational emissions results are likely an overestimate for mobile, energy, and waste emissions. As shown in the following table, as conservatively modeled, the annual GHG emissions associated with the proposed Project would be approximately 1,706 MT CO₂e.

Table GHG-2: Operational GHG Emissions at Buildout (Metric Tons/Year)

Sector	Bio- CO ₂	Non-Bio- CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	R	CO ₂ e
Mobile	-	1,252.2	1,252.2	0.1	0.1	1.6	1,274.3
Area	25.7	51.3	77.0	0.1	<0.1	-	80.0
Energy	-	298.6	298.6	<0.1	<0.1	-	300.0
Water	1.6	10.0	11.6	0.1	<0.1	-	16.9
Waste	9.8	-	9.8	1.0	-	-	34.4
Refrig.	-	-	-	-	-	0.3	0.3
Total	37.1	1,612.1	1,649.2	1.4	0.1	1.9	1,705.9

SOURCE: CALEEMOD (v.2022.1)

Pacific Gas & Electric (PG&E), the electrical service provider for the Project site, will need to continue to annually increase renewable electricity through 2045 in order to meet the carbon-free electricity target set by SB 100. The project would need to comply with the Title 24 standards, which require incorporation of rooftop PV systems and solar panels, as well as electric vehicle charging capabilities. The potential reductions in GHG emissions associated with this requirement were not incorporated in the reductions, as the amount would be confirmed at a later stage; therefore, the operational emissions shown in Table GHG-2 are conservative.

PROJECT CONSISTENCY WITH APPLICABLE PLANS

Several plans and policies have been adopted to reduce GHG emissions in the San Joaquin Valley region. The Project's consistency with the State's 2022 Scoping Plan.

The CARB's 2022 Scoping Plan

The 2022 Scoping Plan strategies that are applicable to the project include reducing fossil fuel use, energy demand, and vehicle miles traveled (VMT); maximizing recycling and diversion from landfills; and increasing water conservation. The project would be consistent with these goals through Project design, which includes complying with the latest requirements of the CALGreen Code and Building Energy Efficiency Standards, providing EV parking spaces and charging equipment, and complying with the AB 341 waste diversion goal of 75 percent. In addition, the project would receive electricity from PG&E, which is required to reduce GHG emissions by increasing procurement from eligible renewable energy by set target years. Moreover, the project would provide extensive pedestrian connectivity to encourage alternative modes of transportation and be consistent with the requirements of the latest (2025) version of the Title 24 Energy Code, or better. Therefore, the project would be consistent with the 2022 Scoping Plan.

Consistency with the SJVAPCD Requirements: The proposed Project would be required to comply with all applicable SJVAPCD (i.e., Air District) Rules and Regulations. For example, Regulations and Rules that may apply to the proposed Project could include Regulation VIII, which provides fugitive PM₁₀ dust prohibitions; Rule 8021 provides rules for PM₁₀ dust prohibition associated with construction, demolition activities, excavation, extraction, and other

earthmoving activities; Rule 4601 provides rules to limit VOC emissions for architectural coatings.

CONCLUSION

In summary, the project, including the off-site improvements, would be consistent with the plans, policies, regulations, and GHG emissions reduction actions/strategies outlined in the 2022 Scoping Plan Update. Furthermore, because the project is consistent and does not conflict with these plans, policies, and regulations, the project's incremental increase in GHG emissions as described above would not have a *less than significant* impact.

IX. HAZARDS AND HAZARDOUS MATERIALS

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on hazards and hazardous materials will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

The General Plan EIR discusses hazardous materials impacts in Section 3.8, Hazards and Hazardous Materials (Impacts 3.8-1 through 3.8-6). The General Plan EIR found impacts involving the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, to be less than significant. Impacts related to the handling of hazardous materials within 0.25 miles of a school and the location of development on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962 were also found to be less than significant. The General Plan EIR found less than significant impacts involving airport safety

hazards, interference with an adopted emergency response or emergency evacuation plan, and wildland fires.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy HM-3: Comply with all existing federal and state laws which regulate the generation, transportation, storage, and disposal of hazardous materials. (UAGP Policy VI.M.1)
- Policy HM-4: Require that businesses and industries using hazardous material provide mitigation measures commensurate with the hazards they bring to the community, in accordance with the most current adopted edition of the Uniform Fire Code. (UAGP Policy VI.M.2)
- Policy HM-5: In the event that site inspection or construction activities uncover chemical contamination, underground storage tanks, abandoned drums, or other hazardous materials or wastes at a parcel, the inspection report preparer shall so notify the City. The City shall notify the County Health Services Department. Under the direction of these agencies, a site remediation plan would be prepared by the project applicant.

The plan would (1) specify measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certify that the proposed remediation measures would clean up the wastes, dispose the wastes, and protect public health in accordance with federal, state, and local requirements.

Permitting or work in the areas of potential hazard shall not proceed until the site remediation plan is on file with the City.

If a parcel is found to be contaminated to a level that prohibits the proposed use, the potential for reduction of the hazard should be evaluated. Site remediation is theoretically capable of removing hazards to levels sufficiently low to allow any use at the site. In practice, both the technical feasibility of the remediation and its cost (financial feasibility) should be evaluated in order to determine the overall feasibility of locating a specific use on a specific site. In some cases, it may require restriction on industrial use or a use that involves complete paving and covering of the parcel.

In accordance with OSHA requirements, any activity performed at a contaminated site shall be preceded by preparation of a separate site health and safety plan (prepared by the project applicant and filed with the City) for the protection of workers and the public. All reports, plans, and other documentation shall be added to the administrative record. (UAGP Policy VI.M.3)

- Policy HM-6: For each specific project that would generate hazardous waste, require as a condition of building permit approval that the project sponsor prepare a hazardous material transportation program. Passage through residential streets should be minimized and parking of waste haulers on residential streets should be prohibited. The City Fire Department shall review and approve the applicant's hazardous materials transportation

program or, working with the applicant, modify it to the satisfaction of both parties. (UAGP Policy VI.M.4)

- Policy HM-7: Prior to the issuance of all building permits, identify the site in relation to all Comprehensive Environmental Response, Compensation and Liability Information System sites and to known or suspected uncontrolled or abandoned hazardous waste sites. All projects within 2,000 feet of these facilities should conduct hazardous materials studies as necessary to identify the type and extent of contamination, if any, and the extent of risk to human health and public safety. If necessary, a remedial action program should be developed and implemented as in UAGP Policy VI.M.3. (UAGP Policy VI.M.5)
- Policy HM-8: Applicants for building permits should determine that a site containing or formerly containing residences or farm buildings / structures has been fully investigated for the presence of hazardous materials or wastes prior to issuance of the permit. Investigation should consist of, at minimum, a Phase I environmental site assessment and a Phase II site assessment, if found necessary as a result of the Phase I assessment. The findings of the site assessment should be reported to the City and the County's Department of Environmental Resources. The appropriate remediation should occur prior to final occupancy of the approved development. (UAGP Policy VI.M.6)

Responses to Checklist Questions

Response a), b): The Project site is surrounded by a mix of industrial, residential, and agricultural uses, including a residential neighborhood to the west, agricultural uses to the north and east, and industrial and residential uses to the south. The BNSF (Santa Fe) main line also runs along the eastern boundary of the Project site and is used to transport hazardous materials, and the surrounding agricultural operations apply agricultural chemicals. Apart from the rail corridor, these surrounding uses do not routinely use, store, or dispose of hazardous materials in quantities that would present a reasonably foreseeable release of hazardous substances, beyond typical materials such as household cleaners, paint, motor oil, or fertilizers. Rail transport of hazardous materials is regulated by the Federal Railroad Administration and the U.S. Department of Transportation, and the risk of an accidental release affecting the Project site is not greater than that already present throughout the Village One planning area, which was analyzed in the VOSP EIR and the General Plan EIR.

The Project site has historically been used for agricultural purposes. Like most agricultural operations in the Central Valley, agricultural practices in the area have used agricultural chemicals as standard practice. Despite this, the Project site is within the VOSP planning area which has already adequately addressed the potential risk from hazardous materials. A regulatory database review - Cortese list, DTSC EnviroStor, SWRCB GeoTracker does not indicate past or current issues on the site. There are no known RECs on the project site.

However, given the urbanized setting and proposed ground-disturbing activities such as excavation and trenching for roads, utilities, and building foundations, there is a potential to encounter previously unknown contaminants in soil or groundwater. The project would also be required to adhere to federal, State, and local regulations regarding hazardous materials. During grading and construction activities, it is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, paints, would be brought onto the site. Construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws. Additionally, the construction

SWPPP would include BMPs to control accidental spills of equipment fluids and measures for cleanup. Adherence to these regulatory requirements and the SWPPP would ensure that this impact is less than significant.

The proposed Project is not expected to result in new or increased hazardous material risks beyond those previously evaluated in the City's General Plan EIR and the VOSP. With implementation of standard site assessment and construction management practices, potential impacts related to hazardous materials would be ***less than significant***.

Response c): The Project site is located less than ¼ mile from an existing school. The nearest school is Mary Ann Sanders Elementary School, located approximately 0.09 miles from the Project site at its closest point. However, the elementary school is already located within a residential neighborhood. The Project site is planned for residential development under the Village Residential (VR) land use designation. As such, the proposed Project is not expected to result in new or increased hazardous material risks beyond those previously evaluated in the City's General Plan EIR and the VOSP. With implementation of standard site assessment and construction management practices described above, potential impacts related to hazardous materials would be ***less than significant***.

Response d): Pursuant to Government Code 65962.5, the Cortese List catalogs a list of sites that have been contaminated with hazardous materials. The VOSP EIR concluded that none of the parcels within the planning area were contaminated with hazardous materials. However, the VOSP EIR did note the possibility of soil containing residual chemicals from agricultural operations and recommended soil testing before parcels were converted to residential use. Given that the Project site is within the approved VOSP planning area, it can be concluded that the same site conditions exist. Given that the VOSP has been approved and adopted, the potential risk for site contamination from hazardous materials remains ***less than significant***.

Mitigation Measure HAZ-1: *Prior to issuance of a grading permit, the applicant shall retain a qualified environmental professional to collect and analyze representative shallow soil samples from the Project site for organochlorine pesticides and arsenic, and for any other constituents identified as potentially present by a Phase I Environmental Site Assessment. If concentrations exceed applicable residential environmental screening levels, the applicant shall prepare and implement a soil management and remediation plan, subject to review by the City and oversight by the Stanislaus County Department of Environmental Resources or the Department of Toxic Substances Control, prior to issuance of a grading permit.*

Response e): The Federal Aviation Administration (FAA) establishes distances of ground clearance for take-off and landing safety based on such items as the type of aircraft using the airport. The Project site is located approximately 4.15 miles northwest of the Modesto City-County Airport, a public use airport governed by the Stanislaus County Airport Land Use Commission (ALUC). The Project site is located outside the Airport Influence Area (AIA) identified in the Modesto City-County Airport Land Use Compatibility Plan (ALUCP) and lies outside of any designated safety zones or noise contours that would restrict residential development. According to the ALUCP, the Project site is not subject to land use restrictions related to height hazards, aircraft overflight, or high noise exposure. Implementation of the proposed Project would have a ***less than significant*** impact with regard to this environmental issue.

Response f): The Stanislaus County Office of Emergency Services (OES) maintains an Emergency Operations Plan (EOP) and the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan, which both serve as guiding documents for Stanislaus County and the City of Modesto regarding the response to hazardous materials. These documents include planned operational functions and overall responsibilities of County Departments during an emergency.

The County OES establishes effective response capabilities to contain and control releases, establishes oversight of long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. It also includes guidelines and regulations for directing responses to hazardous materials incidents for first responders.

The project would not alter travel lanes on roadways carrying emergency vehicles. Emergency vehicles would have access to the project site via Claus Road and Milnes Road. Therefore, construction and operation of the project would not directly impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan or involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation. The proposed Project would not block access or permanently constrain evacuation routes adopted in an emergency response plan or emergency evaluation plan. No additional impacts beyond those previously identified in the City of Modesto General Plan EIR are anticipated. Implementation of the proposed Project would have a *less than significant* impact with regard to this environmental issue.

Response g): The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), weather (winds, temperatures, humidity levels, fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point. The City has areas with an abundance of flashy fuels (i.e., grassland) in the outlying residential parcels and open lands that, when combined with warm and dry summers with temperatures often exceeding 100 degrees Fahrenheit, create a situation that results in higher risk of wildland fires, as is common throughout the Central Valley. Most wildland fires are human caused, so areas with easy human access to land with the appropriate fire parameters generally result in an increased risk of fire.

According to CalFire, the Project site is within a Local Responsibility Area (LRA) and is unzoned for fire hazard severity, meaning that responsibility to wildfire events is passed to regional and local agencies. Stanislaus County currently maintains a Multi-Jurisdictional Hazard Mitigation Plan that includes plans to respond to, and mitigate the damage from, wildfires. The Project site is not located on a steep slope, instead, the Project site is essentially flat. The Project site is in an urban area, with existing or future urban development located on multiple sides. Additionally, wildfire hazards and potential increased risk from wildfire have been considered by the General Plan EIR, which includes the Project site. Therefore, this is a *less than significant* impact and no mitigation is required.

X. HYDROLOGY AND WATER QUALITY

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:			X	
(i) Result in substantial erosion or siltation on- or off-site;			X	
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
(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			X	
(iv) Impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on the site's hydrology and water quality will be guided by, in part, the policies and standards within the Modesto General Plan and the VOSP.

The General Plan EIR analyzes impacts on hydrology and water quality in Section 3.9, Hydrology and Water Quality (Impacts 3.9-1 through 3.9-4). The General Plan EIR found that impacts related to violation of water quality standards, groundwater supply and recharge, alteration of existing drainage patterns, release of pollutants due to inundation, and conflict with water quality or groundwater plans would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- FWQ-4: When development is proposed on parcels located within any “Flood Potential Study Area” shown on Figure VII-2 [of the UAGP], the following policies apply.
 - Approve new urban development only when the City determines via “findings” that it is protected from “200-year” floods, and otherwise complies with the City’s Floodplain Management Ordinance (Title 9, Chapter 4 of the Modesto Municipal Code). (UAGP Policy VII.L[a])
 - Undeveloped floodway areas as well as the Tuolumne River Regional Park Master Plan, the Dry Creek Master Plan, the Tuolumne River Comprehensive Planning District (CPD), and the Dry Creek CPD should be preserved for undeveloped and non-urban use, as provided in the City’s Floodplain Management Ordinance. (UAGP Policy VII.L[b])
 - Appropriate emergency plans for the safe evacuation of people from areas subject to inundation from dam failure shall be reviewed and periodically updated. The City Fire Department, Police Department, and Public Works Department should continue to work with other jurisdictions to develop evacuation routes to be used in case of dam failure. Evacuation routes will serve all of the jurisdictions in the County. (UAGP Policy VII.L[c])
- FWQ-5: The following policies will help to minimize the future loss of life and reduce property damage as a result of floods as well as reduce the economic impact of floods.
 - Maintain the floodplain management ordinance to ensure that flood insurance can be made available to qualified property owners through State and Federal programs. (UAGP Policy VII.L[d])
 - Support the Federal Emergency Management Agency (FEMA) Flood Insurance Program so that residents who qualify may purchase such protection. Property owners whose property is located within certain areas identified by FEMA as flood hazard areas may purchase insurance against flood damage. (UAGP Policy VII.L[e])
 - Discourage development in areas susceptible to floods, except as provided under the Flood Insurance Program and City Floodplain Management Ordinance. (UAGP Policy VII.L[f])
- FWQ-6: All of the Flood Hazard Policies adopted for the Baseline Developed Area apply equally within the Planned Urbanizing Area. (UAGP Policy VII.L[g])
- FWQ-7: The environmental review document for any Comprehensive Planning District located within or including any portion of a “Flood Potential Study Area” on Figure VII-2 [of the UAGP], should include a Flood Hazard Analysis developed to mitigate all of the Flood Hazard impacts identified in the Master Environmental Impact Report. (UAGP Policy VII.L[h])
- FWQ-8: The results of the Flood Hazard Analysis should be incorporated into the project design of any Specific Plan. The Specific Plan shall prohibit development within the flood channel, consistent with the City’s Floodplain Management Ordinance. Where possible, the Specific Plan shall minimize development within the floodplain, consistent with the

City's Floodplain Management Ordinance, by such means as providing setbacks from flood zones, designating areas within the flood zones for low-intensity development only, or providing for setback levees. When levee improvements are necessary to achieve flood protection, the Specific Plan shall include adequate funding for those improvements. Funding mechanisms may include special assessments or special taxes for both capital and maintenance costs, and shall not rely solely on impact fees. The City may work with other agencies to provide these improvements. (UAGP Policy VII.L[i])

- FWQ-9: Meet the requirements of acceptable urban storm runoff as established by the Central Valley Regional Water Quality Control Board Basin Plan for surface discharges and Environmental Protection Agency for underground injection. (UAGP Policy VI.G.1)
- FWQ-10: Construct, operate, maintain, and replace storm water drainage facilities in a manner that will provide the best possible service to the public, as required by federal and state laws and regulations. In developing implementation plans, consideration should be given to rehabilitation of existing facilities, remediation of developed areas with inadequate levels of drainage service, and timely system expansion for future development. (UAGP Policy VI.G.2)
- FWQ-11: Construction activities shall comply with the requirements of the City's Storm Water Management Plan under its municipal NPDES stormwater permit, and the State Water Resources Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity. (UAGP Policy VI.G.3)
- FWQ-12: For developments within a mapped 100-year floodplain, prepare studies that demonstrate how the development will comply with both the construction and post-construction programs under the City's municipal NPDES permit. No increased erosion or releases of other contaminants that would cause violations of the City's municipal NPDES permit should occur as a result of development. (UAGP Policy VI.G.4)
- FWQ-13: Ensure that new development complies with the City of Modesto's Stormwater Management Program: Guidance Manual for New Development Stormwater Quality Control Measures. (UAGP Policy VI.G.5)
- FWQ-14: Require new development to implement an appropriate selection of permanent pollution control measures in accordance with the City's implementation policies for the municipal NPDES stormwater permit. (UAGP Policy VI.G.6)
- FWQ-15: Design development projects to preserve and, where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffers. Minimize disturbance of natural water bodies or natural drainage systems that might result from development, including road construction. (UAGP Policy VI.G.7)
- FWQ-16: Integrate Low Impact Development principles into proposed development projects' design. Low Impact Development is a storm water management and land development strategy that promotes conservation and use of natural on-site features combined with engineered small-scale hydrologic devices. In designing development projects, minimize the amount of impervious surface in order to maximize on-site infiltration of stormwater runoff and minimize the potential for storm water runoff from the site. (UAGP Policy VI.G.8)

Responses to Checklist Questions

Response a): The proposed project does not contain any drainage connectivity to Waters of the US. To ensure that stormwater runoff from the project site does not adversely increase pollutant levels in adjacent surface waters and stormwater conveyance infrastructure, the application of BMPs to effectively reduce pollutants from stormwater leaving the site during both the construction and operational phases of the project are required.

Implementation of proposed Project would not violate any water quality or waste discharge requirements. Construction activities could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of soil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project-specific SWPPP to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required to include project specific best management measures that are designed to control drainage and erosion. The SWPPP and the project specific drainage plan would reduce the potential for the proposed Project to violate water quality standards during construction. Following construction, the Project would be required to install permanent post-construction stormwater treatment and hydromodification control measures meeting the Low Impact Development performance standards of the City's municipal stormwater permit and the City's Guidance Manual for New Development Stormwater Quality Control Measures. This would ensure that the proposed Project would have a less than significant impact on construction- and operation-related water quality.

Response b): The proposed project would be served by the City's municipal water system. As described in greater detail in the Utilities Section of this document, the City has adequate water supplies to serve the proposed project without increasing the current rate of groundwater extraction.

Groundwater recharge occurs primarily through percolation of surface waters through the soil and into the groundwater basin. The addition of significant areas of impervious surfaces (such as roads, parking lots, buildings, etc.) can interfere with this natural groundwater recharge process. Upon full project buildout, most of the project site would be covered in impervious surfaces, which would limit the potential for groundwater percolation to occur on the project site to landscaped areas. However, given the relatively large size of the groundwater basin in the Modesto area, the areas of impervious surfaces added because of Project implementation will not adversely affect the recharge capabilities of the local groundwater basin. The proposed Project would result in **less than significant** impacts related to depletion of groundwater supplies and interference with groundwater recharge.

Response c.i); c.ii), c.iii), c.iv), e): The proposed Project would not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial surface runoff, erosion, or siltation. There are no streams within or in the vicinity of the project area. The Modesto Irrigation District (MID) operates several irrigation canal "laterals" that flow east to west in the vicinity of the study area. Lateral No. 6 is located more than 1.1-mile northeast of the Project site. The nearest river is the Stanislaus River, approximately 3.5 miles away to the north. The implementation of the proposed project would result in additional impervious surfaces.

The project site is not located within a FEMA-designated 100-year flood hazard zone. However, the site is within a broad, relatively flat area that is subject to sheet flow-type shallow flooding. Flooding can occur because of catastrophic dam failure and the release of waters contained in

upstream reservoirs. Although a very low probability event, catastrophic structural dam failure can be caused by earthquakes or overflow.

The proposed Project would conform to existing flood hazard control regulations within the Modesto General Plan as well as the recommendations and priorities established in the Groundwater Sustainability Plan for the Modesto Subbasin and the City of Modesto's current Urban Water Management Plan and Water Shortage Contingency Plan. These plans guide hydrologic planning decisions for the region. In addition, the proposed project would be required to comply with General Plan policies FWQ-9 through FWQ-16, which would require compliance with the City's Stormwater Management Program and Construction General Permit requirements; installation of stormwater drainage facilities; incorporation of Low Impact Development design measures that restrict the amount of post-development runoff from exceeding pre-development conditions; and implementation of post-construction erosion control and stormwater control measures. Therefore, with conformance to these standards, the proposed Project impact would not result in significant hydrology or water quality impacts beyond what has been considered in the VOSP. Therefore, the Project impact would be ***less than significant***.

Response d): The Project site is located outside the 100- year flood zone and is categorized as having a low flood risk. The proposed Project would not expose people or structures to a significant risk of loss, injury or death involving flooding because of the failure of a levee or dam given the distance between the Project site and existing dams and other flood control infrastructure. The Project site is not anticipated to be inundated by a tsunami given its location in California's Central Valley. The Project site is not anticipated to be inundated by a seiche because it is not located near a water body capable of creating a seiche. Implementation of the proposed Project would have a ***less than significant*** impact relative to the risk of release of pollutants due to project inundation by flood hazards, seiches, and tsunamis, or the potential to alter the course of a stream or river in a manner that would impede or redirect flood flows.

XI. LAND USE AND PLANNING

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Physically divide an established community?			X	
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?			X	

Prior Environmental Impacts

The General Plan EIR addresses impacts to land use and planning in Section 3.10, Land Use, Population, and Housing (Impacts 3.10-1 and 3.10-2). The General Plan EIR found that impacts involving physical division of an established community, conflict with an applicable land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- LUP-11. Parcel-Specific Zoning. Zoning within the incorporated City limits should be, and generally is, consistent with the General Plan Land Use Designations as presented on the Land Use Diagram. However, because these designations are broad in nature, there may be minor instances in which the existing zoning for a particular property is not consistent with the Land Use Designation for the property. These situations are still considered to be consistent with the overall goals and policies of the General Plan, and development of these properties may occur consistent with zoning. (UAGP Policy III.A.1)
- LUP-12. Rezoning. Rezonings should also be consistent with the General Plan Land Use Designations. However, rezonings involving less than five (5) acres may occur even if they are not consistent with the Land Use Designation for the property, as long as the rezoning can be found consistent with the Land Use goals and policies of the General Plan. Rezonings of five (5) acres or more that are inconsistent with the applicable Land Use Designation(s) will require a General Plan amendment. (UAGP Policy III.A.2)
- LUP-13. Infill Incentives. Facilitate infill development through active leadership and strategic provision of infrastructure and services, and supporting land uses. Provide incentives for infill development, redevelopment and growth in existing urbanized areas to enhance community character, optimize infrastructure investments, support increased transit use, promote non-motorized transportation, increase housing diversity, and enhance commercial viability. Structure fee programs so that infill development is “priced” according to its relative infrastructure efficiencies and the community wide benefits to be realized. (UAGP Policy III.B.1)
- LUP-14. Existing City. To maximize economic and social benefits, and resource efficiencies, prioritize and focus new development within the existing City limits. This will strengthen existing neighborhoods and maximize efficiencies of utility / infrastructure systems. New

development will be accessible by all modes of transportation, both motorized and non-motorized, with an emphasis on availability of public services. (UAGP Policy III.B.2)

- LUP-15: Complete neighborhoods promote livability, sustainability, and safety for all residents. Neighborhoods are to contain: a mix of housing types including affordable and market-rate; a range of services and facilities such as schools, parks, retail, services & civic facilities; transit access within ½-mile of all dwelling units; and, complete streets with tree canopy cover that accommodate both motorized and nonmotorized mobility. (UAGP Policy III.C.1)
- LUP-16: Preserve, protect, and enhance established neighborhoods by providing sensitive transitions between and among adjoining neighborhoods, and by requiring new development – both private and public – to respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood. (UAGP Policy III.C.2)
- LUP-17: Corridor Studies guide infill development, and re-use / recycling of existing development, along major transportation corridors. Such development will balance vehicular circulation and access against all other travel modes – both motorized and non-motorized. Development along major transportation corridors should mix land uses effectively so that housing, retail, and service needs are combined with pedestrian-friendly facilities and gathering places. (UAGP Goal III.D)
- LUP-18: Development along major transportation corridors that occurs pursuant to an adopted corridor study should be compact, mixed-use, transit- / bicycle- / pedestrian-friendly, and scaled appropriately to match the context and transition to existing nearby neighborhoods. (UAGP Goal III.E)
- LUP-23: The Specific Plan(s) within each CPD should follow the policies and procedures as outlined in the City of Modesto's Specific Plan Procedures and Preparation Guide (Guide), which identifies all subsequent land use approvals required to be consistent with the Specific plan. The Guide should be updated in order to keep it current with regard to policies and practices. (UAGP Policy III.I.3)
- LUP-24: Each Specific Plan should be accompanied by a long-range financing strategy that provides reasonable estimates of the costs of on- and off-site infrastructure to support the proposed development pattern. The strategy should generally address public facility funding for any development project that serves to implement the subject Specific Plan. If new public facilities are required that will also serve the broader community, the Specific Plan should include options for broad-based funding mechanisms. Each Specific Plan should address the need to provide water, wastewater, and storm drainage infrastructure, in the context of the required Facilities Master Plan and Infrastructure Master Plan prepared at the developer's expense. (UAGP Policy III.I.4)
- LUP-25: More than one Specific Plan may be processed within a given CPD, as long as the remaining area within the CPD can still comply with the General Plan policies presented in this chapter. Conversely, a Specific Plan can be used to implement more than one CPD,

when those districts are adjoining. A CPD may consist of more than one Specific Plan provided that the Specific Plans are consistent, compatible, and complement one another. This is particularly important for issues related to, but not limited to, land use plans, circulation plans, and the Specific Plans' financing sections (which must be correlated to provide for adequate infrastructure throughout the CPD). If Specific Plans are adopted at different times within a CPD, the first Specific Plan should include an infrastructure plan for the entire CPD. (UAGP Policy III.I.5)

Responses to Checklist Questions

Response a): The proposed Project is limited to the existing parcel and would not introduce new physical barriers or features that could obstruct or divide the surrounding community. As such, the project would not physically divide an established community. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Response b): The Project site is located within the VOSP and is currently designated BP. The Project includes a Specific Plan Amendment to change the land use designation to VR. The Project proposes 127 dwelling units at a density of approximately 6.68 dwelling units per gross acre. The requested Specific Plan Amendment and Rezone would establish the land use designation, density, and zoning applicable to the Project site, and no conflict with applicable density limits would occur upon their approval. The amendments would convert approximately 19.0 acres from Industrial/Business Park to Village Residential, reducing the employment-generating land supply within the VOSP planning area by a corresponding amount. Jobs-housing balance is an economic and planning consideration rather than a physical environmental effect, and the reduction is small relative to the 1,850-acre planning area and the balance of Business Park designated land within it. The Project site lies outside the Airport Influence Area identified in the Stanislaus County Airport Land Use Compatibility Plan, as described in Section IX, Hazards and Hazardous Materials, and the Project would therefore not conflict with that plan. Consistent with the VOSP treatment of noise setback areas along the railroad frontage, the Project would provide the noise barriers and associated setbacks required by Mitigation Measure NOI-1 along its BNSF, Milnes Road, and Claus Road frontages. With approval of the amendments, the Project would be consistent with the land use policies and allowed uses of the VOSP, and the proposed residential development would not conflict with any land use regulation adopted to avoid or mitigate environmental impacts.

As discussed in Section XIV, Population and Housing, the proposed Project would not result in the displacement of people or housing. The proposed Project would not 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. Implementation of the Project would have a less than significant impact relative to this topic.

XII. MINERAL RESOURCES

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?			X	
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?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP.

The General Plan EIR analyzes impacts on mineral resources in Section 3.6, Geology and Soils (Impact 3.6-7). The General Plan EIR found that impacts related to the loss of availability of regionally or locally important mineral resources, or a mineral resource recovery site delineated on a local plan, specific plan, or other land use plan, would be less than significant. The Project site is not designated by the State or City as containing important mineral resources, nor is it located within a known mineral resource zone.

Historic mineral production in Stanislaus County has included construction materials, industrial materials, and metallic minerals. However, the only mineral commodities that are mined actively in Stanislaus County are sand and gravel. Modesto is entirely within an area zoned MRZ-3a for sand and gravel. This designation indicates areas containing known mineral occurrences of undetermined significance. No areas classified as Mineral Resource Zones (MRZ-2a or MRZ-2b) under the Surface Mining and Reclamation Act – that is, areas where significant mineral deposits have been determined to exist – occur within the planning area.

Responses to Checklist Questions

Response a), b): The California Geological Survey identifies areas that contain or that could contain significant mineral resources to provide context for local agency land use decisions and to protect availability of known mineral resources. Classifications ranging from MRZ-1 to MRZ-4 are based on knowledge of a resource's presence and the quality of the resource.

No mineral extraction operations are known to exist in or adjacent to the Project site. The California Geological Survey (formerly the Division of Mines and Geology) classifies the Project site and surrounding lands as MRZ-3a, indicating that the area may contain known mineral occurrences of undetermined significance. Mining and mineral extraction on the Project site would not be practical given the number of sensitive receptors in the immediate vicinity such as existing residential uses that may be impacted. There are no oil and gas extraction wells within or near the property. Implementation of the proposed Project would have a ***less than significant*** impact relative to this environmental topic.

XIII. NOISE

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
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?				X

Existing Setting

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on noise will be guided by, in part, the Modesto General Plan and the VOSP. Appendix B contains the Noise and Vibration Assessment prepared for the Project site by Illingworth & Rodkin, Inc., dated October 17, 2024. That assessment addresses three adjoining residential development sites within the Village One Specific Plan area. The Project site is identified in Appendix B as the “Naraghi Site”; the Parklane and Greenlaw sites addressed in that report lie south of Milnes Road and are not part of the proposed Project. Because the assessment was prepared for a larger study area, the ambient monitoring data and regional setting information it contains describe conditions across all three sites. The site-specific projections, barrier requirements, and interior noise treatments relied on in this section are those developed in Appendix B for the Naraghi Site.

The General Plan EIR analyzes noise impacts in Section 3.11, Noise (Impacts 3.11-1 through 3.11-6). The General Plan EIR found that impacts involving the generation of traffic noise, exposure to railroad noise and groundborne vibration, generation of excessive stationary noise sources, and increases in construction noise and vibration would be significant and unavoidable at the plan level, and the City adopted a statement of overriding considerations for those effects. The analysis below addresses whether the proposed Project would result in a new significant noise effect, or a substantial increase in the severity of a previously identified significant effect, at the Project site and in its vicinity.

The following describes the analysis included in the General Plan EIR and provides a streamlined review to determine whether there would be project-specific impacts that are either 1) peculiar to the project or the parcel on which the project is located; 2) were not previously analyzed as significant effects in a prior environmental document; 3) are potentially significant off-site impacts and cumulative impacts that were not previously discussed in the prior environmental documents; and 4) are now determined to have a more severe impact than discussed in the previous environmental documents due to substantial new information.

City of Modesto General Plan

Section 3.11, Noise

4. Existing Physical Setting in the Project Area

1) Noise Sources in Modesto

a) Roadways

- i) Major roadways are the primary sources of ambient noise in Modesto. State Route 99 (SR 99) runs generally northwest and southeast through the city and State Route 132 (SR 132) generally runs east and west through the city. Primary major local roadways include McHenry Avenue, Oakdale Road, Claus Road, Kiernan Avenue/Claribel Road, Pelandale Avenue, Standiford Avenue, and Briggsmore Avenue. Dale Road, Prescott Road, Carpenter Road, Tully Road, Coffee Road, Orangeburg Avenue, Maze Boulevard, and Yosemite Boulevard are secondary major roadways and also contribute to residential noise exposure.

b) Railroads

- i) Rail operations along the Burlington Northern and Santa Fe Railroad (BNSF), the Modesto & Empire Traction Company (M&ET), and along Union Pacific Railroad (UPRR) rights-of-way also are substantial sources of noise in some areas of the City. Day-night average noise levels vary throughout the community depending on the number of trains operating along a given rail line per day, the timing and duration of train passby events, and whether or not trains must sound their warning whistles near “at-grade” crossings. Amtrak train schedules are fairly consistent on weekdays and weekends. The number of freight trains passing through Modesto varies on a daily basis depending on the specific rail line and local demand. Day-night average noise levels commonly range from 65 to 75 dBA Ldn at land uses adjoining a railroad right-of-way. When railroad trains approach a passenger station or “at-grade” crossing, they are required to sound their warning whistle. When giving a warning to people and/or animals, they are required to produce a succession of sounds with the whistle. Trains are required to sound a long signal followed by a short signal when approaching stations, curves, or other points where view may be obscured, and when approaching passenger or freight trains. When passing a standing train, the moving train is required to sound two long signals followed by a short signal followed by a long signal, the same requirement when signaling for at-grade crossings. Train warning whistles typically generate maximum noise levels of approximately 105 dBA at 100 feet. The day/night average noise level at locations immediately adjacent to “at-grade” crossings and exposed to multiple train passby events during a day can exceed 85 dBA Ldn.

c) Industrial and Commercial Use

- i) Industrial operations are the primary stationary noise sources that make a significant local contribution to community noise levels. In general, these stationary noise sources (e.g., fabrication, large mechanical equipment, and loading areas) are often located in primarily commercial and industrial areas and are isolated from noise sensitive land uses. However, sensitive development has encroached on some of these stationary noise sources resulting in some land use conflicts.

- ii) Noise sources that affect sensitive receptors within the community would also include commercial land uses or those normally associated with and/or secondary to residential development. These include nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, air conditioning units, swimming pool pumps, school playgrounds, athletic and music events, and public parks.
- d) **Construction Activities**
 - i) Construction is a temporary source of noise for residences and businesses located near construction sites. Construction noise can be significant for short periods of time at any particular location as a result of public improvement projects, private development projects, remodeling, etc. The highest construction noise levels are normally generated during grading and excavation, with lower noise levels occurring during building construction. Large pieces of earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 85 to 90 dBA at a distance of 50 feet. Typical hourly average construction generated noise levels are about 80 to 85 dBA measured at a distance of 50 feet from the site during busy construction periods. Some construction techniques, such as impact pile driving, can generate very high levels of noise (105 dBA Lmax at 50 feet) that are difficult to control. Construction activities can elevate noise levels at adjacent businesses and residences by 15 to 20 dBA or more.
- e) **Airport**
 - i) The Modesto City–County Airport is located in the southeastern portion of the city. Residential areas are adjacent to the airport to the west and northwest within the City of Modesto and to the south across the Tuolumne River in the City of Ceres. The airport serves general aviation pilots (light and ultralight planes), as well as scheduled daily commercial service. The airport had an annual total of 84,185 operations in 2007 and is forecast to have 141,000 annual operations in the future (Stanislaus County Airport Land Use Compatibility Plans, October 2016). Residences are currently located within the 60 dBA CNEL noise contour of the airport, but not within the 65 dBA CNEL noise contour.
- 2) **Ground-borne Vibration Sources in Modesto**
 - a) **Railroads**
 - i) Ground-borne vibration occurs in areas adjacent to fixed rail lines when railroad trains pass through Modesto. Ground vibration levels along the railroad corridors are proportional to the speed and weight of the trains as well as the condition of the tracks and train engine and car wheels. Vibration levels resulting from railroad trains vary by site, but are generally perceptible within 100 feet of the tracks.
 - b) **Construction**
 - i) Construction activities such as demolition, site preparation work, excavation, and foundation work can generate Ground-borne vibration at land uses adjoining construction sites. Impact pile driving has the potential of generating the highest ground vibration levels and is of primary concern for structural damage. Other project construction activities, such as caisson drilling, the use of jackhammers, rock drills, and other high-power or vibratory tools, and rolling stock equipment (tracked

vehicles, compactors, etc.), can generate substantial vibration levels in the immediate vicinity.

The following is a list of General Plan policies that are relevant to this environmental topic.

- Noise-3: Construction activities are to comply with Modesto Municipal Code Title 4, Chapter 9.
- Noise 4: Implement noise-reducing construction practices as conditions of approval where substantial construction-related noise impacts would be likely to occur, such as with extended periods of pile driving, or where construction is expected to continue or where sensitive receptors would be affected by construction noise. Conditions of approval may include, but are not limited to:
 - Require construction equipment, including air compressors and pneumatic equipment to have properly maintained mufflers;
 - Require impact tools to be equipped with shrouds or shields;
 - Require that the quietest equipment available be used; and,
 - Require selection of haul routes that affect the fewest number of people. (UAGP Policy VII-G.3.b)
- Noise 5: Implement techniques, where feasible, to reduce noise impacts from new or widened roadways. Such techniques may include, but are not limited to:
 - Traffic calming to reduce vehicle speeds, including narrowing travel lanes, and limiting the number of motor vehicle lanes;
 - Adding bicycle and parking lanes to move the noise source farther away from sensitive receptors; and,
 - Use of earthen berms and landscaped walls to channel noise away from sensitive receptors. (UAGP Policy VII-G.3.c)
- Noise-6: Use the most recent noise contour map (Figure VII-2) to implement the requirements of Noise Insulation Standards contained in Title 24 of the California Code of Regulations. Developers may be allowed to demonstrate that detailed noise studies and / or mitigation are not necessary due to local conditions, changes in the expected future noise environment, or inapplicable assumptions made in the Master EIR. (UAGP Policy VII-G.3.d)
- Noise 7: Incorporate construction practices and acoustic treatment in new residential construction to reduce typical indoor noise levels to 45 dB. Developers of residential buildings within the 65 dBA contours shown in the General Plan Master EIR shall demonstrate that interior noise has been reduced to 45 dB. Other types of development should be protected against noise intrusion at least to the levels indicated on UAGP Table VII-2. (UAGP Policy VII-G.3.e)
- Noise-8: For proposed non-transportation noise sources, reduce noise levels so as not to exceed the allowable noise exposure thresholds specified in Table V.3.8, below, at the property line of residential or other noise-sensitive land uses. (UAGP Policy VII-G.3.f)
- Noise 9: At noise-sensitive land uses, increases in noise should not exceed 3 dBA where any other noise threshold or standard would be exceeded, and/or 5 dBA where noise

levels would otherwise fall within acceptable limits, for the existing conditions scenario as compared to the buildout scenario. (UAGP Policy VII-G.3.g)

- Noise 10: Additional study and/or mitigation for outdoor recreation areas will be required if:
 - For single-family dwellings, noise exceeds 65 dBA Ldn in one or more backyards;
 - For multi-family dwellings, noise exceeds 65 dBA Ldn at common recreation areas, such as swimming pools or play areas or at private patios and balconies; or,
 - For other uses, noise exceeds the level considered “conditionally acceptable” as shown on Table VII-2 of the General Plan. (UAGP Policy VII-G.3.h)
- Noise-11: Limit trucking to specific routes, times, and speeds that avoid or minimize adverse effects on sensitive receptors. (UAGP Policy VII-G.3.i)
- Noise 12: Airport and aircraft noise analysis will be conducted in accordance with the Modesto City–County Airport’s Master Plan and Federal Aviation Regulation (FAR Part 150). New construction must meet Modesto’s noise compatibility standards. As airport operations increase, mitigation will be provided to existing residential and other sensitive uses, either through operations or direct property improvements, in order to meet Title 14 Code of Federal Regulations Part 150 land use compatibility guidelines. (UAGP Policy VII-G.3.j)
- Noise-13: Study, analyze and consider establishment of “Quiet Zones” along the rail corridors through downtown, along Yosemite Boulevard and along the east side of the planning area. (UAGP Policy VII-G.3.k)
- Noise-14: For new residential development proposed in areas within 200 feet of the center of the near mainline of active rail lines where single-event noise from trains is of concern, demonstrate that the proposed development will incorporate measures to reduce maximum noise levels generated during train passbys to 50 dBA Lmax or less inside bedrooms and to 55 dBA Lmax or less inside other noise sensitive occupied areas. (UAGP Policy VII-G.3.l)
- Noise-15: For new residential and vibration sensitive commercial development (including but not limited to lodging facilities, hospitals and similar uses) located within 200 feet of the center of the near mainline of active rail lines, demonstrate that the proposed development will incorporate measures to reduce vibration levels generated during train passby events to meet the FTA vibration criteria as shown in Master EIR Table V-3-6. (UAGP Policy VII-G.3.m)
- Noise-16: For construction activities involving high-powered vibratory tools or pile driving within 200 feet of an existing structure, demonstrate that project construction would not exceed the Caltrans construction vibration thresholds to ensure that no damage to structures would occur. (UAGP Policy VII-G.3.n)

City of Modesto Municipal Code

Generally, the Modesto Municipal Code prohibits any noise that can be deemed “loud and raucous.” Determining what noises are “loud and raucous” depends on a number of factors, such as its volume and duration, whether the nature of the noise is usual or unusual, when the noise

occurs, and whether it is recurrent, intermittent, or constant. The Municipal Code prohibits “loud and raucous” construction-related noise before 7:00 am or after 9:00 pm daily. It also forbids the loud and raucous operation of many specific types of construction equipment. For example, it prohibits loud and raucous noise from exhaust of any stationary internal combustion engine.

Responses to Checklist Questions

Response a): The existing ambient noise environment at the Project site is primarily influenced by railway activity on the BNSF railroad to the east and vehicular traffic along Milnes Road to the south and Claus Road to the west. Additional noise sources include activity from adjacent industrial properties. Existing sensitive receptors include residential homes located west and south of the Project site, within the surrounding neighborhoods. To the north, south, and east, adjacent agricultural land generates intermittent noise associated with seasonal farming activities and periodic irrigation or maintenance operations, but the noise generated at these locations is minimal. The western boundary is adjacent to a single-family residential neighborhood, which produces low-level noise associated with low-speed vehicle movements on local roads and typical household activities. Most of the noise generated at the adjacent commercial facilities will be during normal business hours, which is the least noise sensitive times. Residential use development warrants building materials that attenuate noise levels to minimize noise impacts on the residences, especially during the nighttime sensitive hours. This can be accomplished with windows that have a minimum Sound Transmission Class (STC) rating of 32.

However, without noise barriers, plots developed at portions of the Project site would be exposed to exterior noise levels exceeding 65 dBA L_{dn} . Furthermore, maximum train passby related noise levels may exceed 50 dBA in bedrooms and 55 dBA in other rooms of homes on the railroad frontage without the use of noise mitigation. Mitigation Measure NOI-1, described below, would require the development of noise barriers needed to reduce exterior noise levels within the yards of the homes on the Project site to acceptable exterior noise levels per the City of Modesto General Plan Standards.

Development of the Project would involve new construction activities such as grading, utility installation, paving, and homebuilding, all of which would generate temporary construction noise. Construction would be limited to daytime hours and would be required to comply with the noise standards set forth in Title 4, Chapter 9 of the Modesto Municipal Code, which restricts construction noise during sensitive periods and limits overall noise exposure to nearby receptors. Operational noise associated with the Project would be typical of low-density single-family residential uses and would primarily consist of vehicle trips, conversations, lawn and garden equipment, and HVAC systems. These sources are consistent with the surrounding residential environment and are not anticipated to exceed the City's established noise thresholds. Furthermore, future residential development would be required to comply with applicable General Plan policies, including Policies Noise-3 and Noise-4 (construction noise), Policy Noise-7 (interior noise levels), Policy Noise-14 (single-event rail noise), and Policy Noise-15 (rail vibration). With implementation of the mitigation measures identified below, Project-generated construction and operational noise would not exceed the City's applicable noise standards at existing noise-sensitive receptors, and the new residences would not be exposed to noise levels in excess of those standards.

The Project site is not adjacent to commercial uses; as documented in Appendix B, the noise sources that govern the design of the Project are the BNSF rail line along the eastern boundary

and traffic on Claus Road and Milnes Road. To reduce exterior noise levels in the rear yards of the proposed homes and interior noise levels within them to the levels established by the City's General Plan, and to control construction noise at existing receptors, the mitigation measures listed below would be implemented. With the implementation of the following mitigation measures, the impact would be reduced to a ***less than significant*** level.

Mitigation Measure NOI-1: Noise barriers shall be constructed along the Project's BNSF railroad, Milnes Road, and Claus Road frontages so that exterior noise levels within the rear yards of the homes do not exceed the City of Modesto's normally acceptable exterior noise exposure limit of 65 dBA Ldn. The barrier heights and locations set out below, and shown graphically in the Noise Study in Figure 2 of Appendix B, were derived for the lot layout evaluated in Appendix B and shall be the presumptive design for the Project. Prior to approval of improvement plans, a qualified acoustical consultant shall confirm the required barrier heights and stationing against the final approved map and shall identify any adjustments necessary to achieve the 65 dBA Ldn standard where the approved lot layout, pad elevations, or rear yard depths differ from those evaluated in Appendix B. Where a required barrier height cannot be achieved under the City's fence height standards, the consultant shall identify an alternative achieving the same standard, such as a combination of berm and wall. The barriers shall be shown on the improvement plans and final map to the satisfaction of the City.

- ***BNSF Railroad Frontage:*** Noise barrier walls shall be constructed along the lot lines backing onto (parallel with) the BNSF rail line, with the following minimum top-of-wall elevations (as referenced to the yard grades), in order to meet the City's normally acceptable noise exposure limit:
 - Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 350 feet north of the Milnes Road centerline.
 - Noise barriers with a top of wall height of 10 feet above yard grades between approximately 350 and 550 feet north of the Milnes Road centerline.
 - Noise barriers with a top of wall height of 8 feet above yard grades between approximately 550 and 850 feet north of the Milnes Road centerline.
 - Noise barriers with a top of wall height of 6 feet above yard grades between approximately 850 feet north of the Milnes Road centerline and the northeastern corner of the site, with this 6-foot-tall noise barrier extended approximately 160 feet along the northern site property line.
- ***Milnes Road Frontage:*** Noise barrier walls shall be constructed along the lot lines backing on (parallel with) Milnes Road with the following minimum top of wall elevations (as referenced to the yard grades):
 - Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 400 feet west of the BNSF railroad centerline.
 - Noise barriers with a top of wall height of 10 feet above yard grades between approximately 400 and 530 feet and 590 and 700 feet west of the BNSF railroad at-grade crossing.

- *Noise barriers with a top of wall height of 8 feet above yard grades between approximately 600 feet west of the BNSF railroad at-grade crossing and the southwest (Milnes and Claus Road) corner of the site.*
- *Noise barriers with a top of wall height of 8 feet above yard grades should be extended perpendicular to Milnes Road along the access road frontage for approximately 100 feet on either side of this roadway.*
- *Claus Road Frontage: Noise barrier walls with a minimum top-of-wall elevation of 9 feet as referenced to the yard grades shall be constructed along the lot lines backing onto (parallel with) Claus Road. An 8-foot-tall noise barrier shall extend across the northern edge of the site to the termination of the 6-foot-tall noise barrier wall extending from the eastern (railroad facing) side of the site.*
- *To be effective as a barrier to noise, the noise barrier walls shall be built without cracks or gaps in the face or large or continuous gaps at the base or where they adjoin the homes or each other. The walls shall also have a minimum surface weight of 3.0 lbs. per sq. ft. Small, dispersed, gaps in the base of the walls for landscape irrigation or drainage, which do not compose more than 0.5% of the wall area, are acceptable.*
 - *For a wood wall to meet these requirements, the fence shall be double faced with butted vertical fence boards on each side with a continuous layer of 1/2" plywood. Using the plywood ensures continued effectiveness of the barrier with age, since wood slats alone have a tendency to warp and separate with age allowing gaps to form and the barrier effect of the wall to diminish. Other acceptable materials include, but are not limited to, masonry block and pre-cast concrete panels.*

Mitigation Measure NOI-2: *The following measures shall be incorporated into the Project on-site construction operations:*

- *Noise-generating construction activities within the Project area shall comply with the time restrictions of Title 4, Chapter 9 of the Modesto Municipal Code.*
- *All noise-producing Project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.*
- *All mobile or fixed noise-producing equipment used on the Project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while during Project activity.*
- *Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from the existing residences to the west and south.*
- *Project area and site access road speed limits shall be established and enforced during the construction period.*
- *If unusual circumstances or emergencies prevent certain Project construction activities from complying with the Modesto requirements, then a noise control plan shall be developed to ensure that sufficient mitigation is implemented during Project construction to ensure adverse noise impacts are avoided.*
- *Notification of construction hours and durations shall be provided to the existing residences to the west and south of the Project site.*

Mitigation Measure NOI-3: *The following measures shall be incorporated into the design:*

- *Forced-air mechanical ventilation, satisfactory to the Building Official, shall be provided for all residences having partial or full line of sight to Claus Road, Milnes Road, or the BNSF rail line, so that occupants may keep windows and doors closed for acoustic isolation.*
- *Air conditioning shall be provided for all residences of this development to allow occupants to close doors and windows as desired for acoustic isolation.*
- *Sound-rated windows and doors shall be provided as necessary to achieve an interior noise level of 45 dBA Ldn or less in all residences and, at residences facing or perpendicular to the BNSF rail line, recurring maximum train passby levels of 50 dBA Lmax or less in bedrooms and 55 dBA Lmax or less in other habitable rooms. As estimated in Appendix B, this is anticipated to require Sound Transmission Class (STC) ratings of approximately 30 to 36 at upper-floor facades facing or perpendicular to Claus Road, and approximately 28 to 34 at first-floor facades and 38 to 45 at second-floor facades facing or perpendicular to the BNSF rail line. These ranges were estimated for the building types and setbacks evaluated in Appendix B and are provided as design guidance; the governing requirement is achievement of the interior noise levels stated above, as demonstrated by the unit-by-unit analysis required below. These ranges were estimated for the building types and setbacks evaluated in Appendix B and are provided as design guidance; the governing requirement is achievement of the interior noise levels stated above, as demonstrated by the unit-by-unit analysis required below. These ranges were estimated for the building types and setbacks evaluated in Appendix B and are provided as design guidance; the governing requirement is achievement of the interior noise levels stated above, as demonstrated by the unit-by-unit analysis required below.*
- *Residences on the lots at the southeastern corner of the Project site nearest the Milnes Road at-grade rail crossing, which would be exposed to recurring maximum levels of up to 97 dBA Lmax30, shall incorporate additional acoustic design and sound control measures as necessary to achieve the interior standards identified above. Such measures may include sound-rated exterior wall construction, acoustical caulking, insulation, and acoustical vents; orienting large windows and doors away from the rail line; locating bedrooms away from the rail frontage; and locating single-story homes closest to the rail line.*
- *The specific determination of exterior wall assemblies and window and door STC ratings shall be made on a unit-by-unit basis during project design by a qualified acoustical consultant. The results of that analysis, including a description of the necessary noise control treatments, shall be submitted to the City with the building plans and approved prior to issuance of a building permit.*

Response b): Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. No major stationary sources of groundborne vibration were identified in the project area that would result in the long-term exposure of proposed onsite land uses to

unacceptable levels of ground vibration. In addition, the Proposed project would not involve the use of any major equipment or processes that would result in potentially significant levels of ground vibration that would exceed these standards at nearby existing land uses. Ground-borne vibration from BNSF train passbys was measured along the same rail line at 60 feet from the track centerline, where the maximum instantaneous root-mean-square vibration level in any octave band was 75 VdB and overall levels ranged from 69 to 77 VdB, averaging 72 VdB (Appendix B). The residential lots on the Project site abutting the rail line would be approximately 220 feet from the track centerline. Accounting for ground-to-building coupling losses, Appendix B concludes that peak vibration levels within the residences closest to the rail line would not exceed 75 VdB, which is the Federal Transit Administration and City criterion for occasional events at residences and buildings where people normally sleep, as set out in Master EIR Table V.3.6 and referenced in General Plan Policy Noise-15. As a result, ground-borne vibration impacts would be considered *less than significant*.

Response c): The Modesto City–County Airport is located approximately 4.15 miles southeast of the Project site. The Stanislaus County adopted an Airport Land Use Compatibility Plans in 2016, analyzing the impacts to safety on surrounding development from the Modesto City–County Airport. The Stanislaus County Airport Land Use Compatibility Plan establishes noise contours surrounding the Modesto City–County Airport. Residences are currently located within the 60 dBA CNEL noise contour of the airport, but not within the 65 dBA CNEL noise contour.

However, the project site is located outside of both the 65 dB CNEL and the 60 dB CNEL noise contours for the Modesto City–County Airport. As such, the project site would not be exposed to excessive noise from the Modesto City–County Airport, and there would be no impact relative to this topic.

XIV. POPULATION AND HOUSING

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on population and housing will be guided, in part, by the Modesto General Plan and the VOSP.

The General Plan EIR addresses impacts on population and housing in Section 3.10, Land Use, Population, and Housing (Impacts 3.10-3 and 3.10-4). The General Plan EIR found that impacts involving substantial population growth, and displacement of people or housing would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- Policy II.A.1. Land Supply. Maintain a five-year supply of available developable land served with urban infrastructure. Consider both underdeveloped urban and non-urbanized land.
- Policy II.A.2. Contiguous Development Tied to Other Goals. Keep urban development as contiguous as possible in order to minimize urbanization of valuable farmland, foster resident convenience, improve air quality, reduce automobile vehicle miles traveled, improve public health and safety, and provide for economy in City services.
- Policy II.A.3. Development Follows Annexation. Annex residential growth and development within the Modesto Urban Area General Plan boundary before development occurs.
- Policy II.A.4. Direct Growth Inward. Direct urban growth to areas currently served with City services.

Responses to Checklist Questions

Response a): The proposed Project would allow the development of a 127-unit residential community within the boundaries of the VOSP. While the proposed Project would induce direct population growth by adding new dwelling units, this growth would not be considered substantial or unplanned because residential development is already contemplated within portions of the VOSP. This amendment is limited to the Project site and would not expand infrastructure capacity or modify regional growth policies in a way that would induce broader unplanned growth. Residential development in this location is located within the City's existing

urban service area and would connect to existing infrastructure systems, including water, sewer, and roadways.

The Project would connect existing utilities in Claus Road and Milnes Road and would not require extension of new off-site infrastructure or roadways into undeveloped areas. All improvements are sized to serve the Project only and would not open additional land to development beyond what is already planned under the VOSP. Therefore, the Project would not induce substantial unplanned population growth either directly or indirectly, and impacts would be ***less than significant***.

The General Plan EIR anticipates that build-out of the Urban Area General Plan, inclusive of the proposed residential density amendments, would add approximately 21,837 dwelling units and approximately 117,107 residents within the Planning Area, increasing the Planning Area population from approximately 265,178 in 2019 to approximately 382,284 at build-out. The 127 dwelling units and approximately 376 residents associated with the proposed Project represent approximately 0.6 percent of the additional units and approximately 0.3 percent of the additional population anticipated by the General Plan EIR, and are within the growth already analyzed at the plan level. Because the Project site is currently designated Industrial/Business Park, the redesignation would correspondingly reduce the supply of employment-generating land within the VOSP planning area by approximately 19 acres, as discussed in Section XI, Land Use and Planning.

Response b): The Project site currently contains vacant agricultural land. Therefore, the project would have ***no impact*** related to displacement of housing or people and is consistent with the assumptions and findings of the Modesto Urban Area General Plan and its associated EIR.

XV. PUBLIC SERVICES

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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:			X	
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?			X	
iv) Parks?			X	
v) Other public facilities?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on public services will be guided, in part, by the Modesto General Plan and the VOSP.

The General Plan EIR analyzes impacts on public services and recreation in Section 3.12, Public Services and Recreation (Impacts 3.12-1 and 3.12-2). The General Plan EIR found that impacts on public services and recreational facilities would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- POS-15: Provide at least one neighborhood park within each residential neighborhood. The neighborhood park should be centrally located within the neighborhood and have a service radius of one-half to three-quarters of a mile. The neighborhood park should have one collector street frontage, and the remaining sides should front on residential streets. The minimum size for a neighborhood park shall be seven acres or the total acreage based on one acre of park land per one thousand population within the neighborhood, whichever is greater. (UAGP Policy VI.H.12)
- POS-16: The Community Park Service Area is that area within a radius of approximately one to one-and-one-half miles of the community park site. The community park should have one major street frontage and the remaining sides may front on residential streets. Community parks should not back up to residential lots. The minimum size for a Community Park should be forty acres or the total acreage based on two acres of park land

per one thousand population within the Community Park Service Area. (UAGP Policy VI.H.13)

- S-7: All of the policies for “Public Schools – Baseline Developed Area” apply equally in the Planned Urbanizing Area. (UAGP Policy VI.I.6)
- PS-2: Maintain an adequate personnel level to organize patrol areas, and provide investigative responses to achieve a comfortable and safe community climate conducive to a high quality of life. To the maximum economic extent feasible, police operations should include proactive law enforcement and administrative efforts, all to be expanded as the City’s population grows. (UAGP Policy VI.J.1)
- PS-4: Provide sworn officers in sufficient numbers to support basic police services consistent with other progressive departments with comparable populations and demographic statistics. The recommended long-term police staffing goal is a ratio of 1.85 sworn officers per one thousand residents. (UAGP Policy VI.J.3)
- FS-1: Maintain adequate fire flows in relation to structure size, design, and requirements for construction and/or built-in fire protection systems in accordance with the California Fire Code and adopted local ordinances. Determination of adequate fire flows includes factors such as storage capacity, system gridding, hydrant spacing, and spacing and sizing of water mains. (UAGP Policy VI.K.1)
- FS-2: Ensure adequate ingress and egress to all structures for fire fighting and rescue purposes independent of privately owned and maintained driveways. Provide protection of life and property through the use of engineered fire protection systems, including roof systems. (UAGP Policy VI.K.2)
- FS-6: Promote fire-safe behaviors within the community through public fire education activities and programs. (UAGP Policy VI.K.6)
- FS-10: Protect life and property by requiring engineered fire protection systems and fire resistive roof systems as part of all new construction; in situations where access is limited, fire sprinklers shall be required for new construction. (UAGP Policy VI.K.10)
- FS-11: Provide an effective prevention program aimed at fire loss reduction through inspection, investigation, and public education. (UAGP Policy VI.K.11)

Responses to Checklist Questions

Response a): Subsequent development of the proposed Project would increase demand for police and fire services to any new residential uses. All construction plans and development proposals on the project site would be reviewed for consistency with City standards and would be required to annex into the City’s Community Facilities Districts (CFDs) and to pay the associated Capital Facilities Fees (CFF) at the time of building permit issuance. The adequacy of impact fees is reviewed by the City on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees prior to any site occupancy, and ongoing revenues that would come from future property taxes, sales taxes, and other revenues generated, would fund capital and labor costs associated with fire and police protection services.

Additionally, all future development projects in Modesto are reviewed to ensure adequate fire protection and suppression service. The Project site is within the jurisdiction of the Modesto Fire Department (MFD) for purposes of fire services. The Project site lies within an urbanized area of the City with existing fire stations, established service routes, and built-out infrastructure. The addition of new residents would incrementally increase demand for fire protection and emergency medical services; however, the Project would not, by itself or cumulatively, require the construction of new or expanded fire stations. The Modesto General Plan and the VOSP anticipate urban development in this area. The proposed General Plan Amendment and Specific Plan Amendment allow the Village Residential land use within this area, but does not alter overall service ratios or trigger the need for new fire protection facilities. The Project site is served by the Modesto Fire Department, which operates 11 fully staffed stations, holds an Insurance Services Office Public Protection Classification rating of 2, and, as of 2024, reported an average response time of 6 minutes and 34 seconds with approximately 90 percent of all calls answered within six minutes of dispatch, consistent with the performance standard in General Plan Policy FS-9. Existing stations are adequately equipped to serve the Project, and no new or expanded fire stations are planned to meet the incremental increase in service demand. Therefore, impacts on fire protection services would be less than significant. The Modesto Fire Department must have access to adequate onsite hydrants with adequate fire-flow pressure available to meet the needs of fire suppression units. The proposed project would include the installation of fire hydrants, and the Modesto Fire Department would conduct fire flow tests prior to building occupancy.

New residential development from the proposed Project would increase demand for public school services, and any subsequent development would pay school impact fees at the time of building permit issuance. The adequacy of fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the project, would fund improvements associated with school services. Under the provisions of SB 50, a project's impact on school facilities is fully mitigated via the payment of the requisite new school construction fees established pursuant to Government Code Section 65995.

Potential project impacts to parks and recreational facilities are addressed in the "Recreation" section of this document.

Other public facilities in the City of Modesto include libraries, hospitals, and cultural centers such as museums and music halls. The proposed project would increase demand for these facilities, but not beyond that anticipated in the VOSP. In addition, the City of Modesto requires new development to pay its fair share of the costs of public buildings by collecting the CFDs and associated CFF. The CFDs and associated CFF is used by the City to expand public services and maintain public buildings to meet the increased demand generated by new development. The collection of fees and determined fair share fee amounts are adopted by the City as Conditions of Approval (COAs) for all new development projects prior to project approval. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from taxes, would ensure that project impacts to libraries and public buildings are less than significant.

Overall, this is considered a *less than significant* impact.

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
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?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on recreation will be guided, in part, by the Modesto General Plan and the VOSP.

The General Plan EIR analyzes impacts to recreation in Section 3.12, Public Services and Recreation (Impact 3.12-2). The General Plan EIR found that impacts to recreational facilities would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- POS-12: The acreage standards related to Neighborhood and Community Parks are considered minimums. Park acreage may be increased beyond the minimum standard acreage at the option of a developer with additional contiguous, clean and usable parkland, as long as the additional land is fully dedicated and design and construction are fully funded at no additional cost to the City or associated park development fee program. These acreage standards may be enhanced by additional open space to meet unique characteristics of the Specific Plans for each new Comprehensive Planning District. (UAGP Policy VI.H.9)
- POS-13: Where dual-use park / basin facilities exist, only acreage owned or otherwise controlled exclusively by the City in perpetuity will count toward minimum park acreage standards. Park acreage credit for dual-use facilities shall be calculated in accordance with the standards and criteria contained in the City of Modesto's Design Standards for Dual Use Flood Control/Recreation Facilities manual. In contrast to the Baseline Developed area, School District open space does NOT count towards minimum park acreage requirements within the Planned Urbanizing Area. (UAGP Policy VI.H.10)
- POS-15: Provide at least one neighborhood park within each residential neighborhood. The neighborhood park should be centrally located within the neighborhood and have a service radius of one-half to three-quarters of a mile. The neighborhood park should have one collector street frontage, and the remaining sides should front on residential streets. The minimum size for a neighborhood park shall be seven acres or the total acreage based on

one acre of park land per one thousand population within the neighborhood, whichever is greater. (UAGP Policy VI.H.12)

- POS-16: The Community Park Service Area is that area within a radius of approximately one to one-and-one-half miles of the community park site. The community park should have one major street frontage and the remaining sides may front on residential streets. Community parks should not back up to residential lots. The minimum size for a Community Park should be forty acres or the total acreage based on two acres of park land per one thousand population within the Community Park Service Area. (UAGP Policy VI.H.13)

Responses to Checklist Questions

Response a): The proposed Project would result in the construction of 127 single-family residential homes. Given Modesto's average household size of 2.96, the Project will produce approximately 376 new residents. As of 2025, Modesto's population was approximately 219,652. The Project would only create a population increase of approximately 0.2%, which does not constitute a significant population increase relative to existing parks and recreational facilities. The Project includes a 0.8-acre park lot that would be improved as a neighborhood park serving the subdivision, and the Project would comply with applicable General Plan and VOSP park standards and Quimby Act dedication requirements, as described in Response b), below. The park lot would function as a combined stormwater detention basin and park, as shown on the site plan. Therefore, the Project's impact on Modesto's parks and recreational facilities would be ***less than significant***.

Responses b): The proposed Project includes one park lot, which would be improved as a neighborhood park serving the subdivision. Construction of the park would occur within the Project site and within the development footprint evaluated throughout this Initial Study, and would not require the construction or expansion of off-site recreational facilities. No adverse physical effect on the environment beyond that evaluated in this Initial Study would result. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Consistent with General Plan Policy POS-13, only that portion of a dual-use park and basin facility that is owned or otherwise controlled by the City in perpetuity would count toward the minimum park acreage standard, calculated in accordance with the City's Design Standards for Dual Use Flood Control/Recreation Facilities.

XVII. TRANSPORTATION

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

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on transportation and circulation will be guided, in part, by the Modesto General Plan and the VOSP. Appendix C contains the Focused CEQA Transportation Analysis prepared by Fehr & Peers, dated July 21, 2026. The analysis was prepared for a study area that includes, but is broader than, the Project site. The trip generation, trip length, and vehicle miles traveled estimates relied on in this section are intended to provide a comparison of the 127 single-family dwelling units proposed by the Project and the 331,056 square feet of business park currently designated for the Project site such that the analysis is an analysis of the land use change that is proposed.

The General Plan EIR discusses transportation and circulation impacts in Section 3.13, Transportation and Circulation (Impacts 3.13-1 through 3.13-3). The General Plan EIR found impacts involving increases in VMT to be significant and unavoidable at the plan level, and the City adopted a statement of overriding considerations for that effect. The General Plan EIR found impacts involving conflict with a program, plan, policy, or ordinance addressing the circulation system, transportation hazards, and inadequate emergency access to be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- TC-18: Encourage Pedestrians and Bicycle Use. Streets, pedestrian paths, and bike paths contribute to a system of fully-connected routes to all destinations. Their designs encourage pedestrian and bicycle use when small and spatially defined by buildings, trees, and lighting, and when high-speed traffic is discouraged. (UAGP Policy V.A.2)
- TC-21: Facilities on Constrained Streets: Where right-of-way constraints exist, a “sharrow” may be used to supplement Class II bicycle facilities where vehicle speeds do not exceed 25 mph. (UAGP Policy V.E.7)
- TC-22: Level of Service and Mitigating Travel Demand. Over time, improve both the Level of Service and Quality of Service (see Tables V-1 and V2, respectively) for all transportation

modes (vehicle, transit, bicycle and pedestrian) on City roadways consistent with the financial resources reasonably available to the City and without unreasonably burdening property owners or developers. On roadways where the automobile LOS is expected to be level F, consider mitigation measures other than road widening, such as the addition of bicycle lanes, improved pedestrian access, improved transit service, and the establishment of walkable development patterns to improve the quality of service for all travel modes. (UAGP Policy V.A.6)

- TC-23. Complete Streets. Where traffic volumes, development types and access patterns provide opportunity, a four-lane street may be narrowed to a two-lane street, with a center turn lane, in order to better accommodate on-street parking, bicycle facilities and other amenities. These types of complete street retrofit projects are generally intended to enhance facilities for non-motorized travel modes, within an existing right-of-way, without resulting in reduced functionality for the motoring public. Maintaining high-quality transit service is equally important. (UAGP Policy V.A.7)
- TC-25: Street Grid. Design roadways and roadway connections to: provide a grid street system featuring short blocks and frequent connections to collectors and arterials to improve connectivity and accessibility for all modes; increase route choice; better accommodate public transit services; and, reduce trip lengths, traffic congestion, and pollution. To promote walking, limit block size to no more than 600 feet on a side, and provide internal access via alleys or walkways (any block-face less than 400 feet long need not have alleys or walkways). Cul-de-sacs are discouraged; when deemed necessary, cul-de-sacs should include pedestrian and bicycle connections to the greatest extent possible. (UAGP Policy V.B.1)
- TC-28: Transportation Study Thresholds. Figure II-1 delineates the functional geographic areas (Downtown, Baseline Developed Area, Planned Urbanizing Area) of the city described below. For CEQA purposes, the following are Modesto's thresholds for performing transportation studies.

Downtown Area: This area is exempt from automobile Level of Service (LOS) standards and no traffic impact analysis will be required for new development.

Baseline Developed Area: If a proposal is consistent with the Urban Area General Plan, no traffic impact analysis will be required. If a general plan amendment is needed, a traffic impact analysis may be required if the proposal would result in at least 100 peak hour trips above and beyond what was assumed in the analysis for the Urban Area General Plan Master EIR, if determined to be necessary. LOS "D" is the significance threshold.

Planned Urbanizing Area: In new specific plan areas that are outside city limits, a traffic study may be required if project-related traffic, as measured in Average Daily Trips, is expected to be at least ten percent (10%) greater than anticipated to result from the General Plan land use designations. The purpose of such a study would be to determine the amount of feasible automobile-oriented and non-auto-oriented mitigation associated with the project. Once a specific plan has been approved and the

area annexed to the city, traffic study policies for the Baseline Developed Area will apply. LOS “D” is the significance threshold. (UAGP Policy V.C.1)

- TC-29: Traffic Study. If required, a Comprehensive Traffic Study should conform to the City of Modesto Traffic Impact Study Criteria. These Criteria will be amended to reflect general plan goals and policies, including definition of metrics for all both motorized and non-motorized transportation modes. (UAGP Policy V.C.2)
- TC-30: Travel Mitigation Outside of Downtown. Streets and roads in the downtown area are constrained (see Policy V.A.6). Transportation mitigation may be applied to projects in that area to facilitate non-automobile travel through means such as sidewalk widening and adding bicycle lanes and increasing transit service. (UAGP Policy V.C.3)
- TC-35: Planning Efforts. Coordinate the City’s streets and highways system with Caltrans,’ the County’s, and other jurisdictions’ existing facilities and plans. (UAGP Policy V.H.3)
- TC-36: Transportation Demand Management. Prepare and maintain a Transportation Demand Management Plan that includes a focus on the Downtown area to reduce automobile trips and single-occupancy vehicle trips. (UAGP Policy V.H.4)
- TC-37: Driveway Consolidation. Consolidate driveways to reduce potential vehicle-pedestrian conflicts. (UAGP Policy V.H.5)
- TC-40 Intersection Control. The type(s) of intersection control(s) (e.g., traffic signal, traffic circle, roundabout, etc.) will be determined by the City Engineer at the time of project design. (UAGP Policy V.H.8)
- TC-41 Standard Specifications. The City’s Standard Specifications Manual applies to the construction of new roadway facilities. More design detail is provided in the City’s adopted Standard Specifications. Update the Standard Specifications to be consistent with the General Plan. (UAGP Policy V.H.9)
- TC-50: Actively Plan New Facilities. Street projects should be evaluated to determine how the planned bicycle facilities can be accommodated. (UAGP Policy V.E.6)
- TC-52: Bicycles at Signalized Intersections. Protected intersection design features, bike boxes, and bicycle detection systems may be used to delineate bicycle facilities, improve safety, and allow bicycle traffic to trigger the green phase of a traffic signal. In accordance with California Vehicle Code Section 21450.5, sensors that detect the presence of a waiting bicycle should be added to signalized intersections when signals are installed, upgraded, and/or maintained. Other markings and signage may be used as approved by the City Engineer. (UAGP Policy V.E.8)
- TC-53: Signal Timing. The green phase of traffic signals throughout Modesto should be timed to allow bicycle riders of all ages and abilities to cross the street safely. (UAGP Policy V.E.9)
- TC-54: Bicycle Circulation Near the Downtown Passenger Rail Station. Plan for the future multimodal transportation center, by facilitating improved bicycle access and parking in

and around downtown, to establish safe and convenient bicycle connections to and from the site. (UAGP Policy V.E.10)

- TC-58: Signal Timing. The green phase of traffic signals citywide should be timed to allow pedestrians of all ages and abilities to safely cross the street. The Federal Highway Administration's Best Practices Design Guide for Designing Sidewalks and Trails for Access, suggests crossing times should allow for pedestrians traveling at 3.5 feet per second or slower. (UAGP Policy V.D.4)
- TC-59: ADA Compliance. Construct or modify curbramps and sidewalks to comply with the Americans with Disabilities Act. (UAGP Policy V.D.5)
- TC-61: Street Trees. Plant and maintain large species trees along streets to separate pedestrians from moving traffic for safety and to create an inviting walking environment. (UAGP Policy V.D.7)

Trip Generation, Distribution, and Assignment

Trip Generation

Table Traffic-1 below compares the typical weekday daily, AM and PM peak hour trip generation of the proposed residential project and the existing designation/zoning, according to the most recent data published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition.¹

TABLE TRAFFIC-1: TRIP GENERATION COMPARISON

	<i>Scenario 1 - Existing Designation/Zoning</i>	<i>Scenario 2 - Proposed Project</i>
Land Use Type	Business Park	Single-family residential subdivision
Land Use Quantity	331,056 sq. ft. business park	127 single-family dwelling units
ITE Land Use Code	770 (Business Park)	210 (Single-Family Detached Housing)
Fitted Curve Equation	$T = 9.97(X) + 0.84$	$T = 8.07(X) + 265.45$
Weekday AM Peak Hour Trips	315 (Total), 258 (Entry), 57 (Exit)	91 (Total), 24 (Entry), 67 (Exit)
Weekday PM Peak Hour Trips	263 (Total), 76 (Entry), 187 (Exit)	120 (Total), 74 (Entry), 46 (Exit)
Weekday Daily Total Trips	3,301 (Total), 1,651 (Entry), 1,650 (Exit)	1,290 (Total), 645 (Entry), 645 (Exit)

Source: Fehr & Peers, 2026.

Trip Length

Average trip lengths for both development scenarios were derived from Replica travel data for comparable land uses in Modesto. For the proposed project's single family residential use, trip length data was drawn from existing single-family dwelling units located adjacent to the project site, within the area bounded by Sylvan Avenue, Claus Road, E. Briggsmore Avenue, and Fine Avenue. For the existing business park designation, trip length data was drawn from a comparable business park area bounded by Kiernan Avenue, SR 108, Bangs Avenue, and the SCA9 Amazon Associate Entrance.

The average trip length for the proposed residential project is 10.50 miles, nearly identical to the average trip length of 10.49 miles for the existing business park designation, a difference of only 0.01 miles. This indicates that, on a per trip basis, the two land uses generate comparable travel distances within the study area.

VMT Analysis

As shown in Table Traffic-2, average weekday VMT was calculated by multiplying daily vehicular trip generation by average trip length for each scenario. The existing business park designation generates approximately 3,350 daily trips at an average trip length of 10.49 miles, resulting in approximately 34,700 daily VMT. The proposed project generates approximately 1,300 daily trips at an average trip length of 10.50 miles, resulting in approximately 13,600 daily VMT.

This comparison indicates that, despite a nearly identical average trip length between the two land uses, the proposed project would generate substantially fewer daily vehicular trips than the existing business park designation, resulting in approximately 21,100 fewer daily VMT. This reduction is primarily attributable to the lower trip generation rate associated with single-family residential use relative to business park use, rather than a difference in travel distance per trip.

Because the proposed project would generate less daily VMT and vehicle trips than the business park land use previously analyzed under the Village One Specific Plan EIR, the project's transportation impacts would be less than those already evaluated in the certified EIR.

TABLE TRAFFIC-2: WEEKDAY VMT COMPARISON

<i>Development Scenario</i>	<i>Land Use Quantity</i>	<i>Daily Vehicular Trip Generation¹</i>	<i>Average Trip Length (miles)²</i>	<i>Average Weekday VMT³</i>
Scenario 1 – Existing Designation/Zoning	331,056 sq. ft. business park	3,350 trips	10.49	34,700
Scenario 2 – Proposed Project	127 single-family dwelling units	1,300 trips	10.50	13,600
Proposed Project vs. Existing Difference⁴		-2,050 trips	+0.01	-21,100

Notes:

1. Daily Trip Generation is rounded up to the nearest 50 trips.
2. Residential trip length is based on Replica data for single-family dwelling units existing right next to the project site in Modesto, CA. The selected sample units are within the area bounded by Sylvan Ave, Claus Rd, E Briggsmore Ave, and Fine Ave. Business park land use trip length is based on Replica data for the existing similar land use area in Modesto, CA. The selected sample area is bound by Kiernan Ave, SR 108, Bangs Ave, and SCA9 Amazon Associate Entrance.
3. Average Weekday VMT = Daily Vehicular Trip Generation * Average Trip Length
4. Difference = Proposed Project Value – Existing Designation/Zoning Value

Source: Fehr & Peers, 2026.

Policy Consistency Analysis

Policy and Plan Consistency Review

The City of Modesto Urban Area General Plan, adopted in March 2019, designates both Claus Road and E. Briggsmore Avenue as expressways serving as major corridors within the City. The General Plan's Bicycle Circulation Diagram further identifies Class II bike lanes along both streets, along with a Class I bike path on Claus Road near the project site. The review also found

no existing transit routes serving the project area, and no new transit routes currently planned in the vicinity. Based on this review, the proposed project would not interfere with existing transit or active transportation facilities, nor would it preclude the construction of planned bicycle, pedestrian, or transit facilities identified in the available and relevant plans.

Site Access and Circulation

The City of Modesto Standard Specifications require multi-family housing complexes and private residential subdivisions with 25 or more dwelling units to provide two access ways from a single public street. The Standard Specifications also require that driveway locations for single-family properties be set back a minimum of 2 feet from the property line, except where a property fronts on a cul-de-sac bulb, in which case a driveway may be constructed up to the property line.

Because the proposed project is anticipated to be developed as a standard public street subdivision, rather than a private residential subdivision, this specific requirement would not directly apply. It is possible, though, that the City Fire Department may require a second access point given state standards for driveways to provide emergency access for residential subdivisions. Given the project's size of 127 single-family dwelling units, the Project shall provide the number and configuration of access points to the surrounding public roadway network required by the City Engineer and the Modesto Fire Department, including any second point of access required under the California Fire Code, to ensure adequate circulation, emergency access, and traffic distribution.

Responses to Checklist Questions

Response a): As stated above, the policy consistency review found that the project would not conflict with applicable circulation, transit, or active transportation plans, and would not preclude planned bicycle or pedestrian facilities. Site access and internal circulation are expected to be consistent with City of Modesto design standards.

The Project proposes five-foot-wide sidewalks along the internal public streets, providing connectivity between the residential lots, the park lot, and the surrounding street network. These sidewalks will include adjacent landscaping and street trees, offering pedestrians shade during extreme weather conditions. While the Project would not trigger the direct installation of bicycle parking or infrastructure, it would be designed to integrate with nearby pedestrian and bicycle pathways, ensuring the future development is accessible for non-motorized transportation. The proposed Project would not conflict with adopted bicycle plans or policies.

The project would not conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, nor would it conflict with future planned auto network improvements within the study area, nor would it eliminate or adversely affect existing transit access; therefore, the impact is considered **less than significant** and would be consistent with the transportation assumptions in the General Plan EIR.

Response b): As of July 1, 2020, CEQA Guidelines Section 15064.3(b) states that the recommended metric for the evaluation of transportation impacts is VMT. It outlines the criteria for analyzing a project's transportation impacts. For land use projects, this section states that "vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact."

Because the project includes a General Plan Amendment and Specific Plan Amendment to redesignate the Project site to Village Residential (VR), a Vehicle Miles Traveled (VMT) analysis was prepared comparing the proposed 127-lot subdivision to the land uses currently designated for the Project site, as documented in Appendix C and summarized in Tables Traffic-1 and Traffic-2 above.

As described above, the proposed project would generate substantially fewer daily vehicular trips than the existing business park designation, resulting in approximately 21,100 fewer daily VMT. Because the proposed project would generate less daily VMT and vehicle trips than the business park land use previously analyzed under the Village One Specific Plan EIR, the project's transportation impacts would be less than those already evaluated in the certified EIR. Implementation of the proposed Project would have a *less than significant* impact.

CEQA Guidelines Section 15064.3(b)(4) provides that a lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household, or by another measure, and to use models to estimate a project's vehicle miles traveled. The proposed Project would not introduce urban development onto land planned to remain in agricultural or open space use. It would change the land use designation of a site that the General Plan and the VOSP already designate for urban development, and that the General Plan EIR and the VOSP EIR already analyzed as developed with a business park. For a land use redesignation of this kind, the City has evaluated the Project's transportation effect by comparing the vehicle miles traveled that would be generated by the proposed residential use to the vehicle miles traveled that would be generated by the business park use currently designated for the Project site. The General Plan EIR also identifies per-household vehicle miles traveled thresholds drawn from the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA, for use in evaluating individual development projects that would add vehicle miles traveled relative to the conditions assumed in the General Plan. Because the proposed Project would reduce vehicle miles traveled relative to the land use assumed for the Project site, the City has determined that the comparative analysis described below is the appropriate measure of the Project's transportation effect.

As documented in Appendix C and summarized in Tables Traffic-1 and Traffic-2 above, the business park use currently designated for the Project site would generate approximately 3,301 daily vehicle trips and approximately 34,700 daily VMT. The proposed 127-lot residential subdivision would generate approximately 1,290 daily vehicle trips and approximately 13,600 daily VMT. The proposed Project would therefore generate approximately 2,010 fewer daily vehicle trips and approximately 21,100 fewer daily VMT than the use currently designated for the Project site, reductions of approximately 61 percent in each case. Table Traffic-2 reports the difference in daily trips as 2,050 because trip generation is shown in that table rounded up to the nearest 50 trips. The average trip length associated with the two uses is essentially the same, at 10.50 miles for the proposed residential use and 10.49 miles for the business park use, so the reduction is attributable to the lower trip generation rate of single-family residential development rather than to any difference in travel distance per trip.

The General Plan EIR identified increases in vehicle miles traveled associated with build-out of the General Plan as a significant and unavoidable effect at the plan level, and the City adopted a statement of overriding considerations for that effect. Because the proposed Project would generate substantially less vehicle miles traveled than the land use previously designated and analyzed for the Project site, the Project would not result in a new significant transportation effect, would not substantially increase the severity of the transportation effect previously identified, and would not conflict with CEQA Guidelines Section 15064.3(b).

Response c), d): The Project would construct frontage improvements along its Milnes Road and Claus Road frontages, and would take access from Milnes Road, in accordance with City of Modesto standards. Streets within the Project site would meet City of Modesto minimum design standards. Additionally, the proposed Project would be subject to review and approval by the City. The review and approval process would include the Fire Department, which would include a review of the proposed project's consistency with the City's design criteria to ensure that safe vehicle access and viable emergency vehicles movements are provided. Therefore, these improvements are not expected to result in increased hazards.

The proposed Project would be consistent with the City of Modesto's design standards for local residential neighborhoods. All improvements, including the new roadway, sidewalks, and utility connections, would comply with applicable provisions of the Modesto General Plan, the Modesto Municipal Code, the City's Standard Specifications (2014), and the Transportation System Plan, ensuring safe and efficient site access and circulation.

Therefore, implementation of the proposed projects would not be inconsistent with an applicable design standard, and the proposed projects would result in a *less than significant* safety impact.

XVIII. TRIBAL CULTURAL RESOURCES

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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)?		X		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.		X		

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on tribal cultural resources will be guided, in part, by the Modesto General Plan and the VOSP.

The General Plan EIR analyzes cultural and tribal cultural resources impacts in Section 3.5, Cultural and Tribal Cultural Resources (Impacts 3.5-1 through 3.5-3). As discussed in the General Plan EIR, areas of high probability for archaeological resources are located within the riparian corridors along the Tuolumne River, Dry Creek, and the Stanislaus River. Areas outside of riparian corridors where soils have been previously excavated have a low probability for archaeological resources. At the plan level, the General Plan EIR concluded that impacts on historical and archaeological resources (Impact 3.5-1) would be significant and unavoidable, and that impacts related to the disturbance of human remains (Impact 3.5-2) and to tribal cultural resources (Impact 3.5-3) would be less than significant with implementation of General Plan policies and actions.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- AH-19: Any project subject to CEQA that involves substantial earth-disturbing activities should require consultation by the applicant for the purposes of determining archaeological and cultural resources impacts and creating appropriate mitigation to address such impacts. (UAGP Policy VII.F.3[a])
- AH-20: Any project that involves earth-disturbing activities within previously undisturbed soils in an area determined to be archaeologically or culturally sensitive by the City of Modesto through consultation with Native American tribes or bands and a qualified

archaeologist should be subject to archaeological and Native American monitoring during all ground-disturbing activities. (UAGP Policy VII.F.3[b])

- AH-21: Any project that involves earth-disturbing activities within previously undisturbed soils in an area determined to be archaeologically or culturally sensitive by the City of Modesto through consultation with Native American tribes or bands and a qualified archaeologist should be required to carry out the following mitigation measures, at a minimum:
 1. If prehistoric archaeological remains are discovered during project construction (inadvertent discoveries), all work in the area of the find shall cease, and a qualified archaeologist should be retained by the project sponsor to investigate the find, and make recommendations as to treatment and mitigation. In the event of the discovery of a burial, human bone, or suspected human bone all excavation or grading in the vicinity of the find should halt immediately and the area of the find should be protected and the project applicant immediately should notify the County Coroner of the find and comply with the provisions of California Health and Safety Code Section 7050.5, including California Public Resources Code Section 5097.98, if applicable. If human remains are identified, the project sponsor should also retain a Native American monitor;
 2. A qualified archaeological monitor should be present and should have the authority to stop and redirect grading activities, in consultation with the Native Americans and their designated monitors, to evaluate the significance of any Native American archaeological resources discovered on the property;
 3. Native American monitors from the appropriate Native American Tribes, as determined by the NAHC should be allowed to monitor all groundbreaking activities, including all archaeological testing and data recovery excavations that are likely to affect Native American resources, as determined by a qualified archaeologist. The project proponent should be responsible for compensating Native American monitors. If human remains are discovered, the NAHC should assign a Most Likely Descendent (MLD); and,
 4. The landowner agrees to relinquish ownership of all Native American human remains and associated burial artifacts that are found within the project area, to the appropriate Native American MLD, as assigned by the NAHC, for proper treatment and disposition. The MLD will decide whether or not standard archaeological analysis will be allowed on human remains and associated artifacts from burials.
 5. If paleontological resources are discovered during earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find, and the City's Planning Manager shall be notified. A qualified paleontologist shall evaluate the resource and prepare a proposed mitigation plan in accordance with Society of Vertebrate Paleontology guidelines. The proposed mitigation plan may include a field survey of additional construction areas, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations determined by the lead agency to be necessary and feasible shall

be implemented before construction activities can resume at the site where the paleontological resources were discovered. (UAGP Policy VII.F.3[c])

Responses to Checklist Questions

Response a): There is potential for the discovery of prehistoric, ethnohistoric, or historic archaeological sites that may meet the definition of Tribal Cultural Resources (TCRs). Although no TCRs have been documented on the Project site, the project is in a region where significant cultural resources have been recorded and there remains a potential that undocumented archaeological resources that may meet the TCR definition could be unearthed or otherwise discovered during ground-disturbing and construction activities. Examples of significant archaeological discoveries that may meet the TCR definition would include villages and cemeteries. Due to the possible presence of undocumented TCRs within the project site, construction-related impacts on tribal cultural resources may occur.

Tribal consultation conducted for the proposed Project is summarized below. Pursuant to Assembly Bill 52 (Public Resources Code sections 21080.3.1 through 21084.3), the City provided written notice of the proposed Project to those California Native American tribes traditionally and culturally affiliated with the geographic area that have requested notice from the City. Separately, pursuant to Senate Bill 18 (Government Contact Code section 65352.3), because the proposed Project includes a General Plan Amendment and a Specific Plan Amendment, the City requested a contact list from the Native American Heritage Commission and provided the required 90-day notice to the listed tribes. The process has not concluded as of the writing of this document.

Mitigation Measure TCR-1: *If a potential tribal cultural resource, archaeological deposit, or human remains is encountered during ground-disturbing activities, all work within 100 feet of the find shall halt and the City shall be notified immediately. A qualified archaeologist shall evaluate the find and, if it may constitute a tribal cultural resource, the City shall notify and consult with the culturally affiliated California Native American tribe(s) regarding treatment, which may include preservation in place, avoidance, capping, or data recovery, and regarding tribal monitoring of the remaining ground disturbance in the vicinity of the find. Work in the affected area shall not resume until the City has authorized it in writing. In the event human remains are encountered, the Stanislaus County Coroner shall be contacted and the procedures of Health and Safety Code section 7050.5 and Public Resources Code section 5097.98 shall be followed.*

Implementation of the General Plan policies and existing State law would require appropriate steps to preserve and/or document any previously undiscovered resources that may be encountered during construction activities. Specifically, the proposed Project would be subject to the City's General Plan policies, including Policies AH-19 through AH-21, which provide procedures for addressing the unanticipated discovery of tribal cultural resources, and to Mitigation Measure TCR-1. Therefore, the impact related to tribal cultural resources would be ***less than significant*** and would not be more severe than those analyzed in the General Plan EIR.

XIX. UTILITIES AND SERVICE SYSTEMS

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X	
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 projects projected demand in addition to the providers existing commitments?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Prior Environmental Impacts

Implementation of the proposed Project would introduce new residential uses to the Project site that are different than those adopted for the same parcels in the VOSP. The determination of impacts on utilities and services systems will be guided, in part, by the Modesto General Plan and the VOSP.

The General Plan EIR analyzes impacts to utilities and service systems in Section 3.14, Utilities and Service Systems (Impacts 3.14-1 through 3.14-6). The General Plan EIR found that impacts involving water supplies and water treatment facilities would be less than significant; impacts involving wastewater capacity and wastewater treatment facilities would be less than significant; impacts involving stormwater drainage facilities would be less than significant; and impacts involving solid waste would be less than significant.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- WS-12: Implement the demand management and conservation measures identified in the City's adopted Urban Water Management Plan (UWMP). During review of development proposals, require that all developments reduce their potable water demand. Refer to the UWMP for potential techniques to reduce potable water demand. (UAGP Policy VI.A.1)
- WS-13: Require water infrastructure master plans for public infrastructure and/or when otherwise pertinent to provision of water service at adopted service levels for the

specific plan areas or other projects depending on site issues and location. (UAGP Policy VI.A.2)

- WS-14: All new connections to the public water system are to have meters installed. In addition, on or before January 1, 2025, all existing municipal and industrial service connections are to have water meters installed. (UAGP Policy VI.A.3)
- WS-19: encourage the optimum beneficial use of water resources within the City. Strive to maintain an adequate supply of high-quality water for urban uses. At a minimum, potable water supplies delivered to water customers shall conform to the primary maximum contaminant levels as defined in State law. (UAGP Policy VI.B.3)
- WS-21: Construct, operate, maintain, and replace water infrastructure facilities in a manner that will provide the best option possible service to the public. Ensure that infrastructure is installed before or concurrently with development. Take a comprehensive approach to financing, using a blend of special taxes, benefit assessments, and other methods to ensure that infrastructure installation occurs in a timely manner. (UAGP Policy VI.B.5)
- WS-22: Continue to establish guidelines, policies, and programs to implement water conservation to the maximum extent feasible. Funding for large conservation rebate or exchange programs should be maintained and enhanced. Strive to maximize the utilization of water resources when developing and implementing the City's Economic Development Strategy. (UAGP Policy VI.B.6)
- SS-10: Construct, operate, maintain, and replace wastewater facilities in a manner that will provide the best possible service to the public. In developing implementations plans, consider rehabilitation of essential existing facilities, expansion to meet current excess demand, and the timely expansion for future demand. (UAGP Policy VI.D.6)
- SS-11: Allocate the City's wastewater system capacity to existing and future residential, commercial, and industrial customers. Discharges from environmental cleanup sites may be issued conditional discharge permits subject to the availability of excess treatment capacity. In accordance with federal and state regulations, discharges to the wastewater system may not, or may not threaten to, upset, or interfere with, the wastewater system. (UAGP Policy VI.E.1)
- SS-13: Individual development projects are subject to review by the City for adequate wastewater collection service and treatment. (UAGP Policy VI.E.3)
- SS-16: Within the city limits and the sewer service area, all developed properties should connect to the sewer system within five (5) years of the extension of service. (UAGP Policy VI.E.6)
- SS-23: Require each new development project to be served with public sanitary sewers. Utilities located in private streets shall be part of the public sewerage system and shall be connected to a sewer lateral. (UAGP Policy VI.E.14)

Responses to Checklist Questions

Response a), b), c):

Water

Consistent with the City of Modesto General Plan EIR and Urban Water Management Plan (UWMP), existing water supply entitlements and groundwater resources are sufficient to meet current and projected demands. As documented in the General Plan EIR (Impact 3.14-1), the City would have sufficient water supplies available to serve the City and reasonably foreseeable future development, including the Project site, during normal, single-dry, and multiple-dry years, and would not require the construction of new or expanded water treatment facilities (Impact 3.14-2). The City's Water Shortage Contingency Plan and groundwater management programs provide additional assurances for the long-term availability and reliability of water resources. Furthermore, the project would be required to comply with applicable General Plan policies related to water demand management, conservation, and metering, consistent with the City's UWMP. Therefore, the proposed Project would not necessitate the construction of new or expanded water treatment or supply facilities, nor would it exceed existing water entitlements. Impacts related to water supply would be ***less than significant*** and consistent with those analyzed in the General Plan EIR.

Based on the water demand factors reported in the General Plan EIR, the Project would generate a projected potable water demand of approximately 67 acre-feet per year. Table 3.14-1 of the General Plan EIR reports 2020 actual residential potable water demand within the City's retail service area of 32,501 acre-feet per year, consisting of 27,081 acre-feet per year for single-family use and 5,420 acre-feet per year for multi-family use. Table 3.13-2 of the General Plan EIR reports 67,211 households within the City and its Planning Area in 2019. Those figures yield an average residential demand of approximately 0.48 acre-foot per household per year, or approximately 432 gallons per household per day. Applied to the 127 proposed dwelling units, the Project would generate approximately 61 acre-feet per year of metered residential demand, or approximately 67 acre-feet per year including a proportional share of distribution system losses, which the General Plan EIR reports at approximately ten percent of production.

This demand represents approximately 0.08 percent of the 82,156 acre-feet per year of total retail demand projected for the City's water service area in 2045 in Table 3.14-3 of the General Plan EIR, and is within the supplies identified for that year, which include treated surface water from the Modesto Regional Water Treatment Plant of up to 67,200 acre-feet per year together with available groundwater supply assumed at up to 51,500 acre-feet per year. Because the Project site is currently designated for business park use, which would itself generate potable water demand, the net increase in demand relative to the land use assumed in the General Plan and the VOSP would be less than the figure stated above. The Project would not require water supplies beyond those identified in the General Plan EIR and the UWMP, and a water supply assessment under Water Code Section 10910 and a verification under Government Code Section 66473.7 are not required because the Project comprises fewer than 500 dwelling units.

Wastewater

The City of Modesto periodically updates its Wastewater Master Plan to ensure wastewater treatment facilities have sufficient capacity to accommodate future growth and development within the city. The proposed Project would continue to be subject to applicable General Plan policies, including those requiring review of wastewater service adequacy and compliance with treatment standards. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Modesto standards and specifications. Sanitary

sewer disposal and treatment will be to the City of Modesto Jennings facility. Applying the generation rate of 120 to 250 gallons per day per dwelling unit used in the General Plan EIR, the Project would generate approximately 15,240 to 31,750 gallons per day, or approximately 0.015 to 0.032 million gallons per day, of wastewater. This volume is a small fraction of the capacity evaluated in the General Plan EIR, which concluded that flows associated with build-out of the General Plan would not exceed available treatment capacity (Impact 3.14-3). Additionally, because the Project applicant would pay the City's Public Facilities Improvement Program (PFIP) fees to develop the site, and adequate long-term wastewater treatment capacity is available to serve full build-out of the proposed project, a ***less than significant*** impact would occur related to requiring or resulting in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Storm Drainage

The proposed Project would be required to maintain compliance with applicable City of Modesto stormwater policies, including adherence to the City's Stormwater Management Program. The proposed Project would also be subject to Low Impact Development (LID) design standards aimed at minimizing runoff and protecting downstream water quality. Therefore, the proposed Project would have a ***less than significant*** impact related to stormwater runoff or drainage and would not result in impacts beyond those analyzed in the General Plan EIR.

Response d), e): Based on the most recent waste generation factor provided by CalRecycle for residential uses in 2024, which designated 6.2 pounds of waste per person per day across California, the proposed Project is expected to generate approximately 2,331 pounds per day of solid waste, which is equivalent to approximately 1.17 tons per day.

Currently, Fink Road Landfill has a remaining capacity of 19,000,000 cubic yards and has a current maximum permitted throughput of 2,400 tons per day. This landfill has a cease operation date in the year 2050. Forward Sanitary Landfill has a remaining capacity of 22,100,000 cubic yards and has a current maximum permitted throughput of 8,668 tons per day. This landfill has a cease operation date in the year 2036. The additional solid waste generation associated with the proposed Project to the Forward and Fink Road Landfills would not exceed either remaining capacity. The Project would also be required to comply with applicable solid waste reduction statutes and regulations, including Assembly Bill 341 and Assembly Bill 1826, which require recycling and organic waste recycling service for covered generators; Senate Bill 1383, which requires organic waste diversion and mandates organic waste collection service; and the construction and demolition debris diversion requirements of the CALGreen Building Standards Code and the Modesto Municipal Code. The Project would therefore comply with federal, State, and local management and reduction statutes and regulations related to solid waste, and impacts would be less than significant. Therefore, the proposed Project would not result in impacts beyond those already anticipated under the City of Modesto General Plan Master EIR. Therefore, impacts related to solid waste would be ***less than significant***.

XX. WILDFIRE

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
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?			X	
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?			X	
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?			X	

Existing Setting

The General Plan EIR analyzes wildfire-related impacts in Section 3.8, Hazards and Hazardous Materials (Impact 3.8-6). The General Plan EIR found that the City of Modesto is not located in or near a state responsibility area (SRA) or lands classified as very high fire hazard severity zones (VHFHSZs). The Project site is located within a primarily urbanized, developed area. Therefore, wildfire-related impacts would not be substantially greater than those identified in the General Plan EIR.

City of Modesto General Plan

The following is a list of General Plan policies that are relevant to this environmental topic.

- FS-1: Maintain adequate fire flows in relation to structures size, design, and requirements for construction and/or built-in fire protection systems in accordance with the California Fire Code and adopted local ordinances. Determination of adequate fire flows includes factors such as storage capacity, system gridding, hydrant spacing, and sizing of water mains. (UAGP Policy VI.K.1)
- FS-2: Ensure adequate ingress and egress to all structures for fire fighting and rescue purposes independent of privately-owned and maintained driveways. Provide protection of life and property through the use of engineered fire protection systems, including roof systems. (UAGP Policy VI.K.2)
- FS-3: Practice timely adoption of the current edition of the California Fire Code including local ordinances designed to address local conditions. The California Fire Code may be amended to suit local conditions. (UAGP Policy VI.K.3)
- FS-4: Ensure that fire stations, apparatus, equipment, and personnel are in place concurrent with construction in the Planned Urbanizing Area. (UAGP Policy VI.K.4)

- FS-5: Future fire station sites and facilities should be closely coordinated with existing and planned public parks, libraries, and other activity centers in order to encourage maximum efficiency of public facilities. (UAGP Policy VI.K.5)
- FS-6: Promote fire-safe behaviors within the community through public fire education activities and programs. (UAGP Policy VI.K.6)
- FS-7: Maintain readiness to mitigate man-made or natural disasters through maintenance and implementation of the Multi-Hazard Functional Plan, the Multi-Hazard Mitigation Plan, and the Emergency Operations Plan. (UAGP Policy VI.K.7)
- FS-8: Maintain equipment, staffing, and facilities to provide Emergency Medical Services, Fire Prevention and Suppression, Urban Search and Rescue, and Hazardous Materials Response Capabilities. (UAGP Policy VI.K.8)
- FS-9: Provide an adequate Fire and Life Safety Delivery system through the achievement of the following standards:
 - a) Maintain an emergency response system capable of achieving the following standards in 90 percent of all cases:
 - The first fire emergency response unit arrives within six minutes of dispatch;
 - A full first alarm assignment consisting of four engines, one truck, one chief officer, and a minimum of 16 personnel arrive within 10 minutes of dispatch; and,
 - A second alarm assignment consisting of two engines and one truck with a minimum of nine personnel arrives within 15 minutes of dispatch. (UAGP Policy VI.K.9)
- FS-10: Protect life and property by requiring engineered fire protection systems and fire resistive roof systems as part of all new construction; in situations where access is limited, fire sprinklers shall be required for new construction. (UAGP Policy VI.K.10)
- FS-11: Provide an effective prevention program aimed at fire loss reduction through inspection, investigation, and public education. (UAGP Policy VI.K.11)
- FS-12: Coordinate with affected fire protection districts when an annexation to the City is proposed, and before it has been finalized, regarding fire protection and other emergency services. (UAGP Policy VI.K.12)
- FS-14: Negotiate with affected fire protection districts when an annexation to the City is contemplated and before it has been affected to determine whether the boundary change may result in the erosion of fire protection or other emergency services. Any resulting agreements must be approved by City Council and the governing board of the fire protection district prior to City Council approval of the annexation. Options range from the consolidation of the fire protection district into Modesto City Fire to revenue sharing. (UAGP Policy VI.K.13)

Responses to Checklist Questions

Response a): The Project site will connect to an existing network of City streets. The proposed circulation improvements would allow for greater emergency access relative to existing conditions. The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response b): The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels, fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The County has areas with an abundance of flashy fuels (i.e., grassland). The Project site is in an area that is predominantly urban and is not considered to be at significant risk of wildfire. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response c): The proposed Project includes development of infrastructure (water, sewer, and storm drainage). The proposed infrastructure improvements would allow for decreased fire risk relative to existing conditions. The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response d): The Project site is not located downslope or downstream of lands subject to wildfire.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e., cut and fill). The Project site is relatively flat; therefore, the potential for a landslide in the Project site is essentially non-existent.

Therefore, impacts from Project implementation would be considered ***less than significant*** relative to this topic.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
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)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Responses to Checklist Questions

Response a): This Initial Study includes an analysis of the impacts associated with aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. The analysis covers a broad spectrum of topics relative to the potential for the proposed Project to have environmental impacts. It was found that the proposed Project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. For the reasons presented throughout this Initial Study, 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. The proposed Project would have a ***less than significant*** impact relative to this topic.

Response b): This Initial Study includes an analysis of the impacts associated with a broad spectrum of topics relative to the potential for the proposed Project to have cumulative environmental impacts. It was found that the proposed Project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. The General Plan EIR and the VOSP EIR identified significant and unavoidable cumulative effects associated with build-out of those plans for the conversion of Prime Farmland, regional air quality, greenhouse gas emissions, noise, and vehicle miles traveled, and the City adopted statements of overriding considerations for those effects. The Project site was included within the area analyzed in those documents, and, as described in the responses above, the proposed Project would not convert additional land, would generate fewer

vehicle trips and less VMT than the land use previously assumed for the site, and would not result in a new significant effect or a substantial increase in the severity of any previously identified significant effect. The Project's incremental contribution to those cumulative effects is therefore not cumulatively considerable, and no significant cumulative effects beyond those already addressed in the prior environmental documents would result after implementation of the mitigation measures presented in this Initial Study. With the implementation of all mitigation measures presented in this Initial Study, the proposed Project would have a ***less than significant*** impact relative to this topic.

The reasonably foreseeable projects considered in this cumulative analysis include the adjoining Parklane (The Crossings) development described in the Project Description, which would subdivide approximately 127.51 acres south of Milnes Road into 527 residential lots under separate ownership, together with other development anticipated within the Village One Specific Plan planning area.

Response c): Environmental factors such as air quality, noise, hazards, and transportation were previously addressed in responses above. As detailed prior, the proposed Project would not result, either directly or indirectly, in substantial adverse impacts related to these issues. The project's effects on regional air quality, hazards and hazardous materials, geology and soils, noise, and transportation/traffic would be less than significant, with mitigation incorporated where identified in this Initial Study. The proposed Project would not cause substantial adverse effects on human beings. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

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APPENDIX A: AIR QUALITY DATA

Village One Easton Subdivision Project Detailed Report

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4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

- 5.4.1. Construction Vehicle Control Strategies
- 5.5. Architectural Coatings
- 5.6. Dust Mitigation
 - 5.6.1. Construction Earthmoving Activities
 - 5.6.2. Construction Earthmoving Control Strategies
- 5.7. Construction Paving
- 5.8. Construction Electricity Consumption and Emissions Factors
- 5.9. Operational Mobile Sources
 - 5.9.1. Unmitigated
- 5.10. Operational Area Sources
 - 5.10.1. Hearths
 - 5.10.2. Architectural Coatings
 - 5.10.3. Landscape Equipment
- 5.11. Operational Energy Consumption
 - 5.11.1. Unmitigated
- 5.12. Operational Water and Wastewater Consumption
 - 5.12.1. Unmitigated
- 5.13. Operational Waste Generation
 - 5.13.1. Unmitigated
- 5.14. Operational Refrigeration and Air Conditioning Equipment
 - 5.14.1. Unmitigated
- 5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Village One Easton Subdivision Project
Construction Start Date	1/1/2028
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10000
Precipitation (days)	29.2000
Location	37.68451474093165, -120.9204966782972
County	Stanislaus
City	Modesto
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2200
EDFZ	15
Electric Utility	Modesto Irrigation District
Gas Utility	Pacific Gas & Electric

Data Field	Value
App Version	2022.1.1.45

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	127.000	Dwelling Unit	19.0000	247,650	1,487,533	0.00000	403.000	—

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	77.6367	9.38889	14.9915	0.02555	0.30453	0.43020	0.73473	0.28051	0.10426	0.38477	—	3,037.22	3,037.22	0.11069	0.07652	1.70592	3,064.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.09399	27.5017	28.9168	0.06093	1.14375	19.7904	20.9342	1.05225	10.1337	11.1860	—	6,735.66	6,735.66	0.27206	0.07753	0.04430	6,760.37

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Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.60389	7.89849	11.0522	0.02030	0.27857	2.06449	2.34306	0.25647	0.69313	0.94961	—	2,345.60	2,345.60	0.08925	0.04800	0.42495	2,362.56
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.84021	1.44147	2.01702	0.00370	0.05084	0.37677	0.42761	0.04681	0.12650	0.17330	—	388.341	388.341	0.01478	0.00795	0.07035	391.149

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.18130	9.38889	14.9915	0.02555	0.30453	0.43020	0.73473	0.28051	0.10426	0.38477	—	3,037.22	3,037.22	0.11069	0.07652	1.70592	3,064.50
2029	77.6367	9.02961	14.8248	0.02554	0.27993	0.43020	0.71013	0.25788	0.10426	0.36214	—	3,022.24	3,022.24	0.11067	0.07651	1.52332	3,049.33
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	3.09399	27.5017	28.9168	0.06093	1.14375	19.7904	20.9342	1.05225	10.1337	11.1860	—	6,735.66	6,735.66	0.27206	0.07753	0.04430	6,760.37
2029	1.11488	9.06833	14.4135	0.02554	0.27993	0.43020	0.71013	0.25788	0.10426	0.36214	—	2,985.74	2,985.74	0.11268	0.07752	0.03941	3,011.69
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
2028	0.95686	7.89849	11.0522	0.02030	0.27857	2.06449	2.34306	0.25647	0.69313	0.94961	—	2,345.60	2,345.60	0.08925	0.04800	0.42495	2,362.56
2029	4.60389	2.91715	4.66405	0.00796	0.09159	0.12727	0.21886	0.08436	0.03075	0.11510	—	931.525	931.525	0.03492	0.02240	0.19530	939.267
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.17463	1.44147	2.01702	0.00370	0.05084	0.37677	0.42761	0.04681	0.12650	0.17330	—	388.341	388.341	0.01478	0.00795	0.07035	391.149
2029	0.84021	0.53238	0.85119	0.00145	0.01672	0.02323	0.03994	0.01540	0.00561	0.02101	—	154.225	154.225	0.00578	0.00371	0.03233	155.506

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.99143	8.92495	12.9352	0.02340	0.30024	0.00000	0.30024	0.27622	0.00000	0.27622	—	2,397.46	2,397.46	0.09725	0.01945	0.00000	2,405.68
2029	77.6050	8.58166	12.9012	0.02340	0.27564	0.00000	0.27564	0.25359	0.00000	0.25359	—	2,396.83	2,396.83	0.09723	0.01945	0.00000	2,405.06
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	3.03620	27.4549	28.3524	0.06093	1.14375	19.6570	20.8008	1.05225	10.1024	11.1547	—	6,598.26	6,598.26	0.26765	0.05353	0.00000	6,620.90
2029	0.96514	8.58166	12.9012	0.02340	0.27564	0.00000	0.27564	0.25359	0.00000	0.25359	—	2,396.83	2,396.83	0.09723	0.01945	0.00000	2,405.06
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.86104	7.62475	10.0723	0.01912	0.27623	1.81799	2.09422	0.25413	0.63356	0.88769	—	1,996.51	1,996.51	0.08099	0.01620	0.00000	2,003.36
2029	4.55739	2.78211	4.18949	0.00736	0.09040	0.00000	0.09040	0.08317	0.00000	0.08317	—	756.137	756.137	0.03067	0.00613	0.00000	758.732
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
2028	0.15714	1.39152	1.83820	0.00349	0.05041	0.33178	0.38220	0.04638	0.11562	0.16200	—	330.545	330.545	0.01341	0.00268	0.00000	331.680
2029	0.83172	0.50774	0.76458	0.00134	0.01650	0.00000	0.01650	0.01518	0.00000	0.01518	—	125.187	125.187	0.00508	0.00102	0.00000	125.617

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.18987	0.46394	2.05622	0.00215	0.00429	0.43020	0.43449	0.00429	0.10426	0.10855	—	639.766	639.766	0.01344	0.05707	1.70592	658.814
2029	0.16677	0.44796	1.92355	0.00215	0.00429	0.43020	0.43449	0.00429	0.10426	0.10855	—	625.407	625.407	0.01344	0.05707	1.52332	644.272
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.16126	0.51454	1.61282	0.00215	0.00429	0.43020	0.43449	0.00429	0.10426	0.10855	—	602.470	602.470	0.01647	0.05808	0.04430	620.233
2029	0.14974	0.48668	1.51227	0.00215	0.00429	0.43020	0.43449	0.00429	0.10426	0.10855	—	588.903	588.903	0.01546	0.05808	0.03941	606.636
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.09582	0.27375	0.97983	0.00117	0.00234	0.24649	0.24884	0.00234	0.05957	0.06192	—	349.089	349.089	0.00826	0.03180	0.42495	359.198
2029	0.04650	0.13504	0.47456	0.00060	0.00119	0.12727	0.12846	0.00119	0.03075	0.03194	—	175.388	175.388	0.00425	0.01626	0.19530	180.535
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.01749	0.04996	0.17882	0.00021	0.00043	0.04499	0.04541	0.00043	0.01087	0.01130	—	57.7956	57.7956	0.00137	0.00527	0.07035	59.4693
2029	0.00849	0.02464	0.08661	0.00011	0.00022	0.02323	0.02344	0.00022	0.00561	0.00583	—	29.0375	29.0375	0.00070	0.00269	0.03233	29.8897

2.3. 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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.0661	5.88916	70.8340	0.18451	4.28769	7.29273	11.5804	4.13121	1.85516	5.98638	759.336	11,436.2	12,195.6	10.6680	0.42190	25.1952	12,613.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.0004	6.35991	58.7977	0.17784	4.28441	7.29273	11.5771	4.12875	1.85516	5.98391	759.336	10,774.0	11,533.4	10.7122	0.45066	2.38098	11,937.8
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7653	4.88661	39.2123	0.10019	1.04620	6.99743	8.04363	1.00805	1.78062	2.78867	224.204	9,737.13	9,961.33	8.16098	0.42585	11.6613	10,303.9
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96467	0.89181	7.15624	0.01828	0.19093	1.27703	1.46796	0.18397	0.32496	0.50893	37.1195	1,612.09	1,649.21	1.35114	0.07050	1.93065	1,705.93

2.4. 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.46690	3.75854	34.2666	0.08049	0.06382	7.29273	7.35655	0.06013	1.85516	1.91529	—	8,215.77	8,215.77	0.31228	0.38139	23.4215	8,360.65
Area	9.56744	1.58868	36.3368	0.10056	4.18005	—	4.18005	4.02727	—	4.02727	690.189	1,356.31	2,046.50	3.25248	0.00268	—	2,128.61

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Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Energy	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	1,803.81	1,803.81	0.16163	0.01351	—	1,811.88
Water	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Waste	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367
Total	14.0661	5.88916	70.8340	0.18451	4.28769	7.29273	11.5804	4.13121	1.85516	5.98638	759.336	11,436.2	12,195.6	10.6680	0.42190	25.1952	12,613.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.02628	4.29701	29.4545	0.07413	0.06386	7.29273	7.35659	0.06017	1.85516	1.91533	—	7,572.84	7,572.84	0.35720	0.41030	0.60731	7,704.65
Area	8.94237	1.52096	29.1126	0.10025	4.17673	—	4.17673	4.02476	—	4.02476	690.189	1,337.05	2,027.24	3.25167	0.00252	—	2,109.28
Energy	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	1,803.81	1,803.81	0.16163	0.01351	—	1,811.88
Water	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Waste	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367
Total	13.0004	6.35991	58.7977	0.17784	4.28441	7.29273	11.5771	4.12875	1.85516	5.98391	759.336	10,774.0	11,533.4	10.7122	0.45066	2.38098	11,937.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.97800	3.96958	28.8787	0.07405	0.06241	6.99743	7.05984	0.05880	1.78062	1.83943	—	7,563.11	7,563.11	0.32679	0.38737	9.88758	7,696.60
Area	6.75558	0.37509	10.1030	0.02267	0.93997	—	0.93997	0.90543	—	0.90543	155.056	309.878	464.934	0.73091	0.00064	—	483.399
Energy	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	1,803.81	1,803.81	0.16163	0.01351	—	1,811.88
Water	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Waste	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367

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Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Total	10.7653	4.88661	39.2123	0.10019	1.04620	6.99743	8.04363	1.00805	1.78062	2.78867	224.204	9,737.13	9,961.33	8.16098	0.42585	11.6613	10,303.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.72599	0.72445	5.27036	0.01351	0.01139	1.27703	1.28842	0.01073	0.32496	0.33570	—	1,252.16	1,252.16	0.05410	0.06413	1.63700	1,274.26
Area	1.23289	0.06845	1.84380	0.00414	0.17154	—	0.17154	0.16524	—	0.16524	25.6713	51.3039	76.9752	0.12101	0.00011	—	80.0323
Energy	0.00579	0.09890	0.04209	0.00063	0.00800	—	0.00800	0.00800	—	0.00800	—	298.642	298.642	0.02676	0.00224	—	299.977
Water	—	—	—	—	—	—	—	—	—	—	1.60836	9.98706	11.5954	0.16582	0.00403	—	16.9412
Waste	—	—	—	—	—	—	—	—	—	—	9.83977	0.00000	9.83977	0.98345	0.00000	—	34.4260
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29365	0.29365
Total	1.96467	0.89181	7.15624	0.01828	0.19093	1.27703	1.46796	0.18397	0.32496	0.50893	37.1195	1,612.09	1,649.21	1.35114	0.07050	1.93065	1,705.93

3. Construction Emissions Details

3.1. Site Preparation (2028)

3.1.1. Onsite - Unmitigated

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

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

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Off-Road Equipment	3.03620	27.4549	28.3524	0.04893	1.14375	—	1.14375	1.05225	—	1.05225	—	5,300.02	5,300.02	0.21499	0.04300	—	5,318.21
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08318	0.75219	0.77678	0.00134	0.03134	—	0.03134	0.02883	—	0.02883	—	145.206	145.206	0.00589	0.00118	—	145.704
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01518	0.13727	0.14176	0.00024	0.00572	—	0.00572	0.00526	—	0.00526	—	24.0405	24.0405	0.00098	0.00020	—	24.1230
Dust From Material Movement	—	—	—	—	—	0.09829	0.09829	—	0.05051	0.05051	—	—	—	—	—	—	—

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

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05779	0.04681	0.56440	0.00000	0.00000	0.13341	0.13341	0.00000	0.03127	0.03127	—	120.224	120.224	0.00386	0.00571	0.01113	122.032
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00159	0.00114	0.01604	0.00000	0.00000	0.00359	0.00359	0.00000	0.00084	0.00084	—	3.39408	3.39408	0.00008	0.00015	0.00507	3.44471
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00029	0.00021	0.00293	0.00000	0.00000	0.00065	0.00065	0.00000	0.00015	0.00015	—	0.56193	0.56193	0.00001	0.00002	0.00084	0.57031
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
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

3.2. Grading (2028)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.87803	24.3289	27.1688	0.06093	0.98510	—	0.98510	0.90629	—	0.90629	—	6,598.26	6,598.26	0.26765	0.05353	—	6,620.90
Dust From Material Movement	—	—	—	—	—	15.5666	15.5666	—	4.34081	4.34081	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23655	1.99964	2.23306	0.00501	0.08097	—	0.08097	0.07449	—	0.07449	—	542.323	542.323	0.02200	0.00440	—	544.184
Dust From Material Movement	—	—	—	—	—	1.27945	1.27945	—	0.35678	0.35678	—	—	—	—	—	—	—

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04317	0.36493	0.40753	0.00091	0.01478	—	0.01478	0.01359	—	0.01359	—	89.7877	89.7877	0.00364	0.00073	—	90.0959
Dust From Material Movement	—	—	—	—	—	0.23350	0.23350	—	0.06511	0.06511	—	—	—	—	—	—	—
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

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06605	0.05349	0.64502	0.00000	0.00000	0.15247	0.15247	0.00000	0.03574	0.03574	—	137.399	137.399	0.00441	0.00652	0.01272	139.465
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Worker	0.00546	0.00390	0.05498	0.00000	0.00000	0.01230	0.01230	0.00000	0.00288	0.00288	—	11.6369	11.6369	0.00029	0.00050	0.01739	11.8104
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00100	0.00071	0.01003	0.00000	0.00000	0.00224	0.00224	0.00000	0.00053	0.00053	—	1.92661	1.92661	0.00005	0.00008	0.00288	1.95535
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
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

3.3. Building Construction (2028)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99143	8.92495	12.9352	0.02340	0.30024	—	0.30024	0.27622	—	0.27622	—	2,397.46	2,397.46	0.09725	0.01945	—	2,405.68
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Off-Road Equipment	0.99143	8.92495	12.9352	0.02340	0.30024	—	0.30024	0.27622	—	0.27622	—	2,397.46	2,397.46	0.09725	0.01945	—	2,405.68
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54131	4.87292	7.06249	0.01278	0.16393	—	0.16393	0.15081	—	0.15081	—	1,308.98	1,308.98	0.05310	0.01062	—	1,313.48
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09879	0.88931	1.28891	0.00233	0.02992	—	0.02992	0.02752	—	0.02752	—	216.717	216.717	0.00879	0.00176	—	217.461
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

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17899	0.09449	1.92331	0.00000	0.00000	0.34855	0.34855	0.00000	0.08170	0.08170	—	351.717	351.717	0.00706	0.01390	1.11977	357.155
Vendor	0.01088	0.36945	0.13291	0.00215	0.00429	0.08165	0.08594	0.00429	0.02256	0.02685	—	288.049	288.049	0.00639	0.04317	0.58614	301.659
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

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15098	0.12228	1.47453	0.00000	0.00000	0.34855	0.34855	0.00000	0.08170	0.08170	—	314.094	314.094	0.01008	0.01491	0.02908	318.818
Vendor	0.01028	0.39226	0.13830	0.00215	0.00429	0.08165	0.08594	0.00429	0.02256	0.02685	—	288.376	288.376	0.00639	0.04317	0.01522	301.415
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08298	0.05918	0.83494	0.00000	0.00000	0.18673	0.18673	0.00000	0.04371	0.04371	—	176.712	176.712	0.00440	0.00759	0.26408	179.348
Vendor	0.00578	0.20954	0.07387	0.00117	0.00234	0.04388	0.04622	0.00234	0.01214	0.01448	—	157.345	157.345	0.00349	0.02357	0.13840	164.595
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01514	0.01080	0.15238	0.00000	0.00000	0.03408	0.03408	0.00000	0.00798	0.00798	—	29.2567	29.2567	0.00073	0.00126	0.04372	29.6931
Vendor	0.00105	0.03824	0.01348	0.00021	0.00043	0.00801	0.00844	0.00043	0.00222	0.00264	—	26.0503	26.0503	0.00058	0.00390	0.02291	27.2506
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

3.4. Building Construction (2029)

3.4.1. Onsite - Unmitigated

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

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

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Off-Road Equipment	0.96514	8.58166	12.9012	0.02340	0.27564	—	0.27564	0.25359	—	0.25359	—	2,396.83	2,396.83	0.09723	0.01945	—	2,405.06
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96514	8.58166	12.9012	0.02340	0.27564	—	0.27564	0.25359	—	0.25359	—	2,396.83	2,396.83	0.09723	0.01945	—	2,405.06
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26820	2.38473	3.58508	0.00650	0.07660	—	0.07660	0.07047	—	0.07047	—	666.047	666.047	0.02702	0.00540	—	668.333
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04895	0.43521	0.65428	0.00119	0.01398	—	0.01398	0.01286	—	0.01286	—	110.272	110.272	0.00447	0.00089	—	110.650
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

3.4.2. Offsite - Unmitigated

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

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15804	0.09348	1.79338	0.00000	0.00000	0.34855	0.34855	0.00000	0.08170	0.08170	—	345.105	345.105	0.00706	0.01390	1.00469	350.428
Vendor	0.00873	0.35448	0.13017	0.00215	0.00429	0.08165	0.08594	0.00429	0.02256	0.02685	—	280.301	280.301	0.00639	0.04317	0.51863	293.844
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14191	0.10939	1.37702	0.00000	0.00000	0.34855	0.34855	0.00000	0.08170	0.08170	—	308.266	308.266	0.00907	0.01491	0.02597	312.961
Vendor	0.00783	0.37728	0.13525	0.00215	0.00429	0.08165	0.08594	0.00429	0.02256	0.02685	—	280.637	280.637	0.00639	0.04317	0.01344	293.674
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04000	0.02956	0.39651	0.00000	0.00000	0.09504	0.09504	0.00000	0.02225	0.02225	—	88.2660	88.2660	0.00224	0.00386	0.12058	89.5937
Vendor	0.00234	0.10240	0.03675	0.00060	0.00119	0.02233	0.02352	0.00119	0.00618	0.00737	—	77.9311	77.9311	0.00177	0.01200	0.06217	81.6124
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00730	0.00539	0.07236	0.00000	0.00000	0.01734	0.01734	0.00000	0.00406	0.00406	—	14.6134	14.6134	0.00037	0.00064	0.01996	14.8333
Vendor	0.00043	0.01869	0.00671	0.00011	0.00022	0.00408	0.00429	0.00022	0.00113	0.00135	—	12.9024	12.9024	0.00029	0.00199	0.01029	13.5119
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

3.5. Paving (2029)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67262	6.45817	9.91841	0.01395	0.23904	—	0.23904	0.21992	—	0.21992	—	1,510.63	1,510.63	0.06128	0.01226	—	1,515.81
Paving	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03686	0.35387	0.54347	0.00076	0.01310	—	0.01310	0.01205	—	0.01205	—	82.7740	82.7740	0.00336	0.00067	—	83.0580
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00673	0.06458	0.09918	0.00014	0.00239	—	0.00239	0.00220	—	0.00220	—	13.7042	13.7042	0.00056	0.00011	—	13.7512
Paving	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

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05185	0.03067	0.58838	0.00000	0.00000	0.11435	0.11435	0.00000	0.02680	0.02680	—	113.223	113.223	0.00231	0.00456	0.32962	114.970
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00259	0.00191	0.02565	0.00000	0.00000	0.00615	0.00615	0.00000	0.00144	0.00144	—	5.71016	5.71016	0.00014	0.00025	0.00780	5.79605
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00047	0.00035	0.00468	0.00000	0.00000	0.00112	0.00112	0.00000	0.00026	0.00026	—	0.94538	0.94538	0.00002	0.00004	0.00129	0.95960
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
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

3.6. Architectural Coating (2029)

3.6.1. Onsite - Unmitigated

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

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Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10236	0.79416	1.11216	0.00173	0.01284	—	0.01284	0.01181	—	0.01181	—	133.510	133.510	0.00542	0.00108	—	133.968
Architectural Coatings	77.5027	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00561	0.04352	0.06094	0.00009	0.00070	—	0.00070	0.00065	—	0.00065	—	7.31560	7.31560	0.00030	0.00006	—	7.34070
Architectural Coatings	4.24672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00102	0.00794	0.01112	0.00002	0.00013	—	0.00013	0.00012	—	0.00012	—	1.21118	1.21118	0.00005	0.00001	—	1.21534
Architectural Coatings	0.77503	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

3.6.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03161	0.01870	0.35868	0.00000	0.00000	0.06971	0.06971	0.00000	0.01634	0.01634	—	69.0210	69.0210	0.00141	0.00278	0.20094	70.0857
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00158	0.00117	0.01564	0.00000	0.00000	0.00375	0.00375	0.00000	0.00088	0.00088	—	3.48091	3.48091	0.00009	0.00015	0.00476	3.53327
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00029	0.00021	0.00285	0.00000	0.00000	0.00068	0.00068	0.00000	0.00016	0.00016	—	0.57630	0.57630	0.00001	0.00003	0.00079	0.58497
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
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

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	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	4.46690	3.75854	34.2666	0.08049	0.06382	7.29273	7.35655	0.06013	1.85516	1.91529	—	8,215.77	8,215.77	0.31228	0.38139	23.4215	8,360.65
Total	4.46690	3.75854	34.2666	0.08049	0.06382	7.29273	7.35655	0.06013	1.85516	1.91529	—	8,215.77	8,215.77	0.31228	0.38139	23.4215	8,360.65
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.02628	4.29701	29.4545	0.07413	0.06386	7.29273	7.35659	0.06017	1.85516	1.91533	—	7,572.84	7,572.84	0.35720	0.41030	0.60731	7,704.65
Total	4.02628	4.29701	29.4545	0.07413	0.06386	7.29273	7.35659	0.06017	1.85516	1.91533	—	7,572.84	7,572.84	0.35720	0.41030	0.60731	7,704.65
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.72599	0.72445	5.27036	0.01351	0.01139	1.27703	1.28842	0.01073	0.32496	0.33570	—	1,252.16	1,252.16	0.05410	0.06413	1.63700	1,274.26
Total	0.72599	0.72445	5.27036	0.01351	0.01139	1.27703	1.28842	0.01073	0.32496	0.33570	—	1,252.16	1,252.16	0.05410	0.06413	1.63700	1,274.26

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	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	—	—	—	—	—	—	—	—	—	—	—	1,115.91	1,115.91	0.10075	0.01221	—	1,122.07
Total	—	—	—	—	—	—	—	—	—	—	—	1,115.91	1,115.91	0.10075	0.01221	—	1,122.07
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,115.91	1,115.91	0.10075	0.01221	—	1,122.07
Total	—	—	—	—	—	—	—	—	—	—	—	1,115.91	1,115.91	0.10075	0.01221	—	1,122.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	184.752	184.752	0.01668	0.00202	—	185.772
Total	—	—	—	—	—	—	—	—	—	—	—	184.752	184.752	0.01668	0.00202	—	185.772

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)

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Land Use	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	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	687.899	687.899	0.06088	0.00130	—	689.807
Total	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	687.899	687.899	0.06088	0.00130	—	689.807
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	687.899	687.899	0.06088	0.00130	—	689.807
Total	0.03171	0.54194	0.23061	0.00346	0.04382	—	0.04382	0.04382	—	0.04382	—	687.899	687.899	0.06088	0.00130	—	689.807
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00579	0.09890	0.04209	0.00063	0.00800	—	0.00800	0.00800	—	0.00800	—	113.889	113.889	0.01008	0.00021	—	114.205
Total	0.00579	0.09890	0.04209	0.00063	0.00800	—	0.00800	0.00800	—	0.00800	—	113.889	113.889	0.01008	0.00021	—	114.205

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)

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Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	3.21798	1.52096	29.1126	0.10025	4.17673	—	4.17673	4.02476	—	4.02476	690.189	1,337.05	2,027.24	3.25167	0.00252	—	2,109.28
Consumer Products	5.29971	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.42467	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.62508	0.06772	7.22425	0.00031	0.00332	—	0.00332	0.00251	—	0.00251	—	19.2643	19.2643	0.00081	0.00016	—	19.3320
Total	9.56744	1.58868	36.3368	0.10056	4.18005	—	4.18005	4.02727	—	4.02727	690.189	1,356.31	2,046.50	3.25248	0.00268	—	2,128.61
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	3.21798	1.52096	29.1126	0.10025	4.17673	—	4.17673	4.02476	—	4.02476	690.189	1,337.05	2,027.24	3.25167	0.00252	—	2,109.28
Consumer Products	5.29971	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.42467	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	8.94237	1.52096	29.1126	0.10025	4.17673	—	4.17673	4.02476	—	4.02476	690.189	1,337.05	2,027.24	3.25167	0.00252	—	2,109.28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.13194	0.06236	1.19362	0.00411	0.17125	—	0.17125	0.16502	—	0.16502	25.6713	49.7310	75.4023	0.12094	0.00009	—	78.4539

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Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Consumer Products	0.96720	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.07750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05626	0.00609	0.65018	0.00003	0.00030	—	0.00030	0.00023	—	0.00023	—	1.57287	1.57287	0.00007	0.00001	—	1.57840
Total	1.23289	0.06845	1.84380	0.00414	0.17154	—	0.17154	0.16524	—	0.16524	25.6713	51.3039	76.9752	0.12101	0.00011	—	80.0323

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	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	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Total	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Total	—	—	—	—	—	—	—	—	—	—	9.71458	60.3224	70.0370	1.00156	0.02433	—	102.326
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1.60836	9.98706	11.5954	0.16582	0.00403	—	16.9412
Total	—	—	—	—	—	—	—	—	—	—	1.60836	9.98706	11.5954	0.16582	0.00403	—	16.9412

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	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	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Total	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Single Family Housing	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Total	—	—	—	—	—	—	—	—	—	—	59.4328	0.00000	59.4328	5.94009	0.00000	—	207.935
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.83977	0.00000	9.83977	0.98345	0.00000	—	34.4260
Total	—	—	—	—	—	—	—	—	—	—	9.83977	0.00000	9.83977	0.98345	0.00000	—	34.4260

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77367	1.77367
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29365	0.29365
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29365	0.29365

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

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

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Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/30/2028	2/13/2028	5.00000	10.00000	—
Grading	Grading	2/14/2028	3/27/2028	5.00000	30.0000	—
Building Construction	Building Construction	3/28/2028	5/22/2029	5.00000	300.000	—
Paving	Paving	5/23/2029	6/20/2029	5.00000	20.0000	—
Architectural Coating	Architectural Coating	6/21/2029	7/19/2029	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
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

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Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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
Site Preparation	Worker	17.5000	10.7900	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.17000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	10.7900	LDA,LDT1,LDT2
Grading	Vendor	—	7.17000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT

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Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Worker	45.7200	10.7900	LDA,LDT1,LDT2
Building Construction	Vendor	13.5763	7.17000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	10.7900	LDA,LDT1,LDT2
Paving	Vendor	—	7.17000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	9.14400	10.7900	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.17000	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	501,491	167,164	0.00000	0.00000	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00000	0.00000	15.0000	0.00000	0.00000
Grading	0.00000	0.00000	90.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	1.39945

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	1.39945	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2028	0.00000	382.981	0.03300	0.00400
2029	0.00000	365.513	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	1,198.88	1,211.58	1,085.85	432,360	10,128.1	10,235.4	9,173.19	3,652,548

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	64	64
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0
Single Family Housing	No Fireplaces	64	64
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	6	6
Single Family Housing	Non-Catalytic Wood Stoves	6	6
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)
501,491	167,164	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	1,114,348	365.513	0.0330	0.0040	2,146,428

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	5,069,615	25,110,455

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	110.277	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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	21.6300	annual days of extreme heat
Extreme Precipitation	1.95000	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	0	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	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	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

Village One Easton Subdivision Project Detailed Report, 8/7/2026

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	68.0896
AQ-PM	53.4910
AQ-DPM	33.4536
Drinking Water	99.6003
Lead Risk Housing	14.0769
Pesticides	93.8966
Toxic Releases	61.8030
Traffic	16.0750
Effect Indicators	—
CleanUp Sites	71.6312
Groundwater	95.3013
Haz Waste Facilities/Generators	91.0126
Impaired Water Bodies	66.7367
Solid Waste	84.0321
Sensitive Population	—
Asthma	53.2901
Cardio-vascular	57.6147
Low Birth Weights	61.0085
Socioeconomic Factor Indicators	—

Indicator	Result for Project Census Tract
Education	58.9218
Housing	10.1774
Linguistic	50.0068
Poverty	36.1055
Unemployment	9.72150

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	78.08289491
Employed	51.27678686
Median HI	69.16463493
Education	—
Bachelor's or higher	43.46208136
High school enrollment	100
Preschool enrollment	29.86013089
Transportation	—
Auto Access	69.12613884
Active commuting	1.039394328
Social	—

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Indicator	Result for Project Census Tract
2-parent households	89.74720903
Voting	64.85307327
Neighborhood	—
Alcohol availability	83.26703452
Park access	22.41755422
Retail density	14.26921596
Supermarket access	32.78583344
Tree canopy	51.08430643
Housing	—
Homeownership	84.46041319
Housing habitability	91.67201335
Low-inc homeowner severe housing cost burden	81.5603747
Low-inc renter severe housing cost burden	81.72719107
Uncrowded housing	83.16437829
Health Outcomes	—
Insured adults	70.06287694
Arthritis	6.9
Asthma ER Admissions	56.4
High Blood Pressure	17.7
Cancer (excluding skin)	9.7
Asthma	43.1

Village One Easton Subdivision Project Detailed Report, 8/7/2026

Indicator	Result for Project Census Tract
Coronary Heart Disease	8.3
Chronic Obstructive Pulmonary Disease	19.2
Diagnosed Diabetes	44.3
Life Expectancy at Birth	25.5
Cognitively Disabled	87.2
Physically Disabled	86.7
Heart Attack ER Admissions	38.4
Mental Health Not Good	53.9
Chronic Kidney Disease	27.1
Obesity	39.2
Pedestrian Injuries	50.1
Physical Health Not Good	48.3
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	46.7
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	20.9

Village One Easton Subdivision Project Detailed Report, 8/7/2026

Indicator	Result for Project Census Tract
Elderly	61.3
English Speaking	42.3
Foreign-born	44.0
Outdoor Workers	64.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	64.8
Traffic Density	27.1
Traffic Access	0.0
Other Indices	—
Hardship	42.2
Other Decision Support	—
2016 Voting	67.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	70.0000
Healthy Places Index Score for Project Location (b)	61.0000
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	Land uses as provided by Project Description.
Construction: Construction Phases	No demolition.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	41.2338	19.0000
Special Landscape Area	sq. ft	—	0.00000

Energy Use Summary

Construction Phase (gallons/construction period)		Gasoline	Diesel		
Construction Vehicles		3,856	12,372		
Worker Trips		125	23,368		
Vendor Trips		1	4,346		
Haul Trucks		0	0		
Total		3,982	40,086		
Operations Phase (gallons/year)		Gasoline	Diesel	Natural Gas (kBTU/yr)	Electricity (kWh/yr)
Single Family Housing		133,560	20,880	2,146,428	1,114,348
0		0	0	0	0
All Land Uses		133,560	20,880	2,146,428	1,114,348

Utilities

Land Use	NaturalGas Use Electricity Use	
	kBTU/yr	kWh/yr
Single Family Housing	2,146,428	1,114,348
	0	
	0	
	0	
	0	
	0	
	0	
	0	
	0	
	0	
Total	2,146,428	1,114,348

Refer to CalEEMod Output 5.1

PhaseNumber	PhaseName	PhaseType	PhaseStartDate	PhaseEndDate	NumDaysWeek	NumDays
1	Site Preparation	Site Preparation	1/30/2028	2/13/2028	5	10
2	Grading	Grading	2/14/2028	3/27/2028	5	30
3	Building Construction	Building Construction	3/28/2028	5/22/2029	5	300
4	Paving	Paving	5/23/2029	6/20/2029	5	20
5	Architectural Coating	Architectural Coating	6/21/2029	7/19/2029	5	20

Year	2028
Air District	San Joaquin Valley APCD

Refer to CalEEMod Output 5.3.1

		One-Way		
Phase Name	Trip Type	Trips per	Miles per	Vehicle Mix
		Day	Trip	
Site Preparation	Worker	17.5	10.79	LDA,LDT1,LDT2
Site Preparation	Vendor	0	7.17	HHDT,MHDT
Site Preparation	Hauling	0	20	HHDT
Site Preparation	Onsite truck	0	0	HHDT
Grading	Worker	20	10.79	LDA,LDT1,LDT2
Grading	Vendor	0	7.17	HHDT,MHDT
Grading	Hauling	0	20	HHDT
Grading	Onsite truck	0	0	HHDT
Building Construction	Worker	45.72	10.79	LDA,LDT1,LDT2
Building Construction	Vendor	13.5763	7.17	HHDT,MHDT
Building Construction	Hauling	0	20	HHDT
Building Construction	Onsite truck	0	0	HHDT
Paving	Worker	15	10.79	LDA,LDT1,LDT2
Paving	Vendor	0	7.17	HHDT,MHDT
Paving	Hauling	0	20	HHDT
Paving	Onsite truck	0	0	HHDT
Architectural Coating	Worker	9.144	10.79	LDA,LDT1,LDT2
Architectural Coating	Vendor	0	7.17	HHDT,MHDT
Architectural Coating	Hauling	0	20	HHDT
Architectural Coating	Onsite truck	0	0	HHDT

0

QAQC	
VMT	mpg
188,883	7

APPENDIX B: NOISE AND VIBRATION ASSESSMENT

NOISE AND VIBRATION ASSESSMENT RESIDENTIAL DEVELOPMENT OF THE NARAGHI, PARKLANE & GREENLAW PROPERTIES

Modesto, California

October 17, 2024



Prepared for:

**FLORSHEIM HOMES
1701 W. March Lane, Suite D
Stockton, CA 95207**

Prepared by:

Fred M. Svinth, INCE, Assoc. AIA
ILLINGWORTH & RODKIN, INC.
/// Acoustics • Air Quality ///
429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400

Job No.: 24-132

INTRODUCTION AND SUMMARY

This report presents the results of an environmental noise and vibration assessment completed for the single-family residential development projects proposed on the Naraghi, Parklane and Greenlaw properties in Modesto located west of the BNSF railroad line/Santa Fe Avenue frontage, east of Claus Road, and north of the future Crossings single family residential development (see Figure 1). The purpose for this noise assessment is to evaluate the compatibility of the development with respect to the environmental noise and vibration levels at the project site and evaluate noise impacts upon sensitive receptors in the area. The Setting Section of this report presents the fundamentals of environmental noise and vibration, describes regulatory criteria that are applicable in the project's assessment, and summarizes the results of a survey of the existing noise environment at the project site and vicinity.



Figure 1: Project Site, Vicinity and Measurement Locations

SETTING

FUNDAMENTALS OF ENVIRONMENTAL NOISE

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception

characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales, which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement, which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

Table 1: Definitions of Acoustical Terms Used in this Report

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA $L_{eq[h]}$.
Day-Night Level, L_{dn}	The equivalent noise level for a continuous 24-hour period with a 10-decibel penalty imposed during nighttime and morning hours (10:00 pm to 7:00 am).
Community Noise Exposure Level, CNEL	CNEL is the equivalent noise level for a continuous 24-hour period with a 5-decibel penalty imposed in the evening (7:00 pm to 10:00 pm) and a 10-decibel penalty imposed during nighttime and morning hours (10:00 pm to 7:00am)
L_1 , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA)*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Environmental sounds are commonly described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called L_{eq} .

Table 2: Typical Noise Levels in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
	10 dBA	Broadcast/recording studio
	0 dBA	

Source: Technical Noise Supplement (TeNS), Caltrans, November 2009.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep - 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Day/Night Average Sound Level* (DNL or L_{dn}) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

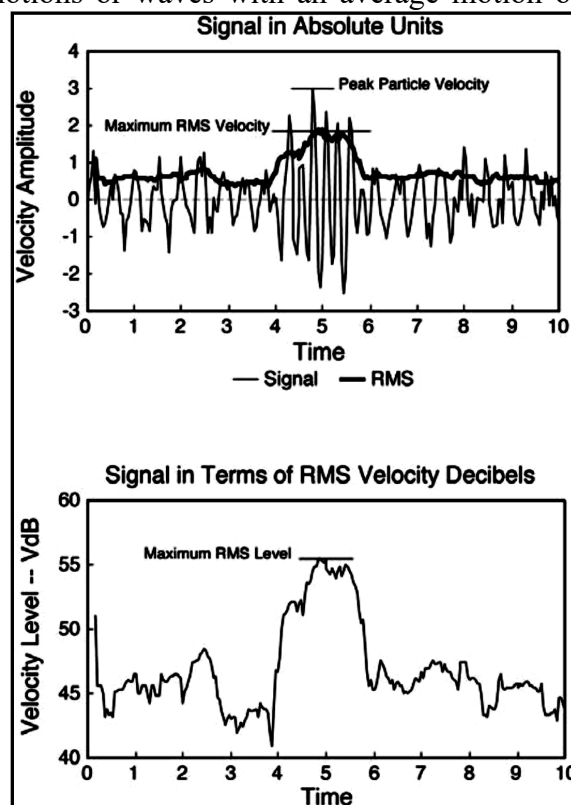
Effects of Noise

Sleep and Speech Interference. The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn} . Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 50 dBA L_{dn} . At a L_{dn} of about 60 dBA, approximately 12 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 25-30 percent of the population. There is, therefore, an increase of about 2 percent per dBA between a L_{dn} of 60-70 dBA. Between a L_{dn} of 70-80 dBA, each additional decibel increases the percentage of the population highly annoyed by about 3 percent. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 30-35 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 3 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 4 percent increase in the percentage of the population which is highly annoyed.

FUNDAMENTALS OF GROUNDBORNE VIBRATION

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the Peak Particle Velocity (PPV) and another is the Root Mean Square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV is often used in monitoring of construction and other peak events since it is related to the stresses that are experienced by buildings. Though peak particle velocity is appropriate for evaluating the potential of building damage, it has not been shown to be as suitable for evaluating human response. The human body has been shown to respond to the average vibration amplitude, as it takes some time for the human body to respond to vibration signals. Because the net average of a vibration signal is zero, the root mean square (RMS) amplitude is used to describe the "smoothed" vibration amplitude. The root mean square of a signal is the square root of the average of the squared amplitude of the signal. The RMS



amplitude is shown superimposed on the vibration signal in Figure 2. The RMS amplitude is always less than the PPV and is always positive. The ratio of crest PPV to maximum RMS amplitude is defined as the factor for the signal. The crest factor is always greater than 1.71, although a crest factor of 8 or more is not unusual for impulsive signals. For ground-borne vibration from trains, the crest factor is usually 4 to 5.

The reference velocity is 1×10^{-6} in./sec. RMS, which equals 0 VdB, and 1 in./sec. equals 120 VdB. Although not a universally accepted notation, the abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels. Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams and foot traffic. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. Table 3 displays the reactions of people and the effects on buildings that continuous vibration levels produce. The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible

levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 3: Human Response to Different Levels of Ground-Borne Vibration

Vibration Level		Human Response
VdB	PPV(in/sec)	
65	0.002	Approximate threshold of perception for many humans.
75	0.006	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85	0.018	Vibration acceptable only if there are an infrequent number of events per day.

Source: Transit Noise and Vibration Impact Assessment May 2018, FTA-VA-90-1003-06

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generate the highest construction related ground-borne vibration levels. Because of the impulsive nature of such activities, the use of the peak particle velocity descriptor (PPV) has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level. Structural damage can be classified as cosmetic only, such as minor cracking of building elements, or may threaten the integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams and foot traffic. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. Table 4 illustrates some common sources of vibration and the association to human perception or the potential for structural damage.

TABLE 4 Typical Levels of Groundborne Vibration

Human/Structural Response	Velocity Level, VdB	Typical Events (50-foot setback)
Threshold, minor cosmetic damage	100	Blasting and pile driving during construction
Difficulty with tasks such as reading a video or computer screen	90	Bulldozers and other heavy tracked construction equipment Commuter rail, upper range
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, occasional events		Commuter rail Bus or truck over bump
Residential annoyance, frequent events	70	Rapid transit, typical
Approximate human threshold of perception to vibration	60	Buses, trucks, and heavy street traffic
Lower limit for equipment ultra-sensitive to vibration	50	Background vibration in residential settings in the absence of activity

Source: Illingworth & Rodkin, Inc. and U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2018, FTA-VA-90-1003-06

REGULATORY BACKGROUND

The State of California and the City of Modesto have established regulatory criteria that are applicable in this assessment. The State of California Environmental Quality Act (CEQA) Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies, Zoning Code standards, or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

State CEQA Guidelines.

CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would result in:

- 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,
- Generation of excessive groundborne vibration or groundborne noise levels,
- 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, if the project would expose people residing or working in the project area to excessive noise levels.

CEQA does not define what noise level increase would be considered substantial. Typically, an increase in the L_{dn} noise level resulting from the project at noise sensitive land uses of 3 dBA or greater would be considered a significant impact when projected noise levels would exceed those

considered acceptable for the affected land use. An increase of 5 dBA L_{dn} or greater would be considered a significant impact when projected noise levels would remain within those considered acceptable for the affected land use.

City of Modesto Urban Area General Plan 2019

Section G in Chapter VII, *Environmental Resources, Open Space and Conservation*, of the City of Modesto General Plan includes the follow policies applicable to the proposed residential project:

- a. Construction activities are to comply with Modesto Municipal Code Title 4, Chapter 9.
- b. Implement noise-reducing construction practices as conditions of approval where substantial construction-related noise impacts would be likely to occur, such as with extended periods of pile driving, or where construction is expected to continue or where sensitive receptors would be affected by construction noise. Conditions of approval may include, but are not limited to:
 - Require construction equipment, including air compressors and pneumatic equipment to have properly maintained mufflers,
 - Require impact tools to be equipped with shrouds or shields,
 - Require that the quietest equipment available be used; and,
 - Require selection of haul routes that affect the fewest number of people.
- e. Incorporate construction practices and acoustic treatment in new residential construction to reduce typical indoor noise levels to 45 dB. Developers of residential buildings within the 65 dBA contours shown in the General Plan Master EIR shall demonstrate that interior noise has been reduced to 45 dB. Other types of development should be protected against noise intrusion at least to the levels indicated on Table VII-2.
- g. At noise-sensitive land uses, increases in noise should not exceed 3 dBA where any other noise threshold or standard would be exceeded, and/or 5 dBA where noise levels would otherwise fall within acceptable limits, for the existing conditions scenario as compared to the buildout scenario.
- h. Additional study and/or mitigation for outdoor recreation areas will be required if:
 - For single-family dwellings, noise exceeds 65 dBA L_{dn} in one or more backyards,
 - For multi-family dwellings, noise exceeds 65 dBA L_{dn} at common recreation areas, such as swimming pools or play areas or at private patios and balconies, or
 - For other uses, noise exceeds the level considered “conditionally acceptable” as shown on Table VII-2.
- l. For new residential development proposed in areas within 200 feet of the center of the near mainline of active rail lines where single-event noise from trains is of concern, demonstrate that the proposed development will incorporate measures to reduce maximum noise levels generated during train passbys to 50 dBA L_{max} or less inside bedrooms and to 55 dBA L_{max} or less inside other noise sensitive occupied areas.
- m. For new residential and vibration sensitive commercial development (including but not limited to lodging facilities, hospitals and similar uses) located within 200 feet of the center of the near main line of active rail lines, demonstrate that the proposed development will incorporate measures to reduce vibration levels generated during train passby events to meet the FTA vibration criteria as shown in Master EIR Table V-3-6.

TABLE VII-2 Noise Compatibility Matrix

Land Use Category	Community Noise Exposure— L_{dn} or CNEL (db)						
	50	55	60	65	70	75	80
Residential: low-density single-family, duplex, mobile homes							
Residential: multi-family							
Transient lodging (hotel / motel)							
Schools, libraries, churches, hospitals, nursing homes							
Auditoriums, concert halls, amphitheaters							
Sports arenas, outdoor spectator sports							
Playgrounds, neighborhood parks							
Golf courses, riding stables, water recreation, cemeteries							
Office buildings (professional, business, commercial)							
Industrial, manufacturing, utilities, agriculture							
Normally Acceptable							
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.							
Conditionally Acceptable							
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.							
Normally Unacceptable							
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and noise insulation features included in the design.							
Clearly Unacceptable							
New construction or development generally should not be undertaken.							

TABLE VII-3 Noise Exposure Thresholds - Non-Transportation Noise Sources

	Citywide, excluding Downtown		Downtown	
	Daytime (7:00am-10:00pm)	Nighttime (10:00pm-7:00am)	Daytime (7:00am-10:00pm)	Nighttime (10:00pm-7:00am)
Hourly Leq, dBA	55	45	60	50
Maximum level, dBA	75	65	80	70

* Each of the noise level standards shall be reduced by five (5) dBA for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. Where measured ambient noise levels exceed the standards, the standards shall be increased to the ambient levels.

** If the existing ambient noise level at the receiving use exceeds the thresholds given in Table V.3.9, then the noise level standards shall be increased to account for the ambient noise level.

Groundborne Vibration

The FTA vibration criteria as shown in Master EIR Table V-3-6 which the General Plan identifies as that which needs to be met at developments within 200 feet of the center of the near mainline of active rail lines is as follows:

TABLE V.3.6 Railroad Train Ground-borne Vibration Thresholds

Land Use Category	Groundborne Vibration Impact Levels (VdB re: 1 μ in./sec, RMS)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category 1: Buildings where low ambient is essential for interior operations	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Notes:

1. "Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
3. "Infrequent Events" is defined as fewer than 30 vibration events per day. This category includes most commuter rail systems.
4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of HVAC systems and stiffened floors.

EXISTING NOISE ENVIRONMENT

The proposed project is located west of the BNSF railroad line/ Santa Fe Avenue frontage, east of Claus Road, and north of the future Crossings single family residential development. The project site is bordered by agricultural and residential uses to the west across Claus Road, existing agricultural and future residential uses to the south, agricultural uses to the east and industrial uses to the north. The existing noise environment at the project site results primarily from rail traffic on the BNSF line and vehicular traffic on area roadways. Other sources of noise in the area include area agricultural and industrial uses and overhead noise from general aviation aircraft using the Modesto City-County Airport.

Noise monitoring surveys were conducted on the site and surrounding areas between 9 am on Tuesday September 24th, and 10 am on Thursday September 26th, 2024, to quantify the existing noise environment on the project site. The noise monitoring survey included three long-term and noise measurements indicated as LT-1, LT-2, and LT-3 and three short-term noise measurements indicated as ST-1, ST-2, and ST-3 in Figure 1. The noise measurements were conducted with Larson Davis Laboratories (LDL) Type I Model LXT Sound Level Meters. All meters were equipped with ½-inch pre-polarized condenser microphones and windscreens and were calibrated with a Larson Davis Model CA250 precision acoustic calibrator prior to and following the measurement survey.

Long-term noise measurement, LT-1, was conducted at the northeast corner of the Parklane Site near the Milnes Road BNSF rail line at-grade crossing. For this measurement the noise monitor was installed on a utility pole at a height of approximately 12 feet above grade. The monitor was approximately 22 feet south of the Milnes Road centerline and 65 feet west of the BNSF rail line centerline. This measurement served to document the average and maximum noise levels produced Amtrack and Freight trains and the sounding of their horns at the Milnes Road at-grade crossing. The measured noise levels at this location, including the energy equivalent noise level (L_{eq}), maximum (L_{max}), minimum (L_{min}), and the noise levels exceeded 10, 50 and 90 percent of the time (indicated as L_{10} , L_{50} and L_{90}) are shown on Chart 1, following.

A review of Chart 1 indicates that the minimum (L_{min}), ambient (L_{90}) and median (L_{50}), noise levels at site LT-1 followed a diurnal pattern characteristic of traffic noise, and that the maximum (L_{max}) through energy average (L_{eq}) noise levels were primarily influenced by noise from trains passing on the BNSF rail line. During the measurement average hourly daytime noise levels ranging from 68 to 82 dBA L_{eq} and the average hourly nighttime noise levels ranging from 56 to 83 dBA L_{eq} . The overall Average Day/Night Noise Level for the 49-hour measurement period at position LT-1 was 84 dBA, with the full weekday measurement (Wednesday 9/25/24) at 85 dBA L_{dn} .

Though Amtrack trains on this rail line run on a schedule, freight train usage on the line does not follow a preset or any published schedule, so the actual number of trains passing the site cannot be determined by scheduling. However, train passing through the Milnes Road at-grade crossing are required to sound their horns, which produce noise levels of over 100 dBA at 65 feet. Because no other sources in the area are this loud, through a review of the noise measurement data it was determined that at least 65 trains passed the site over the 49-hour measurement period (an average of 32 trains per day) and that the recurring maximum noise (L_{max30})¹ from train passbys at the monitoring position (67 feet from the track centerline) was 105 dBA.

In addition to this long-term noise measurement, I&R also conducted a noise survey for the Crossings residential development in 2022 along the BNSF rail line approximately 850 feet south of the Greenlaw site in an area well removed from at-grade crossings. An average of 32.5 trains per day passed the site during this measurement, resulting in average day night noise level of 73 dBA L_{dn} and an L_{max30} of 90 dBA at 80 feet from the railroad centerline from engine and rail cars passbys with only distant noise from train horns.

Long-term noise measurement, LT-2, was made near the northwest corner of the Naraghi Site on a utility pole at a height of approximately 12 feet above grade and 47 feet from the centerline of Claus Road. The measured noise levels at this location, including the energy equivalent noise level (L_{eq}), maximum (L_{max}), minimum (L_{min}), and the noise levels exceeded 10, 50 and 90 percent of the time (indicated as L_{10} , L_{50} and L_{90}) are shown on Chart 2, following.

A review of Chart 2 indicates that the noise levels at site LT-2 follow a diurnal pattern characteristic of traffic noise influenced by loud local events, with the average hourly daytime noise levels ranging from 70 to 75 dBA L_{eq} and the average hourly nighttime noise levels ranging from 63 to 74 dBA L_{eq} . The overall Average Day/Night Noise Level (L_{dn}) for the 49-hour measurement period at position LT-1 was 78 dBA, with the full weekday measurement (Wednesday 9/25/24) also at 77 dBA L_{dn} .

Long-term noise measurement, LT-3, was made on the western side of the Parklane Site on a utility pole at a height of approximately 12 feet above grade and 44 feet from the centerline of Claus Road. The measured noise levels at this location, including the energy equivalent noise level (L_{eq}), maximum (L_{max}), minimum (L_{min}), and the noise levels exceeded 10, 50 and 90 percent of the time (indicated as L_{10} , L_{50} and L_{90}) are shown on Chart 2, following

A review of Chart 3 indicates that the noise levels at site LT-3 follow a diurnal pattern characteristic of traffic noise influenced by loud local events, with the average hourly daytime noise levels ranging from 70 to 76 dBA L_{eq} and the average hourly nighttime noise levels ranging from 64 to 74 dBA L_{eq} . The overall Average Day/Night Noise Level (L_{dn}) for the 49-hour measurement period at position LT-1 was 77 dBA, with the full weekday measurement (Wednesday 9/25/24) at 78 dBA L_{dn} .

¹ Greene, Rob, "Max Level Intrusive Noise Limit", 1982 National Conference on Environmental and Occupational Noise. The L_{max30} is obtained by logarithmically averaging the loudest 30% of maximum levels of rail passbys over a given time period.

Chart 1: Measured Noise Levels at LT-1

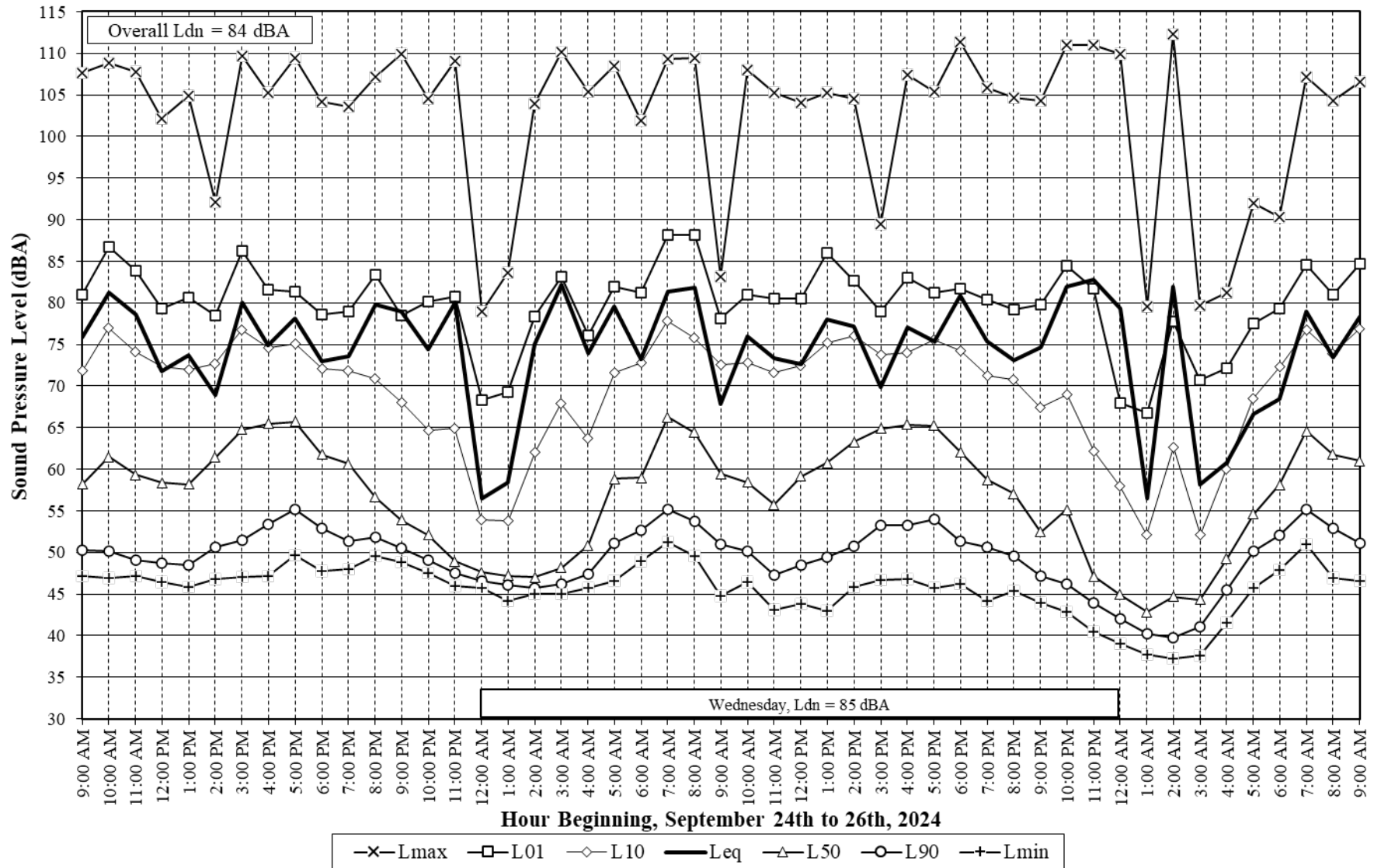


Chart 2: Measured Noise Levels at LT-2



Chart 3: Measured Noise Levels at LT-3



The short-term measurements were made between 9:00 and 10:00 am on September 24th to evaluate the existing noise environment at the setbacks of the proposed residential property lines closest to Claus and Milnes Roads and along the BNSF rail line away from the Milnes Road at-grade crossing. These three short term noise measurements (ST-1, ST-2, and ST-3 in Figure 1) were made simultaneously with the long-term measurements. The locations of the measurements are discussed below, and summarized in Table 3, as follows:

- Short-term measurement one (ST-1) was conducted for a 20-minute period at location 550 feet south of the Milnes Road at-grade crossing and at a distance of approximately 45 feet from the track centerline, near the setback of the rear yards of residential lots backing up to the rail line.
- Short-term measurement two (ST-2) was conducted for a 10-minute period at approximately 40 feet from the Milnes Road centerline, which is the approximate residential property line setback from this roadway near the roadways approximate mid-point between Claus Road and the BNSF rail line.
- Short-term measurement three (ST-3) was conducted for a 10-minute period at approximately 100 feet from the centerline of Claus Road at the approximate residential property line setback from this roadway.

TABLE 3: Summary of Short-term Noise Measurement Data, dBA

Noise Measurement Location and Time Period	L _{max}	L ₍₁₎	L ₍₁₀₎	L _{eq}	L ₍₅₀₎	L ₍₉₀₎	L _{dn}
ST-1: ~550 ft. south of the Milnes Road at-grade crossing and ~45 feet from the BNSF rail centerline (9/25/24, 9:40 - 10:00 am)	89	80	48	65	42	40	74
ST-2: ~40 ft. from the Milnes Road centerline, ~equidistant from the rail line and Claus Road (9/25/24, 9:20 - 9:30 am)	73	68	64	59	51	44	67
ST-3: ~100 ft. from the Claus Road Centerline (9/25/24, 9:00 - 9:10 am)	73	71	67	64	62	54	67

Note: The L_{dn} at the short-term site is approximated by correlating data to that at the long-term site.

A review of the short-term measurement results in combination with the long-term measurements indicates that, under current conditions, the property lines of the homes which back up to Claus Road on all three sites will be exposed to an L_{dn} of 67 dBA and that the homes removed from the BNSF rail line on the Naraghi and Parklane sites will also be exposed to an L_{dn} of 67 dBA. The measurements also indicate that the L_{dn} at the property lines of the homes on the Parklane site closest to the Milnes Road at-grade BNSF railroad crossing will be 84 dBA L_{dn}, and that the lot lines of the homes backing up to the BNSF rail line over 500 feet from the rail line to be exposed to an L_{dn} of 74 dBA. The equivalent L_{max30} at ST-1 was found to be 86 dBA.

FUTURE NOISE ENVIRONMENT

Roadway Traffic Noise

The future noise environment on the roadway frontages would continue to result from traffic along the adjacent roadways. To assess the future noise environment, we have assumed that future traffic volumes would increase by about 1-2% per year as a result of general growth throughout the Area. Considering this traffic volume estimate, the future noise environment would be approximately 1 decibel higher than existing noise levels. A review of the current lot layouts and a consideration that the homes will have a minimum 10-foot rear yard setback, the rear property lines and facades of homes along Claus and Milnes Road would, respectively, be:

- Approximately 50 and 60 feet from the centerline of Claus Road and 35 and 45 feet from the centerline of Milnes Road on the Naraghi Site,
- Approximately 70 and 80 feet from the centerline of Claus Road and 40 and 50 feet from the centerline of Milnes Road on the Parklane Site and,
- Approximately 70 and 80 feet from the centerline of Claus Road on the Greenlaw Site,

Considering these distances and the standard distance attenuation factor for linear vehicular traffic noise of 3 dBA per doubling of distance, the exterior noise levels due to roadway traffic under future conditions at the rear property lines and facades of homes along Claus and Milnes Road would, be:

- 78 dBA L_{dn} at the rear property lines and 77 dBA L_{dn} at the rear facades of homes on lots abutting Claus Road on the Naraghi Site,
- 69 dBA L_{dn} at the rear property lines and 68 dBA L_{dn} at the rear facades of homes on lots abutting Milnes Road on the Naraghi Site, and
- 68 dBA L_{dn} at the rear property lines and 67 dBA L_{dn} at the rear facades of homes on lots abutting Milnes Road on the Parklane Site, and
- 77 dBA L_{dn} at the rear property lines and 76 dBA L_{dn} at the rear facades of homes on lots abutting Claus Road on the Greenlaw and Parklane Sites.

Railroad Noise

Under future conditions rail passbys are expected to continue to be the dominant noise source in the eastern portion of all three project sites. Though there are no available future projections for changes in Amtrack or freight usage on the BNSF rail line, considering existing frequent operations, we expect the average day/night and recurring maximum noise levels resulting rail usage to remain about the same under future conditions. Based on a review of the current lot layouts, and a consideration that the rear yards will be 10 feet deep, the residential property lines and home facades abutting the rail line on the Parklane and Greenlaw sites will, respectively, be as close as 50a and 60 feet from the BNSF track centerline and the residential property lines and home facades on the Naraghi site lots abutting the rail line will, respectively, be as close as 220 and 230 feet from the track centerline on the Naraghi site. Considering the noise measurement results discussed above and an attenuation rate of 4.5 dBA per doubling of distance for rail and transit sources,² the average day/night noise levels (L_{dn}) at the rear property lines and facades of the homes on the project sites would be:

- 76 dBA L_{dn} at the residential property lines and facades on the southeastern edge of the project site adjacent to the Milnes Road at-grade crossing and 68 dBA L_{dn} at the residential property lines and facades on the northeastern edge of the Naraghi site.
- 85 dBA L_{dn} at the residential property lines and 84 dBA L_{dn} at the residential facades on the northeastern edge of the Parklane site adjacent to the Milnes Road at-grade crossing and 75 dBA L_{dn} at the residential property lines and 74 dBA L_{dn} at the residential facades at the southeastern edge of the Parklane site, and
- 75 dBA L_{dn} at the residential property lines and 74 dBA L_{dn} at the residential facades on the Greenlaw site adjacent to the BNSF rail line.

²Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Sept. 2018, Page 49

This analysis also indicates that the facades of the homes on the lots adjacent to the BNSF rail line will be exposed to maximum recurring noise levels ($L_{\max 30}$) of:

- Up to 97 dBA $L_{\max 30}$ at the southeastern edge of the Naraghi site adjacent to the BNSF rail line and up to 75 dBA $L_{\max 30}$ at the northeastern edge of the Naraghi site adjacent to the rail line.
- Up to 106 dBA $L_{\max 30}$ at the northeastern edge of the Parklane site adjacent to the BNSF rail line and up to 84 dBA $L_{\max 30}$ at the southeastern edge of the Parklane site adjacent to the rail line, and
- Up to 84 dBA $L_{\max 30}$ on the Greenlaw site adjacent to the BNSF rail line.

RAILROAD TRAIN PASSBY VIBRATION

Vibration measurements of individual Amtrack (passenger) and freight train passbys on the BNSF line were made in 2022 on the Crossings residential project site south of the Greenlaw site at distances of 30 and 60 feet from the railroad centerline. The BNSF rail line between the Crossings, Greenlaw, Parklane, and Naraghi sites is continuous, and the ground conditions are the same or very similar. Considering this, the ground vibration produced by trains passing on the rail line are considered to be the same at that Crossings and the Greenlaw, Parklane, and Naraghi sites.

The ground vibration resulting from three (3) passenger trains and one (1) freight trains on the rail line traveling at speeds of between 40 to 60 mph was measured at 60 feet from the rail track centerline. The measured RMS vibration levels due to these train passbys showed that the instantaneous maximum RMS vibration produced by trains passing the site at 60 feet from the track centerline in any octave band was limited to 75 VdB, and that the overall VdB levels ranged from 69 to 77 VdB with the average overall level of 72 VdB.

FUTURE RAILROAD INDUCED VIBRATION ENVIRONMENT

Based on the results of these vibration measurements and considering that trains of the same type are expected to continue to pass the site at the same frequency and speeds, we would expect vibration levels at the exterior of the homes to remain the same under future conditions. However, considering typical site grading along with the foundations and wood framed structures of the homes, we would expect ground to building coupling losses as the vibration propagates from the ground into the homes. Considering effect of these losses, and that the peak RMS vibration measurement at ground level was 77 VdB and the average peak RMS level was 72 VdB, we expect that the peak RMS vibration levels within the proposed residences closest to the rail line will not exceed the 75 VdB City (and FTA) impact significance criteria for occasional rail events at residences and buildings where people normally sleep.

SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers over a permanent or temporary basis. A significant impact would be identified for a proposed land use if it would be exposed to noise levels exceeding established guidelines or standards for noise and land use compatibility. Considering the existing noise in the site vicinity, a substantial permanent noise increase would occur if noise resulting from the project would result in an increase in the L_{dn} level at noise sensitive land uses in the site vicinity of by 3 dBA or greater. A substantial temporary noise level increase would occur where noise from construction activities exceeds 60 dBA L_{eq} and the ambient noise environment by at least 5 dBA

L_{eq} at adjacent land uses in the project vicinity for a period of one year or more. Vibration levels generated during demolition or construction activities would be significant if they cause cosmetic or structural damage to adjacent buildings.

NOISE IMPACTS AND MITIGATION MEASURES

Impact 1a: Exterior Residential Noise and Land Use Compatibility. Residential uses developed at portions of the project site would be exposed to exterior noise levels exceeding 65 dBA L_{dn} and maximum train passby related noise levels may exceed 50 dBA in bedrooms and 55 dBA in other rooms with home on the railroad frontage without the use of noise mitigation.

This is a potentially significant impact.

Based on the results of our noise measurement survey and future noise projections, the homes on the eastern edge of the site (adjacent to the BNSF rail line) and homes adjacent to Claus and Milnes Roads will be exposed to exterior noise levels exceeding 65 dBA L_{dn} . We understand that all homes on the three project sites are planned to be of two-story construction and homes will be placed on lots with 10 feet deep (minimum) rear yards. Considering this the resulting future noise levels the rear yards and facades of the homes on the lots adjacent to the BNSF rail line, Claus Road, and Milnes Road for the three project sites are expected to be as follows:

Naraghi Site

- The rear yards of the homes on the eastern edge of the Naraghi site which back onto the rail line will be exposed to average day/night noise levels of between 66 and 76 dBA L_{dn} and the rail-oriented facades of the homes on these lots will be exposed to maximum recurring (L_{max30}) noise levels of between 75 and 97 dBA.
- The rear yards of the homes on the western edge of the Naraghi site, which back onto Claus Road, will be exposed to an average day/night noise level of up to 78 dBA L_{dn} and the rear facades of the homes on these lots will be exposed to levels of up to 77 dBA L_{dn} .
- The rear yards of the homes on the southern edge of the Naraghi site, which back onto Milnes Road, will be exposed to an average day/night noise level of up to 69 dBA L_{dn} and the rear facades of the homes on these lots will be exposed to levels of up to 68 dBA L_{dn} .

Parklane Site

- The rear yards of the homes on the eastern edge of the Parklane site which back onto the rail line will be exposed to average day/night noise levels of between 74 and 85 dBA L_{dn} and the rail-oriented facades of the homes on these lots will be exposed to maximum recurring (L_{max30}) noise levels of between 84 and 106 dBA.
- The rear yards of the homes on the western edge of the Parklane site, which back onto Claus Road, will be exposed to an average day/night noise level of up to 77 dBA L_{dn} and the rear facades of the homes on these lots will be exposed to levels of up to 76 dBA L_{dn} .
- The rear yards of the homes on the northern edge of the Parklane site, which back onto Milnes Road, will be exposed to an average day/night noise level of up to 68 dBA L_{dn} and the rear facades of the homes on these lots will be exposed to levels of up to 67 dBA L_{dn} .

Greenlaw Site

- The rear yards of the homes on the eastern edge of the Greenlaw site which back onto the rail line will be exposed to an average day/night noise level of 74 dBA L_{dn} and the rail-oriented facades of the homes on these lots will be exposed to maximum recurring (L_{max30}) noise levels of 84 dBA.

- The rear yards of the homes on the western edge of the Greenlaw site, which back onto Claus Road, will be exposed to an average day/night noise level of up to 77 dBA L_{dn} and the rear facades of the homes on these lots will be exposed to levels of up to 76 dBA L_{dn} .

Mitigation Measure 1a: Exterior Noise Reduction in Residential Yards

The following noise barriers will be needed to reduce exterior noise levels within the yards of the homes on the Naraghi, Greenlaw and Parklane sites to acceptable exterior noise levels per the City of Modesto General Plan Standards as discussed below and shown in Figures 2, 3 and 4, attached.

Naraghi Site

BNSF Railroad Frontage

Noise barrier walls will be needed along the lot lines backing onto (parallel with) the BNSF rail line with the following minimum top-of-wall elevations (as referenced to the yard grades) to meet the City's Normally Acceptable Noise Exposure limits as possible:

- Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 350 feet north of the Milnes Road centerline.
- Noise barriers with a top of wall height of 10 feet above yard grades between approximately 350 and 550 feet north of the Milnes Road centerline,
- Noise barriers with a top of wall height of 8 feet above yard grades between approximately 550 and 850 feet north of the Milnes Road centerline,
- Noise barriers with a top of wall height of 6 feet above yard grades between approximately 850 feet north of the Milnes Road centerline and the northeastern corner of the site, with this 6-foot-tall noise barrier extended approximately 160 feet along the northern site property line.

Milnes Road Frontage

Noise barrier walls will be needed along the lot lines backing onto (parallel with) Milnes Road with the following minimum top of wall elevations (as referenced to the yard grades):

- Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 400 feet west of the BNSF railroad centerline.
- Noise barriers with a top of wall height of 10 feet above yard grades between approximately 400 and 530 feet and 590 and 700 feet west of the BNSF railroad at-grade crossing.
- Noise barriers with a top of wall height of 8 feet above yard grades between approximately 600 feet west of the BNSF railroad at-grade crossing and the southwest (Milnes and Claus Road) corner of the site.
- Noise barriers with a top of wall height of 8 feet above yard grades should be extended perpendicular to Milnes Road along the access road frontage for approximately 100 feet on either side of this roadway.

Claus Road Frontage

Noise barrier walls with minimum top of wall elevation as referenced to the yard grades of 9 feet will be needed along the lot lines backing onto (parallel with) Claus Road. An 8-foot-tall noise barrier should extend across the northern edge of the site to the termination of the 6-foot-tall noise barrier wall extending from the eastern (railroad facing) side of the site.

Parklane Site

BNSF Railroad Frontage

Assuming that the Parklane and Greenlaw sites are constructed concurrently or consecutively, the noise barrier walls will be needed along the lot lines backing onto (parallel with) the BNSF rail line with the following minimum top-of-wall elevations (as referenced to the yard grade) to meet the City's Normally and Conditionally Acceptable Noise Exposure limits:

- Noise barriers with a top of wall height of 20 feet above yard grades up to a distance of approximately 300 feet south of the Milnes Road centerline would be needed to allow the City of Modesto's Normally Acceptable Noise Exposure limit of 65 dBA L_{dn} to be met in the rear yards of the homes on these lots. Because walls of such height are considered unfeasible, noise barriers with a top of wall height of 15 feet above yards grade up to a distance of approximately 300 feet south of the Milnes Road centerline are recommended to allow the City of Modesto's Conditionally Acceptable Noise Exposure limit of 70 dBA L_{dn} to be met in the rear yards of the homes on these lots.

To allow the City of Modesto's Normally Acceptable Noise Exposure limit of 65 dBA L_{dn} to be met in the rear yards of the homes on the lots greater than approximately 300 feet from the Milnes Road centerline the following minimum top-of-wall elevations (as referenced to the yard grades) will be needed:

- Noise barriers with a top of wall height of 13 feet above yard grades between approximately 300 and 500 feet south of the Milnes Road centerline,
- Noise barriers with a top of wall height of 12 feet above yard grades between approximately 500 and 1300 feet south of the Milnes Road centerline,
- Noise barriers with a top of wall height of 11 feet above yard grades between approximately 1300 feet south of the Milnes Road centerline and the southeast corner of the site.

If the Parklane and Greenlaw sites are not constructed concurrently or consecutively (i.e. if there is one year or more between the occupation of one of these sites and the construction of the rail line noise barrier for the other), then the noise barrier parallel with the rail line should be continued along the rear property line of the lots at the southern edge of the project site within 400 feet of the rail centerline. This wall should be built to a height of at a height of 10 feet above yard grade closest to the rail line and can be tapered to a height of 6 feet above yard grade at approximately 400 feet for the rail centerline

Milnes Road Frontage

Noise barrier walls will be needed along the lot lines backing onto (parallel with) Milnes Road with the following minimum top of wall elevations (as referenced to the yard grades):

- Noise barriers with a top of wall height of 15 feet above yard grades between the southeastern corner of the site and a distance of approximately 275 feet west of the BNSF railroad centerline.
- Noise barriers with a top of wall height of 12 feet above yard grades between approximately 275 and 460 feet west of the BNSF railroad at-grade crossing.
- Noise barriers with a top of wall height of 10 feet above yard grades between 520 and 700 feet west of the BNSF railroad at-grade crossing.

- Noise barriers with a top of wall height of 8 feet above yard grades between 700 feet west of the BNSF railroad at-grade crossing and the northwest (Milnes and Claus Road) corner of the site.
- Noise barriers with a top of wall height of 8 feet above yard grades should be extended perpendicular to Milnes Road along the access road frontage for approximately 100 feet on either side of this roadway.

Claus Road Frontage

Noise barrier walls with minimum top of wall elevation as referenced to the yard grades of 8 feet will be needed along the lot lines backing onto (parallel with) Claus Road with this 8-foot-tall noise barrier extended approximately 400 feet along the rear property lines of the residential lots north of the 'Church Site' and possible Floyd Avenue extension.

Greenlaw Site

BNSF Railroad Frontage

Assuming that the Parklane and Greenlaw sites are constructed concurrently or consecutively, noise barrier walls with minimum top of wall elevation of 10 feet as referenced to the yard grades will be needed along the lot lines backing onto and parallel to the BNSF rail line.

If the Parklane and Greenlaw sites are not constructed concurrently or consecutively (i.e. if there is one year or more between the occupation of one of these sites and the construction of the rail line noise barrier for the other), then the noise barrier parallel with the rail line should be continued along the rear property line of the lots at the southern edge of the project site within 400 feet of the rail centerline. This wall should be built to a height of at a height of 10 feet above yard grade closest to the rail line and can be tapered to a height of 6 feet above yard grade at approximately 400 feet for the rail centerline

Claus Road Frontage

Noise barrier walls with minimum top of wall elevation of 8 feet as referenced to the yard grades will be needed along the lot lines backing onto (parallel with) Claus Road with this 8-foot-tall noise barrier extended approximately 425 feet along the rear property lines of the residential lots on the northern site edged which share a property line with the 'Church Site' to the north.

Noise Barrier specification requirements

To be effective as a barrier to noise, the noise barrier walls should be built without cracks or gaps in the face or large or continuous gaps at the base or where they adjoin the homes or each other. The walls should also have a minimum surface weight of 3.0 lbs. per sq. ft. Small, dispersed, gaps in the base of the walls for landscape irrigation or drainage, which do not compose more than 0.5% of the wall area, are acceptable.

For a wood wall to meet these requirements, we typically recommend that the fence be double faced with butted vertical fence boards on each side with a continuous layer of 1/2" plywood. Using the plywood ensures continued effectiveness of the barrier with age, since wood slats alone have a tendency to warp and separate with age allowing gaps to form and the barrier effect of the wall to diminish. Other acceptable materials include, but are not limited to, masonry block and pre-cast concrete panels.

Impact 1b: Interior Residential Noise and Land Use Compatibility. The interiors of residences on portions of the project site may be exposed to noise levels exceeding the City required average noise level criteria of 45 dBA L_{dn} , and/or the City required maximum noise levels for train passby noise of to 50 dBA L_{max} in bedrooms and 55 dBA L_{max} in other noise sensitive areas. **This is a potentially significant impact.**

Homes adjacent to Claus Road

With the installation of the noise barriers on Naraghi, Parklane and Greenlaw sites as prescribed in Mitigation Measure 1a (above), the first-floor facades of homes on these project sites adjacent to Claus Road will be exposed to average exterior noise levels of 65 dBA L_{dn} or less. However, the upper floor residential facades of homes adjacent to this roadway, which cannot be acoustically protected by a ground level barrier, will have a clear view of the roadway traffic will be exposed to average exterior noise levels of up to 77 dBA L_{dn} at the Naraghi Site, and 76 dBA L_{dn} at the Parklane and Greenlaw sites.

Homes adjacent to Milnes Road

With the installation of the noise barriers on Naraghi and Parklane sites as prescribed in Mitigation Measure 1a (above), the first-floor facades of homes on these project sites adjacent to Milnes Road will be exposed to average exterior noise levels of 65 dBA L_{dn} or less. However, the upper floor residential facades of homes adjacent to this roadway, which cannot be acoustically protected by a ground level barrier, will have a clear view of the roadway traffic will be exposed to average exterior noise levels of up to 68 dBA L_{dn} at the Naraghi Site, and 67 dBA L_{dn} at the Parklane site.

Homes adjacent to the BNSF rail line

With the installation of the noise barriers on Naraghi, Parklane and Greenlaw sites as prescribed in Mitigation Measure 1a (above), with the exception of homes on the northeastern corner of the Parklane site, the first-floor facades of homes on these project site adjacent to the BNSF rail line will be exposed to average exterior noise levels of 65 dBA L_{dn} or less. However, the upper floor residential facades of homes adjacent to the rail line, which cannot be acoustically protected by a ground level barrier, will have a clear view of the train passbys and will be exposed to average exterior noise levels of between 68 and 76 dBA L_{dn} at the Naraghi Site, 74 dBA to 84 dBA L_{dn} at the Parklane site and 74 dBA L_{dn} at the Greenlaw site. Also, with installation of these noise barriers the upper floor facades of the home facing and perpendicular to the BNSF rail line on the Naraghi, Parklane and Greenlaw sites will be exposed to maximum recurring noise levels of between 75 and 97 dBA L_{max30} at the Naraghi Site, 84 dBA to 106 dBA L_{max30} at the Parklane site and 84 dBA L_{max30} at the Greenlaw site. In addition, with installation of a noise barrier of a feasible height at the northeast corner of the Parklane Site as discussed in Mitigation measure 1a, the lower floor facades of homes on the northeastern corner of the Parklane site will be exposed to average exterior noise levels of up to 70 dBA L_{dn} and maximum recurring noise levels of up to 91 dBA L_{max30} ,

In buildings of typical construction, with the windows partially open, interior noise levels are generally 15 dBA lower than exterior noise levels. With the windows maintained closed, standard residential construction typically provides about 20 to 25 decibels of noise reduction. Therefore, with the exception of the homes on the northeastern corner of the Parklane Site, the lower floors of the homes will not require sound-rated windows or doors to meet the City's average noise level criteria of 45 dBA L_{dn} , but the upper floor of these homes will require sound-rated windows and doors (if present) to meet the 45 dBA L_{dn} interior noise standard. Additionally, the homes adjacent to Claus Road Milnes Road and the BNCF rail line will require

the incorporation of a forced-air mechanical ventilation system to allow the occupant the option of controlling noise by closing the windows.

Mitigation 1b.1: Interior Noise reduction for homes adjacent to Claus and Milnes Roads

- a. To achieve the necessary noise reduction required to meet the requirements of the City General Plan standards, some form of forced air mechanical ventilation, satisfactory to the local building official, would be required in all residences with partial or full line of sight to Claus Road traffic.
- b. Given the anticipated exterior noise levels along Claus Road, it may also be necessary to provide sound-rated windows and doors at upper floor residences facing or perpendicular to the roadway to maintain interior noise levels at or below 45 dBA L_{dn} . The degree of sound mitigation needed to achieve an interior CNEL of 45 dBA or less would vary depending on the final design of the building (relative window area to wall area) and the design of the exterior wall assemblies. However, based on the future exterior noise levels and typical residential construction, we would expect that windows and doors facing or with a view of Claus Road may require Sound Transmission Class (STC) ratings of between 30 and 36.
- c. The specific determination of exterior wall assemblies and window/door STC ratings should be conducted on a unit-by-unit basis during the project design. The results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City along with the building plans and approved prior to issuance of a building permit.

Mitigation 1b.2: Interior Noise reduction for homes adjacent to the BNSF rail line

- a. To achieve the necessary noise reduction required to meet the requirements of the City General Plan standards, some form of forced air mechanical ventilation, satisfactory to the local building official, would be required in all residences with partial or full line of sight to trains passing on the BNSF rail line.
- b. Given the anticipated exterior noise levels along the BNSF rail line, it will also be necessary to provide sound-rated windows and doors at lower and upper floor residences facing or perpendicular to the rail line to reduce maximum recurring noise levels from train passbys to at or below the 50 dBA bedrooms/55dBA other rooms L_{max30} interior level standards. The degree of sound mitigation needed to achieve these interior noise standards would vary depending on the final design of the homes (relative window/door areas to wall area) and the design of the exterior wall assemblies. However, with the exception of the homes on the lots at the northeastern corner of the Parklane site and the southeastern corner of the Naraghi site near the at-grade crossing, based on typical window/door to wall percentages we expect that sound-rated windows and doors with STC ratings of 28 to 34 may be needed at the first floor facades facing and perpendicular to the rail line, and depending on the STC rating of the exterior walls, windows with STC ratings of 38 to 45 may be needed at the second floor facades facing and perpendicular to the rail line to control maximum instantaneous noise levels to 50 dBA L_{max} in bedrooms, 55 dBA L_{max} in other habitable rooms. The homes on the lots at the northeastern corner of the Parklane site and the southeastern corner of the Naraghi site near the at-grade crossing will be exposed to L_{max30} levels of up to 97 and 106 dBA and are therefore expected to require additional acoustic design and sound control measures to meet the 50 dBA bedrooms/55dBA other rooms L_{max30} interior level standards
- c. Additional treatments may include, but are not limited to, sound-rated exterior wall construction, acoustical caulking, insulation, acoustical vents, etc. Design measures to limit exterior to interior noise intrusion could also include orienting large windows and doors away from the railroad where possible, locating bedrooms away from the railroad frontage, eliminating all exterior windows and doors from the railroad frontage, and locating single story only homes within close proximity to the rail line.

- d. The specific determination of exterior wall assemblies and window/door STC ratings should be conducted on a unit-by-unit basis during the project design. The results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City along with the building plans and approved prior to issuance of a building permit.

Impact 2: Project Operational Noise Generation Noise due to the use and occupation of the project residences on adjacent noise sensitive uses is not expected to significantly increase or alter the existing noise environment at these uses.
This is a less-than-significant impact.

The proposed project would place new residential uses approximately 200 to 300 feet across Claus Road from existing residential uses to the west and approximately 100 to 200 feet from existing religious uses north of the Parklane and west of the Greenlaw sites. The occupation and use of the proposed homes is expected to result in the typical noises associated with residential development, including voices of the new residents, home maintenance activities, barking dogs and children. The Heating Ventilation and Air Conditioning (HVAC) and other mechanical equipment associated with residential developments will also add noise to the existing environment. However, though noise resulting from occupation of the new residences may noticeably change the noise environment in some areas, these sources are not expected to increase noise levels in any surrounding areas by three or more dBA and the noise associated with the proposed residences is not incompatible with the surrounding land uses. Therefore, project operation is not judged to result in a noise impact.

Mitigation 2: None Needed

Impact 3: Project-Generated Traffic Noise. The proposed project would not substantially increase noise levels on a permanent basis at noise sensitive uses in the vicinity.
This is a less-than-significant impact.

A significant impact would be identified if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if the project traffic on area roadways were to result in a noise level increase of 3 dBA L_{dn} or greater. A traffic report for the development of Naraghi, Parklane or Greenlaw sites was not reviewed for this project, however, to cause a 3 dBA increase in noise along area roadways, development of any one of these three sites would have to generate enough traffic to more than double current roadway volumes. Given the size of the individual project sites, the current roadway noise levels, and the observed traffic volumes on area roadways, this is not considered possible.

Mitigation 3: None Required.

Impact 4a: Exposure to Construction Generated Groundborne Vibration. Residences in the vicinity of the project site are not expected to be exposed to perceptible vibration levels from construction activities. **This is a less-than-significant impact.**

Construction activities would include site preparation work such as grading and the installation of utilities, foundation work, and new building framing. Construction techniques that generate the highest vibration levels, such as impact or vibratory pile driving, are not expected at this project. Construction activities would generally occur at distances of 300 feet or more from the nearest residential units and 100 feet or more from the nearest religious use buildings.

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 in/sec, PPV for buildings structurally sound and designed to modern engineering standards and

0.2 in/sec, PPV for buildings that are found to be structurally sound but where structural damage is a major concern.

Project construction activities such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Building framing, exterior and interior finishing, and landscaping activities are not anticipated to be sources of substantial vibration. Construction activities may extend over several construction seasons, but construction vibration would not be substantial for most of this time except during vibration generating activities (as discussed above).

Table 4 presents vibration source levels for typical construction equipment at a distance of 25 feet. Jackhammers typically generate vibration levels of 0.035 in/sec PPV, drilling typically generates vibration levels of 0.09 in/sec PPV, and vibratory rollers generate vibration levels of 0.21 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. At distances of 100 feet or greater, construction activities would generally not generate vibration levels exceeding 0.05 in/sec PPV and would be well below the 0.50 in/sec PPV damage criteria.

TABLE 4 Vibration Source Levels for Construction Equipment³

Equipment		PPV at 25 ft. (in/sec)
Clam shovel drop		0.202
Hydromill (slurry wall)	in soil	0.008
	in rock	0.017
Vibratory Roller		0.210
Hoe Ram		0.089
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003

In areas where vibration would not be expected to cause structural damage, vibration levels may still be perceptible. However, as with any type of construction, this would be anticipated, and it would not be considered significant given the intermittent and short duration of the phases that have the highest potential of producing vibration. By use of administrative controls such as notifying adjacent land uses of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with least potential to affect nearby residences, perceptible vibration can be kept to a minimum and as such would not result in a significant impact with respect to perception.

Mitigation 4a: None Required

³ Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006.

Impact 4b: Exposure to Railroad Related Groundborne Vibration. Residences on the project site would not be exposed to excessive rail-related ground vibration levels. **This is a less-than-significant impact.**

As determined from I&R's vibration measurement survey along the BNSF rail line south of the Greenlaw site as discussed previously in this report, the interiors of the proposed residences closest to the rail line are expected to be exposed to ground borne vibration levels of 75 VdB or less. This level of vibration would not exceed the City (and FTA) impact significance criteria for occasional rail events at residences and buildings where people normally sleep and is not judged to result in a significant impact.

Mitigation 4b: None Required

Impact 5: Construction Noise. Noise levels generated by project construction activities would temporarily elevate ambient noise levels at sensitive land uses in the vicinity. Major noise generating construction activities would be limited to less than one construction season or less. **This is a less-than-significant impact.**

The construction of the project would generate noise which would temporarily increase noise levels at adjacent residential and religious uses. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment operating on site, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Construction of the project would involve site improvements, such as the establishment of utilities, excavation of foundations, building erection, paving, and landscaping. The hauling of excavated material and construction materials would also generate truck trips on local roadways. Construction activities are typically carried out in stages. During each stage of construction, there would be a different mix of equipment operating. Construction noise levels would vary by stage and vary within stages based on the amount of equipment in operation and location where the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Table 5, which gives the average noise level ranges by construction phase. Most demolition and construction noise is in the range of 80 to 90 dBA at a distance of 50 feet from the source.

TABLE 5: Typical Ranges of Leq Construction Noise Levels at 50 Feet, dBA

Construction Stage	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	84
Excavation	88	75	89	79	88	78
Foundations	81	81	78	78	88	88
Erection	81	65	87	75	79	78
Finishing	88	72	89	75	84	84
I - All pertinent equipment present at site, II - Minimum required equipment present at site.						

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

The nearest noise sensitive residential and religious uses will be 200 and 100 feet from the closest project construction activities. Average noise levels at this distance of typical construction activity at this site would reach 76 and 82 dBA during busy construction periods. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor. The adjacent, existing, residential and religious uses would, therefore, be intermittently exposed to high levels of noise during periods of nearby construction. Typically, significant noise impacts do not result when standard construction noise control measures are enforced at the project site and when the duration of the noise generating construction period is

limited to one construction season (typically one year) or less. Noise generated by major construction activities is not expected to result in noise levels exceeding 60 dBA L_{eq} and the ambient noise environment by 5 dBA L_{eq} for a period of greater than one year.

The following standard controls are assumed to be included in the project:

- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise generating equipment (e.g., compressors) as far as possible from adjacent residential receivers.
- Acoustically shield stationary equipment located near residential receivers with temporary noise barriers.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Designate a "disturbance coordinator" responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem.

With the implementation of these controls, and the limited duration of the noise generating construction period, the substantial temporary increase in ambient noise levels associated with construction activities would be less-than-significant.

Mitigation Measure 5: No additional measures required.

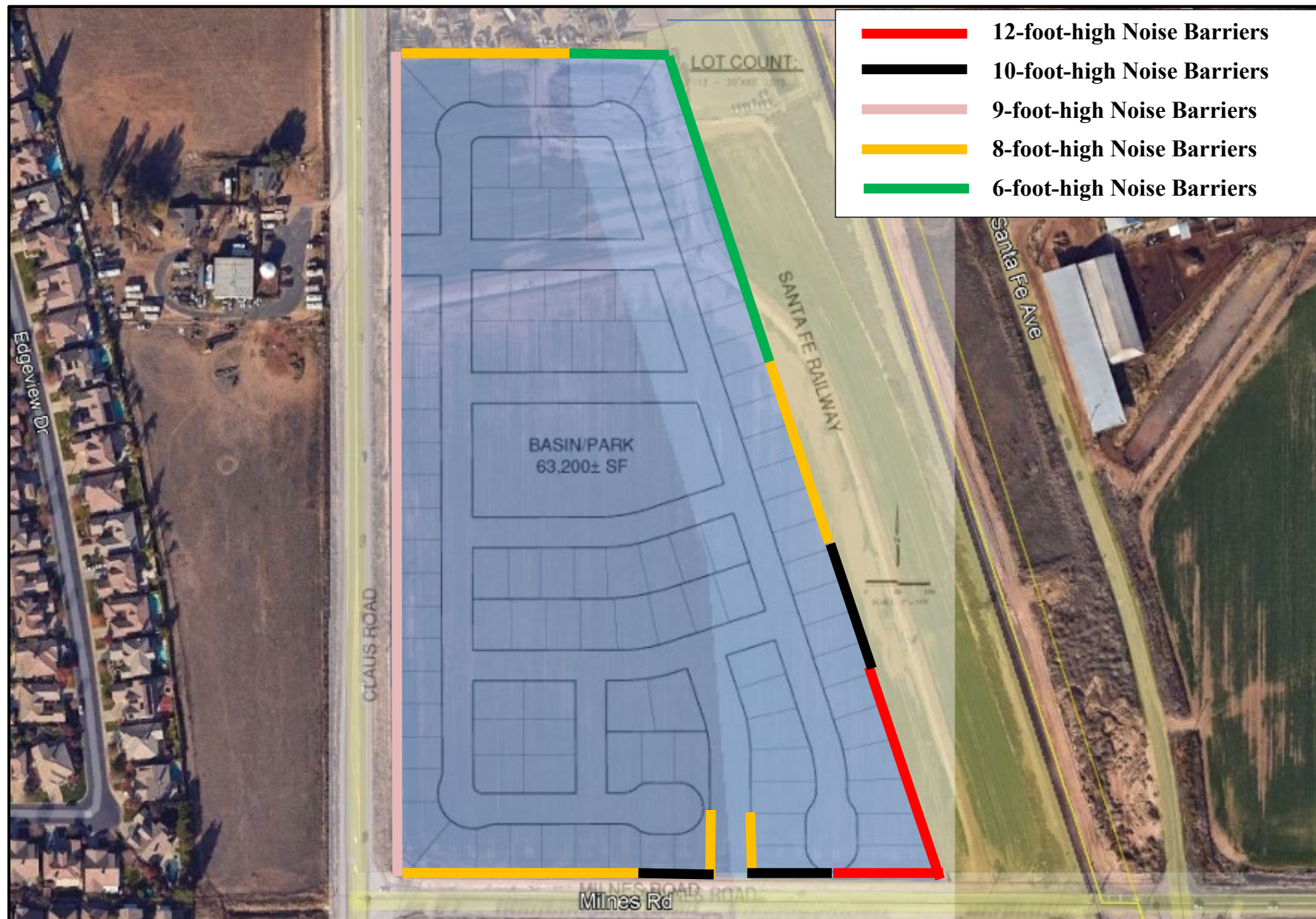


Figure 2: Noise Barrier Heights and Approximate Placement at Naraghi Site

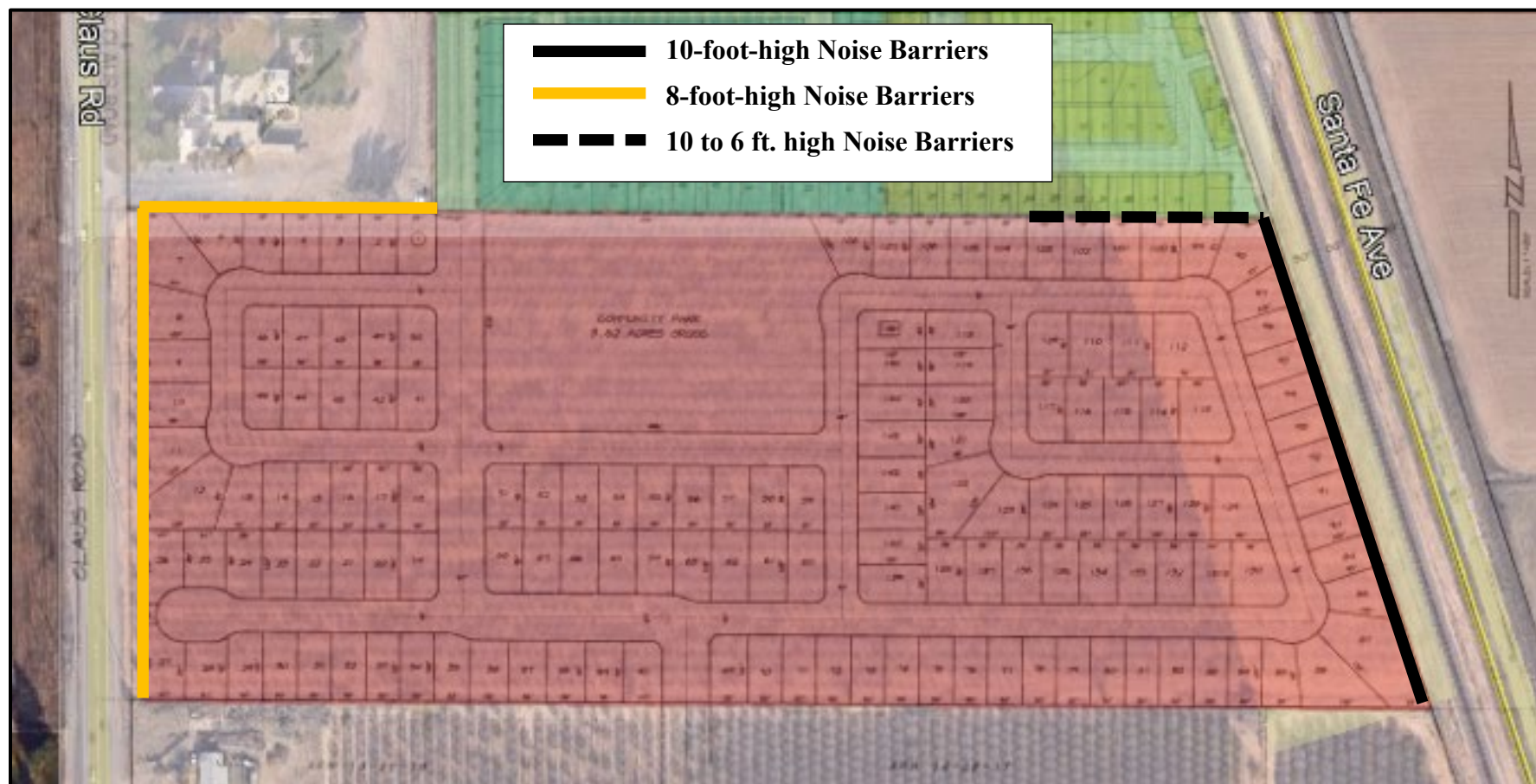


Figure 4: Noise Barrier Placement and Heights at Greenlaw Site

APPENDIX C: FOCUSED CEQA TRANSPORTATION ANALYSIS

Memo

Date: July 21, 2026

To: Steve McMurtry, De Novo Planning Group

From: Zoey Li, Bob Grandy, Fehr & Peers

Subject: Modesto Easton Development Project Phase 1 Focused CEQA Transportation Analysis Memo

Introduction

This technical memorandum documents the transportation analysis including trip generation, trip distribution, trip assignment, and VMT analysis for the proposed residential project within the Village One Specific Plan area in the City of Modesto. This memo includes the technical approach and methodology for evaluating the project's transportation characteristics and its consistency with applicable plans and policies, in accordance with CEQA requirements under SB 743.

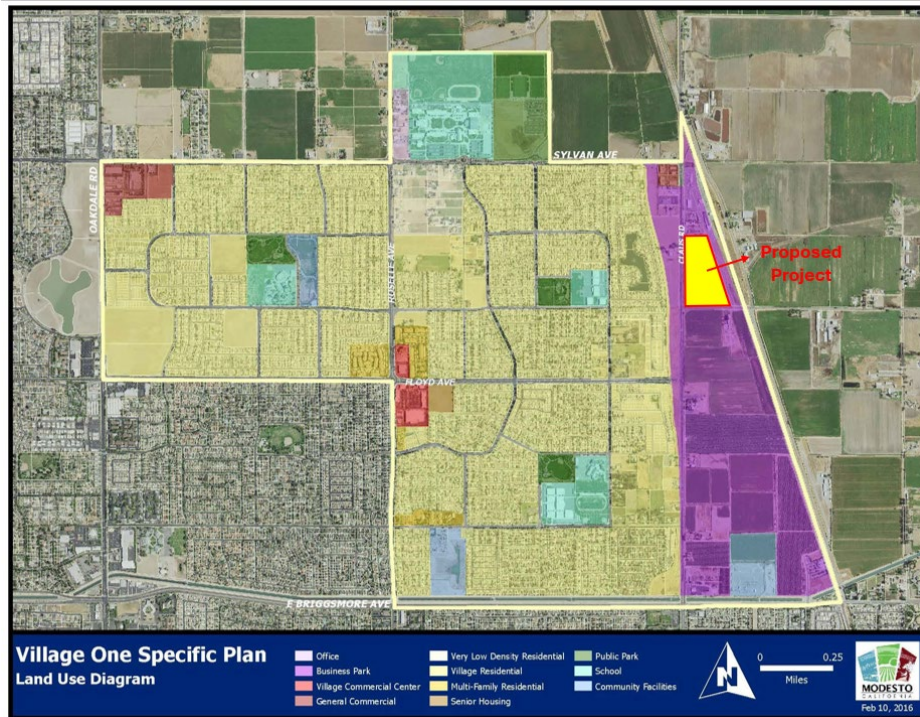
Project Description

The proposed project locates in the currently vacant land at the northeast corner of Milnes Rd and Claus Rd in the east of Modesto, CA. In the existing land use designation/zoning of the City of Modesto General Plan and Village One Specific Plan, this area was planned to include 331,056 square feet of business park. The proposed project replaces the business park with 237 single-family detached dwelling units.

Figure 1 below shows the project location and the existing Village One Specific Plan land use map.

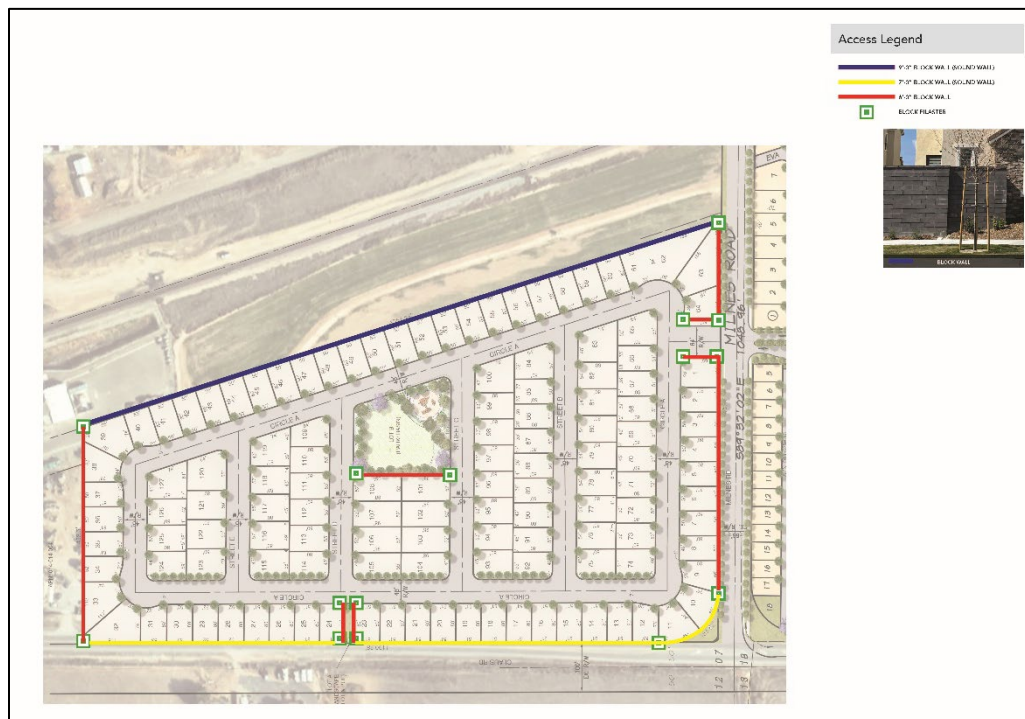
Figure 2 presents the proposed project site plan and access driveways.

Figure 1. Proposed Project Location



Source: Village One Specific Plan, 2016. Fehr & Peers, 2026.

Figure 2. Proposed Project Site Plan



Source: Land Concern Ltd, 2026.

Trip Generation, Distribution and Assignment

Trip Generation

Table 1 below compares the typical weekday daily, AM and PM peak hour trip generation of the proposed residential project and the existing designation/zoning, according to the most recent data published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition.¹

Table 1. Trip Generation Comparison

	Scenario 1 – Existing Designation/Zoning	Scenario 2 – Proposed Project
Land Use Type	Business Park	Single-family residential subdivision
Land Use Quantity	331,056 sqft business park	127 single-family dwelling units
ITE Land Use Code	770 (Business Park)	210 (Single-Family Detached Housing)
Fitted Curve Equation	$T = 9.97(X) + 0.84$	$T = 8.07(X) + 265.45$
Weekday AM Peak Hour Trips	315 (Total), 258 (Entry), 57 (Exit)	91 (Total), 24 (Entry), 67 (Exit)
Weekday PM Peak Hour Trips	263 (Total), 76 (Entry), 187 (Exit)	120 (Total), 74 (Entry), 46 (Exit)
Weekday Daily Total Trips	3,301 (Total), 1651 (Entry), 1650 (Exit)	1,290 (Total), 645 (Entry), 645 (Exit)

Source: Fehr & Peers, 2026.

Trip Length

Average trip lengths for both development scenarios were derived from Replica travel data for comparable land uses in Modesto. For the proposed project's single family residential use, trip length data was drawn from existing single-family dwelling units located adjacent to the project site, within the area bounded by Sylvan Avenue, Claus Road, E. Briggsmore Avenue, and Fine Avenue. For the existing business park designation, trip length data was drawn from a comparable business park area bounded by Kiernan Avenue, SR 108, Bangs Avenue, and the SCA9 Amazon Associate Entrance.

The average trip length for the proposed residential project is 10.50 miles, nearly identical to the average trip length of 10.49 miles for the existing business park designation, a difference of only 0.01 miles. This indicates that, on a per trip basis, the two land uses generate comparable travel distances within the study area.

¹ Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition, August 2025, <https://www.ite.org/technical-resources/topics/trip-and-parking-generation-v2/trip-generation-info/>

VMT Analysis

As shown in **Table 2**, average weekday VMT was calculated by multiplying daily vehicular trip generation by average trip length for each scenario. The existing business park designation generates approximately 3,350 daily trips at an average trip length of 10.49 miles, resulting in approximately 34,700 daily VMT. The proposed project generates approximately 1,300 daily trips at an average trip length of 10.50 miles, resulting in approximately 13,600 daily VMT.

This comparison indicates that, despite a nearly identical average trip length between the two land uses, the proposed project would generate substantially fewer daily vehicular trips than the existing business park designation, resulting in approximately 21,100 fewer daily VMT. This reduction is primarily attributable to the lower trip generation rate associated with single-family residential use relative to business park use, rather than a difference in travel distance per trip.

Because the proposed project would generate less daily VMT and vehicle trips than the business park land use previously analyzed under the Village One Specific Plan EIR, the project's transportation impacts would be less than those already evaluated in the certified EIR.

Table 2. Weekday VMT Comparison

Development Scenario	Land Use Quantity	Daily Vehicular Trip Generation ¹	Average Trip Length (miles) ²	Average Weekday VMT ³
Scenario 1 – Existing Designation/Zoning	331,056 sqft business park	3,350 trips	10.49	34,700
Scenario 2 – Proposed Project	127 single-family dwelling units	1,300 trips	10.50	13,600
Proposed Project vs. Existing Difference ⁴		-1,650 trips	+0.01	-21,100

- Notes:
- 1. Daily Trip Generation is rounded up to the nearest 50 trips.
 - 2. Residential trip length is based on Replica data for single-family dwelling units existing right next to the project site in Modesto, CA. The selected sample units are within the area bounded by Sylvan Ave, Claus Rd, E Briggsmore Ave, and Fine Ave. Business park land use trip length is based on Replica data for the existing similar land use area in Modesto, CA. The selected sample area is boundaried by Kiernan Ave, SR 108, Bangs Ave, and SCA9 Amazon Associate Entrance.
 - 3. Average Weekday VMT = Daily Vehicular Trip Generation * Average Trip Length
 - 4. Difference = Proposed Project Value – Existing Ddesignation/Zoning Value
- Source: Fehr & Peers, 2026.

Policy Consistency Analysis

Policy and Plan Consistency Review

The City of Modesto Urban Area General Plan, adopted in March 2019, designates both Claus Road and E. Briggsmore Avenue as expressways serving as major corridors within the City. The General Plan's Bicycle Circulation Diagram further identifies Class II bike lanes along both streets, along with a Class I bike path on Claus Road near the project site. The review also found no existing transit routes serving

the project area, and no new transit routes currently planned in the vicinity. Based on this review, the proposed project would not interfere with existing transit or active transportation facilities, nor would it preclude the construction of planned bicycle, pedestrian, or transit facilities identified in the available and relevant plans.

Site access and Circulation

The City of Modesto Standard Specifications require multi-family housing complexes and private residential subdivisions with 25 or more dwelling units to provide two access ways from a single public street. The Standard Specifications also require that driveway locations for single-family properties be set back a minimum of 2 feet from the property line, except where a property fronts on a cul-de-sac bulb, in which case a driveway may be constructed up to the property line.

Because the proposed project is anticipated to be developed as a standard public street subdivision, rather than a private residential subdivision, this specific requirement would not directly apply. It is possible, though, that the City Fire Department may require a second access point given state standards for driveways to provide emergency access for residential subdivisions. Given the project's size of 127 single-family dwelling units, providing multiple points of access to the surrounding public roadway network is recommended as good practice to support adequate circulation, emergency access, and traffic distribution.

Summary

This memorandum evaluated the transportation impacts of the proposed 127-unit single-family residential project at the northeast corner of Milnes Road and Claus Road, replacing a previously planned 331,056 square-foot business park. The proposed project would generate fewer daily trips and approximately 21,100 fewer daily VMT than the existing business park designation, indicating that its transportation impacts would be less than those evaluated in the certified Village One Specific Plan EIR.

The policy consistency review found that the project would not conflict with applicable circulation, transit, or active transportation plans, and would not preclude planned bicycle or pedestrian facilities. Site access and internal circulation are expected to be consistent with City of Modesto design standards. However, the City Fire Department may require a second access point to meet state emergency access standards for residential subdivisions, and providing multiple points of access is recommended as good practice to support adequate circulation, emergency access, and traffic distribution.

APPENDIX D: MITIGATION MONITORING AND REPORTING PROGRAM

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Village One – Easton Subdivision Project (Project). This MMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to “adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” An MMRP is required for the proposed Project because the Initial Study/Mitigated Negative Declaration (IS/MND) has identified significant adverse impacts, and measures have been identified to mitigate those impacts.

The numbering of the individual mitigation measures follows the numbering sequence as found in the IS/MND.

4.1 MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP, as outlined in the following table, describes mitigation timing, monitoring responsibilities, and compliance verification responsibility for all mitigation measures identified in this IS/MND.

The City of Modesto will be the primary agency responsible for implementing the mitigation measures and will continue to monitor mitigation measures that are required to be implemented during the operation of the proposed Project.

The MMRP is presented in tabular form on the following pages. The components of the MMRP are described briefly below:

- **Mitigation Measures:** The mitigation measures are taken from the IS/MND in the same order that they appear in that document.
- **Mitigation Timing:** Identifies at which stage of the project mitigation must be completed.
- **Monitoring Responsibility:** Identifies the agency that is responsible for mitigation monitoring.
- **Compliance Verification:** This is a space that is available for the monitor to date and initial when the monitoring or mitigation implementation took place.

TABLE MMRP-1: MITIGATION MONITORING AND REPORTING PROGRAM

<i>MITIGATION MEASURE</i>	<i>MONITORING RESPONSIBILITY</i>	<i>MONITORING ACTIONS</i>	<i>MONITORING REPORTING/ RESPONSIBILITY</i>	<i>SCHEDULE</i>
BIOLOGICAL RESOURCES				
Mitigation Measure BIO-1: No more than 30 days prior to the start of ground-disturbing activities, a qualified biologist shall conduct a reconnaissance-level survey of the Project site and a 500-foot buffer for burrowing owl and, if activities occur during the nesting season (February 1 through August 31), for active nests of birds protected under the Migratory Bird Treaty Act and California Fish and Game Code sections 3503, 3503.5, and 3513. If burrowing owl or an active nest is detected, the biologist shall establish a no-disturbance buffer appropriate to the species and the activity, in coordination with the California Department of Fish and Wildlife, and the buffer shall be maintained until the biologist determines that the young have fledged or the burrow is no longer occupied. Survey results shall be submitted to the City prior to issuance of a grading permit.	Project Developers	Project Developers shall retain a qualified biologist to complete the preconstruction survey, shall implement any no-disturbance buffers established by the biologist, and shall submit the survey results to the City.	City of Modesto Community Development Division	No more than 30 days prior to the start of ground-disturbing activities; survey results submitted prior to issuance of a grading permit
HAZARDS AND HAZARDOUS MATERIALS				
Mitigation Measure HAZ-1: Prior to issuance of a grading permit, the applicant shall retain a qualified environmental professional to collect and analyze representative shallow soil samples from the Project site for organochlorine pesticides and arsenic, and for any other constituents identified as potentially present by a Phase I Environmental Site Assessment. If concentrations exceed applicable residential environmental screening levels, the applicant shall prepare and implement a soil management and remediation plan, subject to review by the City and oversight by the Stanislaus County Department of Environmental Resources or the Department of Toxic Substances Control, prior to issuance of a grading permit.	Project Applicant	Project Applicant shall retain a qualified environmental professional to complete soil sampling and analysis and, where screening levels are exceeded, shall prepare and implement a soil management and remediation plan.	City of Modesto Community Development Division, with oversight by the Stanislaus County Department of Environmental Resources or the Department of Toxic Substances Control	Prior to issuance of a grading permit

MITIGATION MEASURE	MONITORING RESPONSIBILITY	MONITORING ACTIONS	MONITORING REPORTING/ RESPONSIBILITY	SCHEDULE
NOISE				
Mitigation Measure NOI-1: Noise barriers shall be constructed along the Project's BNSF railroad, Milnes Road, and Claus Road frontages so that exterior noise levels within the rear yards of the homes do not exceed the City of Modesto's normally acceptable exterior noise exposure limit of 65 dBA Ldn. The barrier heights and locations set out below, and shown graphically in Figure 2 of the Noise and Vibration Assessment (Appendix B to the Initial Study), were derived for the lot layout evaluated in Appendix B and shall be the presumptive design for the Project. Prior to approval of improvement plans, a qualified acoustical consultant shall confirm the required barrier heights and stationing against the final approved map and shall identify any adjustments necessary to achieve the 65 dBA Ldn standard where the approved lot layout, pad elevations, or rear yard depths differ from those evaluated in Appendix B. Where a required barrier height cannot be achieved under the City's fence height standards, the consultant shall identify an alternative achieving the same standard, such as a combination of berm and wall. The barriers shall be shown on the improvement plans and final map to the satisfaction of the City. • BNSF Railroad Frontage: Noise barrier walls shall be constructed along the lot lines backing onto (parallel with) the BNSF rail line, with the following minimum top-of-wall elevations (as referenced to the yard grades), in order to meet the City's normally acceptable noise exposure limit: ○ Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of	Project Developers	Project Developers shall retain a qualified acoustical consultant to confirm the required barrier heights and stationing against the final approved map, and shall show the noise barriers on the improvement plans and final map.	City of Modesto Community Development Division	Prior to approval of improvement plans and the final map; barriers constructed prior to issuance of certificates of occupancy

MITIGATION MEASURE	MONITORING RESPONSIBILITY	MONITORING ACTIONS	MONITORING REPORTING/ RESPONSIBILITY	SCHEDULE
the site and a distance of approximately 350 feet north of the Milnes Road centerline. ○ Noise barriers with a top of wall height of 10 feet above yard grades between approximately 350 and 550 feet north of the Milnes Road centerline. ○ Noise barriers with a top of wall height of 8 feet above yard grades between approximately 550 and 850 feet north of the Milnes Road centerline. ○ Noise barriers with a top of wall height of 6 feet above yard grades between approximately 850 feet north of the Milnes Road centerline and the northeastern corner of the site, with this 6-foot-tall noise barrier extended approximately 160 feet along the northern site property line. • Milnes Road Frontage: Noise barrier walls shall be constructed along the lot lines backing on (parallel with) Milnes Road with the following minimum top of wall elevations (as referenced to the yard grades): ○ Noise barriers with a top of wall height of 12 feet above yard grades between the southeastern corner of the site and a distance of approximately 400 feet west of the BNSF railroad centerline. ○ Noise barriers with a top of wall height of 10 feet above yard grades				

MITIGATION MEASURE	MONITORING RESPONSIBILITY	MONITORING ACTIONS	MONITORING REPORTING/ RESPONSIBILITY	SCHEDULE
between approximately 400 and 530 feet and 590 and 700 feet west of the BNSF railroad at-grade crossing. ○ Noise barriers with a top of wall height of 8 feet above yard grades between approximately 600 feet west of the BNSF railroad at-grade crossing and the southwest (Milnes and Claus Road) corner of the site. ○ Noise barriers with a top of wall height of 8 feet above yard grades should be extended perpendicular to Milnes Road along the access road frontage for approximately 100 feet on either side of this roadway. • Claus Road Frontage: Noise barrier walls with a minimum top-of-wall elevation of 9 feet as referenced to the yard grades shall be constructed along the lot lines backing onto (parallel with) Claus Road. An 8-foot-tall noise barrier shall extend across the northern edge of the site to the termination of the 6-foot-tall noise barrier wall extending from the eastern (railroad facing) side of the site. • To be effective as a barrier to noise, the noise barrier walls shall be built without cracks or gaps in the face or large or continuous gaps at the base or where they adjoin the homes or each other. The walls shall also have a minimum surface weight of 3.0 lbs. per sq. ft. Small, dispersed, gaps in the base of the walls for landscape irrigation or drainage, which do not compose more than 0.5% of the wall area, are acceptable.				

MITIGATION MEASURE	MONITORING RESPONSIBILITY	MONITORING ACTIONS	MONITORING REPORTING/ RESPONSIBILITY	SCHEDULE
○ For a wood wall to meet these requirements, the fence shall be double faced with butted vertical fence boards on each side with a continuous layer of 1/2" plywood. Using the plywood ensures continued effectiveness of the barrier with age, since wood slats alone have a tendency to warp and separate with age allowing gaps to form and the barrier effect of the wall to diminish. Other acceptable materials include, but are not limited to, masonry block and pre-cast concrete panels.				
Mitigation Measure NOI-2: The following measures shall be incorporated into the Project on-site construction operations: • Noise-generating construction activities within the Project area shall comply with the time restrictions of Title 4, Chapter 9 of the Modesto Municipal Code. • All noise-producing Project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition. • All mobile or fixed noise-producing equipment used on the Project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while during Project activity. • Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be	Project Developers	Project Developers shall incorporate the construction noise control measures into contract specifications and shall implement them throughout construction.	City of Modesto Community Development Division	Prior to issuance of grading permits and continuing throughout construction

MITIGATION MEASURE	MONITORING RESPONSIBILITY	MONITORING ACTIONS	MONITORING REPORTING/ RESPONSIBILITY	SCHEDULE
located as far as practicable from the existing residences to the west and south. • Project area and site access road speed limits shall be established and enforced during the construction period. • If unusual circumstances or emergencies prevent certain Project construction activities from complying with the Modesto requirements, then a noise control plan shall be developed to ensure that sufficient mitigation is implemented during Project construction to ensure adverse noise impacts are avoided. • Notification of construction hours and durations shall be provided to the existing residences to the west and south of the Project site.				
Mitigation Measure NOI-3: The following measures shall be incorporated into the design: • Forced-air mechanical ventilation, satisfactory to the Building Official, shall be provided for all residences having partial or full line of sight to Claus Road, Milnes Road, or the BNSF rail line, so that occupants may keep windows and doors closed for acoustic isolation. • Air conditioning shall be provided for all residences of this development to allow occupants to close doors and windows as desired for acoustic isolation. • Sound-rated windows and doors shall be provided as necessary to achieve an interior noise level of 45 dBA Ldn or less in all residences and, at residences facing or perpendicular to the BNSF rail line, recurring maximum train passby levels of 50 dBA Lmax or less in bedrooms and	Project Developers	Project Developers shall retain a qualified acoustical consultant to prepare the unit-by-unit analysis and shall submit it, with the required noise control treatments, to the City with the building plans.	City of Modesto Community Development Division	Prior to issuance of building permits

MITIGATION MEASURE	MONITORING RESPONSIBILITY	MONITORING ACTIONS	MONITORING REPORTING/ RESPONSIBILITY	SCHEDULE
55 dBA Lmax or less in other habitable rooms. As estimated in Appendix B, this is anticipated to require Sound Transmission Class (STC) ratings of approximately 30 to 36 at upper-floor facades facing or perpendicular to Claus Road, and approximately 28 to 34 at first-floor facades and 38 to 45 at second-floor facades facing or perpendicular to the BNSF rail line. These ranges were estimated for the building types and setbacks evaluated in Appendix B and are provided as design guidance; the governing requirement is achievement of the interior noise levels stated above, as demonstrated by the unit-by-unit analysis required below. • Residences on the lots at the southeastern corner of the Project site nearest the Milnes Road at-grade rail crossing, which would be exposed to recurring maximum levels of up to 97 dBA Lmax30, shall incorporate additional acoustic design and sound control measures as necessary to achieve the interior standards identified above. Such measures may include sound-rated exterior wall construction, acoustical caulking, insulation, and acoustical vents; orienting large windows and doors away from the rail line; locating bedrooms away from the rail frontage; and locating single-story homes closest to the rail line. • The specific determination of exterior wall assemblies and window and door STC ratings shall be made on a unit-by-unit basis during project design by a qualified acoustical consultant. The results of that analysis, including a description of the necessary noise control				

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treatments, shall be submitted to the City with the building plans and approved prior to issuance of a building permit.				
TRIBAL CULTURAL RESOURCES				
Mitigation Measure TCR-1: If a potential tribal cultural resource, archaeological deposit, or human remains is encountered during ground-disturbing activities, all work within 100 feet of the find shall halt and the City shall be notified immediately. A qualified archaeologist shall evaluate the find and, if it may constitute a tribal cultural resource, the City shall notify and consult with the culturally affiliated California Native American tribe(s) regarding treatment, which may include preservation in place, avoidance, capping, or data recovery, and regarding tribal monitoring of the remaining ground disturbance in the vicinity of the find. Work in the affected area shall not resume until the City has authorized it in writing. In the event human remains are encountered, the Stanislaus County Coroner shall be contacted and the procedures of Health and Safety Code section 7050.5 and Public Resources Code section 5097.98 shall be followed.	Project Developers	Project Developers shall halt work within 100 feet of any find, notify the City immediately, and retain a qualified archaeologist; treatment and any tribal monitoring shall be implemented as directed by the City in consultation with the culturally affiliated tribe(s).	City of Modesto Community Development Division; Stanislaus County Coroner in the event human remains are encountered	Throughout ground-disturbing activities

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