MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY

FOR THE

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

DECEMBER 2023

Prepared for:

City of Tracy
Parks and Recreation Department
333 Civic Center Plaza
Tracy, CA 95376

Prepared by:

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De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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Proposed Gretchen Talley Park Phase 3 Expansion Project

Lead Agency:
City of Tracy
Parks and Recreation Department
333 Civic Center Plaza
Tracy, CA 95376

Project Title: Gretchen Talley Park Phase 3 Expansion Project

Project Location: The Gretchen Talley Park Phase 3 Expansion project is located at 2200-2398 Mits Way in the City of Tracy, San Joaquin County, California (see Figures 1 and 2). Figure 3 shows an aerial view of the Project site. The Project site is identified by Assessor Parcel Numbers (APN) 242-040-49, 242-040-46, and 242-040-50. The Project site encompasses 11.24 acres, and is bounded by Dove Drive to the north and Mits Way to the west, low density residential uses to the south, and Wanda Hirsch Elementary School to the east.

The Project site currently includes the existing Gretchen Talley Park, which encompasses the eastern and southwestern portions of the Project site, which includes an ampitheater, picnic area, lawn area, gazebo, and courts. The western portion of the Project site is currently vacant and has been previously graded.

Project Description: The proposed Project would develop Phase 3 of Gretchen Talley Park, an expansion of the existing Gretchen Talley Park. Within this expansion, the City is proposing to add to the existing Gretchen Talley Park several features, such as a new lawn, landscaping, a nature play zone, a decomposed granite path, lighted tennis, pickleball, and basketball courts, as well as an outdoor fitness area and a park restroom, and large and small dog park areas. The proposed Project is also anticipated to include various other features, including enhancements to pedestrian access to the Project site.

Access to the Project site would be provided to both vehicles and pedestrians. Vehicle parking is located along the perimeter of the Project site, including along Mitz Way and Dove Drive.

Pedestrian site access to the Project site would be provided by an extensive internal sidewalk system, which would connect pedestrians to the various project features, as well as the existing Gretchen Park features located outside of the Project site. Pedestrian site access to the project site would also be provided from the sidewalks on adjacent roadways (i.e. Mitz Way and Dove Drive).

Findings:

In accordance with the California Environmental Quality Act, the City of Tracy 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 Tracy staff. On the basis of the Initial Study, the City of Tracy 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 Mitigation Measures:

The following Mitigation Measures 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. A Mitigation Monitoring and Reporting Program (MMRP) is an integral part of project implementation to ensure that mitigation is properly implemented by the City and the implementing agencies. The MMRP will describe actions required to implement the appropriate mitigation for each CEQA category including identifying the responsible agency, program timing, and program monitoring requirements. 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 mitigation measures presented below.

AIR QUALITY

Mitigation Measure AIR-1*: Prior to the commencement of grading activities, the contractor hired to complete the grading activities shall prepare a construction emissions reduction plan that meets the requirements of SJVAPCD Rule VIII. The construction emissions reductions plan shall be submitted to the SJVAPCD for review and approval. The Project applicant shall comply with all applicable APCD requirements prior to commencement of grading activities.*

Mitigation Measure AIR-2*: The following mitigation measures, in addition to those required under Regulation VIII of the SJVAPCD, shall be implemented by the Project's contractor during all phases of Project grading and construction to reduce fugitive dust emissions:*

- *Water previously disturbed exposed surfaces (soil) a minimum of two-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity.*
- *Water all haul roads (unpaved) a minimum of two-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity.*
- *Reduce speed on unpaved roads to less than 5 miles per hour.*
- *Reduce the amount of disturbed surface area at any one time pursuant to the scope of work identified in approved and permitted plans.*
- *Restrict vehicular access to the area to prevent unlawful entry to disturbed areas and limit unnecessary onsite construction traffic on disturbed surfaces. Restriction measures may include fencing or signage as determined appropriate by the City.*
- *Cease grading activities during periods of high winds (greater than 20 mph over a one-hour period).*
- *Asphalt-concrete paving shall comply with SJVAPCD Rule 4641 and restrict use of cutback, slow-sure, and emulsified asphalt paving materials.*

Implementation of this mitigation shall occur during all grading or site clearing activities. The SJVAPCD shall be responsible for monitoring.

BIOLOGICAL RESOURCES

Mitigation Measure BIO-1*: Prior to the commencement of grading activities or other ground disturbing activities on the Project site, the Project applicant shall arrange for a qualified biologist to conduct a preconstruction survey for western burrowing owls in accordance with SJMSCP requirements. If no owls or owl nests are detected, then construction activities may commence. If burrowing owls or occupied nests are discovered, then the following shall be implemented:*

- *During the breeding season (February 1 through September 1) occupied burrows shall not be disturbed and shall be provided with a 75 meter protective buffer until and unless the SJCOG Technical Advisory Committee (TAC), with the concurrence of the Permitting Agencies' representatives on the TAC; or unless a qualified biologist approved by the Permitting Agencies verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed. They should only be destroyed by a qualified biologist using passive one-way eviction doors to ensure that owls are not harmed during burrow destruction. Methods for removal of burrows are described in the California Department of Fish and Game's Staff Report on Burrowing Owls (October, 1995).*
- *During the non-breeding season (September 1 through January 31) burrowing owls occupying the Project site should be evicted from the Project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (Oct., 1995)*

Implementation of this mitigation shall occur prior to grading or site clearing activities. SJCOG shall be responsible for monitoring and a qualified biologist shall conduct surveys and relocate owls as required.

Mitigation Measure BIO-2*: Prior to commencement of any grading activities, the Project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through payment of development fees for conversion of open space lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. In addition, coverage includes incidental take avoidance and minimization measures for species that could be affected as a result of the proposed Project. There are a wide variety of incidental take avoidance and minimization measures contained in the SJMSCP that were developed in consultation with the USFWS, CDFW, and local agencies. The applicability of incidental takes avoidance and minimization measures are determined by SJCOG on a Project basis. The process of obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a) and California Fish and Game Code Section 2081. The Section 10(a) permit also serves as a special-purpose permit for the incidental take of those species that are also protected under the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species. The SJMSCP includes the implementation of an ongoing Monitoring Plan to ensure success in mitigating the habitat impacts that are covered. The SJMSCP Monitoring Plan includes an Annual Report process, Biological Monitoring Plan, SJMSCP Compliance Monitoring Program, and the SJMSCP Adaptive Management Plan SJCOG.*

CULTURAL RESOURCES

Mitigation Measure CUL-1*: If any prehistoric or historic artifacts, human remains or other indications of archaeological or paleontological resources are found during grading and construction activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be consulted to evaluate the finds and recommend appropriate mitigation measures.*

- *If cultural resources or Native American resources are identified, every effort shall be made to avoid significant cultural resources, with preservation an important goal. If significant sites cannot feasibly be avoided, appropriate mitigation measures, such as data recovery excavations or photographic documentation of buildings, shall be undertaken consistent with applicable state and federal regulations.*

- *If human remains are discovered, all work shall be halted immediately within 50 meters (165 feet) of the discovery, the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.*

If any fossils are encountered, there shall be no further disturbance of the area surrounding this find until the materials have been evaluated by a qualified paleontologist, and appropriate treatment measures have been identified.

GEOLOGY AND SOILS

Mitigation Measure GEO-1*: Prior to the development of the Project site, a subsurface geotechnical investigation must be performed to identify onsite soil conditions and identify any site-specific engineering measures to be implemented during the construction of building foundations and subsurface utilities. The results of the subsurface geotechnical investigation shall be reflected on the Improvements Plans, subject to review and approval by the City's Building Safety and Fire Prevention Division.*

Mitigation Measure GEO-2*: Expansive materials and potentially weak and compressible fills at the site shall be evaluated by a Geotechnical Engineer during the grading plan stage of development. If highly expansive or compressible materials are encountered, special foundation designs and reinforcement, removal and replacement with soil with low to non-expansive characteristics, compaction strategies, or soil treatment options to lower the expansion potential shall be incorporated through requirements imposed by the City's Development Services Department.*

Mitigation Measure GEO-3: *If paleontological resources are discovered during the course of construction, work shall be halted immediately within 50 meters (165 feet) of the discovery, the City of Tracy or San Joaquin County shall be notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. If the paleontological resource is considered significant, it should be excavated by a qualified paleontologist and given to a local agency, State University, or other applicable institution, where they could be curated and displayed for public education purposes.*

HAZARDS AND HAZARDOUS MATERIALS

Mitigation Measure HAZ-1*: A Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health prior to the issuance of a grading permit. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The*

approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.

Mitigation Measure HAZ-2*: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Division (CUPA) for review and approval. If during the construction process the applicant or his subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*

NOISE

Mitigation Measure NOISE-1: *The City of Tracy Development Services Department shall establish the following as conditions of approval for any permit that results in the use of construction equipment:*

- *Construction shall be limited to 7:00 a.m. to 7:00 p.m.*
- *All construction equipment powered by internal combustion engines shall be properly muffled and maintained.*
- *Quiet construction equipment, particularly air compressors, are to be selected whenever possible.*
- *All stationary noise-generating construction equipment such as generators or air compressors are to be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.*
- *Unnecessary idling of internal combustion engines is prohibited.*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.*

These requirements shall be noted on the Project plans prior to approval of grading and/or building permits.

TABLE OF CONTENTS

INITIAL STUDY 3
Project Title 3
Lead Agency Name and Address 3
Contact Person and Phone Number 3
Project Sponsor's Name and Address 3
Project Location and Setting 3
Project Description 3
General Plan and Zoning 4
Environmental Factors Potentially Affected: 15
Determination: 15
Evaluation Instructions: 16
Evaluation of Environmental Impacts: 17
I. AESTHETICS -- Would the project: 18
II. AGRICULTURE AND FOREST RESOURCES -- Would the project: 21
III. AIR QUALITY -- Would the project: 25
IV. BIOLOGICAL RESOURCES -- Would the project: 29
V. CULTURAL RESOURCES -- Would the project: 39
VI. ENERGY 41
VII. GEOLOGY AND SOILS -- Would the project: 45
VIII. GREENHOUSE GAS EMISSIONS -- Would the project: 59
X. HYDROLOGY AND WATER QUALITY -- Would the project: 68
XI. LAND USE AND PLANNING -- Would the project: 77
XII. MINERAL RESOURCES -- Would the project: 79
XIII. NOISE 80
XIV. POPULATION AND HOUSING -- Would the project: 90
XV. PUBLIC SERVICES 91
XVI. RECREATION 94
XVII. TRANSPORTATION AND CIRCULATION -- Would the project: 95
XVIII. TRIBAL CULTURAL RESOURCES 98
XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project: 100
XX. WILDFIRE 104
XV. MANDATORY FINDINGS OF SIGNIFICANCE 106
References 108

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INITIAL STUDY

PROJECT TITLE

Gretchen Talley Park Phase 3 Expansion

LEAD AGENCY NAME AND ADDRESS

City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376

CONTACT PERSON AND PHONE NUMBER

Michael Rosales, Landscape Architect
City of Tracy
City of Tracy - Parks and Recreation Department
333 Civic Center Plaza
Tracy, CA 95376
William.Dean@cityoftracy.org
(209) 831-6231

PROJECT SPONSOR'S NAME AND ADDRESS

Michael Rosales, Landscape Architect
City of Tracy
City of Tracy - Parks and Recreation Department
333 Civic Center Plaza
Tracy, CA 95376
William.Dean@cityoftracy.org
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PROJECT LOCATION AND SETTING

The Gretchen Talley Park Phase 3 Expansion project is located at 2200-2398 Mits Way in the City of Tracy, San Joaquin County, California (see Figures 1 and 2). Figure 3 shows an aerial view of the Project site. The Project site is identified by Assessor Parcel Numbers (APN) 242-040-49, 242-040-46, and 242-040-50. The Project site encompasses 11.24 acres, and is bounded by Dove Drive to the north and Mits Way to the west, low density residential uses to the south, and Wanda Hirsch Elementary School to the east.

The Project site currently includes the existing Gretchen Talley Park, which encompasses the eastern and southwestern portions of the Project site, which includes an ampitheater, picnic area, lawn area, gazebo, and courts. The western portion of the Project site is currently vacant and has been previously graded.

PROJECT DESCRIPTION

The proposed Project would develop Phase 3 of Gretchen Talley Park, an expansion of the existing Gretchen Talley Park. Within this expansion, the City is proposing to add to the existing Gretchen

Talley Park several features, such as a new lawn, landscaping, a nature play zone, a decomposed granite path, lighted tennis, pickleball, and basketball courts, as well as an outdoor fitness area and a park restroom, and large and small dog park areas. The proposed Project is also anticipated to include various other features, including enhancements to pedestrian and vehicle access to the Project site. Other project components, such as Project site access and circulation, utilities, and requested entitlements, are discussed in detail below.

ACCESS AND CIRCULATION

Access to the Project site would be provided for pedestrians. Vehicle on-street parking is located along the perimeter of the Project site, including along Mitz Way and Dove Drive.

Pedestrian site access to the Project site would be provided by an extensive internal sidewalk system, which would connect pedestrians to the various project features, as well as the existing Gretchen Park features located outside of the Project site. Pedestrian site access to the project site would also be provided from the sidewalks on adjacent roadways (i.e. Mitz Way and Dove Drive).

UTILITIES

The proposed Project would connect to existing City infrastructure to provide water and sewer, and utilities. Existing sewer, water, and gas lines/pipes are currently located along adjacent roadways.

The project would be served by the following existing service providers:

1. City of Tracy for water;
2. City of Tracy for wastewater collection and treatment;
3. Pacific Gas and Electric Company for electricity.

In addition, the Project site is largely made up of pervious surfaces. Therefore, specific Project storm drainage facilities would not be required.

GENERAL PLAN AND ZONING

The Project site is identified as Park (P) on the Tracy General Plan Land Use Map and Low Density Residential (LDR) on the Tracy Zoning Map, as shown in Figure 4. The Project would not require a General Plan or Zoning Amendment.

The Park General Plan land use designation provides for current and future locations for public parks of all sizes in the City. Examples of specific land uses that are appropriate within this designation include active playing fields, parks and recreation facilities, urban parks and plazas, bicycle and walking trails, fountains, landscaped areas and corridors, natural open space and wildlife areas, water recharge and detention facilities (that are also used as public parks when they are not flooded) and renewable energy and/or alternative energy uses. Park facilities and open space are also allowed in areas with Public Facilities and Residential designations.

The Low Density Residential (LDR) zoning is intended to be utilized in the areas designated low-medium density residential with a density range of two (2.0) to five and eight-tenths (5.8)

dwelling units per gross acre by the General Plan. However, the LDR zoning also allows for public park uses, such as the proposed Project. Separately, the Park (P) zoning is designed to provide for public parks of all sizes. The proposed park use is consistent with the Park zoning requirements.

Requested Entitlements and Other Approvals

The City of Tracy is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050.

If the City Council adopts the IS/MND in accordance with CEQA requirements, the City may use the IS/MND to support the following actions:

- Development Review Permit approval for landscaping and other site features;
- Other permits as necessary for project construction;
- Adopting a Mitigation Monitoring and Reporting Program (MMRP).

The following agencies may rely on the adopted IS/MND to issue permits or approve certain aspects of the proposed project:

- Regional Water Quality Control Board (RWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES);
- RWQCB – The Storm Water Pollution Prevention Plan (SWPPP) would be required to be approved prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Construction activities would be subject to the SJVAPCD codes and requirements.

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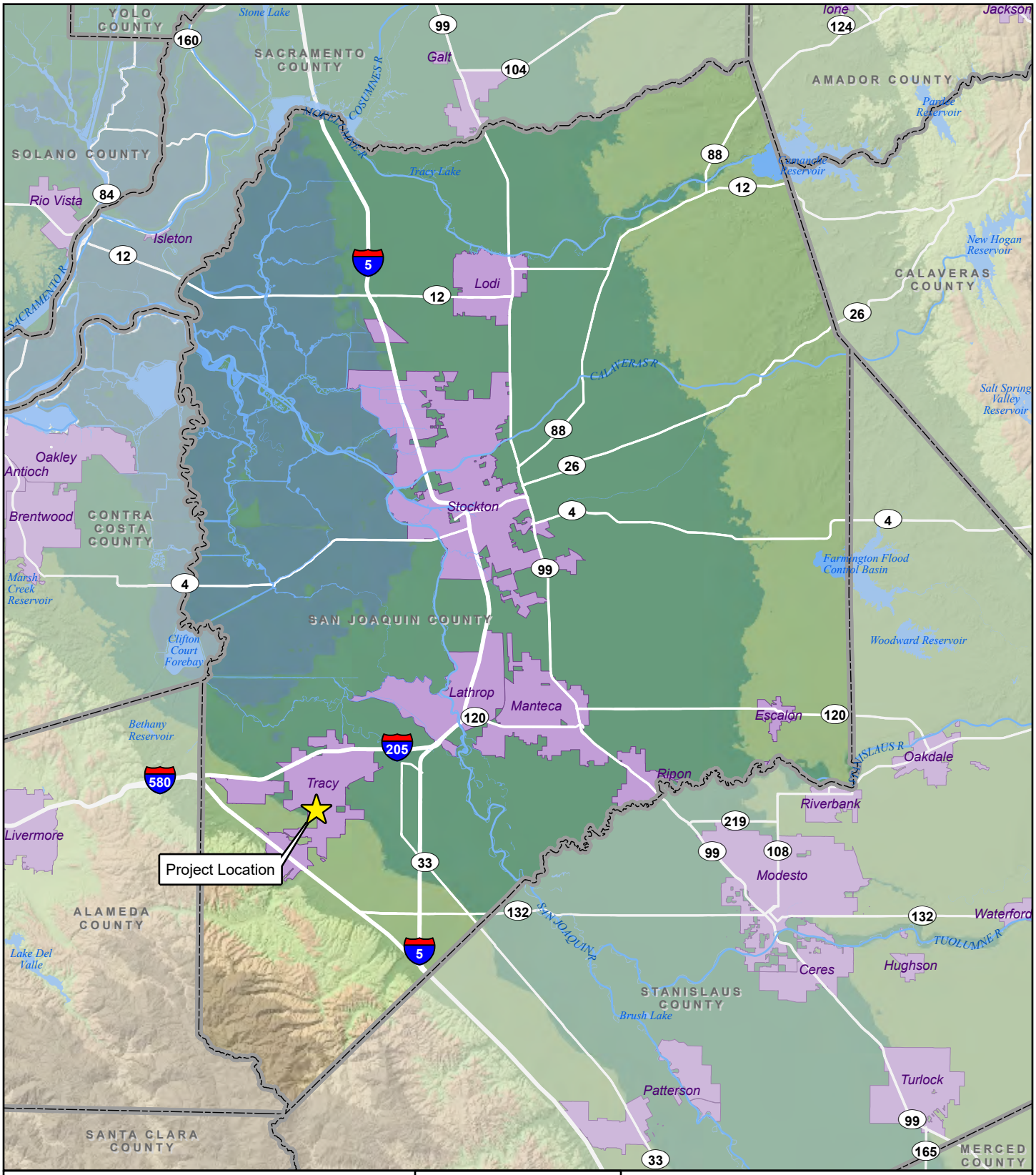

LEGEND

County Boundary

Incorporated Area

N

0 2½ 5

Miles

Sources: San Joaquin County GIS. Map date: May 11, 2023.

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 1. Regional Project Location

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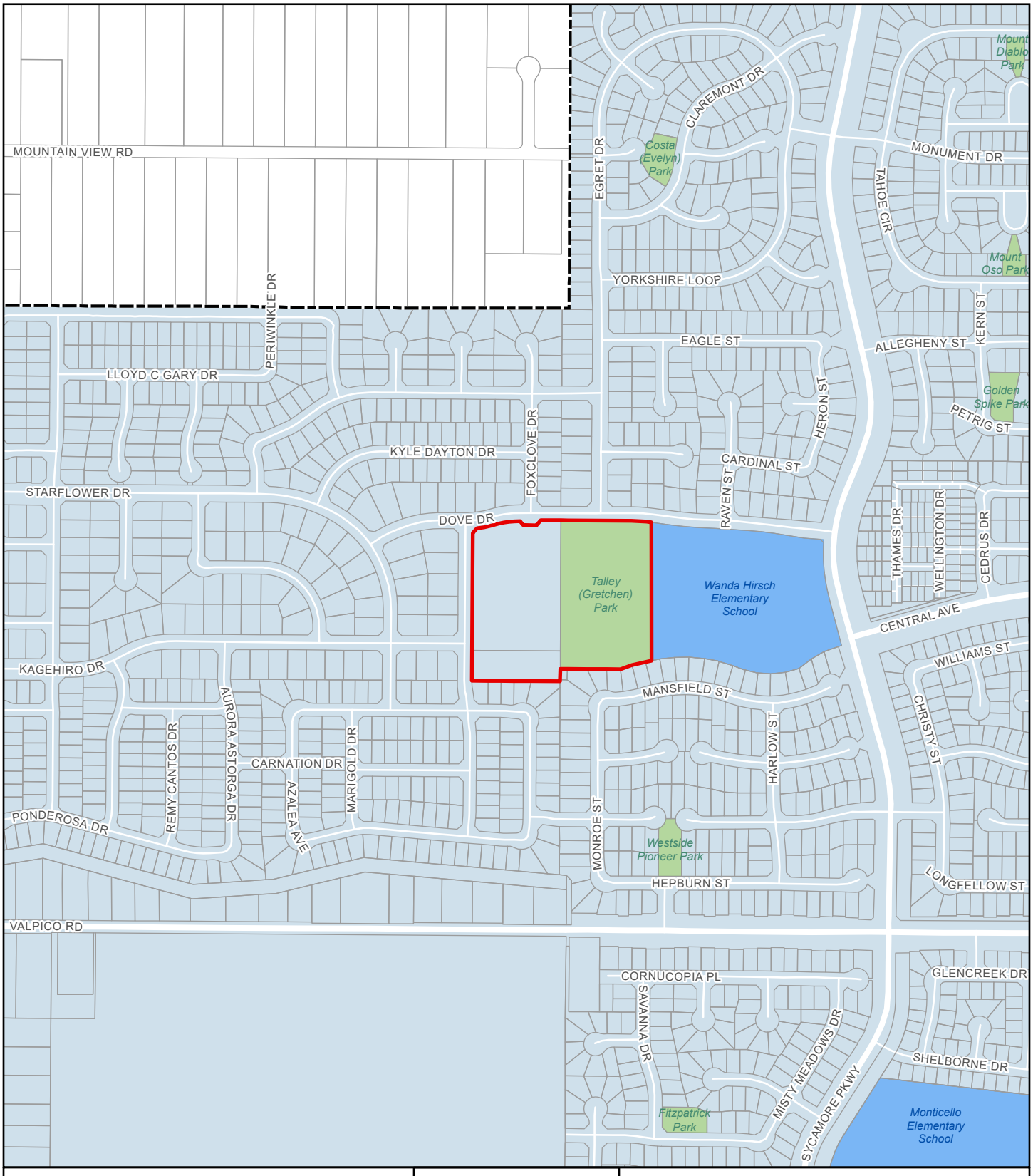

LEGEND

- Project Site Boundary
- Tracy City Limits
- Parks
- Public Schools

Sources: City of Tracy; San Joaquin County GIS. Map date: September 29, 2023.

N

0 250 500

US Feet

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 2. Project Vicinity Map

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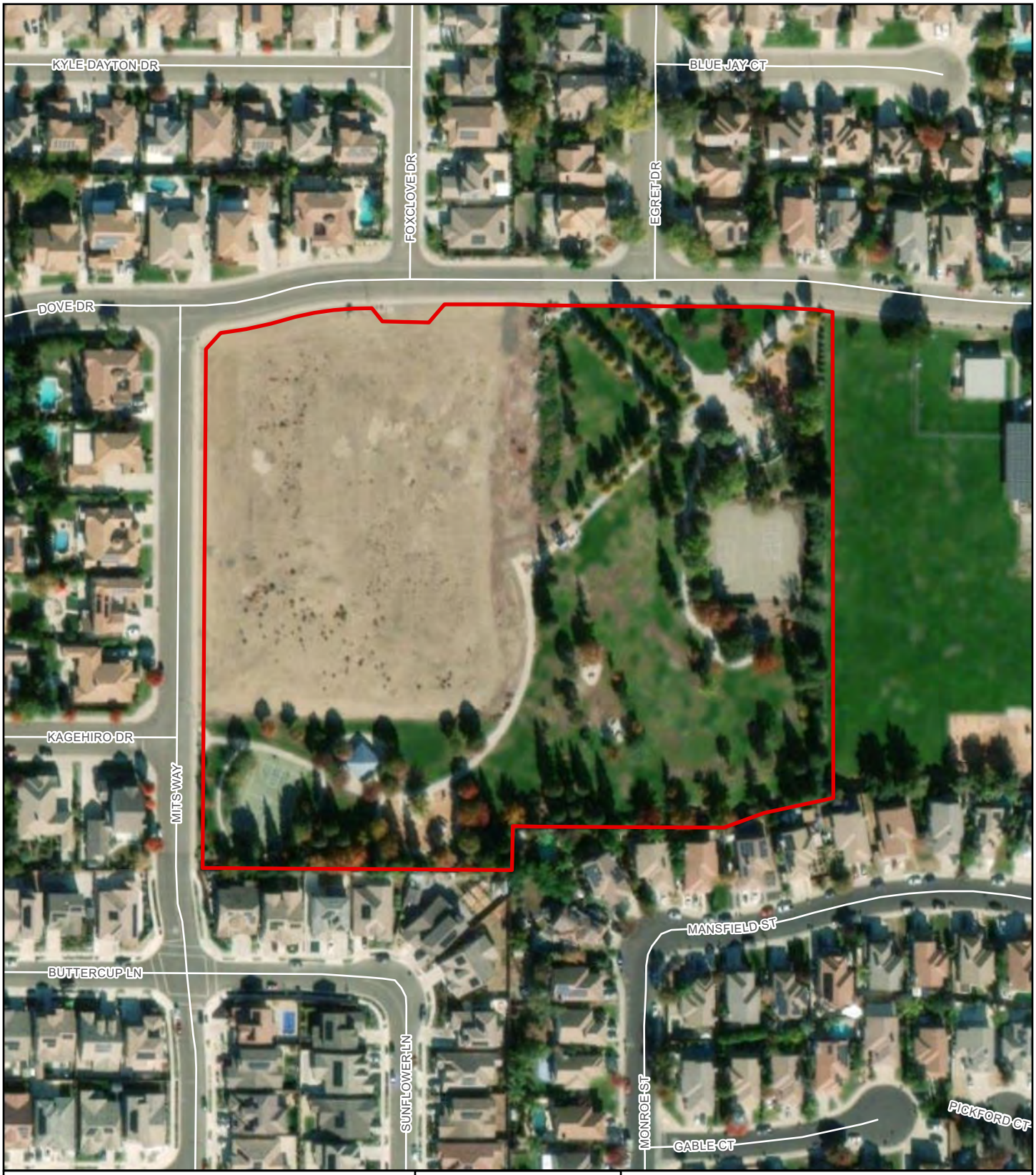

LEGEND

Project Site Boundary

N

0 50 100

US Feet

Sources: ArcGIS Map Service; San Joaquin County GIS. Map date: September 29, 2023.

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 3. Aerial View of Project Site

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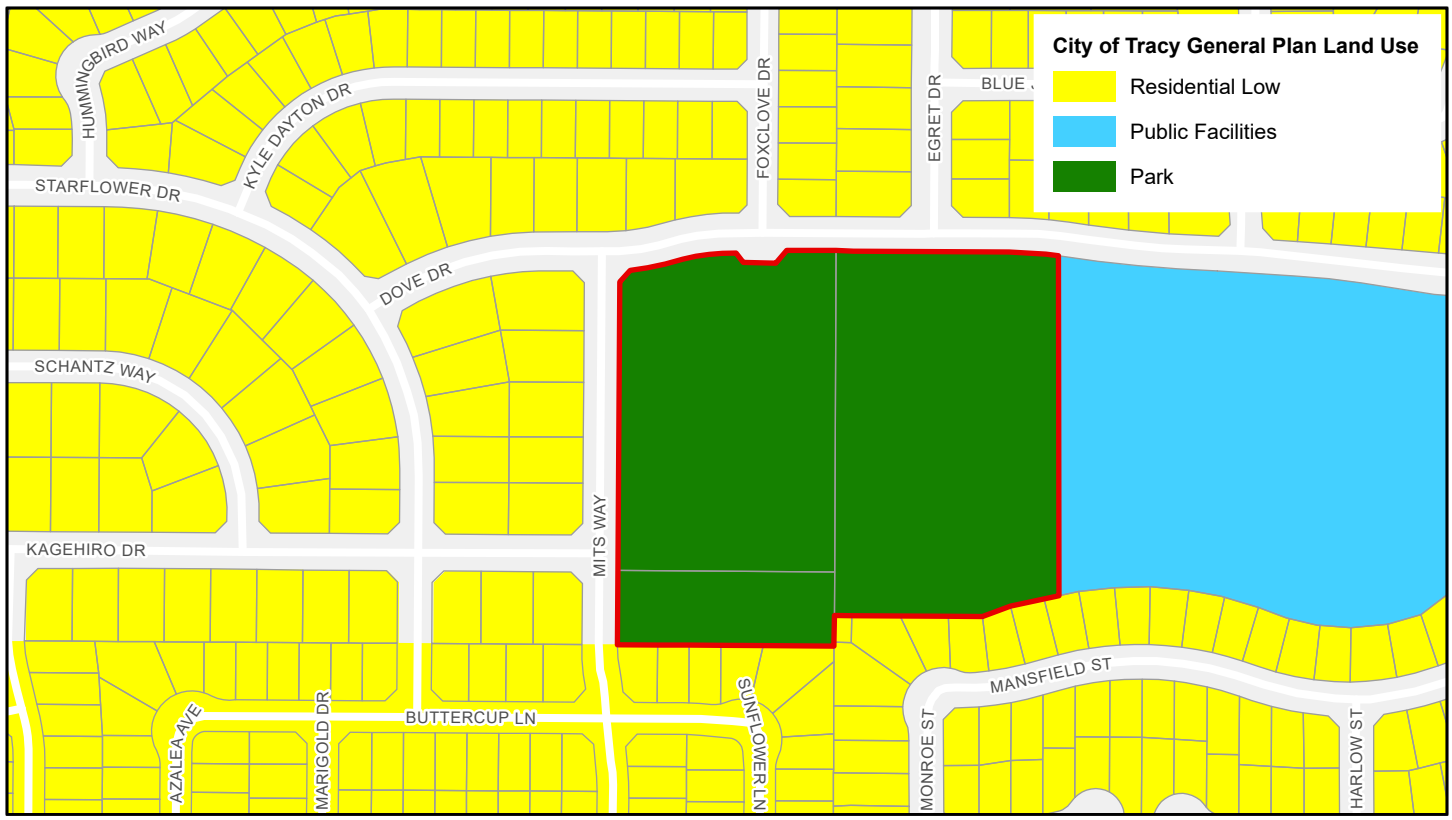

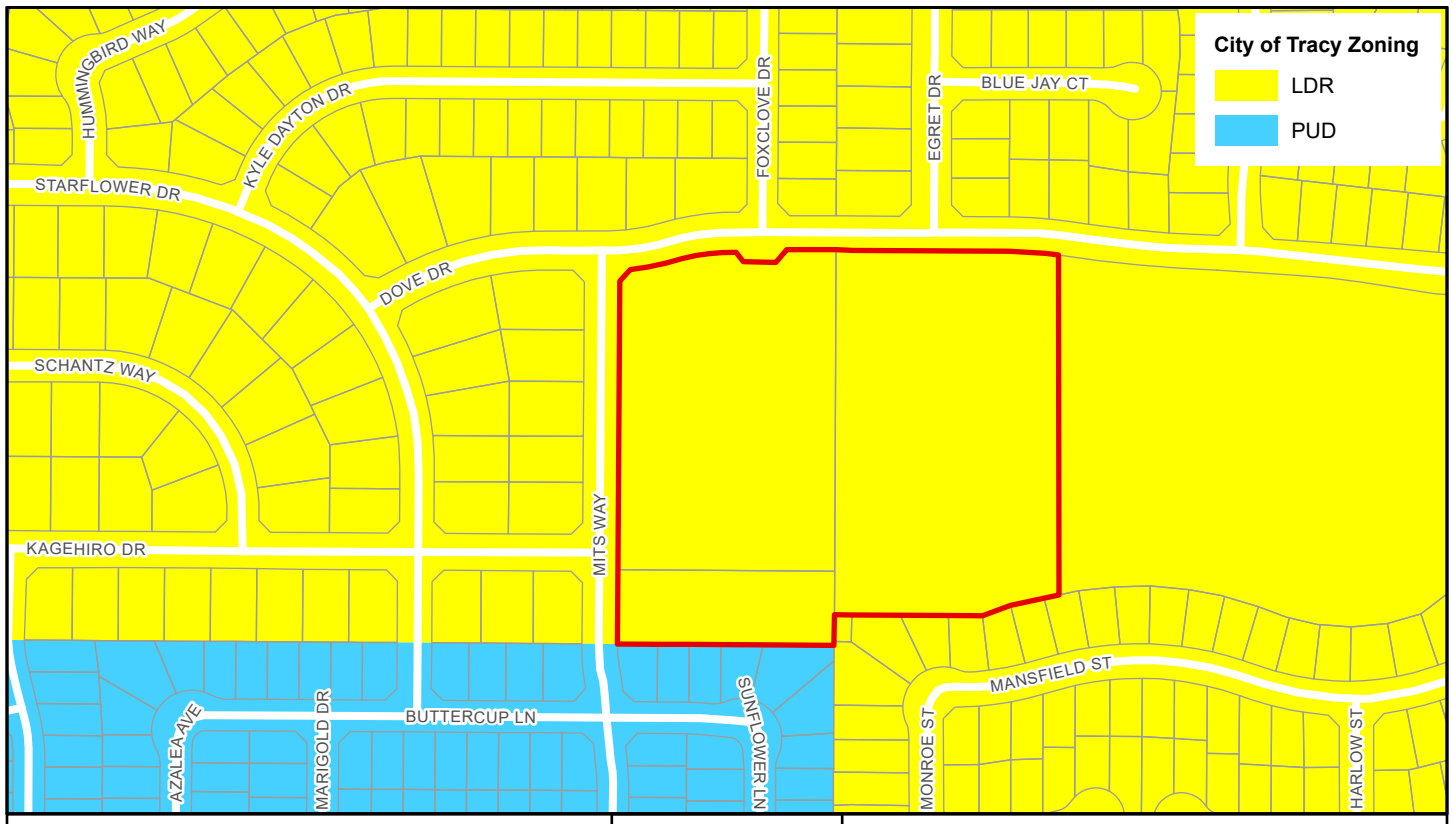

LEGEND

Project Site Boundary

N

0 100 200

US Feet

Sources: City of Tracy; San Joaquin County GIS. Map date: September 29, 2023.

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 4. Existing General Plan Land Use Map and Zoning

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

	Aesthetics		Agriculture and Forest Resources		Air Quality
	Biological Resources		Cultural Resources		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 and Traffic		Tribal Cultural Resources		Utilities and Service Systems
	Mandatory Findings of Significance				

DETERMINATION:

On the basis of this initial evaluation:

	I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
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 significance

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.

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 18 environmental topic areas.

I. AESTHETICS -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?			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	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. There are no designated scenic vistas located on or adjacent to the Project site. The Project site currently consists primarily of an existing public park, as well as vacant, undeveloped land, and is surrounded by existing urban development. The proposed Project uses are consistent and compatible with the surrounding land uses. Surrounding land uses include residences to the north, west, and south, and Wanda Hirsch Elementary School to the east.

Implementation of the proposed Project would provide for an expansion of the existing Gretchen Talley Park in an area that is already designated for public park uses. The Project site is not topographically elevated from the surrounding lands, and is not highly visible from areas beyond the immediate vicinity of the site. There are no prominent features on the site, such as extensive trees, rock outcroppings, or other visually distinctive features that contribute to the scenic quality of the site. The Project site is not designated as a scenic vista by the City of Tracy General Plan.

Implementation of the proposed Project would change the existing vacant portion of the existing park and therefore improve the existing visual character of the Project site and surrounding area.

Furthermore, the General Plan designates this area as Park, which is intended to provide public and private open spaces and recreational facilities in the City. The Project is consistent with the adopted Statement of Overriding Considerations, and uses established by the General Plan. Implementation of the proposed Project would introduce an expansion of park to the Project area that would be generally consistent with the surrounding residential and public facilities developments, and consistent with the intended uses established by the Tracy General Plan. Therefore, this impact is considered **less than significant**.

Response b): Less than Significant. As described in the Tracy General Plan EIR**,** there are two Officially Designated California Scenic Highway segments in the Tracy Planning Area, which extend a total length of 16 miles. The first designated scenic highway is the portion of I-580 between I-205 and I-5, which offers views of the Coast Range to the west and the Central Valley's urban and agricultural lands to the east. The second scenic highway is the portion of I-5 that starts at I-205 and continues south to Stanislaus County, which allows for views of the surrounding agricultural lands and the Delta-Mendota Canal and California Aqueduct.

The Project site lies approximately 2.7 miles northeast of the I-580 scenic highway and is not visible from the Project site. The Project site is consistent with the surrounding residential and public facilities uses. The structures proposed as part of the Project present no more visual prominence within the development area relative to the existing development. Existing residential and school buildings in the vicinity are one to two stories. Distant background views would remain roughly equal to existing conditions.

The Project site is not visible from any of the above-referenced scenic highways. The Project site contains several trees along the southern boundary of the site. As shown in the landscaping plan, these trees would be retained. Development of the proposed Project would not result in the removal of any rock outcroppings, or buildings of historical significance, and would not result in substantial changes to the viewsheds from the designated scenic highways in the vicinity of the City of Tracy. Therefore, this is a **less than significant** impact.

Response c): Less than Significant. The CEQA definition for an "Urbanized area" means a central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile. In addition, to be considered an Urbanized area according to CEQA, projects must also be within the boundary of a map prepared by the U.S. Bureau of the Census which designates the area as urbanized area. According to the U.S. Bureau of the Census, the Project site is mapped and designated as urbanized area. In addition, the Project site is located within the City of Tracy, which has an estimated population of approximately 94,538 people; meaning the Project site is within an urbanized area and subjected to applicable zoning or other regulation governing scenic quality. Development of the Project site would convert the Project site from its existing state to a park use.

The proposed Project would add a park use to an area that currently contains an existing park. The proposed Project would be visually compatible with the existing park and the surrounding residential and public facilities uses. Site specific characteristics would change a portion of the

Project site from vacant land to park uses. However, taking into account the scope and location of the proposed Project relative to the surrounding area uses, this would not greatly alter the area's overall visual character.

Additionally, the proposed Project includes extensive planting of new trees and other vegetation. Overall, Project implementation would not conflict with the applicable zoning and other regulations governing scenic quality. Therefore, this impact is considered **less than significant**.

Response d): Less than Significant. Daytime glare can occur when the sunlight strikes reflective surfaces such as windows, vehicle windshields and shiny reflective building materials. The proposed Project would introduce new recreational structures into the Project site; however, reflective building materials are not proposed for use in the Project, and as such, the Project is not anticipated to result in increases in daytime glare.

The proposed Project would include exterior lighting in the Project area. The City of Tracy Standard Plan #140 establishes street light standards, and requirements for light illumination. Exterior lighting on new projects is also regulated by the Tracy Municipal Code, 10.08.4000 (a), which specifies that the site plan and architectural review package includes an exterior lighting standards and devices review. The City addresses light and glare issues on a case-by-case basis during Project approval and typically adds requirements as a condition of Project approval to shield and protect against light spillover from one property to the next as required by Tracy Municipal Code Section 10.08.3530(h).Therefore, this impact would be **less than significant**.

II. AGRICULTURE AND FOREST RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			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	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The Project site is designated as Urban and Built-Up Land by the Farmland Mapping and Monitoring Program and the California Department of Conservation.[1] Figure 5 identifies important farmlands, as mapped by the California Department of Conservation, on and near the Project site. The Project site has not been historically used for agricultural production. Due to the existing surrounding land uses, the Project site is not suitable for agricultural production and agricultural operations.

The potential environmental impacts from development of the site for urban uses and the associated removal of prime farmland soil for agricultural use were considered and addressed in the City of Tracy General Plan and Final EIR. There, it was determined that buildout of the General Plan would result in the conversion of Prime Farmland, Unique Farmland and Farmland of Statewide Importance to urban uses. The General Plan Draft EIR found this to be a significant and unavoidable impact. On February 1, 2011, the Tracy City Council adopted a Statement of Overriding Considerations (Resolution 2011-028) for the loss of prime agricultural land resulting from adoption of the Plan and EIR, and provided mitigation measures for the agricultural land lost to development in the City of Tracy's urbanized areas. Mitigation measures included the implementation of a "Right to Farm" ordinance by the City (Tracy Municipal Code Chapter 10.24 et seq.), intended to preserve and protect existing agricultural operations within the

[1] Available at: http://maps.conservation.ca.gov/ciff/ciff.html.

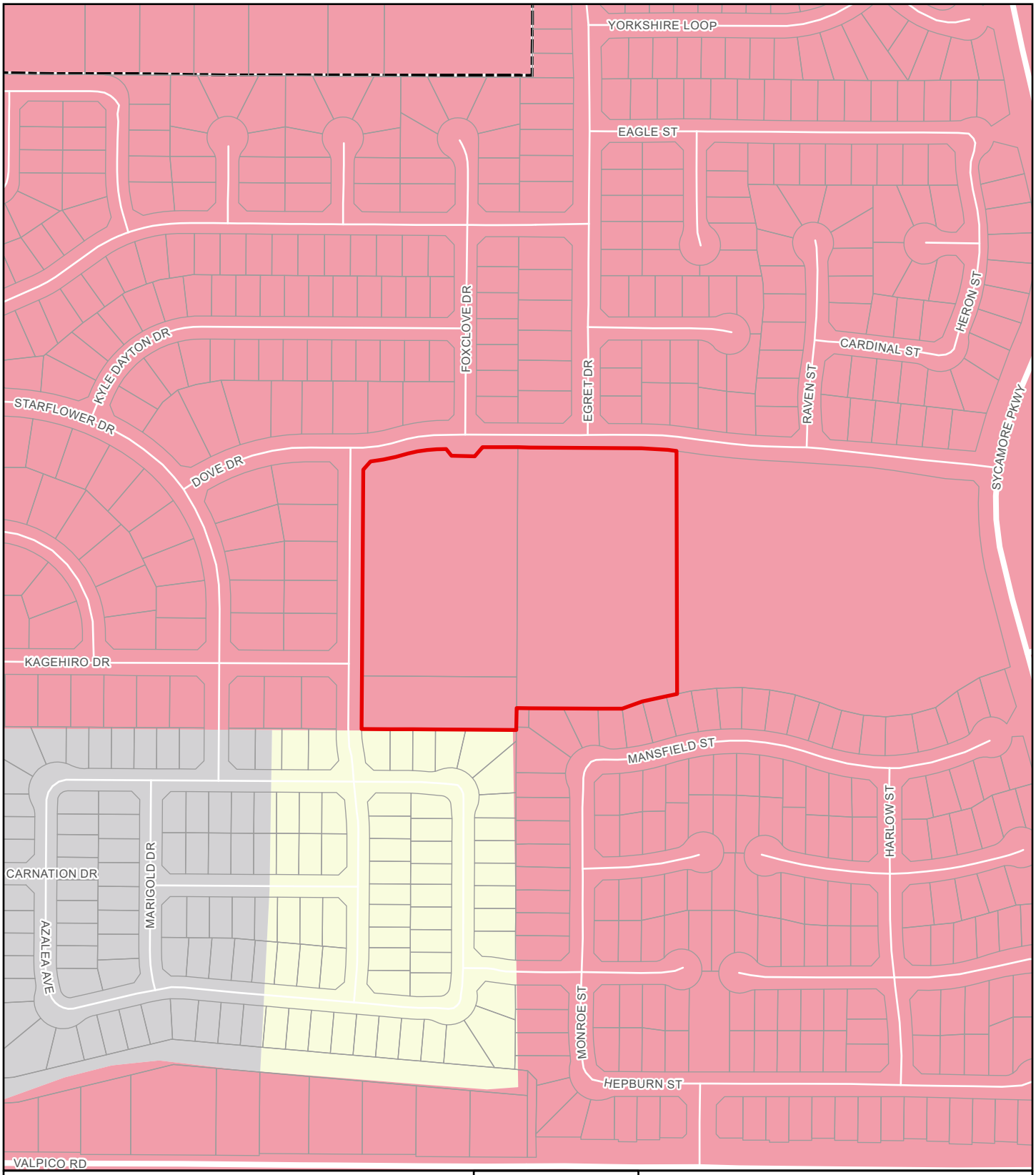
incorporated City, and participation in the City's agricultural mitigation fee program (Tracy Municipal Code, Chapter 13.26).

The proposed Project site is designated with a Park General Plan land use, which is intended for future urban land uses in the Tracy General Plan. As such, implementation of the proposed Project would not create new impacts over and above those identified in the General Plan Final EIR, nor significantly change previously identified impacts. Therefore, this would be considered a **less than significant** impact.

Response b): No Impact. The Project site is not under a Williamson Act Contract, nor are any of the parcels immediately adjacent to the Project site under a Williamson Act Contract. Therefore, implementation of the proposed Project would not conflict with a Williamson Act Contract. The Project site is currently zoned LDR by the City's Zoning Map. As such, the proposed Project would not conflict with any agricultural zoning or Williamson Act Contract. There is **no impact**.

Responses c) and d): No Impact. The Project site is located in an area consisting of residential and recreational development. Several trees are present on the Project site; however, these trees are ornamental in nature. There are no forest resources on the Project site or in the immediate vicinity of the Project site. Therefore, development of the Project would result in **no impact**.

Response e): Less than Significant. As described under Responses (a) above, the proposed Project site has not previously been used for agricultural purposes and is not designated or zoned for agricultural uses. The proposed Project is identified for urban land uses in the Tracy General Plan. The proposed Project is consistent with the overriding considerations that were adopted for the General Plan. As such, implementation of the proposed Project would not create new impacts over and above those identified in the General Plan Final EIR, nor significantly change previously identified impacts. Therefore, implementation of the proposed Project would result in a **less than significant** impact.



LEGEND

- Project Site Boundary
- Tracy City Limits
- Farmland of Local Importance
- Vacant or Disturbed Land
- Urban and Built-Up Land

Sources: FMMP San Joaquin County 2018; City of Tracy; San Joaquin County GIS. Map date: September 29, 2023.

N

0 100 200

US Feet

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 5. Important Farmlands Map

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III. AIR QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

EXISTING SETTING

The Project site is located within the boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD). This agency is responsible for monitoring air pollution levels and ensuring compliance with federal and state air quality regulations within the San Joaquin Valley Air Basin (SJVAB) and has jurisdiction over most air quality matters within its borders.

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b), c): Less than Significant with Mitigation. Air quality emissions would be generated during construction of the proposed Project and during operation of the proposed Project. Construction-related air quality impacts and operational air quality impacts are addressed separately below.

Construction-Related Emissions

The SJVAPCD has published guidance on determining CEQA applicability, significance of impacts, and potential mitigation of significant impacts, in the SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). The SJVAPCD has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Using project type and size, the SJVAPCD has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants. In the interest of streamlining CEQA requirements, projects that fit the descriptions and project sizes provided in the SJVAPCD Small Project Level (SPAL) are deemed to have a less than significant impact on air quality and, as such, are excluded from quantifying criteria pollutant emissions for CEQA purposes.

The SJVAPCD's approach to analysis of construction impacts is that quantification of construction emissions is not necessary if an Initial Study demonstrates that construction emissions would less than significant based on the SJVAPCD SPAL screening levels (SJVAPCD, 2020). The proposed Project would only generate a very small number of vehicle trips during its construction and operational phases and would not require a large Project area (far less than the SPAL screening threshold of 1,100 daily trips for city park land uses, and 256 acres for city park land uses, respectively). Based on these Project characteristics, the proposed Project would be deemed to have a less than significant impact on air quality under the SPAL guidelines (SJVAPCD, 2020). As such, the proposed Project is excluded from quantifying criteria pollutant emissions for CEQA purposes.

However, regardless of emission quantities, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. Implementation of the following mitigation measures in addition to compliance with all applicable measures from SJVAPCD Rule VIII would ensure that the Project would have a **less than significant** impact related to construction emissions.

MITIGATION MEASURE(S)

Mitigation Measure AIR-1*: Prior to the commencement of grading activities, the contractor hired to complete the grading activities shall prepare a construction emissions reduction plan that meets the requirements of SJVAPCD Rule VIII. The construction emissions reductions plan shall be submitted to the SJVAPCD for review and approval. The Project applicant shall comply with all applicable APCD requirements prior to commencement of grading activities.*

Mitigation Measure AIR-2*: The following mitigation measures, in addition to those required under Regulation VIII of the SJVAPCD, shall be implemented by the Project's contractor during all phases of Project grading and construction to reduce fugitive dust emissions:*

- *Water previously disturbed exposed surfaces (soil) a minimum of two-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity.*
- *Water all haul roads (unpaved) a minimum of two-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity.*
- *Reduce speed on unpaved roads to less than 5 miles per hour.*
- *Reduce the amount of disturbed surface area at any one time pursuant to the scope of work identified in approved and permitted plans.*
- *Restrict vehicular access to the area to prevent unlawful entry to disturbed areas and limit unnecessary onsite construction traffic on disturbed surfaces. Restriction measures may include fencing or signage as determined appropriate by the City.*
- *Cease grading activities during periods of high winds (greater than 20 mph over a one-hour period).*
- *Asphalt-concrete paving shall comply with SJVAPCD Rule 4641 and restrict use of cutback, slow-sure, and emulsified asphalt paving materials.*

Implementation of this mitigation shall occur during all grading or site clearing activities. The SJVAPCD shall be responsible for monitoring.

Operational-Related Emissions

For the purposes of this operational air quality analysis, actions that violate Federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors while outdoors and secondary standards designed to safeguard human welfare) are considered significant impacts. Additionally, the SJVAPCD has established operations related emissions thresholds of significance as follows: 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), and 15 tons per year particulate matter of 10 microns or less in size (PM_{10}) and 15 tons per year particulate matter of 2.5 microns or less in size ($PM_{2.5}$). Additionally, as discussed previously, the SJVAPCD has established thresholds of significance for criteria pollutant emissions, which are based on District NSR offset requirements for stationary sources. Using project type and size, the SJVAPCD has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants.

The proposed Project is smaller in scope and size than the SJVAPCD's SPAL for city park uses. Therefore, localized CO modeling is not warranted for this Project.

The proposed Project includes expansion of an existing City park. Therefore, the Project would not be subject to the requirements of Direct Rule 9510. Additionally, the SJVAPCD has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) requirements. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "not conflict or obstruct implementation of the District's air quality plan." As such, the Project would result in **less than significant** air quality impacts, and would not conflict or obstruct implementation of the District's air quality plan.

Response d): Less than Significant. Sensitive receptors are those parts of the population that can be severely impacted by air pollution. Sensitive receptors include children, the elderly, and the infirm. The closest sensitive receptors directly border the Project site to the south.

Implementation of the proposed Project would not expose these or other nearby sensitive receptors to substantial pollutant concentrations. Air emissions would be generated during the construction phase of the Project. The construction phase of the Project would be temporary and short-term, and the implementation of Mitigation Measures AIR-1 and AIR-2 and would greatly reduce pollution concentrations generated during construction activities.

Operation of the proposed Project would result in emissions primarily from vehicle trips. As described under Response a) – c) above, the proposed Project would not generate significant concentrations of air emissions. Impacts to sensitive receptors would be negligible and this is a **less than significant** impact.

Response e): Less than Significant. Operation of the proposed Project would not generate notable odors. The proposed Project includes development of park uses, which is compatible

with the surrounding land uses. Occasional mild odors may be generated during landscaping maintenance (equipment exhaust), but the Project would not otherwise generate odors. Trash receptacles would be provided in the northern portion of the site. The receptacles would have lids in order to contain potential odor from trash and waste. This is a **less than significant** impact and no mitigation is required.

IV. BIOLOGICAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		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		

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. A background search of special-status species within one mile of the Project site that are documented in the California Natural Diversity Database (CNDDB) was completed. Figure 7 illustrates the special-status species records located within the nine-quadrangle radius of the Project site.

Special-status mammals

Special-status mammals that occur within the region include American badger, which is most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils; pallid bat, which lives in deserts, grasslands, shrublands, woodlands and forests, most common in open, dry habitats with rocky areas for roosting; riparian (San Joaquin Valley) woodrat, which lives in riparian areas along the San Joaquin, Stanislaus and Tuolumne rivers; Townsend's big-eared bat, which is found throughout California in a wide variety of habitats, most common in mesic sites; western mastiff bat, which lives in many open, semi-arid to arid habitats, including

conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc; riparian brush rabbit, which lives in riparian areas on the San Joaquin River in northern Stanislaus County; San Joaquin kit fox, which lives in annual grasslands or grassy open stages with scattered shrubby vegetation.

The Project site does not contain essential habitat for these special status mammals. However, there are CNDDB records of the aforementioned special-status mammals exist within one-mile of the Project site, including American badger and San Joaquin kit fox.

American badger. The American badger is threatened in California and is protected by the California Department of Fish and Wildlife (CDFW). The American badger is most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. They need sufficient food, friable soils and open, uncultivated ground and prey on burrowing rodents. There is one documented occurrence of American badger within one mile of the Project site. The Project site does not contain suitable habitat for American badger. As such, impacts to American badger are **less than significant**.

San Joaquin kit fox. The San Joaquin kit fox is threatened in California and is protected by the California Department of Fish and Wildlife (CDFW). San Joaquin kit fox lives in annual grasslands or grassy open stages with scattered shrubby vegetation. They need loose-textured sandy soils for burrowing, and suitable prey base. There is one documented occurrence of San Joaquin kit fox within one mile of the Project site. The Project site does not contain suitable habitat for San Joaquin kit fox. As such, impacts to San Joaquin kit fox are **less than significant**.

Special-status reptiles and amphibians

Special-status reptiles and amphibians that occur within the region include California red-legged frog, which is found at lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation; western spadefoot, which occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands; California glossy snake, which is reported from a range of scrub and grassland habitats, often with loose or sandy soils; coast horned lizard, which frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes; Northern California legless lizard, which is found in sandy or loose loamy soils under sparse vegetation; San Joaquin coachwhip, which is found in open, dry habitats with little or no tree cover; western pond turtle, which is a thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation; California tiger salamander - central California DPS, which lives in vacant or mammal-occupied burrows throughout most of the year, in grassland, savanna, or open woodland habitats; Alameda whipsnake, which is typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats.

No CNDDB records of the aforementioned special-status reptiles or amphibians exist within one-mile of the Project site. The Project site does not contain essential habitat for these special status reptiles and amphibians. Implementation of the proposed Project would have a **less than significant** impact on these species. No mitigation is necessary.

Special-status birds

Special-status birds that occur within the region include burrowing owl, which lives in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation; grasshopper sparrow, which lives in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes; loggerhead shrike, which lives in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes; northern harrier, which lives in coastal salt and freshwater marsh and nests and forages in grasslands, from salt grass in desert sink to mountain cienagas; short-eared owl, which is found in swamp lands, both fresh and salt, lowland meadows, and irrigated alfalfa fields; song sparrow ("Modesto" population), which lives in freshwater marshes, riparian thickets, sparsely vegetated irrigation canals, and Valley Oak restoration sites; tricolored blackbird, which requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony; yellow-headed blackbird, which nests in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds; least Bell's vireo; western yellow-billed cuckoo.

The Project site does not contain essential habitat for these special status birds. However, there are CNDDB records of the aforementioned special-status birds exist within one-mile of the Project site, including tricolored blackbird and burrowing owl.

Burrowing Owls. Burrowing owls are a California Species of Special Concern and are protected by the CDFW and the MBTA. Burrowing owls forage in open grasslands and shrublands and typically nest in old ground squirrel burrows. There are four documented occurrences of burrowing owls within one mile of the Project site. The nearest documented occurrence of burrowing owl is located approximately 0.15 miles northeast of the northern boundary of the Project site. The Project site contains suitable, but not high quality, habitat for burrowing owls. Overall, there is the potential for burrowing owls to occupy the site. While considered unlikely, this is considered potentially significant impact.

Tricolored Blackbird. Tricolored blackbirds are a California Species of Special Concern and are protected by the CDFW and the MBTA. Tricolored blackbirds nest in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Tricolored blackbird habitat must be large enough to support 50 pairs and likely requires water at or near the nesting colony. There is on occurrence of tricolored blackbirds within one mile of the Project site. However, the Project site does not contain suitable habitat for tricolored blackbirds. As such, impacts to tricolored blackbirds are **less than significant**.

The proposed Project would require coverage under the SJMSCP and SJCOG would apply incidental take minimization measures for the Project. In addition, implementation of Mitigation Measure BIO-1 would ensure that burrowing owls are not impacted during construction activities. Implementation of Mitigation Measure BIO-1 would ensure a **less than significant** impact to burrowing owls.

Special-status plant

Numerous special-status plant species are known to occur in the region. Many of these special status plant species require specialized habitats such as serpentine soils, rocky outcrops, slopes, vernal pools, marshes, swamps, riparian habitat, alkali soils, and chaparral, which are not present on the Project site. The Project site is located in an area that was likely valley grassland prior to human settlement, and there are several plant species that are found in valley and foothills grasslands areas. These species include large-flowered fiddleneck, bent-flowered fiddleneck, big balsamroot, big tarplant, round-leaved filaree, Lemmon's jewelflower, and showy golden madia. Human settlement has involved a high frequency of ground disturbance associated with the historical farming activities in the region, including the Project site.

CNDDB records of two special-status plant species exist within one mile of the Project site: big tarplant and caper-fruited tropidocarpum. The Project site does not contain suitable habitat for special-status plant species, and these species are not expected to be present on the site due to ongoing site disturbance. Implementation of the proposed Project would have a **less than significant** impact on these species. No mitigation is necessary.

Participation in the SJMSCP is recommended for all new projects on previously undeveloped land in Tracy. Although the likelihood for the occurrence of any special status plant or wildlife species on the site is extremely low, the implementation of Mitigation Measure BIO-2 would ensure that special status plant or wildlife species are protected throughout the region. Impacts to special status plant or wildlife species would be reduced to a **less than significant** level with mitigation.

MITIGATION MEASURE(S)

Mitigation Measure BIO-1*: Prior to the commencement of grading activities or other ground disturbing activities on the Project site, the Project applicant shall arrange for a qualified biologist to conduct a preconstruction survey for western burrowing owls in accordance with SJMSCP requirements. If no owls or owl nests are detected, then construction activities may commence. If burrowing owls or occupied nests are discovered, then the following shall be implemented:*

- *During the breeding season (February 1 through September 1) occupied burrows shall not be disturbed and shall be provided with a 75 meter protective buffer until and unless the SJCOG Technical Advisory Committee (TAC), with the concurrence of the Permitting Agencies' representatives on the TAC; or unless a qualified biologist approved by the Permitting Agencies verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed. They should only be destroyed by a qualified biologist using passive one-way eviction doors to ensure that owls are not harmed during burrow destruction. Methods for removal of burrows are described in the California Department of Fish and Game's Staff Report on Burrowing Owls (October, 1995).*

- *During the non-breeding season (September 1 through January 31) burrowing owls occupying the Project site should be evicted from the Project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (Oct., 1995)*

Implementation of this mitigation shall occur prior to grading or site clearing activities. SJCOG shall be responsible for monitoring and a qualified biologist shall conduct surveys and relocate owls as required.

***Mitigation Measure BIO-2**: Prior to commencement of any grading activities, the Project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through payment of development fees for conversion of open space lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. In addition, coverage includes incidental take avoidance and minimization measures for species that could be affected as a result of the proposed Project. There are a wide variety of incidental take avoidance and minimization measures contained in the SJMSCP that were developed in consultation with the USFWS, CDFW, and local agencies. The applicability of incidental takes avoidance and minimization measures are determined by SJCOG on a Project basis. The process of obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a) and California Fish and Game Code Section 2081. The Section 10(a) permit also serves as a special-purpose permit for the incidental take of those species that are also protected under the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species. The SJMSCP includes the implementation of an ongoing Monitoring Plan to ensure success in mitigating the habitat impacts that are covered. The SJMSCP Monitoring Plan includes an Annual Report process, Biological Monitoring Plan, SJMSCP Compliance Monitoring Program, and the SJMSCP Adaptive Management Plan SJCOG.*

Responses b): No Impact. Riparian natural communities support woody vegetation found along rivers, creeks and streams. Riparian habitat can range from a dense thicket of shrubs to a closed canopy of large mature trees covered by vines. Riparian systems are considered one of the most important natural resources. While small in total area when compared to the state's size, they provide a special value for wildlife habitat.

Over 135 California bird species either completely depend upon riparian habitats or use them preferentially at some stage of their life history. Riparian habitat provides food, nesting habitat, cover, and migration corridors. Another 90 species of mammals, reptiles, invertebrates and amphibians depend on riparian habitat. Riparian habitat also provides riverbank protection, erosion control and improved water quality, as well as numerous recreational and aesthetic values.

There is no riparian habitat or other sensitive natural communities located on the Project site. As such, the proposed Project would have **no impact** on these resources, and no mitigation is required.

Response c): Less than Significant. A wetland is an area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands are defined by regulatory agencies as having special vegetation, soil, and hydrology characteristics. Hydrology, or water inundation, is a catalyst for the formation of wetlands. Frequent inundation and low oxygen causes chemical changes to the soil properties resulting in what is known as hydric soils. The prevalent vegetation in wetland communities consists of hydrophytic plants, which are adapted to areas that are frequently inundated with water. Hydrophytic plant species have the ability to grow, effectively compete, reproduce, and persist in low oxygen soil conditions.

Below is a list of wetlands that are found in the Tracy planning area:

- Farmed Wetlands: This category of wetlands includes areas that are currently in agricultural uses. This type of area occurs in the northern portion of the Tracy Planning Area.
- Lakes, Ponds and Open Water: This category of wetlands includes both natural and human-made water bodies such as that associated with working landscapes, municipal water facilities and canals, creeks and rivers.
- Seasonal Wetlands: This category of wetlands includes areas that typically fill with water during the wet winter months and then drain enough to become ideal plant habitats throughout the spring and summer. There are numerous seasonal wetlands throughout the Tracy Planning Area.
- Tidal Salt Ponds and Brackish Marsh: This category of wetlands includes areas affected by irregular tidal flooding with generally poor drainage and standing water. There are minimal occurrences along some of the larger river channels in the northern portion of the Tracy Planning Area.

There are no wetlands located on the Project site. Therefore, this is a **less than significant** impact and no mitigation is required.

Response d): Less than Significant. The CNDDB record search did not reveal any documented wildlife corridors or nursery sites on or adjacent to the Project site. Furthermore, field surveys did not reveal any wildlife nursery sites on or adjacent to the Project site. Implementation of the proposed Project would have a **less than significant** impact. No mitigation is necessary.

Responses e), f): Less than Significant with Mitigation. The Project site is located within the jurisdiction of the SJMSCP and is located within the Central/Southwest Transition Zone of the SJMSCP. The SJCOG prepared the Plan pursuant to a Memorandum of Understanding adopted by

SJCOG, San Joaquin County, the United States Fish and Wildlife Service (USFWS), the CDFW, Caltrans, and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy in October 1978. On February 27, 2001, the Plan was unanimously adopted in its entirety by SJCOG. The City of Tracy adopted the Plan on November 6, 2001.

According to Chapter 1 of the SJMSCP, its key purpose is to "provide a strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses, while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA); providing and maintaining multiple use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and, accommodating a growing population while minimizing costs to project proponents and society at large."

In addition, the goals and principles of the SJMSCP include the following:

- Provide a County-wide strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses, while protecting the region's agricultural economy.
- Preserve landowner property rights.
- Provide for the long-term management of plant, fish, and wildlife species, especially those that are currently listed, or may be listed in the future, under the ESA or the CESA.
- Provide and maintain multiple-use open spaces, which contribute to the quality of life of the residents of San Joaquin County.
- Accommodate a growing population while minimizing costs to project proponents and society at large.

In addition to providing compensation for conversion of open space to non-open space uses, which affect plant and animal species covered by the SJMSCP, the SJMSCP also provides some compensation to offset impacts of open space conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial open space uses. Specifically, the SJMSCP compensates for conversions of open space to urban development and the expansion of existing urban boundaries, among other activities, for public and private activities throughout the County and within Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy.

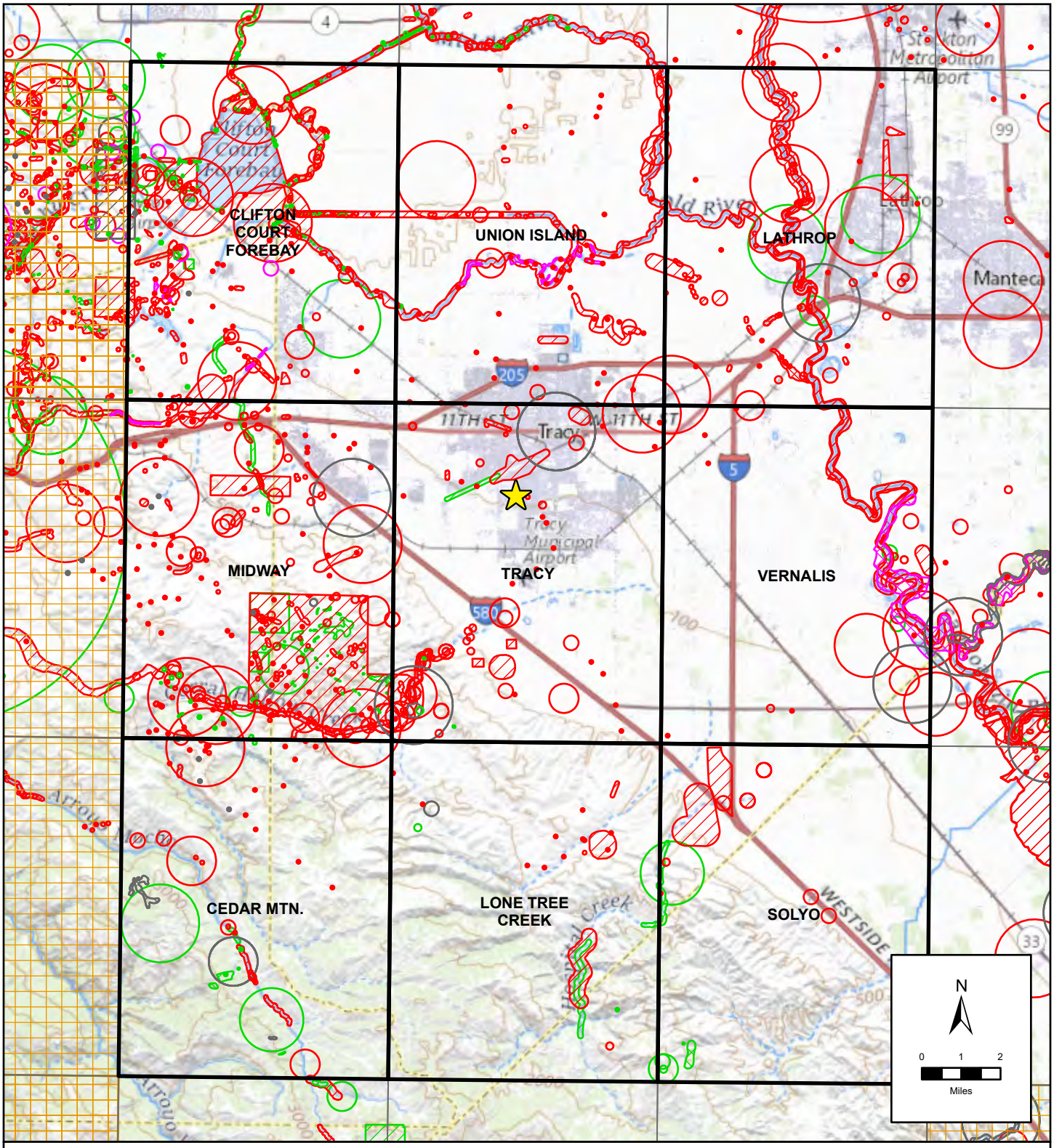
Participation in the SJMSCP is voluntary for both local jurisdictions and project applicants. Only agencies adopting the SJMSCP would be covered by the SJMSCP. Individual project applicants have two options if their project is located in a jurisdiction participating in the SJMSCP: mitigating under the SJMSCP or negotiating directly with the state and/or federal permitting agencies. If a project applicant opts for SJMSCP coverage in a jurisdiction that is participating under the SJMSCP, the following options are available, unless their activities are otherwise exempted: pay the appropriate fee; dedicate, as conservation easements or fee title, habitat lands; purchase approved mitigation bank credits; or, propose an alternative mitigation plan.

Responsibilities of permittees covered by the SJMSCP include collection of fees, maintenance of implementing ordinances/resolutions, conditioning permits (if applicable), and coordinating with the Joint Powers Authority (JPA) for Annual Report accounting. Funds collected for the SJMSCP are to be used for the following: acquiring Preserve lands, enhancing Preserve lands, monitoring and management of Preserve lands in perpetuity, and the administration of the SJMSCP. Because the primary goal of SJMSCP to preserve productive agricultural use that is compatible with SJMSCP's biological goals, most of the SJMSCP's Preserve lands would be acquired through the purchase of easements in which landowners retain ownership of the land and continue to farm the land. These functions are managed by San Joaquin Council of Governments.

As described under Response (a), the proposed Project is subject to participation in the SJMSCP by Mitigation Measure BIO-2. The City of Tracy and the Project applicant shall consult with SJCOG and determine coverage of the Project pursuant to the SJMSCP. Implementation of Mitigation Measure BIO-2 would ensure that the Project complies with the requirements of the SJMSCP, and would not conflict with any applicable habitat conservation plans. With the implementation of Mitigation Measure BIO-2, the Project would have a **less than significant** impact.

MITIGATION MEASURE(S)

Implement Mitigation Measure BIO-2



LEGEND

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 6. CNDDB 9-Quadrangle Map
9-quad Search

Sources: ArcGIS Online USGS Topo Map Service; CNDDB version 4/1/2023. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: USGS Topographic Map. Map date: June 14, 2023.

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V. CULTURAL RESOURCES -- WOULD THE PROJECT:

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section15064.5?		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		

RESPONSES TO CHECKLIST QUESTIONS

Responses a)-c): Less than Significant with Mitigation. The City of Tracy General Plan and subsequent EIR does not identify the site as having prehistoric period cultural resources. Additionally, there are no known unique cultural, historical, paleontological or archeological resources known to occur on, or within the immediate vicinity of the Project site. Furthermore, the site is not designated as a historical resource as defined by Public Resources Code § 21084.1, or listed in, or eligible for listing in the California Register of Historical Resources.

No instances of cultural resources or human remains have been unearthed on the Project site, and site visits did not identify any historical, cultural, paleontological, or archeological resources present on site. Therefore, it is not anticipated that site grading and preparation activities would result in impacts to cultural, historical, archaeological or paleontological resources. There are no known human remains located on the Project site, nor is there evidence to suggest that human remains may be present on the Project site. However, as with most projects in California that involve ground-disturbing activities, there is the potential for discovery of a previously-unknown cultural or historical resource or human remains. This is considered a **potentially significant** impact.

The implementation of the following mitigation measure would require appropriate steps to preserve and/or document any previously undiscovered resources that may be encountered during construction activities, including human remains. Implementation of this measure would reduce this impact to a **less-than-significant** level.

MITIGATION MEASURE(S)

Mitigation Measure CUL-1*: If any prehistoric or historic artifacts, human remains or other indications of archaeological or paleontological resources are found during grading and construction activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be consulted to evaluate the finds and recommend appropriate mitigation measures.*

- *If cultural resources or Native American resources are identified, every effort shall be made to avoid significant cultural resources, with preservation an*

important goal. If significant sites cannot feasibly be avoided, appropriate mitigation measures, such as data recovery excavations or photographic documentation of buildings, shall be undertaken consistent with applicable state and federal regulations.

- *If human remains are discovered, all work shall be halted immediately within 50 meters (165 feet) of the discovery, the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.*
- *If any fossils are encountered, there shall be no further disturbance of the area surrounding this find until the materials have been evaluated by a qualified paleontologist, and appropriate treatment measures have been identified.*

VI. ENERGY

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

Responses to Checklist Questions

Responses a) and 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]). According to Appendix G of the CEQA Guidelines, the means to achieve the goal of conserving energy include 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 state and federal energy standards and/or result in significant adverse impacts related to Project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The amount of energy used at the Project site would directly correlate to the energy consumption (including fuel) used by vehicle trips generated during Project construction, fuel used by off-road construction vehicles during construction, fuel used by vehicles during Project operation, and electricity and other energy usage during Project operation.

Electricity and Natural Gas

The annual electricity usage of the proposed Project would primarily consist of outdoor lighting. There is not anticipated to be any natural gas usage of the proposed Project.

On-road Vehicles (Operation)

The proposed Project would generate vehicle trips (i.e. passenger vehicles for employees and heavy-duty trucks for hauling) during its operational phase. Requirements to limit the idling of vehicles and equipment would result in fuel savings. Similarly, compliance with applicable State laws and regulations would limit idling and a part of a comprehensive regulatory framework that is implemented by the CARB. A description of Project operational on-road mobile energy usage is provided below.

As provided by the CalEEMod modeling results (see Appendix A), based on the proposed Project land use, the proposed Project would increase total vehicle trips by approximately 4,718 trips

per year. In order to calculate operational on-road vehicle energy usage, De Novo Planning Group used fleet mix data from the CalEEMod (v2022.1) output for the proposed Project, and Year 2024 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2021, to derive weighted average gasoline and diesel MPG factors for the vehicle fleet as a whole. Based on these calculations, as provided in Appendix A, upon full buildout, the proposed Project would generate operational vehicle trips that would use a total of approximately 1,288 gallons of gasoline per year.

The proposed Project's building would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the State's Title 24 Energy Efficiency Standards for Nonresidential Buildings and Green Building Code Standards. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), and indoor and outdoor lighting, are widely regarded as the some of the most advanced and stringent building energy efficiency standards in the country. Therefore, building energy consumption would not be considered wasteful, inefficient, or unnecessary.

Moreover, the proposed Project would be required to comply with transportation efficiency standards, as promulgated at the State and federal levels. Thus, transportation fuel consumption would not be wasteful, inefficient, or unnecessary.

On-road Vehicles (Construction)

The proposed Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors travelling to and from the Project site). De Novo Planning Group estimated the vehicle fuel consumed during these trips based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2024 gasoline and diesel MPG factors provided by EMFAC2021 (year 2024 factors were used to represent a conservative analysis, as the energy efficiency of construction activities is anticipated to improve over time). For the sake of simplicity and to be conservative, it was assumed that all construction worker light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel. Table ENERGY-1, below, describes gasoline and diesel fuel consumed during each construction phase (in aggregate). As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed Project would occur during the grading phase. See Appendix A of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

Table ENERGY-1: Project On-Road Vehicles (Construction) Fuel Consumption

CONSTRUCTION PHASE	# OF DAYS	TOTAL DAILY WORKER TRIPS(A)	TOTAL DAILY VENDOR TRIPS(A)	TOTAL HAULER WORKER TRIPS(A)	TOTAL GALLONS OF GASOLINE FUEL(B)	TOTAL GALLONS OF DIESEL FUEL(B)
Site Preparation	10	18	0	0	78	0
Grading	30	20	0	0	268	0
Paving	20	15	0	0	134	0
Total	**N/A**	**N/A**	**N/A**	**N/A**	**480**	**0**

NOTE: (A) PROVIDED BY CALEEMOD OUTPUT. (B)SEE APPENDIX A OF THIS EIR FOR FURTHER DETAIL
SOURCE: CALEEMOD (V.2022.1); EMFAC2021.

Off-road Equipment (Construction)

Off-road construction equipment would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive equipment expected to be used during the construction phase of the proposed Project includes: forklifts, generator sets, tractors, excavators, and dozers. Fuel utilized from off-road equipment is anticipated to be approximately 11,250 MT CO_2e.

State laws and regulations would limit idling from both on-road and off-road diesel-powered equipment and are part of a comprehensive regulatory framework that is implemented by the CARB. Additionally, as a practical matter, it is reasonable to assume that the overall construction schedule and process would be designed to be as efficient as feasible in order to avoid excess monetary costs. For example, equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for further future efficiency gains during construction are limited. For the foregoing reasons, it is anticipated that the construction phase of the Project would not result in wasteful, inefficient, and unnecessary consumption of energy.

Conclusion

The proposed Project would be in compliance with all applicable federal, state, and local regulations regulating energy usage. For example, 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 provider to the site, maintains sufficient capacity to serve the proposed Project. In addition, PG&E is on its way to achieving the statewide requirement of 60% of total energy mix generated by eligible renewables by year 2030. As of 2021, PG&E generated approximately 48% of its energy from eligible renewables (PG&E,

2019).[2] The proposed Project would comply with all existing energy standards, including the statewide Title 24 Energy Efficiency Standards, and would not result in significant adverse impacts on energy resources. Therefore, the proposed Project would not result in potentially significant environmental impacts due to inefficient, wasteful, or unnecessary use of energy resources during construction and operation, nor conflict with or construct with a State or local plan for renewable energy or energy efficiency. This is a **less than significant** impact.

[2] *PG&E 2021 POWER MIX. WEBSITE: HTTPS://WWW.PGE.COM/PGE_GLOBAL/COMMON/PDFS/YOUR-ACCOUNT/YOUR-BILL/UNDERSTAND-YOUR-BILL/BILL-INSERTS/2022/1022-POWER-CONTENT-LABEL.PDF*

VII. GEOLOGY AND SOILS -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation***	***Less Than Significant Impact***	***No Impact***
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 waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

RESPONSES TO CHECKLIST QUESTIONS

Responses a.i), a.ii): Less than Significant. The Project site is located in an area of low to moderate seismicity. No known active faults cross the Project site, and the site is not located within an Alquist-Priolo Earthquake Fault Zone; however, relatively large earthquakes have historically occurred in the Bay Area and along the margins of the Central Valley. Many earthquakes of low magnitude occur every year in California. The nearest earthquake fault zoned as active by the State of California Geological Survey is the Greenville fault, located approximately 11 miles southwest of the site. Figure 7 shows nearby faults in relation to the Project site.

The Tracy area has a low-to-moderate seismic history. The largest recorded measurable magnitude earthquake in Tracy measured 3.9 on the Richter scale. The greatest potential for significant ground shaking in Tracy is believed to be from maximum credible earthquakes occurring on the Calaveras, Hayward, San Andreas, or Greenville faults. Further seismic activity can be expected to continue along the western margin of the Central Valley, and as with all projects in the area, the Project will be designed to accommodate strong earthquake ground shaking, in compliance with the applicable California building code standards.

Since there are no known active faults crossing the Project site and the site is not located within an Earthquake Fault Special Study Zone, the potential for ground rupture at the site is considered low.

An earthquake of moderate to high magnitude generated within the San Francisco Bay Region and along the margins of the central valley could cause considerable ground shaking at the site, similar to that which has occurred in the past. In order to minimize potential damage to the proposed structures caused by groundshaking, all construction would comply with the latest California Building Code standards, as required by the City of Tracy Municipal Code 9.04.030.

Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage.

Implementation of the California Building Code standards, which include provisions for seismic building designs, would ensure that impacts associated with groundshaking would be **less than significant**. Building new structures for human use would increase the number of people exposed to local and regional seismic hazards. Seismic hazards are a significant risk for most property in California.

The Safety Element of the Tracy General Plan includes several goals, objectives and policies to reduce the risks to the community from earthquakes and other geologic hazards. In particular, the following policies would apply to the Project site:

> **SA-1.1, Policy P1:** Underground utilities, particularly water and natural gas mains, shall be designed to withstand seismic forces.
>
> **SA-1.1, Policy P2:** Geotechnical reports shall be required for development in areas where potentially serious geologic risks exist. These reports should address the degree of hazard, design parameters for the project based on the hazard, and appropriate mitigation measures.

SA-1.2, Policy P1: All construction in Tracy shall conform to the California Building Code and the Tracy Municipal Code including provisions addressing unreinforced masonry buildings.

The City reviews all proposed development projects for consistency with the General Plan policies and California Building Code provisions identified above. This review occurs throughout the project application review and processing stage, and throughout plan check and building inspection phases prior to the issuance of a certificate of occupancy.

Consistency with the requirements of the California Building Code and the Tracy General Plan policies identified above would ensure that impacts on humans associated with seismic hazards would be **less than significant**. No mitigation is required.

Responses a.iii), c), d): Less than Significant with Mitigation. Liquefaction normally occurs when sites underlain by saturated, loose to medium dense, granular soils are subjected to relatively high ground shaking. During an earthquake, ground shaking may cause certain types of soil deposits to lose shear strength, resulting in ground settlement, oscillation, loss of bearing capacity, landsliding, and the buoyant rise of buried structures. The majority of liquefaction hazards are associated with sandy soils, silty soils of low plasticity, and some gravelly soils. Cohesive soils are generally not considered to be susceptible to liquefaction. In general, liquefaction hazards are most severe within the upper 50 feet of the surface, except where slope faces or deep foundations are present.

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections.

Soil expansion is dependent on many factors. The more clayey, critically expansive surface soil and fill materials will be subjected to volume changes during seasonal fluctuations in moisture content. Figure 8 shows the soils within the Project site, and Figure 9 shows the shrink-swell potential of the soils within the site. The soils encountered at the site consist of Zacharias clay loam, 0 to 2 percent slopes. The Zacharias series consists of very deep, well drained soils formed in alluvium from mixed rock sources. Therefore, the potential for liquefaction to occur at the Project site is considered low. As shown in Figure 9, the on-site soils have a moderate moisture content, posing a potentially moderate risk of soil expansion. Implementation of Mitigation Measures GEO-1 and GEO-2 below would bring this impact to **less than significant**.

MITIGATION MEASURE(S)

Mitigation Measure GEO-1*: Prior to the development of the Project site, a subsurface geotechnical investigation must be performed to identify onsite soil conditions and identify any site-specific engineering measures to be implemented during the construction of building foundations and subsurface utilities. The results of the subsurface geotechnical*

investigation shall be reflected on the Improvements Plans, subject to review and approval by the City's Building Safety and Fire Prevention Division.

Mitigation Measure GEO-2*: Expansive materials and potentially weak and compressible fills at the site shall be evaluated by a Geotechnical Engineer during the grading plan stage of development. If highly expansive or compressible materials are encountered, special foundation designs and reinforcement, removal and replacement with soil with low to non-expansive characteristics, compaction strategies, or soil treatment options to lower the expansion potential shall be incorporated through requirements imposed by the City's Development Services Department.*

Responses a.iv): Less than Significant. The Project site is relatively flat and there are no major slopes in the vicinity of the Project site. According to the City's General Plan EIR, the landslide risk in Tracy is low in most areas. In the wider Tracy Planning Area, some limited potential for risk exists for grading and construction activities in the foothills and mountain terrain of the upland areas in the southwest. The potential for small scale slope failures along river banks also exists. The Project site is not located in the foothills, mountain terrain, or along a river bank. Additionally, the Project site is essentially flat. As shown in Figure 10, the Project site is not in an area known to have landslide susceptibility. As such, the Project site is exposed to little or no risk associated with landslides. This is a **less than significant** impact and no mitigation is required.

Response b): Less than Significant. During the construction preparation process, existing vegetation would be removed to grade and compact the Project site, as necessary. As construction occurs, these exposed surfaces could be susceptible to erosion from wind and water. Effects from erosion include impacts on water quality and air quality. Exposed soils that are not properly contained or capped increase the potential for increased airborne dust and increased discharge of sediment and other pollutants into nearby stormwater drainage facilities. Risks associated with erosive surface soils can be reduced by using appropriate controls during construction and properly re-vegetating exposed areas. The SJVAPCD's Rule 8021 requires the implementation of various dust control measures during site preparation and construction activities that would reduce the potential for soil erosion and the loss of topsoil. Additionally, the Project would be required to implement various best management practices (BMPs) and a SWPPP that would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction activities. Compliance with these existing regulations would ensure these impacts are **less than significant**.

Response e): No Impact. The Project site would be served by public wastewater facilities and does not require an alternative wastewater system such as septic tanks. Implementation of the proposed Project would have **no impact** on this environmental issue.

Response f): Less than Significant with Mitigation. The Project site is not expected to contain subsurface paleontological resources, although it is possible. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of the following mitigation measure would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are

discovered during construction. This would ensure that any potentially significant impacts would be reduced to a **less than significant** level regarding this topic.

MITIGATION MEASURE(S)

Mitigation Measure GEO-3: *If paleontological resources are discovered during the course of construction, work shall be halted immediately within 50 meters (165 feet) of the discovery, the City of Tracy or San Joaquin County shall be notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. If the paleontological resource is considered significant, it should be excavated by a qualified paleontologist and given to a local agency, State University, or other applicable institution, where they could be curated and displayed for public education purposes.*

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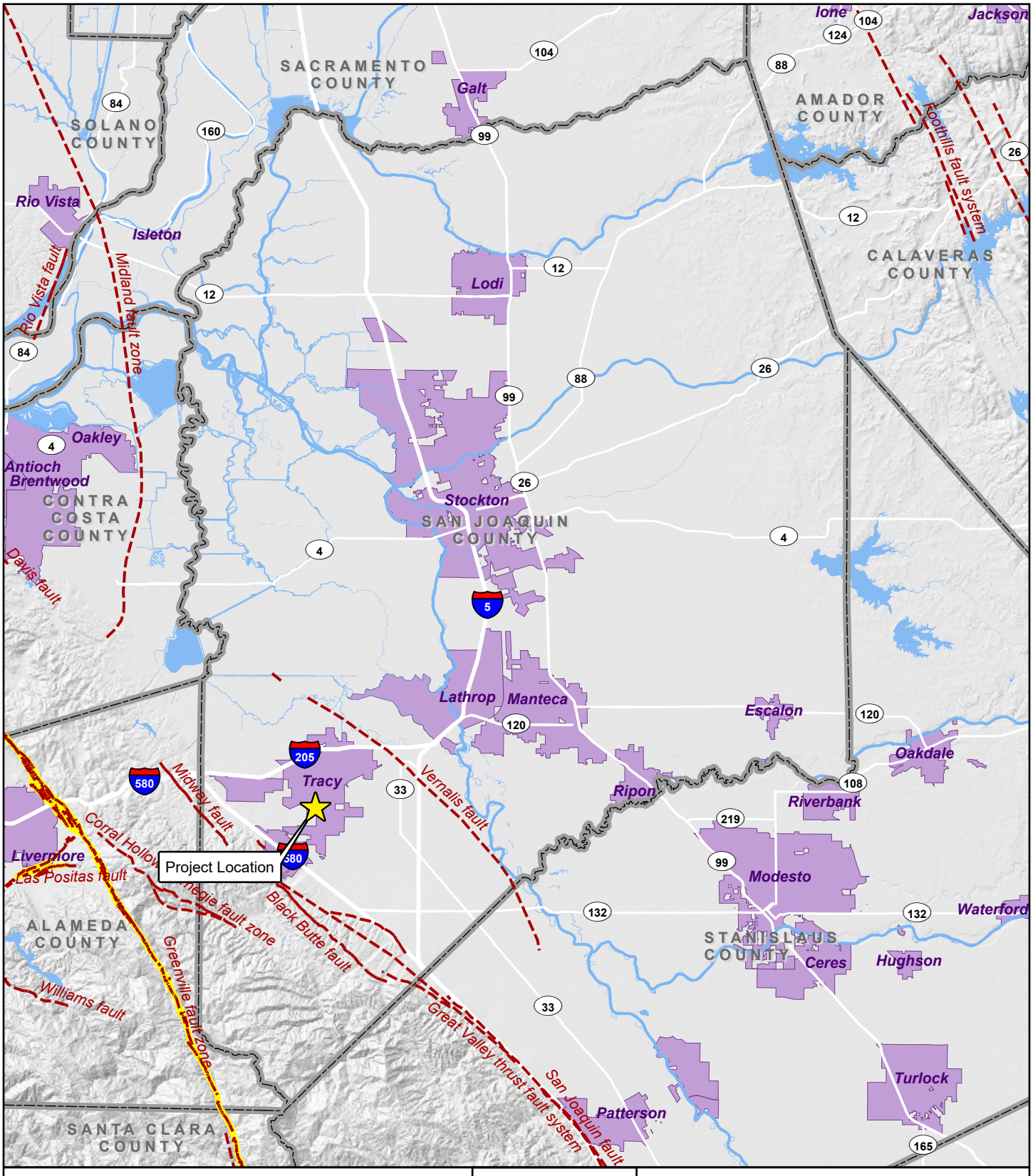
SACRAMENTO COUNTY
SOLANO COUNTY
AMADOR COUNTY
CALAVERAS COUNTY
CONTRA COSTA COUNTY
SAN JOAQUIN COUNTY
ALAMEDA COUNTY
SANTA CLARA COUNTY
STANISLAUS COUNTY
Galt
Rio Vista
Isleton
Lodi
Oakley
Antioch
Brentwood
Stockton
Lathrop
Manteca
Tracy
Escalon
Oakdale
Riverbank
Ripon
Modesto
Waterford
Ceres
Hughson
Turlock
Patterson
Livermore
Project Location
Rio Vista fault
Midland fault zone
Davis fault
Midway fault
Corral Hollow
Las Positas fault
Vernalis fault
Black Butte fault
Greenville fault zone
Williams fault
Great Valley thrust fault system
San Joaquin fault
Foothills fault system
Ione
Jackson
LEGEND
Incorporated Area
County Boundary
Quaternary Fault
Alquist Priolo Fault Zone
Sources: CGS; San Joaquin County GIS. Map date: May 11, 2023.
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0 2½ 5
Miles
GRETCHEN TALLEY PARK PHASE 3 EXPANSION
Figure 7. Earthquake Fault Map

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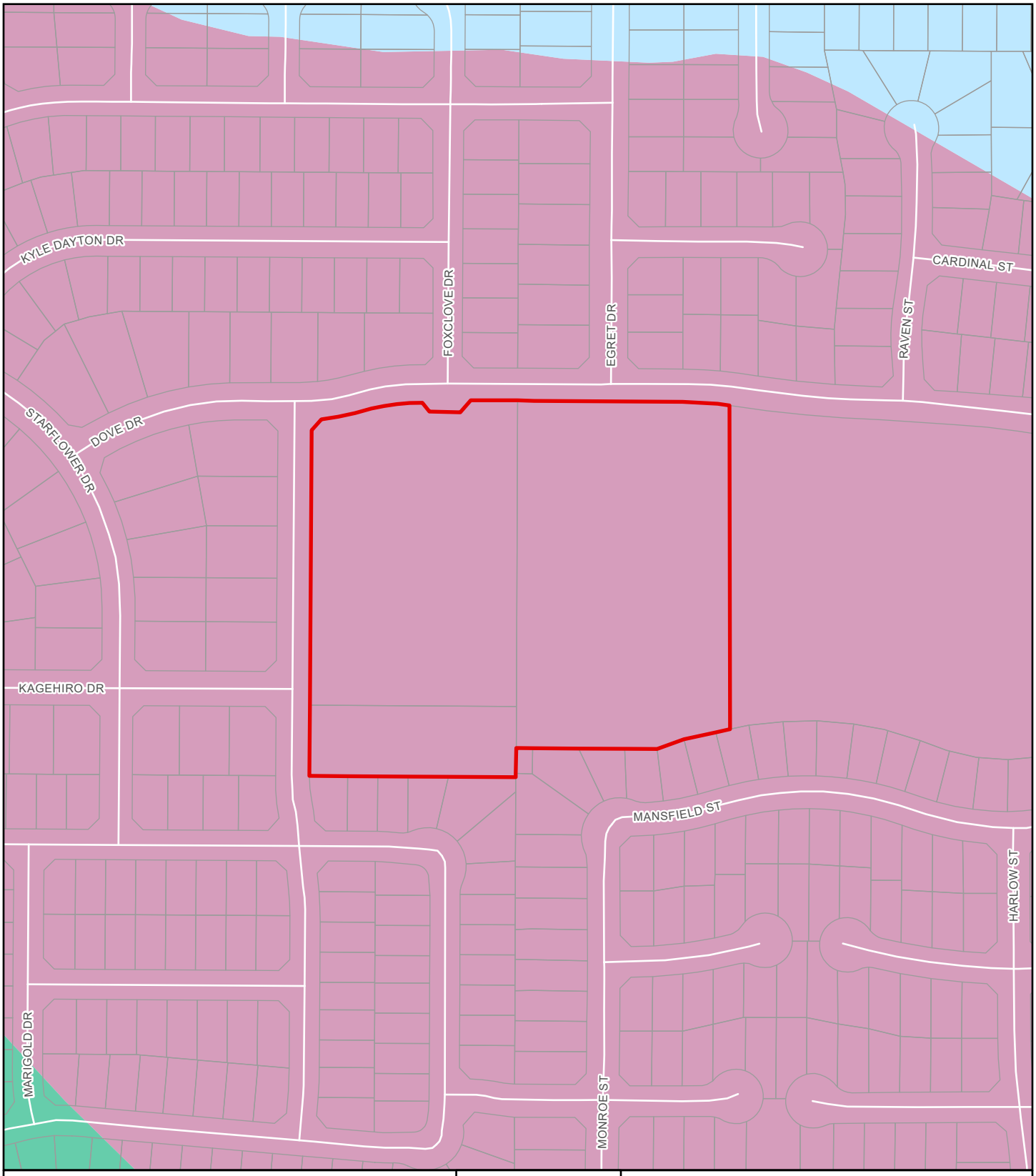

LEGEND

- Project Site Boundary
- Stomar clay loam, 0 to 2 percent slopes
- Zacharias clay loam, 0 to 2 percent slopes
- Zacharias gravelly clay loam, 0 to 2 percent slopes

Sources: NCRS Soil Survey; City of Tracy; San Joaquin County GIS. Map date: September 29, 2023.

N

0 50 100

US Feet

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 8. Project Site Soils Map

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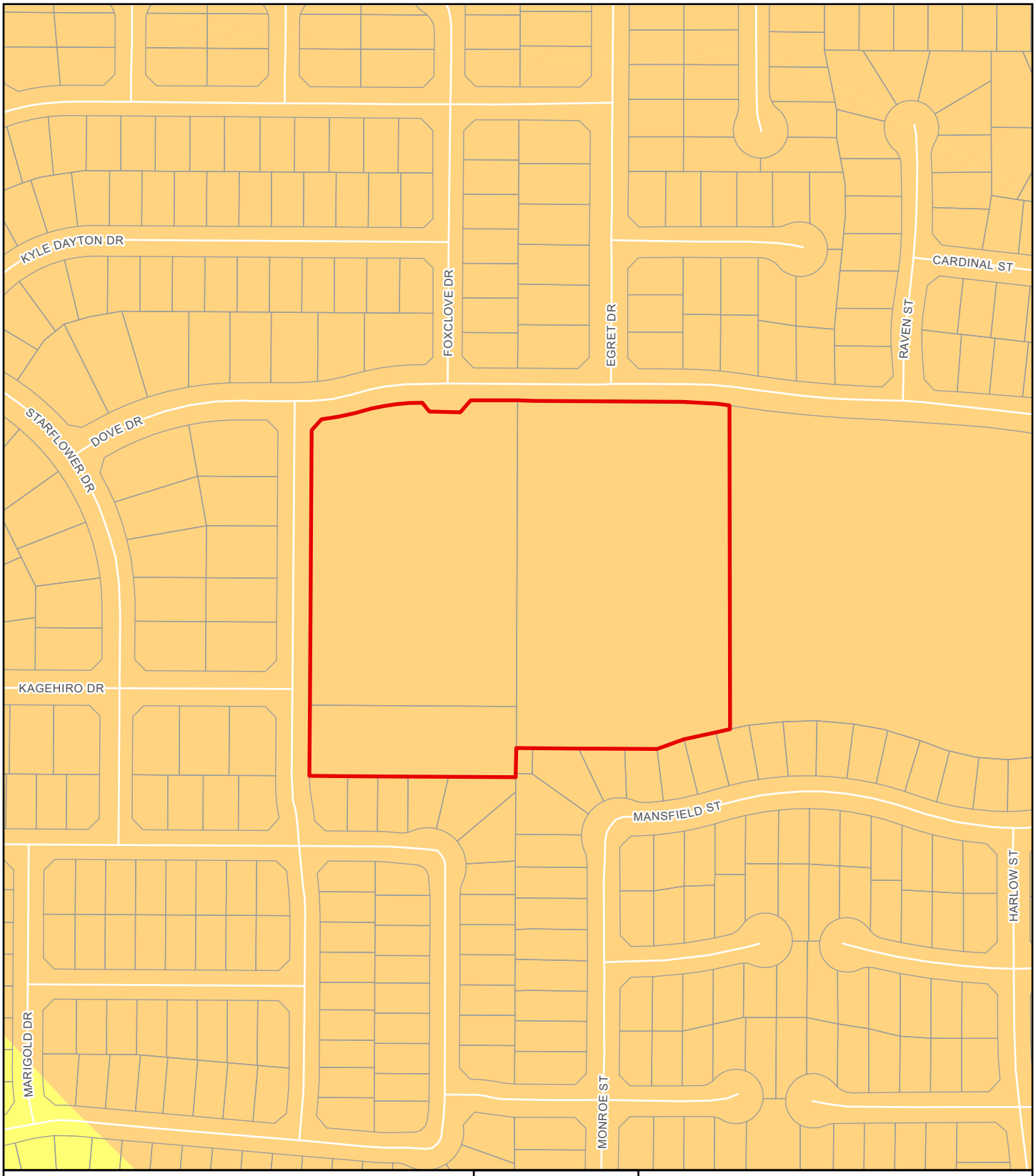

LEGEND

- Project Site Boundary
- Moderate Potential
- Low Potential

N

0 50 100

US Feet

Sources: NRCS Soil Survey; City of Tracy; San Joaquin County GIS. Map date: September 29, 2023.

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 9. Shrink-Swell Potential Map

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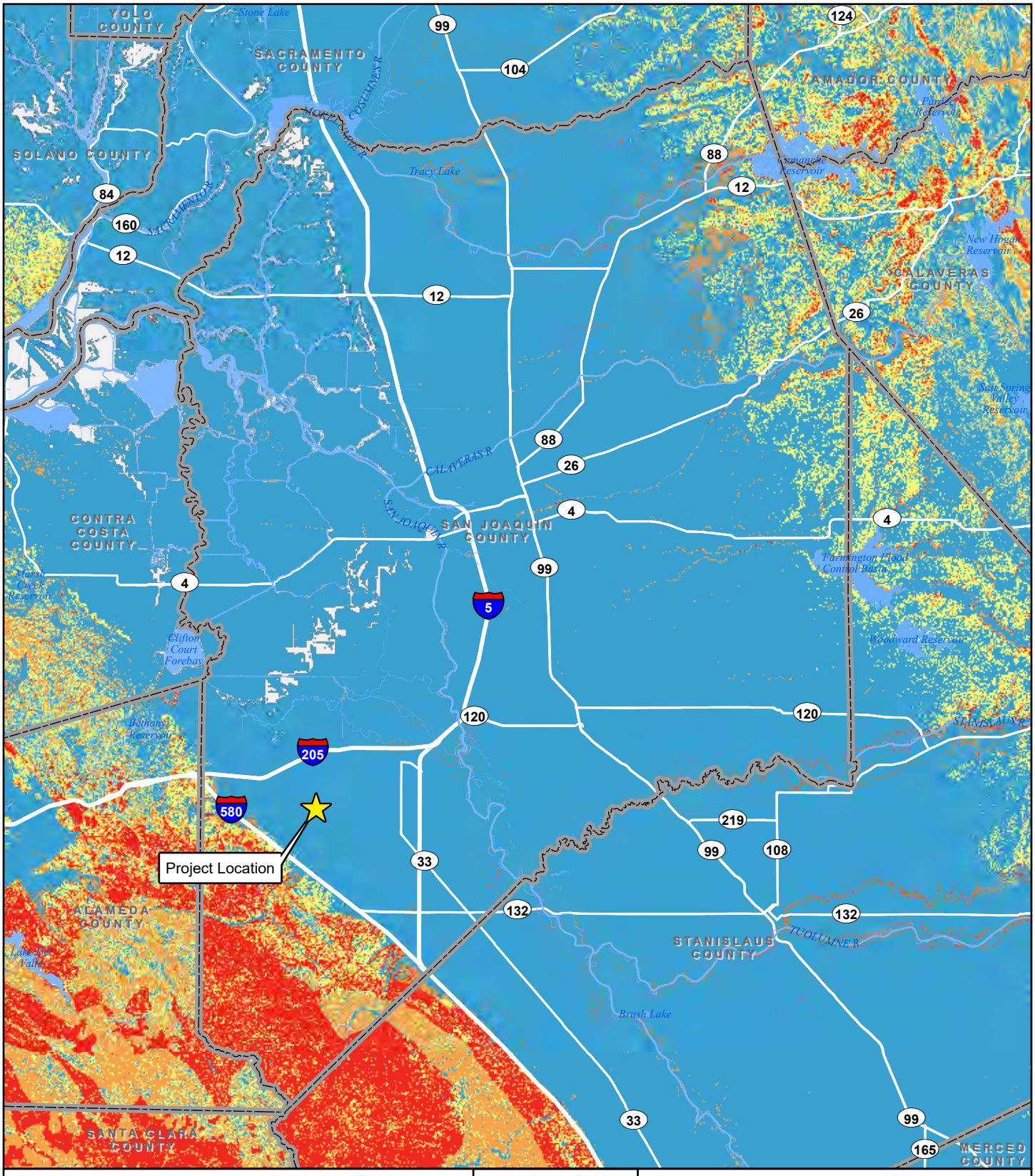

LEGEND

Susceptibility to Deep-Seated Landslides

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10

Sources: CGS; San Joaquin County GIS. Map date: May 11, 2023.

N

0 2½ 5

Miles

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 10. Landslide Susceptibility Map

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VIII. GREENHOUSE GAS EMISSIONS -- WOULD THE PROJECT:

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

BACKGROUND

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (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.

Naturally occurring GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs, including CO_2, CH_4, and N_2O, occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

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. Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%) and the agriculture and forestry sector (8%) (California Energy Commission, 2021).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced approximately 425 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2018 (California Energy Commission, 2021). Given that the

U.S. EPA estimates that worldwide emissions from human activities totaled nearly 46 billion gross metric tons of carbon dioxide equivalents ($BMTCO_2e$) in 2010, California's incremental contribution to global GHGs is approximately 2% (U.S. EPA, 2014).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

RESPONSES TO CHECKLIST QUESTIONS

Response a) and b): Less than Significant. Existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change. This is readily understood when one considers that global climatic change is the result of the sum total of GHG emissions, both man-made and natural that occurred in the past; that is occurring now; and will occur in the future. The effects of project specific GHG emissions are cumulative, and unless reduced or mitigated, their incremental contribution to global climatic change could be considered significant.

The SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD, 2015) provides an approach to assessing a project's impacts on greenhouse gas emissions by evaluating the project's emissions to the "reduction targets" established in the CARB's AB 32 Scoping Plan. For instance, the SJVACD's guidance recommends that projects should demonstrate that "*project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG*."

Subsequent to the SJVAPCD's approval of the *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015), the California Supreme Court issued an opinion that affects the conclusions that should/should not be drawn from a GHG emissions analysis that is based on consistency with the AB 32 Scoping Plan. More specifically, in *Center for Biological Diversity v. California Department of Fish and Wildlife*, the Court ruled that showing a "project-level reduction" that meets or exceeds the Scoping Plan's overall statewide GHG reduction goal is not necessarily sufficient to show that the project's GHG impacts will be adequately mitigated: "*the Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects*..." According to the Court, the lead agency cannot simply assume that the overall level of effort required to achieve the statewide goal for emissions reductions will suffice for a specific project.

Given this Court decision, reliance on a 29 percent GHG emissions reduction from projected BAU levels compared to the project's estimated 2020 levels as recommended in the SJVAPCD's

guidance documents is not an appropriate basis for an impact conclusion in the MND. Given that the SJVAPCD staff has concluded that "*existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change,*" this MND instead relies on consistency with the local reduction strategies contained within the latest version of the CARB's Scoping Plan policies, and the policies contained within the SJCOG's 2022 RTP/SCS.

The approach still relies on the Appendix G of the CEQA Guidelines thresholds which indicate that climate change-related impacts are considered significant if implementation of the proposed Project would do any of the following:

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

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

These two CEQA Appendix G threshold questions are provided within the Initial Study checklist and are the thresholds used for the subsequent analysis. The focus of the analysis is on the Project's consistency with the 2022 Scoping Plan policies and the policies contained within the SJCOG's 2022 RTP/SCS.

Project Greenhouse Gas Emissions

The proposed Project would generate GHGs during the construction and operational phases of the proposed Project. The primary source of construction-related GHGs from the proposed Project would result from emissions of CO_2 associated with the construction of the proposed Project, and worker vehicle trips. The proposed Project would require limited grading, and would also include site preparation, building construction, architectural coating, and paving phases. Sources of GHGs during Project operation would include CO_2 associated with operational vehicle trips and on-site energy usage (e.g. electricity). Other sources of GHG emissions would be minimal.

According to the CalEEMod results, the proposed Project would generate approximately 367 MT CO_2e during the construction year with the most emissions (year 2024). Separately, the proposed Project would generate approximately 12.7 MT CO_2e per year during the proposed Project's operational phase.

Project Consistency with the 2022 Scoping Plan Policies

Table GHG-1, below provides a consistency analysis of the relevant 2022 Scoping Plan Policies in comparison to the proposed Project. The 2030 goal was codified under SB 32 and is addressed by the 2022 Scoping Plan. The new plan provides a strategy that is capable of reaching the SB 32 target if the measures included in the plan are implemented and achieve reductions within the ranges expected. Under the Scoping Plan Update, local government plays a supporting role through its land use authority and control over local transportation infrastructure. SB 375 and AB 32 is implemented with the SJCOG RTP/SCS. The RTP/SCS envisions an increase in

development density that would encourage fewer and shorter trips and more trips by transit, walking, and bicycling in amounts sufficient to achieve the SB 375 targets. The 2022 Scoping Plan Update includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32.

TABLE GHG-1: PROJECT CONSISTENCY WITH THE 2022 SCOPING PLAN

SCOPING PLAN MEASURE	*PROJECT CONSISTENCY*
SCAQMD Rule 445 (Wood Burning Devices): Restricts the installation of wood-burning devices in new development.	Mandatory Compliance. Approximately 15 percent of California's major anthropogenic sources of black carbon include fireplaces and woodstoves. The Project would not include hearths (woodstove and fireplaces) as mandated by this rule.
California Renewables Portfolio Standard, Senate Bill 350 (SB 350) and Senate Bill 100 (SB 100): Increases the proportion of electricity from renewable sources to 33 percent renewable power by 2020. SB 350 requires 50 percent by 2030. SB 100 requires 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	No Conflict. The Project would utilize electricity provided by Pacific Gas & Electric (PG&E), which is required to meet the 2020, 2030, 2045, and 2050 performance standards. In 2021, 48 percent of PG&E's electricity came from renewable resources.[1] By 2030 PG&E plans to achieve over 60 percent carbon-free energy.
All Electric Appliances for New Residential and Commercial Buildings (AB 197): All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	Not applicable. The proposed Project is a park project and therefore would not include appliances.
California Code of Regulations, Title 24, Building Standards Code: Requires compliance with energy efficiency standards for residential and nonresidential buildings.	Mandatory Compliance. Future development associated with Project implementation would be required to meet the applicable requirements of the 2022 Title 24 Building Energy Efficiency Standards.
California Green Building Standards (CALGreen) Code Requirements: All bathroom exhaust fans are required to be ENERGY STAR compliant.	Mandatory Compliance. Project-specific construction plans would be required to demonstrate that energy efficiency appliances, including bathroom exhaust fans, and equipment are ENERGY STAR compliant.
California Green Building Standards (CALGreen) Code Requirements: HVAC system designs are required to meet American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards.	Mandatory Compliance. Project-specific construction plans would be required to demonstrate that the HVAC system meets the ASHRAE standards.
California Green Building Standards (CALGreen) Code Requirements: Air filtration systems are required to meet a minimum efficiency reporting value (MERV) 8 or higher.	Mandatory Compliance. Specific development projects would be required to install air filtration systems (MERV 8 or higher) as part of its compliance with the 2022 Title 24 Building Energy Efficiency Standards.

SCOPING PLAN MEASURE	*PROJECT CONSISTENCY*
California Green Building Standards (CALGreen) Code Requirements: Refrigerants used in newly installed HVAC systems shall not contain any chlorofluorocarbons.	Mandatory Compliance. Specific development projects would be required to meet this requirement as part of its compliance with the CALGreen Code.
California Green Building Standards (CALGreen) Code Requirements: Parking spaces shall be designed for carpool or alternative fueled vehicles. Up to eight percent of total parking spaces is required for such vehicles, based on the land use.	Not applicable. The proposed Project is a park project and therefore would not be required to comply with this CALGreen Code requirement.
Mobile Source Strategy (Cleaner Technology and Fuels): Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems, and reduction of vehicle miles traveled.	Consistent. The Project would be consistent with this strategy by supporting the use of zero-emission and low-emission vehicles; refer to CALGreen Code discussion above.
Senate Bill (SB) 375: SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the State's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.	Consistent. As demonstrated in Table GHG-2, the Project would comply with the San Joaquin Council of Governments (SJCOG) 2022 RTP/SCS, and therefore, the Project would be consistent with SB 375.
CCR, Title 24, Building Standards Code: Title 24 includes water efficiency requirements for new residential and non- residential uses.	Mandatory Compliance. Refer to the discussion under 2022 Title 24 Building Standards Code and CALGreen Code, above.
Water Conservation Act of 2009 (Senate Bill X7-7): The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.	Consistent. Refer to the discussion under 2022 Title 24 Building Standards Code and CALGreen Code, above.
California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341: The IWMA mandates that State agencies develop and implement an integrated waste management plan which outlines the steps to divert at least 50 percent of solid waste from disposal facilities. AB 341 directs the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling and sets a Statewide goal for 75 percent disposal reduction by the year 2020.	Mandatory Compliance. The Project would be required to comply with AB 341 which requires multifamily residential dwelling of five units or more to arrange for recycling services. This would reduce the overall amount of solid waste disposed of at landfills. The decrease in solid waste would in return decrease the amount of methane released from decomposing solid waste.

[1]*PG&E 2021 POWER MIX. WEBSITE: HTTPS://WWW.PGE.COM/PGE_GLOBAL/COMMON/PDFS/YOUR-ACCOUNT/YOUR-BILL/UNDERSTAND-YOUR-BILL/BILL-INSERTS/2022/1022-POWER-CONTENT-LABEL.PDF*

SOURCE: CALIFORNIA AIR RESOURCES BOARD. 2022. FINAL 2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY. WEBSITE: HTTPS://WW2.ARB.CA.GOV/SITES/DEFAULT/FILES/2022-12/2022-SP.PDF

Project Consistency with SJCOG's RTP/SCS

The proposed Project is analyzed for consistency with the strategies contained in the latest adopted SJCOG RTP/SCS (i.e. SJCOG's 2022 RTP/SCS). With the passage of SB 375 in 2008, metropolitan planning organizations were required to develop an SCS, which must demonstrate an ambitious, yet achievable, approach to how land use development and transportation can work together to meet greenhouse gas emission reduction targets for cars and light trucks. These targets, set by the California Air Resources Board, call for the region to reduce per capita emissions. Table GHG-3 below provides this consistency analysis.

TABLE GHG-3: PROJECT CONSISTENCY WITH THE SJCOG'S 2022 RTP/SCS

RTP/SCS POLICY	*PROJECT CONSISTENCY*
Policy 1: Enhance the Environment for Existing and Future Generations and Conserve Energy	**Consistent**. The proposed Project would meet the requirements of Title 24 for energy efficient design.
Policy 2: Maximize Mobility and Accessibility	**Consistent**. The proposed Project is compatible to the surrounding area. The proposed Project's location would be easily accessible from the surrounding area.
Policy 3: Increase Safety and Security	**Consistent**. The proposed Project is in a safe and accessible location.
Policy 4: Preserve the Efficiency of the Existing Transportation System	**Consistent**. The proposed Project will facilitate movement in the Tracy area and thereby increasing the efficiency of the existing transportation system.
Policy 5: Support Economic Vitality	**Consistent**. The proposed Project would not hinder economic growth or vitality.
Policy 6: Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts	**Not Applicable**. The proposed Project is not a transportation Project.
Policy 7: Maximize Cost-Effectiveness	**Consistent**. The proposed Project is located in an area that has been planned for in the City's General Plan for park uses.
Policy 8: Improve the Quality of Life for Residents	**Consistent**. The proposed Project implements a commercial Project in an area that has been planned for in the General Plan for park land uses. Therefore, the proposed Project avoids being sited in an area that would be highly sensitive to the physical environmental impacts associated with the proposed Project, thereby maintaining quality of life for residents in the City of Tracy and the region.

SOURCE: SAN JOAQUIN COUNCIL OF GOVERNMENTS (SJCOG). 2022. 2022 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY (RTP/SCS). AUGUST 5, 2022. WEBSITE: HTTPS://WWW.SJCOG.ORG/608/ADOPTED-2022-RTPSCS-PLAN. ACCESSED MARCH 21, 2023.

Conclusion

Overall, the proposed Project would be consistent with the policies within the CARB's 2022 Scoping Plan and the SJCOG's latest RTP/SCS. Therefore, the proposed Project would not generate a significant cumulative impact to GHGs. The proposed Project would not generate GHG emissions that would have a significant impact on the environment or conflict with any applicable plans, policies, or regulations. Therefore, impacts related to greenhouse gases are **less than significant**.

IX. HAZARDS AND HAZARDOUS MATERIALS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		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	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant with Mitigation. The proposed Project would place recreational park uses in an area of the City that currently contains existing recreational park uses. Like most agricultural and farming operations in the Central Valley, agricultural practices in the area have used agricultural chemicals including pesticides and herbicides as a standard practice. Although no contaminated soils have been identified on the Project site or the vicinity above applicable levels, residual concentrations of pesticides may be present in soil as a result of historic agricultural application and storage. Continuous spraying of crops over many years can potentially result in a residual buildup of pesticides, in farm soils. Of highest concern relative to agrichemicals are chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop (MCPP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE). There are no records of soil contamination on the Project site.

The proposed commercial land uses do not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common hazardous materials such as household cleaners, paint, etc. The operational phase of the proposed Project does not pose a significant hazard to the public or the environment.

Onsite reconnaissance and historical records indicate that there are no known underground storage tanks or pipelines located on the Project site that contain hazardous materials. Therefore, the disturbance of such items during construction activities is unlikely. Construction equipment and materials would likely require the use of petroleum based products (oil, gasoline, diesel fuel), and a variety of common chemicals including paints, cleaners, and solvents. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials.

Mitigation Measure HAZ-1 presented below require a Soils Management Plan (SMP) to be submitted and approved by the San Joaquin County Department of Environmental Health prior to the issuance of a grading permit. The SMP will establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. In addition, the Project applicant would be statutorily required to implement a SWPPP during construction activities, which would prevent any contaminated runoff from leaving the Project site. Further, Mitigation Measure HAZ-2 requires submittal of a Hazardous Materials Business Plan. Therefore, the proposed Project would have a **less than significant** impact relative to this issue.

MITIGATION MEASURE(S)

Mitigation Measure HAZ-1*: A Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health prior to the issuance of a grading permit. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.*

Mitigation Measure HAZ-2*: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Division (CUPA) for review and approval. If during the construction process the applicant or his subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*

Response c): Less than Significant. Hirsch Elementary School is located directly adjacent to the Project site (to the east). However, the Project is a park project and therefore would not emit hazardous materials or handle hazardous or acutely hazardous materials, substances, especially with implementation of Mitigation Measure HAZ-2. Therefore, **no impact** would occur as a result of the proposed Project.

Response d): Less than Significant. According to the California Department of Toxic Substances Control (DTSC) there are no Federal Superfund Sites, State Response Sites, or Voluntary Cleanup Sites on, or in the near vicinity of the Project site. The Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. The nearest investigation sites include:

> ***Quality Cleaners, Tracy*** (site #60002170). This site is a strip mall that contains Quality Dry Cleaners. The site is a voluntary cleanup site and is active as of March 27, 2015. The site was investigated and had limited soil, indoor air, and soil samples taken. PDT/TCE has been found in the groundwater and indoor air.
>
> ***Old Valley Pipeline (Laurelbrook)*** (site #37860005). From the early 1900's to the late 1950's, the Old Valley Pipeline was used by Standard Oil Company (now Chevron) to transport heavy petroleum (crude oil) from Bakersfield to Richmond. The site is a voluntary cleanup site and was referred to the Regional Water Quality Control Board as of December 9, 2015. A Voluntary Cleanup Agreement dated October 23, 2002 outlined site characterization and human health activities. The site characteristic activities are ongoing.

Therefore, implementation of the proposed Project would result in a **less than significant** impact relative to this environmental topic.

Response e): No Impact. The Project is not located within the airport land use plan area for any airport, including for the Tracy Municipal Airport, which is located approximately 1.4 miles south of the Project site. Therefore, implementation of the proposed Project would have **no impact** relative to this topic.

Response f): Less than Significant. The Project site currently connects to an existing network of City streets. The proposed roadway circulation improvements would allow for greater emergency access relative to existing conditions. The Project includes new connections to the existing park areas. The 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 g): Less than Significant. The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and 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) in the foothill areas of the County. The Project would not result in development of structures or housing which would subject residents, visitors, or workers to long-term wildfire danger. Therefore, impacts from Project implementation would be considered **less than significant** relative to this topic.

X. HYDROLOGY AND WATER QUALITY -- WOULD THE PROJECT:

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

RESPONSES TO CHECKLIST QUESTIONS

Responses a): Less than Significant. The proposed Project does not contain any drainage connectivity to Waters of the US. The proposed Project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. In order 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. As noted in the Project description, a SWPPP would be required to be approved prior to construction activities pursuant to the Clean Water Act.

Through compliance with the NPDES permit requirements, and compliance with the SWPPP, the proposed Project would not result in a violation of any water quality standards or waste

discharge requirements. Therefore, through compliance with the NPDES, and SWPPP requirements, the proposed Project would result in a **less than significant** impact relative to this topic.

Responses b): Less than Significant. The proposed Project would not result in the construction of new groundwater wells, nor would it increase existing levels of groundwater pumping. The proposed Project would be served by the City's municipal water system. The City of Tracy uses several water sources, including the US Bureau of Reclamation, the South County Water Supply Project (SCWSP), and groundwater. 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. However, given the relatively large size of the groundwater basin in the Tracy area, the areas of impervious surfaces added as a result 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. No mitigation is required.

Responses c.i)-c.iv): The proposed Project would not alter a stream or river. The implementation of the proposed Project would result in additional impervious surfaces. As a standard practice, the City requires post-Project runoff to be equal to or less than pre-Project runoff, which would ensure that the proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Additionally, the Project is subject to the requirements of Chapter 11.34 of the Tracy Municipal Code – Stormwater Management and Discharge Control. The purpose of this Chapter is to *"Protect and promote the health, safety and general welfare of the citizens of the City by controlling non-stormwater discharges to the stormwater conveyance system, by eliminating discharges to the stormwater conveyance system from spills, dumping, or disposal of materials other than stormwater, and by reducing pollutants in urban stormwater discharges to the maximum extent practicable."*

This chapter is intended to assist in the protection and enhancement of the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Water Pollution Control Act (Clean Water Act, 33 USC Section 1251 et seq.), Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) and NPDES Permit No. CAS000004, as such permit is amended and/or renewed.

New projects in the City of Tracy are required to provide site-specific storm drainage solutions and improvements that are consistent with the overall storm drainage infrastructure approach

presented in the 2012 City of Tracy Citywide Storm Drainage Master Plan. Prior to approval of the improvement plans, a detailed storm drainage infrastructure plan shall be coordinated with the City of Tracy Development Services Department and Utilities Department for review and approval. The proposed Project's storm drainage infrastructure plans must demonstrate adequate infrastructure capacity to collect and direct all stormwater generated on the Project site to the existing stormwater conveyance system and demonstrate that the proposed Project would not result in on- or off-site flooding impacts.

In order to ensure that stormwater runoff from the Project site does not adversely increase pollutant levels in adjacent surface waters and stormwater conveyance infrastructure, or otherwise degrade water quality, a SWPPP would be required. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project.

As noted above, the City requires post-Project runoff to be equal to or less than pre-Project runoff, which would ensure that the proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Additionally, a Stormwater Runoff Management Technical Memorandum on January 4, 2023 (as provided in Appendix F), which identifies how the proposed Project would mitigate for potential discharges on and near the Project site as well as further downstream. The Technical Memorandum includes four recommendations:

1. The Project either should be conditioned to demonstrate to the satisfaction of the City Engineer that infiltration is feasible and that the concept shown on the Project's Preliminary Plan meets the requirements of the Multi-Agency Post Construction Stormwater Standards Manual, otherwise, the applicant must provide an alternative drainage and stormwater quality treatment configuration that meets the City's Design Standards.
2. It should be noted in the Project Conditions of Approval that a stormwater pump system and flow-through planter configuration will be required in order to meet the City's Design Standards unless the applicant demonstrates to the satisfaction of the City Engineer that the configuration shown on the Preliminary Plans (or an alternative configuration) meets all of the applicable requirements.
3. Appropriate calculations will need to be provided with the Project's Design Plans in order to demonstrate that the hydraulic grade lines on the Project will meet the drainage constraints.
4. The Project should be conditioned to provide a maintenance plan for the site drainage system and to maintain the system in perpetuity.

According to the City,[3] storm drain issues identified in the Technical Memorandum have been resolved and the recommendations in the Memorandum will be City conditions of approval for the Project.

Overall, impacts from Project implementation would be reduced to a **less than significant** level relative to this topic.

Response d): The Project site is not within a 100-year or 200-year flood zone as delineated by FEMA, as provided in Figure 11. Additionally, the Project site is not within a tsunami or seiche zone. Further, the Project site is not within a dam inundation area, as provided in Figure 12. Development of the proposed Project would not place housing or structures in a flood hazard area. As a result, the proposed Project would have a **less than significant** impact relative to this topic.

Response e): The Water Quality Control Plan for the Central Valley Region and the 2014 Eastern San Joaquin Integrated Water Resources Master Plan (IRWMP) are the two guiding documents for water quality and sustainable groundwater management in the Project area. Consistency with the two plans is discussed below.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where known.

As discussed above, impacts related to water quality during construction and operation would be less than significant with implementation of the four recommendations in the Technical Memorandum and the Project-specific SWPPP. The proposed Project would create new impervious surfaces within the Project area, including paved roads and sports fields. The long-term operations of the proposed Project would not result in long-term impacts to surface water quality from urban stormwater runoff.

2014 Eastern San Joaquin IRWMP

The 2014 Eastern San Joaquin IRWMP defines and integrates key water management strategies to establish protocols and courses of action to implement the Eastern San Joaquin Integrated Conjunctive Use Program. The 2014 Eastern San Joaquin IRWMP is an update and expansion of the 2007 IRWMP prepared for the Eastern San Joaquin Region. There has been significant progress toward implementing the goal of improving the sustainability and reliability of water

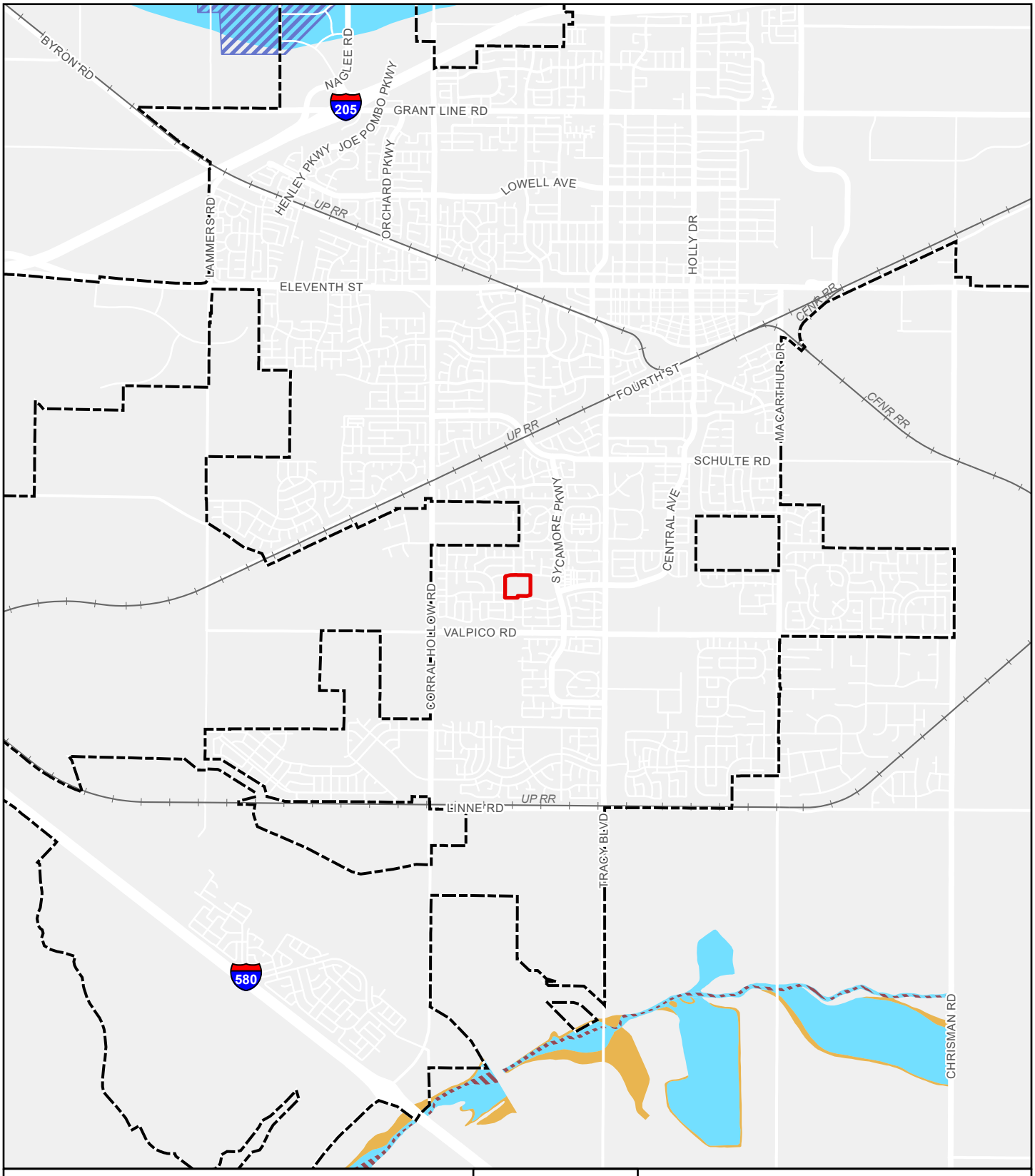
[3] Personal communication with Alan Bell, Senior Planner, City of Tracy, March 21, 2023.

supplies in the Region, but the process is ongoing and as yet incomplete. The IWRMP does not include requirements for individual projects, such as the proposed Project. Instead, the IWRMP outlines projects to be carried out which achieve regional goals, such as reduced water demand, improved efficiency, improved water quality, and improved flood management.

As discussed previously, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. The proposed Project would result in new impervious surfaces that could reduce rainwater infiltration and groundwater recharge. Rainwater which falls on the new impervious surfaces would flow to the adjacent stormwater facilities. Additionally, the proposed Project would not interfere with groundwater recharge.

Conclusion

Overall, implementation of the proposed Project would have a **less than significant** impact related to conflicts with the Basin Plan and the Groundwater Management Plan.



LEGEND

- Project Site
- Tracy City Limits

FEMA Designation

- 100-Year Flood Zone
- 500-Year Flood Zone
- Regulator Floodway

USACE Designation

- 200-year Flood Zone

N

0 1,000 2,000

US Feet

Sources: FEMA; USACE; San Joaquin County GIS. Map date: May 11, 2023.

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 11. FEMA Flood Insurance Rate Map

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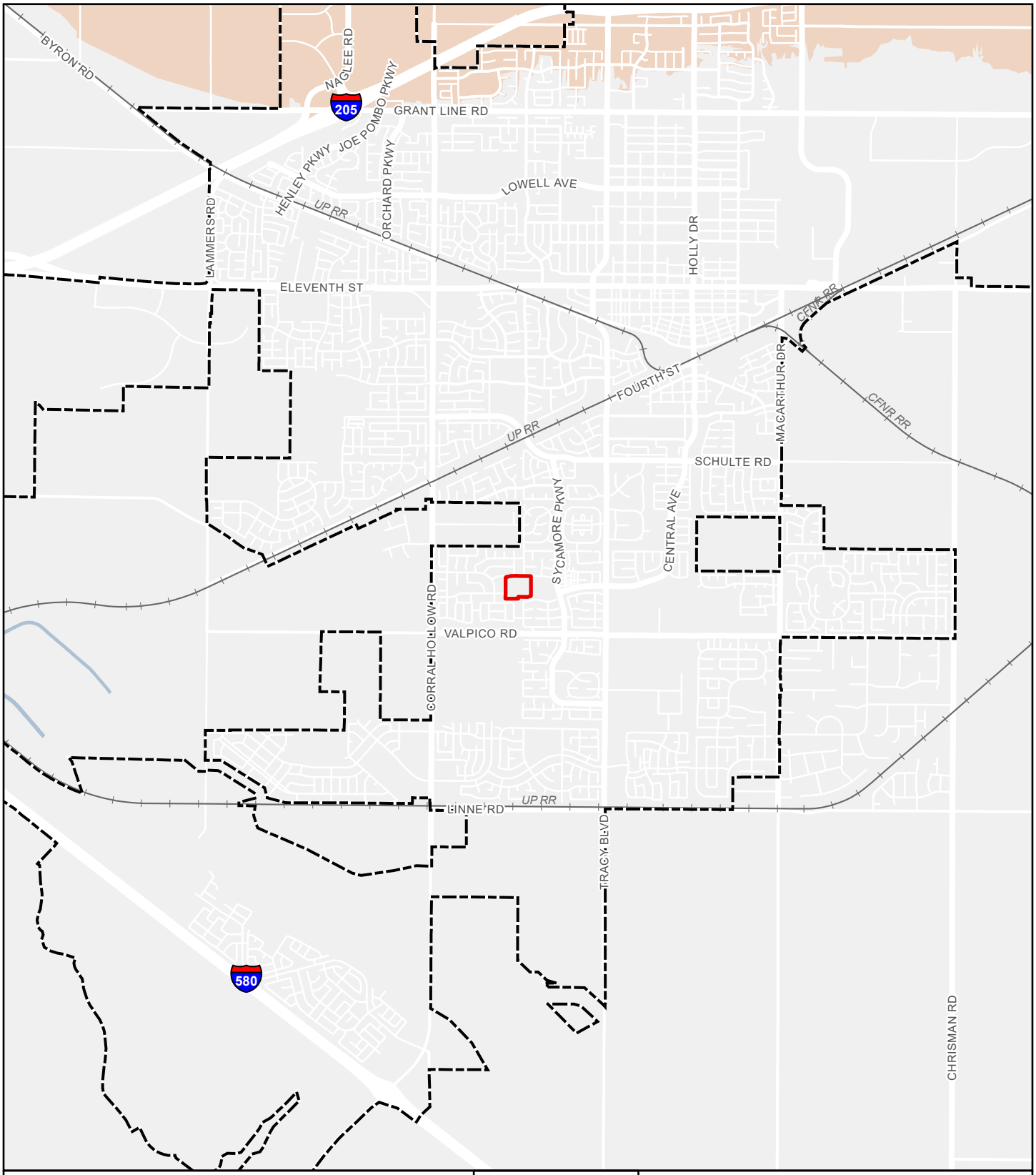

LEGEND

- Project Site
- Tracy City Limits

Dam Inundation Areas

- Don Pedro Dam Inundation Area
- Maria Dam Inundation Area

N

0 1,000 2,000

US Feet

Sources: DWR; San Joaquin County GIS. Map date: Jun 14, 2023.

GRETCHEN TALLEY PARK PHASE 3 EXPANSION

Figure 12. Dam Inundation Map

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XI. LAND USE AND PLANNING -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?				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

RESPONSES TO CHECKLIST QUESTIONS

Responses a): No Impact. The Project site is surrounded by residential and public facilities land uses. The Project would be consistent and compatible with the surrounding land uses. The Project would not physically divide any established community. Therefore, there is **no impact.**

Responses b): Less than Significant. The Project site is currently designated Park by the City of Tracy General Plan Land Use Designations Map and is zoned LDR. The Project would not require a General Plan or Zoning Amendment.

The key planning documents that are directly related to, or that establish a framework within which the proposed Project must be consistent, include:

- City of Tracy General Plan
- City of Tracy Zoning Ordinance

The Project site is currently designated Park (P) by the City of Tracy General Plan Land Use Designations Map. A General Plan Amendment would not be required for the Project. The City of Tracy General Plan provides the following designations relevant to the proposed Project:

- Park (P). This category refers to established public and private open spaces and recreational facilities, such as playing fields, miniparks, neighborhood and community parks. Currently there are approximately 241 acres of park land, 221 within the City limits and 20 in the SOI. Parks are typically moderately sized and distributed throughout the City, often in the context of playing fields associated with schools. There is one large public sports complex on the west side of town, south of Eleventh Street.

The Project site is currently zoned LDR. A Zoning Amendment would not be required for the Project. The City of Tracy Zoning Ordinance (Municipal Code Title 10) provides the following designations relevant to the proposed Project:

- The Low Density Residential (LDR) Zone is intended to be utilized in the areas designated low-medium density residential with a density range of two and no/tenths (2.0) to five and eight-tenths (5.8) dwelling units per gross acre by the General Plan. The following uses shall be permitted in the LDR Zone:
  1. Single-family dwelling; Accessory dwelling unit, subject to TMC section 10.08.3180;
  2. Mobile home on an individual lot;

3. Crop and tree farming; and
4. Public park, building or school.

The proposed uses on the Project site are consistent with the purpose of the General Plan designation of Park, which allows for public and private open spaces and recreational facilities, And a General Plan Amendment would not be required. Additionally, the Project site is currently zoned LDR, and a re-zone would not be required. The Project's consistency with other General Plan policies that provide environmental protections are addressed within the relevant sections of this document. Therefore, there is **no impact**.

XII. MINERAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			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	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less Than Significant Impact . As described in the Tracy General Plan EIR, the main mineral resources found in San Joaquin County, and the Tracy Planning Area, are sand and gravel (aggregate), which are primarily used for construction materials such as asphalt and concrete. According to the California Geological Survey (CGS) evaluation of the quality and quantity of these resources, the most marketable aggregate materials in San Joaquin County are found in three main areas:

- In the Corral Hollow alluvial fan deposits south of Tracy
- Along the channel and floodplain deposits of the Mokelumne River
- Along the San Joaquin River near Lathrop

The CGS has also designated these deposits in the Tracy Planning Area as regionally significant. Of these areas, the State Division of Mines and Geology designates specific mineral resources within Tracy where mining is not restricted by other land uses such as urban development or resource conservation. Figure 4.8-1 of the General Plan EIR identifies Mineral Resource Zones (MRZs) throughout the Tracy Planning Area. The Project site is located within an area designated as MRZ-2. The MRZ-2 designation applies to areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. Of these areas, the State Division of Mines and Geology designates specific mineral resources within Tracy where mining is not restricted by other land uses such as urban development or resource conservation. However, the City of Tracy has an agreement with the State Division of Mines and Geology that the area north of Linne Road would allow for urban development, while area south of Linne Road would be protected for aggregate mining. Since the Project site is located north of Linne Road, the Project site has been allowed for urban development the proposed Project would have a **less than significant** impact relative to this environmental topic.

XIII. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		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	

KEY NOISE TERMS

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of noise.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.

CNEL Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.

Impulsive Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.

L_{dn} Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

L_{eq} Equivalent or energy-averaged sound level. This section provides a general description of the existing noise sources in the project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed project. project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment.

L_{max} The highest root-mean-square (RMS) sound level measured over a given period of time.

$L_{(n)}$ The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one hour period.

Loudness A subjective term for the sensation of the magnitude of sound.

Noise Unwanted sound.

SEL Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. The following analysis is based on the Environmental Noise Assessment prepared by Saxelby Acoustics for the proposed Project on July 20, 2023 (see Appendix C).

Summary of Applicable Noise Level Criteria

The proposed Project includes development of transient lodging and is subject to the applicable City of Tracy noise level standards.

Table NOISE-1 shows the City of Tracy Land Use Compatibility Chart. The table indicates that development of park uses is "Normally Acceptable" where the ambient noise level is 65 dBA L_{dn} or less. Construction where the ambient noise level exceeds 80 dBA L_{dn} is considered "Unacceptable."

Table NOISE-1: Land Use Compatibility for Community Noise Environment

LAND USE CATEGORY	*EXTERIOR NOISE EXPOSURE (LDN)*					
	55	*60*	*65*	*70*	*75*	*80*
Single-Family Residential						
Multi-Family Residential, Hotels, and Motels		(a)				
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches						
Office Buildings, Business Commercial, and Professional						
Auditoriums, Concert Halls, Amphitheaters						

	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 Specified land use may be permitted only after detailed analysis of the noise reduction requirements and the needed noise insulation features included in the design.
	UNACCEPTABLE New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

(A) RESIDENTIAL DEVELOPMENT SITES EXPOSED TO NOISE LEVELS EXCEEDING 60 LDN SHALL BE ANALYZED FOLLOWING PROTOCOLS IN APPENDIX CHAPTER 12, SECTION 1208A, SOUND TRANSMISSION CONTROL, CALIFORNIA BUILDING CODE. SOURCE: CITY OF TRACY GENERAL PLAN.

Table NOISE-2 shows the noise level standard of a one-hour average sound level permitted at any point on or beyond the boundaries of the property. The table indicates the proposed Project shall not produce non-transportation noise levels of 55 dBA L_{eq} at adjacent noise sensitive receptors.

Table NOISE-2: General Sound Level Limits at Base District Zone

BASE DISTRICT ZONE	*SOUND LEVEL LIMITS (DECIBELS)*
1. Residential Districts RE (Residential Estate) LDR (Low Density) MDR/MDC (Medium Density) HDR (High Density) RMH (Mobile Home)	55
2. Commercial Districts MO (Medical Office) POM (Professional Office and Medical) NS (Neighborhood Shopping) CBD (Central Business District) GHC (General Highway) H-s (Highway Service)	65
3. Industrial Districts (Light Industrial) (Heavy Industrial)	75
4. A (Agricultural)	75

BASE DISTRICT ZONE	*SOUND LEVEL LIMITS (DECIBELS)*
5. AMO Aggregate Mineral Overlay Zone	75

SOURCE: CITY OF TRACY MUNICIPAL CODE.

Existing Noise Receptors

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the Project site, sensitive land uses include by residences to the north, west, and south and Hirsch Elementary School to the east.

Existing General Ambient Noise Levels

The existing noise environment in the Project area is primarily defined by traffic on Mits Way and Dove Drive. To quantify the existing ambient noise environment in the Project vicinity, Saxelby Acoustics conducted continuous (24-hour) noise level measurements at two locations on the Project site. A summary of the noise level measurement survey results is provided in Table NOISE-3. Appendix C contains the complete results of the noise monitoring.

Table NOISE-3: Summary of Existing Background Noise Measurement Data

LOCATION	*DATE*	L_{DN}	*DAYTIME*	*DAYTIME*	*DAYTIME*	*NIGHTTIME*	*NIGHTTIME*	*NIGHTTIME*
			L_{EQ}	L_{50}	L_{MAX}	L_{EQ}	L_{50}	L_{MAX}
LT-1: 150 ft. to CL of Mits Way.	6/16/2023	54	51	47	70	48	46	58
	6/17/2023	53	52	45	70	44	42	59
	6/18/2023	56	57	53	71	45	42	61
LT-2: 640 ft. to CL of Dove Dr.	6/16/2023	52	48	44	64	46	41	62
	6/17/2023	52	48	43	64	46	41	59
	6/18/2023	53	52	49	65	44	38	63

SOURCE: SAXELBY ACOUSTICS, 2023.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a CAL200 acoustical calibrator to ensure the accuracy of the measurements. The

equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Evaluation of Project Operational Noise on Existing Sensitive Receptors

The basketball courts, tennis courts, the small and large dog parks, and pickleball courts are considered to be the primary noise sources for this Project. The following is a list of assumptions used for the noise modeling. The data used is based upon a combination of manufacturer's provided data and Saxelby Acoustics data from similar operations.

Dog Parks:

Recreational activity producing 52 dBA Leq at 150 feet as measured from the center of the park. Daytime use only. Saxelby Acoustics data.

Basketball Court:

Recreational activity producing 60 dBA Leq at 50 feet as measured from the center of court. Daytime use only. Saxelby Acoustics data.

Tennis Courts:

Recreational activity producing 55 dBA Leq at 50 feet as measured from the center of court. Daytime use only. Saxelby Acoustics data.

Pickleball Courts:

Saxelby Acoustics predicted noise levels associated with the operation of the pickleball courts at the nearby sensitive receptors. The proposed Project includes four pickleball courts located east of the Project. Saxelby Acoustics used pickleball noise level data collected at a single court (Saxelby Acoustics 2022) to predict Project noise levels. Pickleball gameplay is expected to produce noise levels of approximately 60 dBA Leq at 25 feet from the edge of the end of a single court and 55 dBA Leq at 25 feet from the edge of the side of a single court.1 Daytime use only.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed amenities, existing and proposed buildings, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation.

The Project is predicted to expose nearby residences to noise levels up to 52 dBA L_{eq}. The predicted Project noise levels would meet the City of Tracy Municipal Code noise level standard of 55 dBA, L_{eq}. The results are also summarized in Table NOISE-4.

Table NOISE-4: Project Operational Noise Significant Increase at Adjacent Noise Sensitive Receptors

NOISE SENSITIVE RECEPTOR	*AMBIENT NOISE LEVEL*	*PROJECT NOISE LEVEL*[3]	*AMBIENT + PROJECT NOISE LEVEL*	*DIFFERENCE*
R1	52.6 Ldn[1]	41.0 Ldn	52.9 Ldn	0.3
R2	52.6 Ldn[1]	45.0 Ldn	53.3 Ldn	0.7
R3	52.6 Ldn[1]	45.0 Ldn	53.5 Ldn	0.9
R4	52.6 Ldn[1]	49.0 Ldn	54.2 Ldn	1.6
R5	52.4 Ldn[2]	49.0 Ldn	54.4 Ldn	1.6
R6	52.4 Ldn[2]	50.0 Ldn	54.4 Ldn	2.0
R7	52.4 Ldn[2]	48.0 Ldn	54.4 Ldn	2.0

NOTES:
[1] As measured at LT-1
[2] As measured at LT-2
[3] Assumes continuous day operation

Based on Table NOISE-4 data, the proposed Project will result in a 2.0 dBA Ldn increase in the ambient noise level of nearby noise-sensitive receptors. As stated in the City of Tracy General Plan Policy P2, mitigation measures shall be required for new development projects under the following conditions:

- Causes the Ldn at noise-sensitive uses to increase 3 dB or more and exceed the "normally acceptable level;
- Causes the Ldn at noise-sensitive uses increase 5 dB or more and remain "normally acceptable" level;
- Cause new noise levels to exceed the City of Tracy Noise Ordinance limits.

The predicted Project noise levels are predicted to comply with the City of Tracy General Plan Policy P2. This is a **less than significant** impact, and no mitigation is required.

Evaluation of Project Construction Noise on Existing Sensitive Receptors

During the construction phases of the Project, noise from construction activities would add to the noise environment in the immediate Project vicinity. As indicated in Table NOISE-5, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Construction activities would also be temporary in nature and are anticipated to occur during normal daytime working hours.

Table NOISE-5: Construction Equipment Noise

TYPE OF EQUIPMENT	*MAXIMUM LEVEL, DBA AT 50 FEET*
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator 81	81

Jackhammer	89
Pneumatic Tools	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A Project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours.

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given this noise attenuation rate and assuming no noise shielding from either natural or human-made features (e.g., trees, buildings, fences), outdoor receptors within approximately 250 feet of construction sites could experience maximum instantaneous noise levels of greater than 60 dBA when on-site construction-related noise levels exceed approximately 90 dBA at the boundary of the construction site. As previously discussed, nearby noise-sensitive receptors consist predominantly of residential dwellings located near the northern and western boundaries of the Project site. The City of Tracy Noise Ordinance places limitations on the acceptable hours of construction. During development of the proposed Project, construction activities occurring during the more noise-sensitive nighttime hours (i.e., 7 PM to 7 AM) are prohibited. Additionally, there are several residential uses directly north and east of the Project site which may be subject to construction noise. As a result, noise-generating construction activities would be considered to have a potentially significant short-term impact.

Implementation of Mitigation Measure NOISE-1 would reduce construction-generated noise levels. With implementation of Mitigation Measure NOISE-1, the proposed Project would have a ***less than significant*** impact relative to this environmental topic.

MITIGATION MEASURE(S)

Mitigation Measure NOISE-1: *The City of Tracy Development Services Department shall establish the following as conditions of approval for any permit that results in the use of construction equipment:*

- *Construction shall be limited to 7:00 a.m. to 7:00 p.m.*
- *All construction equipment powered by internal combustion engines shall be properly muffled and maintained.*
- *Quiet construction equipment, particularly air compressors, are to be selected whenever possible.*
- *All stationary noise-generating construction equipment such as generators or air compressors are to be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.*
- *Unnecessary idling of internal combustion engines is prohibited.*

- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.*

These requirements shall be noted on the Project plans prior to approval of grading and/or building permits.

Response b): Less than Significant. Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table NOISE-6 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v.). One-half this minimum threshold or 0.1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

Table NOISE-6: Effects of Vibration on People and Buildings

PEAK PARTICLE VELOCITY		*HUMAN REACTION*	*EFFECT ON BUILDINGS*
MM/SEC.	*IN./SEC.*		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage

10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

The vibration-generating activities typically happen during construction when activities such as grading and road construction occur. Structures which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 130 feet, or further, from the Project site. At this distance, construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table NOISE-7 shows the typical vibration levels produced by construction equipment.

Table NOISE-7: Vibration Levels for Varying Construction Equipment

TYPE OF EQUIPMENT	*PEAK PARTICLE VELOCITY @ 25 FEET (INCHES/SECOND)*	*PEAK PARTICLE VELOCITY @ 50 FEET (INCHES/SECOND)*	*PEAK PARTICLE VELOCITY @ 100 FEET (INCHES/SECOND)*
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES. FEDERAL TRANSIT ADMINISTRATION. MAY 2006.

Construction Vibration Impacts

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The Table NOISE-7 data indicates that construction vibration levels anticipated for the Project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less than significant** impact, and no mitigation is required.

Response c): Less than Significant . The proposed Project is located approximately 1.0 miles outside of the predicted 55 dBA CNEL noise contour. According to Table 5 of the City of Tracy General Plan Land Use Compatibility Chart, the noise environment of the proposed Project is considered normally acceptable. This is a less-than-significant impact, and no mitigation is required.

XIV. POPULATION AND HOUSING -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial 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	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. Implementation of the Project would result in the expansion of the existing park on the Project site. The proposed Project is located near the western edge of an existing urbanized area of the City. There is existing infrastructure (roads, water, sewer, etc.) in the immediate vicinity of the Project site. While the Project would extend these services onto the site to serve the proposed development, the Project would not extend infrastructure beyond an area of the City not currently served. Therefore, the Project would not induce population growth in the City of Tracy.

This impact is **less than significant**, as demonstrated throughout this document. No additional mitigation is required.

Response b): Less than Significant. There are no residential structures located on the Project site. Development of the Project would not create or remove housing. Therefore, the Project would not displace substantial numbers of people or existing housing and would have a **less than significant** impact in this respect.

XV. PUBLIC SERVICES

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

RESPONSES TO CHECKLIST QUESTIONS

Response a.i) Fire Protection: Less than Significant. On September 16, 1999, the City of Tracy Fire Department merged with the Tracy Rural Fire Protection District, forming the South San Joaquin County Fire Authority (SCFA). The SCFA was created to provide fire protection services to the entire jurisdictional area of both the corporate city limits and surrounding rural community. Employees of the Tracy Rural Fire Protection District became employees of the City of Tracy with the City of Tracy maintaining day to day administrative control of the department. Both the Tracy Rural Fire Protection District and the City of Tracy contract with the SCFA to receive fire protection services. The SCFA in turn contracts with the City of Tracy to provide employees and administrative services.

The SCFA/Tracy Fire Department provides emergency medical services to citizens located within the San Joaquin Emergency Medical Services Agency (SJEMSA) Zone C. Ambulance transport is provided by private provider, American Medical Response (AMR) under contract with the SJEMSA. The SCFA currently operates six fire stations and an administrative office. Twenty-four hour-per-day staffing is provided with six paramedic engine companies and one ladder truck company. Four fire stations are within the incorporated area of the City of Tracy, and two are in the surrounding rural Tracy area.

The nearest fire station, Station 97, is located approximately 0.52 miles east of the Project site. The City of Tracy Public Safety Master Plan identifies this fire station that will permanently serve the Project area as Station "97".

Response time and fire department effectiveness once units arrive are critical considerations in mitigating emergencies. The response time standard is defined as total reflex time (1:30 call processing, 1:00 turn-out time, and 4:00 travel-time). In addition, the SCFA performance standard to measure effectiveness is to confine moderate risk structure fires to the room of origin or less 90 percent of the time in the City. In order to successfully mitigate emergencies, it is

essential the SCFA assemble an adequate number of personnel to perform critical tasks at the scene once the unit(s) arrive.

Recognizing the potential need for increases in fire protection and emergency medical services, the City's General Plan includes policies to ensure that adequate related facilities are funded and provided to meet future growth (Objective PF-1.1, P1). This policy is implemented through the review of all new projects with the City's Sphere of Influence, prior to development, and through the collection of development impact fees for the funding of facilities.

Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service facility and equipment needs.

Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, participation in the Community Facilities District or similar funding mechanism, and other revenues generated by the Project, would fund capital and labor costs associated with fire protection services.

All construction plans and development proposals are evaluated to determine fire protection needs. The Fire Prevention Division works closely with other City departments to ensure appropriate design and construction standards, including adequate fire protection water flows and that fire-resistant building materials are met within new development projects.

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

a.ii) Police Protection: Less than Significant. The Tracy Police Department provides police protection services to the City of Tracy. Its headquarters are located at 1000 Civic Center Drive, approximately 2.1 mile northeast of the Project site. There are no satellite offices or plans to construct any in the near future.

The Department divides calls into three categories, Priority 1, 2, and 3 calls. Priority 1 calls are defined as life threatening situations. Priority 2 calls are not life threatening, but require immediate response. Priority 3 calls cover all other calls received by the police. Average response time for Priority 1 calls within city limits is approximately six to eight minutes. Response time for Priority 2 and 3 calls is, on average, 22 minutes.

The Tracy Police Department provides mutual aid to the San Joaquin County Sheriff's office, and vice versa, when a situation exceeds the capabilities of either department. Mutual aid is coordinated through the San Joaquin County Sheriff.

The City of Tracy General Fund provides approximately 96% of the Police Department's budget. The remaining 4% comes from various grants, fees, and assessments. The Police Department operates on a pre-approved annual budget, based on a fiscal year. New service demands are assessed when budget proposals are reviewed. Supplemental budget requests are considered on a case-by-case basis during the fiscal year.

It is not anticipated that implementation of the proposed Project would result in significant new demand for police services. Project implementation would not require the construction of new police facilities to serve the Project Area, nor would it result in impacts to the existing response times and existing police protection service levels. Therefore, impacts to police services will be **less than significant.**

a.iii) Schools: No impact. The proposed Project includes development of a park in an area adjacent to existing residential uses. Such uses would not generate additional students requiring accommodation in the Tracy Unified School District (TUSD). Therefore, there is **no impact** relative to this topic.

a.iv) Parks: No impact. Potential Project impacts to parks and recreational facilities are addressed in the following Recreation section of this document.

a.v) Other Public Facilities: No impact. Other public facilities in the City of Tracy include libraries, hospitals, and cultural centers such as museums and music halls. The proposed Project would not increase demand on these facilities. Therefore, there is **no impact** relative to this topic.

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

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): No Impact. The proposed Project would develop Phase 3 of Gretchen Talley Park. Within this expansion, the City is proposing to add to the existing Gretchen Talley Park a new lawn, landscaping, a nature play zone, a decomposed granite path, lighted tennis, pickleball, and basketball courts, as well as an outdoor fitness area and a park restroom, and large and small dog park areas. The proposed Project would also include various other features, including to enhance pedestrian and vehicle access to the existing park. Therefore, the proposed Project would not increase the use of the City's existing parks and recreation system. As such, there is no impact and no mitigation is required.

XVII. TRANSPORTATION AND CIRCULATION -- WOULD THE PROJECT:

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

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. Implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the Project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The Project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

Existing pedestrian and bicycle facilities are located on the roadways adjacent to the Project site. The City of Tracy General Plan describes an interconnected, hierarchical system of sidewalks, on-street bike lanes, and off-street trails for pedestrians and bicyclists that provides access to this area of the City of Tracy. The Project's transportation and circulation system is designed to accommodate access to and from the Project site.

Site access would be provided by the existing nearby roadways, including Dove Drive and Mits Way. Additionally, as part of the proposed Project, pedestrian access to the Project site would be enhanced. Overall, this impact would be **less than significant**.

Response b) Less than Significant. The proposed Project would not add a notable amount of new vehicle trips to any area roadways (based upon the Project land use and size, estimated annual trips estimated by CalEEMod are approximately 4,718 trips per year or 13 new trips per day), nor can it reasonably assumed that it would meaningfully increase the length of any existing or future vehicle trips.

Moreover, crucially, Section 15064.3 of the current CEQA Guidelines gives agencies wide latitude in assessing transportation impacts with VMT. The more technical details of calculating VMT and assessing impacts are found in a Technical Advisory issued by OPR. The Technical Advisory provides guidance on assessing VMT, different methodologies, significance thresholds, and mitigation measures.

SB 743 authorized OPR to decide whether the new VMT-based approaches would apply only to "transit priority areas" or to all areas in the state. A transit priority area is an area within one-half mile of a major transit stop. A major transit stop is a "site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Pub. Res. Code § 21064.3. OPR has opted to require the new VMT-based analysis in all areas of the state, not just in transit priority areas. Transit priority areas are still relevant, however; land use projects within one-half mile of a major transit stop or a stop along a high-quality transit corridor should be presumed to have a less than significant transportation impact. A high-quality transit corridor is a corridor with fixed route bus service with service intervals that do not exceed 15 minutes during peak commute hours. In addition, projects that decrease VMT in the project area as compared to existing conditions should be presumed to have a less than a significant impact.

Where quantitative models or methods are unavailable, section 15064.3 allows agencies to assess VMT qualitatively, using factors such as availability of transit and proximity to other destinations. The Guideline also states that the lead agency has discretion to choose the most appropriate methodology and can use its professional judgment to adjust its analysis accordingly.

While not legally binding, the Technical Advisory will be an important reference for agencies in determining how to calculate VMT, setting significance thresholds, and identifying mitigation measures. For instance, the Technical Advisory discusses the difference between tour-based and trip-based VMT. Trip-based VMT counts trips to and from one location (i.e., home to work) but does not count any trips taken in between, whereas tour-based VMT includes these trips. Either method can be used for residential and office projects, but the Technical Advisory recommends tour-based VMT because it is more comprehensive.

Globally, the Technical Advisory suggests that agencies use consistent methodologies for setting thresholds, estimating project VMT, and estimating reductions from mitigations, to allow for apples-to-apples comparisons.

The Technical Advisory also provides guidance for setting screening thresholds and thresholds of significance:

- As stated by the new Guideline, projects within one-half mile of a major transit stop or high-quality transit corridor should be presumed to result in a less-than-significant impact.
- Small projects that generate fewer than 110 trips per day may generally be assumed to cause a less-than-significant transportation impact.
- Agencies may develop map-based screening for residential and office projects where projects located near areas with low VMT may be presumed to have a less-than-significant transportation impact.

- Residential projects that result in per capita VMT that exceeds 85 percent of existing regional or city average VMT may indicate a significant impact.
- Office projects that result in per employee VMT that exceeds 85 percent of existing regional average VMT may indicate a significant impact.
- With retail projects, the Technical Advisory recommends that the analysis should be based on total change in VMT because retail projects usually re-route travel from other retail destinations.

Since the Project can be anticipated to generate fewer than 110 trips per day, the proposed Project fits the second guidance criteria for setting screening thresholds and thresholds of significance, as promulgated by OPR's Technical Advisory. Therefore, there is a **less than significant** impact associated with this impact.

Responses c-d): Less than Significant. No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay that could impede emergency vehicles or emergency access. The Project does not include any design features or incompatible uses that pose a significant safety risk. The Project would create no adverse impacts to emergency vehicle access or circulation. Overall, Project implementation would have a **less than significant** impact relative to this topic.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public 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		

BACKGROUND

Assembly Bill 52 (AB 52) requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City of Tracy has not received any requests from California Native American tribes to be informed through formal notification of proposed projects in the City's geographic area.

RESPONSES TO CHECKLIST QUESTIONS

Responses a.i)-a.ii): Less than Significant with Mitigation. The City of Tracy General Plan and subsequent EIR does not identify the site as having prehistoric period cultural resources. Additionally, there are no known unique cultural resources known to occur on, or within the immediate vicinity of the Project site. No instances of cultural resources or human remains have been unearthed on the Project site. Based on the above information, the Project site has a low potential for the discovery of prehistoric, ethnohistoric, or historic archaeological sites that may meet the definition of Tribal Cultural Resources. Although no Tribal Cultural Resources have been documented in the Project site, the Project is located in a region where cultural resources have been recorded and there remains a potential that undocumented archaeological resources that may meet the Tribal Cultural Resource definition could be unearthed or otherwise discovered during ground-disturbing and construction activities. Examples of significant archaeological

discoveries that may meet the Tribal Cultural Resources definition would include villages and cemeteries.

Due to the possible presence of undocumented Tribal Cultural Resources within the Project site, construction-related impacts on tribal cultural resources would be potentially significant. Implementation of the Mitigation Measure CUL-1 would require appropriate steps to preserve and/or document any previously undiscovered resources that may be encountered during construction activities, including human remains. Implementation of this measure would reduce this impact to a **less than significant** level.

MITIGATION MEASURE(S)

Implement Mitigation Measure CUL-1

XIX. UTILITIES AND SERVICE SYSTEMS -- WOULD THE PROJECT:

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, wastewater 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	

Responses to Checklist Questions

Response a-c):

Water

It is anticipated that water supply for the proposed Project would be local groundwater and treated surface water from SSJID's South County Water Supply Program (SCWSP). Water distribution will be by an underground distribution system to be installed as per the City of Tracy standards and specifications. The applicant for the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable water supplies to the proposed Project site through connection fees.

The City's General Plan designates the Project site as Park, which allows for the uses proposed for the proposed Project. Therefore, the City's 2011 General Plan anticipated the proposed Project and the City's UWMP assumed that the site would be developed with Park uses. There are no changes to the land use assumptions in the City's General Plan Update, and UWMP Update. The following analysis reflects the City's most current water demand and supply projections based on the General Plan Update.

Table UTIL-1 summarizes the projected availability of the City's existing and planned future potable water supplies compared with projected water demands in normal, single dry and multiple dry years at buildout.

To be conservative, water demands were assumed to be at normal levels. With future planned projects implemented, the results of the assessment show that water supply is sufficient during normal years. However, during a single dry year or a multiple dry year period, the City must depend more heavily on conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand. As described in the City's 2020 UWMP, these findings are primarily due to projected reduced reliability of the City's CVP supplies and SSJID supplies in dry years.

Table UTIL-1. Summary of Buildout Total Water Supply Versus Demand During Hydrologic Normal, Single Dry, and Multiple Dry Years

HYDROLOGIC CONDITION		*SUPPLY AND DEMAND COMPARISON, ACRE-FEET/YEAR*
NORMAL YEAR		
Available Total Water Supply		40,168
Total Water Demand		39,800
Potential Surplus (Deficit)		368
Percent Shortfall of Demand		-
SINGLE DRY YEAR		
Available Total Water Supply		30,259
Total Water Demand		39,800
Potential Surplus (Deficit)		(9,541)
Percent Shortfall of Demand		24%
MULTIPLE DRY YEARS		
Year 1	Available Total Water Supply	35,292
	Total Water Demand	39,800
	Potential Surplus (Deficit)	(4,508)
	Percent Shortfall of Demand	11.3%
Year 2	Available Total Water Supply	37,014
	Total Water Demand	39,800
	Potential Surplus (Deficit)	(2,786)
	Percent Shortfall of Demand	7.0%
Year 3	Available Total Water Supply	32,071
	Total Water Demand	39,800
	Potential Surplus (Deficit)	(7,729)
	Percent Shortfall of Demand	19.4%
Year 4	Available Total Water Supply	32,071
	Total Water Demand	39,800

	Potential Surplus (Deficit)	(7,729)
	Percent Shortfall of Demand	19.4%
Year 5	Available Total Water Supply	37,014
	Total Water Demand	39,800
	Potential Surplus (Deficit)	(2,786)
	Percent Shortfall of Demand	7.0%

SOURCE: CITY OF TRACY CITYWIDE WATER SYSTEM MASTER PLAN UPDATE, MAY 2023.

The proposed Project is an expansion of the existing Gretchen Talley Park and would generate minimal water demand. The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during normal years, and the City will depend on conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand during dry years. Therefore, the proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources.

Moreover, the City's 2011 General Plan designates the Project site as Park, which allows for the uses proposed by the proposed Project. Therefore, the City's 2011 General Plan anticipated the uses associated with the proposed Project on the Project site.

Therefore, the proposed Project would result in a **less than significant** impact to water supplies.

Wastewater

The City of Tracy owns and operates a wastewater collection, treatment, and disposal system, and provides sanitary sewerage service to the City of Tracy. The Wastewater Treatment Plant (WWTP) currently treats approximately 7.35 mgd of average dry weather influent flows. The influent is comprised of both municipal and industrial waste streams, with the primary industrial contributor being Leprino Foods.

The 2023 Wastewater Master Plan Update projected a capacity requirement of 15.65 mgd ADWF at buildout. The City is currently undergoing a series of treatment plant upgrades. Phases 1A, 1B, 2A, and 2B are fully complete, Phase 2C is designed but has yet to be completed. Phase 1A and 1B increased the treatment plant capacity from 6.5 mgd to 10.8 mgd.

According to the City's 2012 Wastewater Collection System Master Plan Update, Park uses are estimated to generate zero gallons per acre per day. Using this rate, the proposed Project uses on the Project site would not generate wastewater. Accordingly, the proposed Project would not increase the amount of wastewater requiring treatment.

Moreover, the City's 2011 General Plan designates the Project site as Park, which allows for the uses proposed by the proposed Project. Therefore, the City's 2011 General Plan anticipated the uses associated with the proposed Project on the Project site.

Additionally, because the Project applicant would pay City Public Facilities Improvement Plan (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

Stormwater management at the project site would comply with the requirements of the City of Tracy Municipal Code. This would require the applicant to submit a stormwater quality control plan for the project as a whole to the City of Tracy for review and approval during improvement plan review. The plan must include a detailed drainage plan that demonstrates attainment of pre-project runoff requirements prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment. The drainage plan must identify all expected flows from the project area and the location, size, and type of facilities used to retain and treat the runoff volumes and peak flows to meet pre-project conditions.

Responses d), e): Tracy Delta Solid Waste Management, Inc. (Tracy Disposal) has a franchise agreement with the City of Tracy to provide all solid waste services and would serve the proposed Project. Tracy Material Recovery Facility (MRF) is a specialized facility that receives and processes solid wastes, recyclables, green wastes, wood and other inert wastes. Waste generated by the proposed Project would be minimal, as the Project is an expansion of the an existing park.

Moreover, development of the site for park uses was assumed in the City's General Plan EIR. The proposed Project would not interfere with regulations related to solid waste (i.e. the State-mandated waste target of not less than 75 percent of solid waste generated be source reduced, recycled, or composted), or generate waste in excess of the capacity of local infrastructure. Implementation of the proposed Project would have a **less than significant** impact relative to this topic.

XX. WILDFIRE

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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

There are no State Responsibility Areas (SRAs) within the vicinity of the Tracy Planning Area. In addition, there are no areas within the City of Tracy that are categorized as a "Very High" Fire Hazard Severity Zone (FHSZ) by CalFire or a local agency. Although this CEQA topic only applies to areas within a SRA or Very High FHSZ, out of an abundance of caution, these checklist questions are analyzed below.

Responses to Checklist Questions

Response a): The proposed circulation improvements would allow for sufficient emergency access. The Project site would provide adequate emergency vehicular access via driveway connections with adjoining roadways and an internal circulation network. All driveways and internal roadways would be designed to accommodate large emergency vehicles such as fire engines. These improvements would contribute to effective emergency response and evacuation, and they would promote efficient circulation in the project vicinity. Furthermore, the proposed Project does not propose any permanent road closures, lane reductions, or other adverse circulation conditions that may adversely affect emergency response or evacuation in the project vicinity. Furthermore, the City of Tracy does not maintain an 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 and 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. San Joaquin County has areas with an abundance of flashy fuels (i.e. grassland) in the foothill areas of the eastern and western portion of the County. The Project site is located in an area that is predominately agricultural and urban, which is not considered at a significant risk of wildfire. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response c): Development of the proposed Project would not exacerbate fire risks, nor would there be installation or maintenance of any other infrastructure associated with the proposed Project that would significantly exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response d): Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the 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, as a result of runoff, post-fire slope instability, or drainage changes, in the Project site is essentially non-existent.

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

XV. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			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): Less than Significant. As described throughout the analysis above, the proposed Project would not result in any significant impacts that would substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal to the environment. All potentially significant impacts related to plant and animal species would be mitigated to a less than significant level. The proposed Project would be required to implement a SWPPP aimed at reducing stormwater pollutants and runoff during construction, as well as through compliance of various other state, regional and local standards. Specifically related to ensuring the continued sustainability of biological resources through adaptive management, Mitigation Measure BIO-2 requires the SJMSCP Monitoring Plan an Annual Report process, Biological Monitoring Plan, SJMSCP Compliance Monitoring Program, and the SJMSCP Adaptive Management Plan. The Project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species that would reduce any potentially significant impacts to a less than significant level. Through the full mitigation of biological impacts, the Project would not result in any cumulative impacts, related to biological resources. These are **less-than-significant** impacts.

Response b): Less than Significant. As described throughout the analysis above, the proposed Project would not result in any significant individual or cumulative impacts that would not be mitigated to less than significant levels. Therefore, these are **less-than-significant** impacts.

Response c): Less than Significant. As described throughout the analysis above, the proposed Project would not result in any significant impacts that would have environmental effects which will cause substantial adverse effects on humans. The analysis in the relevant sections above provides standards and mitigation measures to reduce any potentially significant impacts on humans to less than significant levels. A variety of mitigation measures including those related to aesthetics and light and glare, GHG and air quality, cultural resources, hazardous materials, seismic hazards, water pollution and water quality, and noise, ensure any adverse effects on humans are reduce to an acceptable standard. Therefore, these are **less than significant** impacts.

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Appendix A: Air Quality, Greenhouse Gas, and Energy

Gretchen Talley Park Phase 3 Expansion Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

3.3. Site Preparation (2024) - Unmitigated

3.5. Grading (2024) - Unmitigated

3.7. Building Construction (2024) - Unmitigated

3.9. Building Construction (2025) - Unmitigated

3.11. Paving (2025) - Unmitigated

3.13. Architectural Coating (2025) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Gretchen Talley Park Phase 3 Expansion
Construction Start Date	1/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	6.60
Location	Gretchen Talley Park, 1551 Dove Dr, Tracy, CA 95376, USA
County	San Joaquin
City	Tracy
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2111
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

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

City Park	11.2	Acre	11.2	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.44	1.20	11.2	13.1	0.02	0.50	0.13	0.50	0.46	0.03	0.46	—	2,398	2,398	0.10	0.02	0.52	2,406
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.42	3.72	36.0	33.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,769	6,769	0.28	0.06	0.02	6,794
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.43	1.20	11.3	11.9	0.02	0.49	1.32	1.81	0.45	0.58	1.04	—	2,210	2,210	0.09	0.02	0.05	2,218
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.22	2.06	2.17	< 0.005	0.09	0.24	0.33	0.08	0.11	0.19	—	366	366	0.01	< 0.005	0.01	367

2.2. Construction Emissions by Year, Unmitigated

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

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

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.44	1.20	11.2	13.1	0.02	0.50	0.00	0.50	0.46	0.00	0.46	—	2,398	2,398	0.10	0.02	0.00	2,406
2025	1.35	1.13	10.4	13.0	0.02	0.43	0.13	0.47	0.40	0.03	0.40	—	2,398	2,398	0.10	0.02	0.52	2,406
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.42	3.72	36.0	33.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,769	6,769	0.28	0.06	0.02	6,794
2025	1.35	1.13	10.4	13.0	0.02	0.43	0.00	0.43	0.40	0.00	0.40	—	2,398	2,398	0.10	0.02	0.00	2,406
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.43	1.20	11.3	11.9	0.02	0.49	1.32	1.81	0.45	0.58	1.04	—	2,210	2,210	0.09	0.02	0.05	2,218
2025	0.44	0.37	3.36	4.27	0.01	0.14	0.01	0.15	0.13	< 0.005	0.13	—	763	763	0.03	0.01	0.01	766
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.26	0.22	2.06	2.17	< 0.005	0.09	0.24	0.33	0.08	0.11	0.19	—	366	366	0.01	< 0.005	0.01	367
2025	0.08	0.07	0.61	0.78	< 0.005	0.03	< 0.005	0.03	0.02	< 0.005	0.02	—	126	126	0.01	< 0.005	< 0.005	127

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.10	0.08	0.69	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	0.52	148	149	0.06	0.01	0.55	153
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.10	0.09	0.09	0.62	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	0.52	138	138	0.06	0.01	0.01	142

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.05	0.04	0.32	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	0.52	73.6	74.1	0.06	< 0.005	0.13	76.8
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.09	12.2	12.3	0.01	< 0.005	0.02	12.7

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.11	0.10	0.08	0.69	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	148	148	0.01	0.01	0.55	151
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.11	0.10	0.08	0.69	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	0.52	148	149	0.06	0.01	0.55	153
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	0.09	0.09	0.62	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	138	138	0.01	0.01	0.01	140
Area	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Total	0.10	0.09	0.09	0.62	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	0.52	138	138	0.06	0.01	0.01	142
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.05	0.04	0.32	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	73.6	73.6	< 0.005	< 0.005	0.13	75.0
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.05	0.05	0.04	0.32	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	0.52	73.6	74.1	0.06	< 0.005	0.13	76.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.4
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.09	0.00	0.09	0.01	0.00	—	0.30
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.01	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.09	12.2	12.3	0.01	< 0.005	0.02	12.7

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.36	1.19	< 0.005	0.06	—	0.06	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.67	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	0.01	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.19	7.19	< 0.005	< 0.005	0.01	7.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.19	1.19	< 0.005	< 0.005	< 0.005	1.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	149	149	0.01	0.01	0.02	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	171	171	0.01	0.01	0.02	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.03	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.38	2.38	< 0.005	< 0.005	< 0.005	2.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.66	6.13	7.16	0.01	0.27	—	0.27	0.25	—	0.25	—	1,309	1,309	0.05	0.01	—	1,314
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.12	1.31	< 0.005	0.05	—	0.05	0.05	—	0.05	—	217	217	0.01	< 0.005	—	217
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.90	3.62	0.01	0.12	—	0.12	0.11	—	0.11	—	666	666	0.03	0.01	—	669
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.53	0.66	< 0.005	0.02	—	0.02	0.02	—	0.02	—	110	110	< 0.005	< 0.005	—	111
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.78	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	139	139	0.01	0.01	0.52	141
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.17	1.17	< 0.005	< 0.005	< 0.005	1.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

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

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

Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.11	0.10	0.08	0.69	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	148	148	0.01	0.01	0.55	151
Total	0.11	0.10	0.08	0.69	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	148	148	0.01	0.01	0.55	151
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.10	0.09	0.09	0.62	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	138	138	0.01	0.01	0.01	140

Total	0.10	0.09	0.09	0.62	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	138	138	0.01	0.01	0.01	140
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.01	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.4
Total	0.01	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.4

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Total	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Total	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.09	0.00	0.09	0.01	0.00	—	0.30
Total	—	—	—	—	—	—	—	—	—	—	—	0.09	0.00	0.09	0.01	0.00	—	0.30

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	1/29/2024	5.00	20.0	—
Site Preparation	Site Preparation	1/30/2024	2/13/2024	5.00	10.0	—

Grading	Grading	2/14/2024	3/27/2024	5.00	30.0	—
Building Construction	Building Construction	3/28/2024	5/22/2025	5.00	300	—
Paving	Paving	5/23/2025	6/20/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	6/21/2025	7/19/2025	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2
Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	0.00	—
Site Preparation	0.00	0.00	15.0	0.00	—

Grading	0.00	0.00	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
City Park	8.77	22.0	24.6	4,718	59.0	148	166	31,726

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)

City Park	0.97	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	22.3	annual days of extreme heat
Extreme Precipitation	0.65	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	9.31	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	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

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	62.5
AQ-PM	17.4
AQ-DPM	48.8
Drinking Water	36.3
Lead Risk Housing	3.55
Pesticides	5.07
Toxic Releases	26.2
Traffic	17.4
Effect Indicators	—
CleanUp Sites	4.12

Groundwater	15.2
Haz Waste Facilities/Generators	50.1
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	66.9
Cardio-vascular	78.3
Low Birth Weights	43.1
Socioeconomic Factor Indicators	—
Education	36.2
Housing	2.99
Linguistic	39.2
Poverty	19.1
Unemployment	51.3

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	81.59887078
Employed	74.38727063
Median HI	79.87937893
Education	—
Bachelor's or higher	63.82651097
High school enrollment	100
Preschool enrollment	76.01693828
Transportation	—

Auto Access	85.40998332
Active commuting	32.36237649
Social	—
2-parent households	84.07545233
Voting	70.42217375
Neighborhood	—
Alcohol availability	87.93789298
Park access	81.35506224
Retail density	24.91979982
Supermarket access	39.67663288
Tree canopy	66.27742846
Housing	—
Homeownership	65.25086616
Housing habitability	84.52457334
Low-inc homeowner severe housing cost burden	93.22468882
Low-inc renter severe housing cost burden	54.75426665
Uncrowded housing	75.52932119
Health Outcomes	—
Insured adults	86.65469011
Arthritis	84.5
Asthma ER Admissions	23.9
High Blood Pressure	61.0
Cancer (excluding skin)	68.9
Asthma	61.7
Coronary Heart Disease	91.8
Chronic Obstructive Pulmonary Disease	84.0
Diagnosed Diabetes	85.5

Life Expectancy at Birth	69.9
Cognitively Disabled	95.5
Physically Disabled	92.6
Heart Attack ER Admissions	12.0
Mental Health Not Good	62.3
Chronic Kidney Disease	90.3
Obesity	51.2
Pedestrian Injuries	39.4
Physical Health Not Good	76.2
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	21.6
Current Smoker	56.0
No Leisure Time for Physical Activity	59.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	91.7
English Speaking	81.3
Foreign-born	43.5
Outdoor Workers	35.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	31.7
Traffic Density	8.2
Traffic Access	0.0
Other Indices	—

Hardship	33.6
Other Decision Support	—
2016 Voting	56.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	21.0
Healthy Places Index Score for Project Location (b)	83.0
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

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Joaquin (SJV)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Fuel Consumption	**MPG (Derived)**	
San Joaquin (SJV)	2024	All Other Buses	Aggregate	Aggregate	Diesel	65.05222502	3428.444696	0.394675604	**8.69**	
San Joaquin (SJV)	2024	LDA	Aggregate	Aggregate	Gasoline	247012.0846	10048544.61	343.6270786	**29.24**	
San Joaquin (SJV)	2024	LDA	Aggregate	Aggregate	Diesel	662.6899919	21573.25495	0.501839499	**42.99**	
San Joaquin (SJV)	2024	LDT1	Aggregate	Aggregate	Gasoline	21456.49018	717056.3787	29.4159226	**24.38**	
San Joaquin (SJV)	2024	LDT1	Aggregate	Aggregate	Diesel	5.633733188	62.92292074	0.002565124	**24.53**	
San Joaquin (SJV)	2024	LDT2	Aggregate	Aggregate	Gasoline	102901.1101	4166165.024	174.9447245	**23.81**	
San Joaquin (SJV)	2024	LDT2	Aggregate	Aggregate	Diesel	286.987515	12717.11324	0.385547294	**32.98**	
San Joaquin (SJV)	2024	LHD1	Aggregate	Aggregate	Gasoline	9641.660065	340622.7164	36.05181334	**9.45**	
San Joaquin (SJV)	2024	LHD1	Aggregate	Aggregate	Diesel	8656.00688	302559.269	19.07627031	**15.86**	
San Joaquin (SJV)	2024	LHD2	Aggregate	Aggregate	Gasoline	1150.998132	40352.62191	4.767420056	**8.46**	
San Joaquin (SJV)	2024	LHD2	Aggregate	Aggregate	Diesel	3118.358677	114286.0331	8.708041628	**13.12**	
San Joaquin (SJV)	2024	MCY	Aggregate	Aggregate	Gasoline	12062.21076	65353.43213	1.623503572	**40.25**	
San Joaquin (SJV)	2024	MDV	Aggregate	Aggregate	Gasoline	93457.86813	3290392.694	172.5699306	**19.07**	
San Joaquin (SJV)	2024	MDV	Aggregate	Aggregate	Diesel	1392.771352	53244.94495	2.200486663	**24.20**	
San Joaquin (SJV)	2024	MH	Aggregate	Aggregate	Gasoline	1422.457887	12431.65886	2.817578923	**4.41**	
San Joaquin (SJV)	2024	MH	Aggregate	Aggregate	Diesel	637.8145601	5565.076859	0.591984802	**9.40**	
San Joaquin (SJV)	2024	Motor Coach	Aggregate	Aggregate	Diesel	17.9321887	2501.984796	0.454968807	**5.50**	
San Joaquin (SJV)	2024	OBUS	Aggregate	Aggregate	Gasoline	177.3165445	7727.16438	1.627277957	**4.75**	
San Joaquin (SJV)	2024	PTO	Aggregate	Aggregate	Diesel	0	19970.46672	4.00727503	**4.98**	
San Joaquin (SJV)	2024	SBUS	Aggregate	Aggregate	Gasoline	129.6913882	7167.249263	0.704616753	**10.17**	
San Joaquin (SJV)	2024	SBUS	Aggregate	Aggregate	Diesel	489.5027098	10928.5849	1.334007114	**8.19**	**MHD**
San Joaquin (SJV)	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	10.4258013	692.5730592	0.077624843	**8.92**	**8.49**
San Joaquin (SJV)	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	13.90870419	950.7974883	0.106548597	**8.92**	
San Joaquin (SJV)	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	45.47581648	2476.537004	0.273307239	**9.06**	
San Joaquin (SJV)	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	76.65849176	15605.60454	1.610472397	**9.69**	
San Joaquin (SJV)	2024	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	248.0416093	8390.384435	1.014382441	**8.27**	
San Joaquin (SJV)	2024	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	159.232235	5459.954804	0.663149843	**8.23**	
San Joaquin (SJV)	2024	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	695.0120144	23687.85018	2.864213626	**8.27**	
San Joaquin (SJV)	2024	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	123.4336087	6821.359167	0.81523187	**8.37**	
San Joaquin (SJV)	2024	T6 Instate Other Clas	Aggregate	Aggregate	Diesel	451.1129727	18663.28795	2.191013074	**8.52**	
San Joaquin (SJV)	2024	T6 Instate Other Clas	Aggregate	Aggregate	Diesel	1201.861539	52691.78205	6.167338558	**8.54**	
San Joaquin (SJV)	2024	T6 Instate Other Clas	Aggregate	Aggregate	Diesel	923.0227284	39128.69519	4.555077658	**8.59**	
San Joaquin (SJV)	2024	T6 Instate Other Clas	Aggregate	Aggregate	Diesel	576.3302588	26029.21041	2.982693496	**8.73**	
San Joaquin (SJV)	2024	T6 Instate Tractor Cla	Aggregate	Aggregate	Diesel	10.8446098	517.545082	0.060838227	**8.51**	
San Joaquin (SJV)	2024	T6 Instate Tractor Cla	Aggregate	Aggregate	Diesel	714.3465289	43555.15195	4.826227026	**9.02**	
San Joaquin (SJV)	2024	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.054636746	398.8706276	0.04448499	**8.97**	
San Joaquin (SJV)	2024	T6 OOS Class 5	Aggregate	Aggregate	Diesel	8.039716641	547.1787746	0.061063112	**8.96**	
San Joaquin (SJV)	2024	T6 OOS Class 6	Aggregate	Aggregate	Diesel	26.41414681	1429.793793	0.156729016	**9.12**	
San Joaquin (SJV)	2024	T6 OOS Class 7	Aggregate	Aggregate	Diesel	41.42374128	10396.37881	1.065076157	**9.76**	
San Joaquin (SJV)	2024	T6 Public Class 4	Aggregate	Aggregate	Diesel	31.56333135	1053.78498	0.138898444	**7.59**	
San Joaquin (SJV)	2024	T6 Public Class 5	Aggregate	Aggregate	Diesel	76.95816953	2782.913848	0.359655019	**7.74**	
San Joaquin (SJV)	2024	T6 Public Class 6	Aggregate	Aggregate	Diesel	125.5221254	4449.870691	0.571506625	**7.79**	
San Joaquin (SJV)	2024	T6 Public Class 7	Aggregate	Aggregate	Diesel	150.3174424	6760.620338	0.870575173	**7.77**	
San Joaquin (SJV)	2024	T6 Utility Class 5	Aggregate	Aggregate	Diesel	33.65509289	1370.025298	0.154664523	**8.86**	
San Joaquin (SJV)	2024	T6 Utility Class 6	Aggregate	Aggregate	Diesel	6.378562647	258.4995427	0.029097101	**8.88**	
San Joaquin (SJV)	2024	T6 Utility Class 7	Aggregate	Aggregate	Diesel	7.241994207	359.7153567	0.040236892	**8.94**	
San Joaquin (SJV)	2024	T6TS	Aggregate	Aggregate	Gasoline	543.942625	27420.2383	5.79393515	**4.73**	**HHD**
San Joaquin (SJV)	2024	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1534.527717	313079.2303	51.17544603	**6.12**	**5.48**
San Joaquin (SJV)	2024	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1373.302248	372186.6297	59.77834597	**6.23**	
San Joaquin (SJV)	2024	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	578.3811292	135208.7914	22.07143154	**6.13**	
San Joaquin (SJV)	2024	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	30.34238714	5584.705745	0.939576872	**5.94**	
San Joaquin (SJV)	2024	T7 POAK Class 8	Aggregate	Aggregate	Diesel	136.1535747	13506.37259	2.314776832	**5.83**	
San Joaquin (SJV)	2024	T7 POLA Class 8	Aggregate	Aggregate	Diesel	150.6817261	19103.13151	3.291418093	**5.80**	
San Joaquin (SJV)	2024	T7 Public Class 8	Aggregate	Aggregate	Diesel	386.4292842	16583.79222	3.181568443	**5.21**	
San Joaquin (SJV)	2024	T7 Single Concrete/T	Aggregate	Aggregate	Diesel	120.132319	8584.481023	1.451453452	**5.91**	
San Joaquin (SJV)	2024	T7 Single Dump Class	Aggregate	Aggregate	Diesel	503.0679595	30859.86722	5.349370415	**5.77**	
San Joaquin (SJV)	2024	T7 Single Other Class	Aggregate	Aggregate	Diesel	1102.799233	57868.37225	9.828957612	**5.89**	
San Joaquin (SJV)	2024	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	171.344301	11107.44979	4.365787424	**2.54**	
San Joaquin (SJV)	2024	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	2796.388438	215878.9148	35.37410597	**6.10**	
San Joaquin (SJV)	2024	T7 Utility Class 8	Aggregate	Aggregate	Diesel	23.92280564	1090.321233	0.187456981	**5.82**	
San Joaquin (SJV)	2024	T7IS	Aggregate	Aggregate	Gasoline	1.5755645	52.13121289	0.014943025	**3.49**	
San Joaquin (SJV)	2024	UBUS	Aggregate	Aggregate	Gasoline	50.03970637	3769.973563	0.80245172	**4.70**	
San Joaquin (SJV)	2024	UBUS	Aggregate	Aggregate	Diesel	78.70033808	5451.344083	0.604716218	**9.01**	

On-road Mobile (Operational) Energy Usage

Note: Assumes that all vehicles that are generated as part of proposed project use gasoline as a fuel source (for simplicity), since the vast majority of vehicles generated by the project would use gasoline.

Unmitigated:

Step 1:

Therefore:

Average Daily VMT:

87	Source: CalEEMod

Step 2: Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
49.06%	3.86%	19.79%	17.49%	3.30%	0.78%	1.20%	1.75%	0.05%	0.04%	2.20%	0.13%	0.36%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2024 (EMFAC2021 Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
29.24	24.38	23.81	19.07	9.45	8.46	N/A	N/A	4.75	4.70	40.25	10.17	4.41

Therefore:

Weighted Average MPG Factors

Gasoline: **24.6**

Step 3: **Therefore:**

4	**daily gallons of gasoline**

or

1,288	**annual gallons of gasoline**

Off-road (i.e. On-site) Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source.
Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	**114.2**	**metric tons**	**CO2**	**(provided in CalEEMod Output File)**
Conversion Factor:	2204.6262	pounds	per metric ton	
Intermediate Result:	**251,768**	**pounds**	**CO2**	
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016
Final Result:	**11,250**	**gallons**	**diesel fuel**	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Site Preparation	24
Grading	90

On-road Mobile (Construction) Energy Usage - Site Preparation

Note: Year 2022 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

18

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

208

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2021) - Year 2022

LDA	LDT1	LDT2
29.24	24.38	23.81

Therefore:

Weighted Average Worker MPG Factor

26.67

Step 3: **Therefore:**

8 **Worker daily gallons of gasoline**

Step 4: 10 **# of Days (CalEEMod Output)**

Therefore:

Result: **78** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Grading

Note: Year 2022 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

20

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

238

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2021) - Year 2022

LDA	LDT1	LDT2
29.24	24.38	23.81

Therefore:

Weighted Average Worker MPG Factor

26.67

Step 3: **Therefore:**

9 **Worker daily gallons of gasoline**

Step 4: 30 **# of Days (CalEEMod Output)**

Therefore:

Result: **268** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Paving

Note: Year 2022 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

15

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

179

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2021) - Year 2022

LDA	LDT1	LDT2
29.24	24.38	23.81

Therefore:

Weighted Average Worker MPG Factor

26.7

Step 3: **Therefore:**

7 **Worker daily gallons of gasoline**

Step 4: 20 **# of Days (CalEEMod Output)**

Therefore:

Result: **134** **Total gallons of gasoline**

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Appendix B: Geotechnical Investigation

ROCKRIDGE GEOTECHNICAL

Prepared for **The KPA Group**

GEOTECHNICAL INVESTIGATION
PROPOSED PARK IMPROVEMENTS
GRETCHEN TALLEY PARK
1551 DOVE DRIVE
TRACY, CALIFORNIA

October 29, 2021
Project No. 21-2097

270 Grand Avenue
Oakland, CA 94610

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ROCKRIDGE GEOTECHNICAL

October 29, 2021
Project No. 21-2097

Mr. Paul Powers
The KPA Group
6700 Koll Center Parkway, Suite 125
Pleasanton, CA 94566

Subject: Geotechnical Investigation Report
Proposed Park Improvements
Gretchen Talley Park
1551 Dove Drive
Tracy, California

Dear Mr. Powers,

We are pleased to present our geotechnical investigation report for the proposed park improvements at Gretchen Talley Park, located at 1551 Dove Drive in Tracy, California. The project site is at the southeastern corner of the intersection of Mitts Way and Dove Drive.

The site is part of a larger park consisting of picnic areas, lawns, a basketball court, playgrounds, and amphitheater. Most of the proposed improvements will be constructed on the vacant lot at the northwestern corner of the park.

The proposed improvements consist of constructing a lighted basketball court, lighted pickleball courts, and lighted tennis courts with shade structures at the southern perimeter of the site. Other improvements include new concrete walkways and pavements as well as a park monument sign and gathering area.

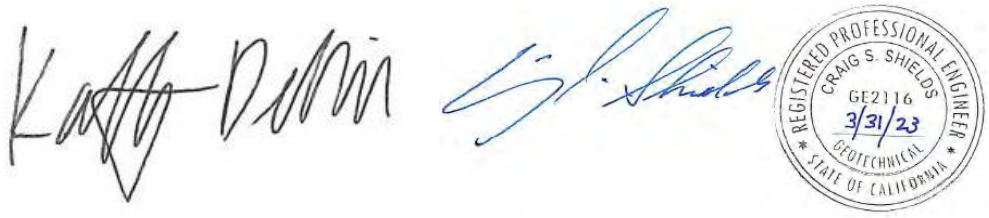
From a geotechnical standpoint, we conclude the proposed development can be constructed as planned, provided the recommendations presented in this report are incorporated into the project plans and specifications and implemented during construction. The primary geotechnical concern for the project is providing adequate foundation and subgrade support for the proposed improvements.

The recommendations contained in our report are based on a limited subsurface exploration. Consequently, variations between expected and actual subsurface conditions may be found in localized areas during construction. Therefore, we should be engaged to

observe grading and foundation installation during which time we may make changes in our recommendations, if deemed necessary.

We appreciate the opportunity to provide our services to you on this project. If you have any questions, please call.

Sincerely yours,
ROCKRIDGE GEOTECHNICAL, INC.



Katie S. Dickinson
Project Engineer

Craig S. Shields, P.E., G.E.
Principal Geotechnical Engineer

Enclosure

ROCKRIDGE GEOTECHNICAL

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 SCOPE OF SERVICES 1

3.0 FIELD INVESTIGATION 2
- 3.1 Test Borings 2
- 3.2 Laboratory Testing 3

4.0 SUBSURFACE CONDITIONS 4

5.0 SEISMIC CONSIDERATIONS 4
- 5.1 Regional Seismicity 4
- 5.2 Geologic Hazards 7
  - 5.2.1 Ground Shaking 8
  - 5.2.2 Fault Rupture 8
  - 5.2.3 Liquefaction and Liquefaction-Induced Settlement 8
  - 5.2.4 Cyclic Densification 9

6.0 CONCLUSIONS AND RECOMMENDATIONS 9
- 6.1 Site Preparation and Grading 9
  - 6.1.1 Fill Quality and Compaction 10
  - 6.1.2 Utility Trench Backfill 11
  - 6.1.3 Exterior Concrete Flatwork 11
- 6.2 Foundations and Settlement 12
  - 6.2.1 Spread Footings 12
  - 6.2.2 Drilled Pier Foundations 13
- 6.3 Pavement Design 14
  - 6.3.1 Flexible (Asphalt Concrete) Pavement Design 14
  - 6.3.2 Rigid (Portland Cement Concrete) Pavement 15
- 6.4 Soil Corrosivity 15
- 6.5 Seismic Design 16
- 6.6 Construction Considerations 17

7.0 ADDITIONAL GEOTECHNICAL SERVICES 17

8.0 LIMITATIONS 18

REFERENCES

FIGURES

APPENDIX A – Logs of Borings

APPENDIX B – Laboratory Test Results

LIST OF FIGURES

Figure 1 Site Location Map

Figure 2 Site Plan

Figure 3 Regional Geologic Map

Figure 4 Regional Fault Map

APPENDIX A

Figures A-1 through A-5 Logs of Borings, B-1 through B-5

Figure A-6 Soil Classification Chart

APPENDIX B

Figure B-1 Plasticity Chart

Figure B-2 Particle Size Distribution Report

Figure B-3 Resistance Value Test

Figure B-4 Soil Corrosion Test Results

ROCKRIDGE GEOTECHNICAL

GEOTECHNICAL INVESTIGATION
PROPOSED PARK IMPROVEMENTS
GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

1.0 INTRODUCTION

This report presents the results of the geotechnical investigation performed by Rockridge Geotechnical, Inc. for the proposed park improvements at Gretchen Talley Park, located at 1551 Dove Drive in Tracy, California. The project site is at the southeastern corner of the intersection of Mitts Way and Dove Drive, as shown on the Site Location Map, Figure 1.

The site is part of a larger park consisting of picnic areas, lawns, a basketball court, playgrounds, and amphitheater. Most of the proposed improvements will be constructed on the vacant lot at the northwestern corner of the park.

We understand the proposed improvements consist of constructing a lighted basketball court, lighted pickleball courts, and lighted tennis courts with shade structures at the southern perimeter of the site. Other improvements include new concrete walkways and pavements as well as a park monument sign and gathering area.

2.0 SCOPE OF SERVICES

Our geotechnical investigation was performed in accordance with our proposal dated August 31, 2021. Our scope of services consisted of reviewing available subsurface information in the site vicinity, exploring subsurface conditions at the site by drilling five test borings, performing laboratory tests on selected soil samples, and performing engineering analyses to develop conclusions and recommendations regarding:

- site seismicity and seismic hazards, including the potential for liquefaction and liquefaction-induced ground failure
- the most appropriate foundation type(s) for the proposed structures
- design criteria for the recommended foundation type(s), including vertical and lateral capacities for each of the foundation type(s)

- estimates of foundation settlement
- site grading and excavation, including criteria for fill quality and compaction
- subgrade preparation for exterior concrete slabs-on-grade
- rigid and flexible pavement design
- 2019 California Building Code (CBC) site class and design spectral response acceleration parameters
- corrosivity of the near-surface soil and groundwater and the potential effects on buried concrete and metal structures and foundations
- construction considerations.

3.0 FIELD INVESTIGATION

Subsurface conditions at the site were explored by drilling five borings, and performing laboratory testing on selected soil samples. Prior to performing the field investigation, we obtained a drilling permit from the San Joaquin County Environmental Health Department (SJCEHD). We also contacted Underground Service Alert (USA) to notify them of our work, as required by law. Details of the field exploration and laboratory testing are described below.

3.1 Test Borings

Benevent Building of Concord, California drilled five borings on September 28, 2021 using a limited-access drill rig equipped with four-inch-diameter solid-stem flight augers. The borings, designated as B-1 through B-5, were drilled at the approximate locations shown on Figure 2. The borings were drilled to depths ranging from 11-1/2 to 16-1/2 below the existing ground surface (bgs).

During drilling, our field engineer logged the soil encountered and obtained representative samples for visual classification and laboratory testing. The logs of the borings are presented on Figures A-1 through A-5, respectively, in Appendix A. The soil encountered in the borings was classified in accordance with the classification chart shown on Figure A-6.

Soil samples were obtained using the following samplers:

- Modified California (MC) split-barrel sampler with a 3.0-inch outside diameter and 2.5-inch inside diameter, lined with 2.43-inch inside diameter stainless steel or brass tubes.
- Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside and 1.5-inch inside diameter; the sampler was designed to accommodate liners, but liners were not used.

The type of sampler used was selected based on soil type and the desired sample quality for laboratory testing. In general, the MC sampler was used to obtain samples in stiff to very stiff cohesive soil and the SPT sampler was used to evaluate the relative density of sandy soils.

The MC and SPT samplers were driven with a 140-pound safety hammer falling 30 inches per drop using a rope-and-cathead pulley system. The samplers were driven up to 18 inches and the hammer blows required to drive the samplers were recorded every six inches and are presented on the boring logs. A "blow count" is defined as the number of hammer blows per six inches of penetration or 50 blows for six inches or less of penetration. The blow counts required to drive the MC and SPT samplers were converted to approximate SPT N-values using factors of 0.7 and 1.2, respectively, to account for sampler type, approximate hammer energy, and the fact that the SPT sampler is sized to accommodate liners, but liners were not used. The blow counts used for this conversion were: 1) the last two blow counts if the sampler was driven more than 12 inches and the last one blow count if the sampler was driven 12 inches or less. The converted SPT N-values are presented on the boring logs.

Upon completion, the borings were backfilled with cement grout in accordance with SJCEHD grout standards. Soil cuttings were spread near the boring locations.

3.2 Laboratory Testing

We re-examined the soil samples obtained from the borings to confirm the field classifications and selected representative samples for laboratory testing. Soil samples were tested by B. Hillebrandt Soils Testing, Inc. of Alameda, California to measure moisture content, dry density, plasticity index, and particle size distribution. A resistance value (R-value) sample was tested by Construction Materials Testing of Livermore, California. Soil samples were also tested by

Project X Corrosion Engineering of Murrieta, California to measure corrosivity. The results of the laboratory tests are presented on the boring logs and in Appendix B.

4.0 SUBSURFACE CONDITIONS

A regional geologic map prepared by Wagner, Bortugno and McJunkin (1991), a portion of which is presented on Figure 3, indicates the site is underlain by alluvial fan deposits (Qf). Based on our borings, we conclude the site is generally underlain by alluvium consisting of loose to dense gravel and sand and stiff to hard clay to the maximum depth explored of 15 feet bgs. Atterberg limits tests performed on three samples of the upper few feet of soil indicates it has low expansion potential with plasticity indices (PIs) ranging from 9 to 14.

Groundwater was not encountered in our borings. To further evaluate the groundwater level at the site, we reviewed information on the State of California Department of Water Resources SMGA Data Viewer website GeoTracker website (https://sgma.water.ca.gov/). The closest monitoring well data is one block west of the project site. Intermittent groundwater readings between 2013 and 2021 fluctuated between depths of 70 and 140 feet bgs. Considering the depth of the monitoring well (800 feet), it is possible that seasonal perched water may be encountered at shallower depths. The depth to groundwater is expected to vary tens feet annually, depending on rainfall amounts and regional groundwater management. Based on the available information, we conclude a high groundwater depth of 50 feet bgs should be considered used for design.

5.0 SEISMIC CONSIDERATIONS

The San Francisco Bay Area and surrounding areas are considered to be one of the more seismically active regions in the world. The results of our evaluation regarding seismic considerations for the project site are presented in the following sections.

5.1 Regional Seismicity

The site is located adjacent to the Coast Ranges geomorphic province of California that is characterized by northwest-trending valleys and ridges. These topographic features are

controlled by folds and faults that resulted from the collision of the Farallon and North American plates and subsequent strike-slip faulting along the San Andreas fault system. The San Andreas fault is more than 600 miles long from Point Arena in the north to the Gulf of California in the south. The Coast Ranges province is bounded on the east by the Great Valley and on the west by the Pacific Ocean.

The major active faults in the area are the Great Valley, Las Positas, and Greenville faults. These and other faults in the region are shown on Figure 4. For these and other active faults within a 50-kilometer radius of the site, the distance and direction from the site and characteristic moment magnitude[1] [Peterson et al. (2014) & Thompson et al. (2016)] are summarized in Table 1. These references are based on the Third Uniform California Earthquake Rupture Forecast (UCERF3), prepared by Field et al. (2013).

[1] Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

TABLE 1
Regional Faults and Seismicity

Fault Segment	Approximate Distance from Site (km)	Direction from Site	Characteristic Magnitude
Great Valley 07 (Orestimba)	4.0	Southwest	6.82
Great Valley 06 (North)	18	West	6.86
Las Positas	21	West	6.50
Great Valley 06 (Midland alt1)	23	Northwest	7.27
Great Valley 06 (Midland alt2)	24	Northwest	7.12
Greenville (South)	25	Southwest	6.64
Mount Diablo Thrust South	30	West	6.50
Mount Diablo Thrust	33	West	6.67
Clayton	39	West	6.57
Total Calaveras (CN+CC+CS+CE)	40	West	7.43
Calaveras (North, CN)	40	West	6.86
Mount Diablo Thrust North CFM	41	West	6.72
Calaveras (Central, CC)	44	Southwest	6.85
Totally Hayward + Rodgers Creek (RC+HN+HA+HE)	47	Southwest	7.58
Hayward (South, HS)	47	Southwest	7.00
Hayward (Extension, HE)	47	Southwest	6.18
Ortigalita (North)	48	Southwest	6.80
Great Valley 05 (Pittsburg – Kirby Hills alt2)	49	Northwest	6.66

Since 1800, four major earthquakes (i.e., Magnitude > 6) have been recorded on the San Andreas Fault. In 1836, an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) Intensity Scale occurred east of Monterey Bay on the San Andreas fault (Toppozada and Borchardt, 1998). The estimated moment magnitude, M_w, for this earthquake is about 6.25. In 1838, an earthquake occurred on the Peninsula segment of the San Andreas fault. Severe shaking occurred with an MM of about VIII-IX, corresponding to an M_w of about 7.5. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas fault from Shelter Cove to San Juan Bautista approximately 470 kilometers in length. It had a maximum intensity of XI (MM), an M_w of about 7.9, and was felt

560 kilometers away in Oregon, Nevada, and Los Angeles. The most recent earthquake to affect the Bay Area was the Loma Prieta Earthquake of October 17, 1989 with an M_w of 6.9. This earthquake occurred in the Santa Cruz Mountains about 85 kilometers southwest of the site.

In 1868, an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward fault. The estimated M_w for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably an M_w of about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake ($M_w = 6.2$).

The U.S. Geological Survey's 2014 Working Group on California Earthquake Probabilities has compiled the earthquake fault research for the San Francisco Bay area in order to estimate the probability of fault segment rupture. They have determined that the overall probability of moment magnitude 6.7 or greater earthquake occurring in the San Francisco Region during the next 30 years (starting from 2014) is 72 percent. The highest probabilities are assigned to the Hayward fault, Calaveras fault, and the northern segment of the San Andreas fault. These probabilities are 14.3, 7.4, and 6.4 percent, respectively.

5.2 Geologic Hazards

Because the project site is in a seismically active region, we evaluated the potential for earthquake-induced geologic hazards including ground shaking, ground surface rupture, liquefaction,[2] lateral spreading,[3] and cyclic densification[4]. We used the results of our field investigation to evaluate the potential of these phenomena occurring at the project site.

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[2] Liquefaction is a phenomenon where loose, saturated, cohesionless soil experiences temporary reduction in strength during cyclic loading such as that produced by earthquakes.

[3] Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces.

[4] Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is compacted by earthquake vibrations, causing ground-surface settlement.

5.2.1 Ground Shaking

The seismicity of the site is governed by the activity of the Greenville and Great Valley faults, although ground shaking from future earthquakes on other faults will also be felt at the site. The intensity of earthquake ground motion at the site will largely depend upon the characteristics of the generating fault, distance to the earthquake epicenter, and magnitude . We judge that strong to very strong ground shaking could occur at the site during a large earthquake on one of the nearby faults.

5.2.2 Fault Rupture

Historically, ground surface displacements closely follow the trace of geologically young faults. The site is not within an Earthquake Fault Zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. Therefore, we conclude the risk of fault offset at the site from a known active fault is very low. In a seismically active area, the remote possibility exists for future faulting in areas where no faults previously existed; however, we conclude the risk of surface faulting and consequent secondary ground failure from previously unknown faults is also very low.

5.2.3 Liquefaction and Liquefaction-Induced Settlement

When a saturated, cohesionless soil liquefies, it experiences a temporary loss of shear strength created by a transient rise in excess pore pressure generated by strong ground motion. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction.

Considering the depth to groundwater, we conclude the potential for liquefaction and associated hazards (i.e., lateral spreading) to impact surface improvements at the site is nil.

5.2.4 Cyclic Densification

Cyclic densification (also referred to as differential compaction) of non-saturated sand (sand above groundwater table) can occur during an earthquake, resulting in settlement of the ground surface and overlying improvements. We used the methodology proposed by Pradel (1998) to evaluate the potential for cyclic densification in the layers of sand and gravel encountered in our borings. The analysis considered a peak ground acceleration during an MCE earthquake (PGA_M) of 0.56 times gravity (g) and an earthquake magnitude of 6.3 (based on deaggregation).

The results of our analysis indicates that localized ground surface settlement of approximately 1/2 inch could occur as a result of a large earthquake on a nearby fault.

6.0 CONCLUSIONS AND RECOMMENDATIONS

From a geotechnical standpoint, we conclude the site can be developed as planned, provided the recommendations presented in this report are incorporated into the project plans and specifications and implemented during construction. The primary geotechnical concerns for the project is providing adequate foundation and subgrade support for the proposed improvements. Our conclusions and recommendations regarding site grading, design of foundations, and concrete flatwork are presented in the following sections.

6.1 Site Preparation and Grading

Site preparation should consist of stripping the existing grass and the upper 3 to 4 inches of soil containing more than three percent organics by dry weight. In areas that will receive fill or improvements, the soil subgrade exposed should be scarified to a depth of at least 12 inches, moisture-conditioned to above optimum moisture content, and compacted to at least 90 percent relative compaction[5]. If there are active underground utility lines, care should be taken to protect these lines during the overexcavation. If existing, abandoned underground utility lines are

[5] Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM D1557 laboratory compaction procedure.

encountered beneath proposed improvements, they should be removed beneath proposed improvements and capped. Where existing utility lines will not interfere with the proposed construction, they may be abandoned in-place provided the lines are filled with lean concrete or cement grout to the property line. Voids resulting from demolition activities, including removal of abandoned utility lines, that extend below finished improvements should be properly backfilled with engineered fill.

If grading work is performed during the rainy season, the contractor may find the subgrade material too wet to compact to the recommended relative compaction and will have to be scarified and aerated to lower its moisture content so the specified compaction can be achieved. Material to be dried by aeration should be scarified to a depth of at least 12 inches; the scarified soil should be turned at least twice a day to promote uniform drying. Once the moisture content of the aerated soil has been reduced to acceptable levels, the soil should be compacted in accordance with our recommendations. Aeration typically is the least costly method used to stabilize the subgrade soil; however, it generally requires the most time to complete. Other soil stabilization alternatives include overexcavating and placing drier material, and treatment with lime or Portland cement. If the grading work is performed during the dry season, moisture-conditioning will likely be required.

6.1.1 Fill Quality and Compaction

Fill (engineered fill) should consist of on-site or imported soil that is free of organic matter, contains no rocks or lumps larger than three inches in greatest dimension, has a liquid limit of less than 40 and a plasticity index lower than 15, and is approved by the Geotechnical Engineer. Samples of the proposed imported fill should be submitted to the Geotechnical Engineer at least three business days prior to use at the site. The grading contractor should provide analytical test results or other suitable environmental documentation indicating the imported fill is free of hazardous materials at least three days before use at the site. If this data is not available, up to two weeks should be allowed to perform analytical testing on the proposed imported material.

Fill should be placed in horizontal lifts not exceeding eight inches in uncompacted thickness, moisture-conditioned to above optimum moisture content, and compacted to at least 90 percent relative compaction. Fill consisting of clean sand or gravel (defined as poorly-graded soil with less than five percent fines by weight) or greater than five feet in thickness should be compacted to at least 95 percent relative compaction. Fill placed within the upper 12 inches of vehicular pavement soil subgrade should also be compacted to at least 95 percent relative compaction and be non-yielding.

6.1.2 Utility Trench Backfill

Excavations for utility trenches can be readily made with a backhoe. All trenches should conform to the current CAL-OSHA requirements. To provide uniform support, pipes or conduits should be bedded on a minimum of four inches of sand or fine gravel. After the pipes and conduits are tested, inspected (if required), and approved, they should be covered to a depth of six inches with sand or fine gravel, which should be mechanically tamped.

Backfill for utility trenches and other excavations are also considered fill, and should be placed and compacted in accordance with the recommendations previously presented. If imported clean sand or gravel (defined as poorly-graded soil with less than five percent fines) is used as backfill, it should be compacted to at least 95 percent relative compaction. Jetting of trench backfill should not be permitted. Special care should be taken when backfilling utility trenches in pavement areas. Poor compaction may cause excessive settlements, resulting in damage to the pavement section.

6.1.3 Exterior Concrete Flatwork

We recommend a minimum of four inches of Class 2 aggregate base be placed beneath proposed exterior concrete flatwork, such as sidewalks. The subgrade should be prepared by scarifying to a depth of at least 12 inches, moisture-conditioning the scarified soil to above optimum moisture content, and compacting to a minimum of 90 percent relative compaction. The prepared subgrade should be kept moist until it is covered with the Class 2 aggregate base. The Class 2 aggregate base placed beneath exterior slabs-on-grade not subject to vehicular loading, such as

pedestrian sidewalks, should be moisture-conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction.

6.2 Foundations and Settlement

We conclude the proposed new improvements may be supported on spread footings or drilled, cast-in-place concrete piers (drilled piers). Recommendations for spread footings and drilled piers are presented in this section.

6.2.1 Spread Footings

New site retaining walls and other improvements may be supported on spread footings bottomed on firm native soil. Spread footings may be designed using allowable bearing pressures of 1,500 pounds per square foot (psf) for dead-plus-live loads and 2,000 psf for total design loads, which include wind or seismic forces; these values include factors of safety of at least 2.0 and 1.5, respectively. We estimate total settlement of spread footings under static loads will be less than 3/4 inch and differential settlement will less than 1/2 inch over a horizontal distance of 30 feet.

Lateral loads may be resisted by a combination of passive pressure on the vertical faces of the footings and friction between the bottoms of the footings and the supporting soil. To compute lateral resistance, we recommend using an equivalent fluid weight of 240 pounds per cubic foot (pcf); the upper foot of soil should be ignored for lateral resistance unless confined by a slab. Frictional resistance should be computed using a base friction coefficient of 0.30. The passive pressure and frictional resistance values include a factor of safety of at least 1.5 and may be used in combination without further reduction.

Footing excavations should bottom on firm native soil or engineered fill and be free of standing water, debris, and weak and disturbed materials prior to placing concrete. The bottoms and sides of the footing excavations should be maintained in a moist condition until concrete is placed. We should check footing excavations prior to placement of reinforcing steel.

6.2.2 Drilled Pier Foundations

The proposed new fences and sports court lighting poles may be supported on drilled cast-in-place concrete piers. Drilled piers should be at least 12 inches in diameter. For dead-plus-live-load conditions, the vertical capacity of the piers should be computed using an allowable skin friction of 400 psf. This skin friction values may be increased by one-third for total load conditions. Skin friction in the upper one foot of soil and end bearing should be ignored in computing the vertical pier capacity.

To compute lateral pier capacities using the pole formula, we recommend using passive pressure equivalent fluid weight of 240 pcf. The passive pressure value may be assumed to act over three pier diameters. Passive pressure provided by the upper one foot of soil should be ignored unless the ground surface adjacent to the pier is paved. After the length and diameter of the drilled pier foundations have been determined, we should perform a lateral pile analysis to estimate the amount of deflection of the top of the pier under the design shear and bending moment.

Drilled piers should be installed by a qualified contractor with demonstrated experience in this type of foundation. The contractor should be prepared to use casing or slurry if caving soils are encountered. The bottoms of the pier holes should be free of debris and water before placement of concrete. If groundwater is encountered during pier drilling, the pier hole should be pumped dry prior to placement of concrete. If the hole cannot be pumped dry prior to placement of concrete, then the concrete should be placed by tremie methods.

Concrete used for pier construction should be placed in the pier holes using a tremie pipe or hose to minimize aggregate segregation. Under no circumstances should concrete be allowed to free-fall against either the steel reinforcement or the sides of the excavation during pouring. Concrete should be placed in the pier holes the same day they are drilled if groundwater is encountered.

6.3 Pavement Design

Design recommendations for asphalt and Portland cement concrete pavements are presented in the following sections.

6.3.1 Flexible (Asphalt Concrete) Pavement Design

The State of California flexible pavement design method was used to develop the recommended asphalt concrete (AC) pavement sections. The subgrade soil that will be exposed at the pavement subgrade will consist primarily of clayey sand and sandy clay with varying amounts of gravel. Based on the laboratory test results of a near-surface sample, we selected a resistance value (R-value) of 25 for design . Recommended pavement sections for traffic indices (TIs) ranging from 4.0 to 7.0 are presented in Table 2. The civil engineer for the project should check that the TIs presented in this report are appropriate for the intended use. We can provide additional pavement sections for different TIs upon request.

TABLE 2
AC Pavement Sections

TI	Asphaltic Concrete (inches)	Class 2 Aggregate Base R = 78 (inches)
4.0	2.5	6.0
4.5	2.5	6.5
5.0	3.0	6.5
5.5	3.0	8.0
6.0	3.5	8.5
6.5	4.0	9.0
7.0	4.0	11.0

The upper 12 inches of the pavement subgrade should be moisture-conditioned and compacted in accordance with requirements presented in Section 6.1 of this report and be non-yielding. The soil subgrade should be kept moist until it is covered by aggregate base. The aggregate base

should be moisture-conditioned to near optimum and compacted to at least 95 percent relative compaction to achieve a firm, non-yielding surface.

6.3.2 Rigid (Portland Cement Concrete) Pavement

Concrete pavement design is based on a maximum single-axle load of 20,000 pounds and a maximum tandem axle load of 32,000 pounds and light truck traffic (i.e., a few trucks per week). The recommended rigid pavement section for these axle loads is six inches of Portland cement concrete over six inches of Class 2 aggregate base. Where fire truck traffic is expected, the pavement section should consist of 6.5 inches of Portland cement concrete over six inches of Class 2 aggregate base. Where only passenger cars or light trucks will use the pavement, the recommended minimum pavement section is five inches of Portland cement concrete over six inches of Class 2 aggregate base.

The modulus of rupture of the concrete should be at least 500 psi at 28 days. Contraction joints should be constructed at maximum spacing of 12.5 and 15 feet for 5-inch-thick and 6- and 6.5-inch-thick pavement sections, respectively. Where the outer edge of a concrete pavement meets asphalt concrete pavement, the concrete slab should be thickened by 50 percent at a taper not to exceed a slope of 1 in 10. For areas that will receive moderate truck traffic, such as weekly garbage truck traffic, we recommend the slab be reinforced with a minimum of No. 4 bars at 16-inch spacing in both directions. Recommendations for subgrade preparation and aggregate base compaction for concrete pavement are the same as those we have described above for asphalt concrete pavement.

6.4 Soil Corrosivity

Laboratory testing was performed by Project X Corrosion Engineering of Murrieta, California to evaluate the corrosivity of two selected soil samples obtained from Borings B-2 and B-3 at depths of 2.5 and 4.5 feet bgs, respectively. The results of the tests are presented in Appendix B of this report.

Many factors can affect the corrosion potential of soil including, but not limited to, resistivity, pH, and chloride and sulfate concentrations. Based on the resistivity test results (3216 and 938 ohm-cm), we conclude that the tested samples are "extremely corrosive[6] to corrosive" to buried metals. Accordingly, all buried iron, steel, cast iron, ductile iron, galvanized steel, and dielectric-coated steel or iron should be protected against corrosion depending upon the critical nature of the structure. If it is necessary to have metal in contact with soil, a corrosion engineer should be consulted to provide recommendations for corrosion protection.

The results of the pH test indicate the tested near-surface soil samples have a pH of 9.0 and 8.2 which should not have an adverse effect on buried concrete but may be detrimental to buried metal. Alkaline soil with a pH greater than 8.5 can cause accelerated corrosion of copper and aluminum alloys. We also anticipate the alkalinity soil will inhibit plant growth unless it is treated to lower the pH. The chloride ion concentrations (51.1 and 120.8 mg/kg) indicates the chlorides in the near-surface soil samples are "mildly to negligibly corrosive" to buried metallic structures and reinforcing steel in concrete structures below ground. The results also indicate the sulfate ion concentrations (225.5 and 165.7 mg/kg) are sufficiently low such that sulfates do not to pose a threat to buried concrete.

6.5 Seismic Design

The latitude and longitude of the site are 37.7147º and -121.4446º, respectively. Hence, in accordance with the 2019 CBC, we recommend the following:

- Site Class D
- S_S = 1.225g, S_1 = 0.424g

The 2019 CBC is based on the guidelines contained within ASCE 7-16 which stipulates that where S_1 is greater than 0.2 times gravity (g) for Site Class D, a ground motion hazard analysis is needed unless the seismic response coefficient (C_S) value will be calculated as outlined in

[6] Roberge, Pierre R. (2018). *Corrosion Basics, an Introduction, Third Edition*. NACE International, P. 189.

Section 11.4.8, Exception 2. Assuming the C_S value will be calculated as outlined in Section 11.4.8, Exception 2, we recommend the following seismic design parameters:

- $F_a = 1.0$, $F_v = 1.88$
- $S_{MS} = 1.237g$, $S_{M1} = 0.797g$
- $S_{DS} = 0.825g$, $S_{D1} = 0.531$ g
- Seismic Design Category D for Risk Categories I, II, and III.

6.6 Construction Considerations

If site grading is performed during the rainy season, the near-surface clay, clayey sand and clayey gravel will likely be wet and will have to be dried before compaction can be achieved. Heavy rubber-tired equipment, such as scrapers and vibratory rollers, could cause excessive deflection (pumping) of the wet clay and therefore should be avoided. If the project schedule or weather conditions do not permit sufficient time for drying of the soil by aeration, the subgrade can be treated with lime prior to compaction. The appropriate amount of lime should be determined during construction based on visual examination and, if necessary, laboratory testing of the soil to be treated. It is also important that the moisture content of subgrade soil is sufficiently high to reduce the expansion potential. If the grading work is performed during the dry season, moisture-conditioning may be required.

7.0 ADDITIONAL GEOTECHNICAL SERVICES

Prior to construction, Rockridge Geotechnical, Inc. should review the project plans and specifications to verify that they conform to the intent of our recommendations. During construction, our field engineer should provide on-site observation and testing during site preparation, placement and compaction of fill, and installation of foundations. These observations will allow us to compare actual with anticipated soil conditions and to verify that the contractor's work conforms to the geotechnical aspects of the plans and specifications.

8.0 LIMITATIONS

This geotechnical investigation has been conducted in accordance with the standard of care commonly used as state-of-practice in the profession. No other warranties are either expressed or implied. The recommendations made in this report are based on the assumption that the subsurface conditions do not deviate appreciably from those disclosed in the exploratory borings. If any variations or undesirable conditions are encountered during construction, we should be notified so that additional recommendations can be made. The foundation recommendations presented in this report are developed exclusively for the proposed development described in this report and are not valid for other locations and construction in the project vicinity.

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ROCKRIDGE GEOTECHNICAL

FIGURES

Base map: Google Maps, 2021

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

ROCKRIDGE GEOTECHNICAL

SITE LOCATION MAP

Date 10/11/21	Project No. 21-2097	Figure 1

EXPLANATION

B-1 Approximate location of boring by Rockridge Geotechnical, Inc., September 28, 2021

N

0 80 Feet

Approximate scale

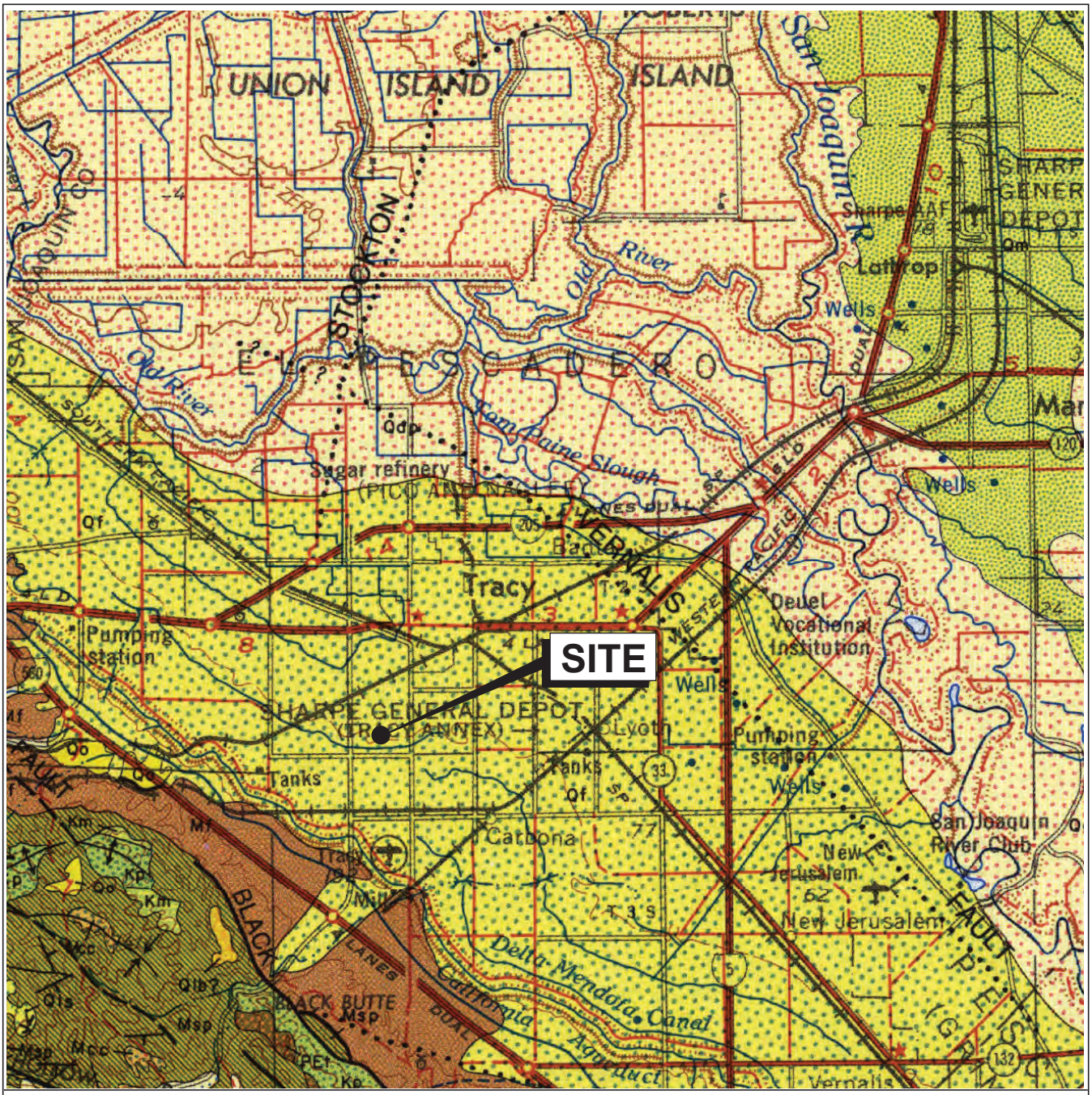
GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

SITE PLAN

Date 10/11/21	Project No. 21-2097	Figure 2

ROCKRIDGE GEOTECHNICAL

Reference: Base map from a drawing titled "Gretchen Talley Park Phase III, Lighting Site Plan Exhibit 1", by City of Tracy, undated.



Division of Mines and Geology, James F. Davis, State Geologist
Regional Geologic Map Series, San Francisco-San Jose Quadrangle - Map No. 5A (Geology)

Qdp	Dos Palos Alluvium
Qf	Alluvial fan deposits
Qm	Modesto Formation
Qr	Riverbank Formation
Qls	Landslide deposits
Qo	Older alluvium
Msp	San Pablo Group *(Marine sandstone)*
Mf	Fanglomerate

Kb	Berryessa Formation *(Marine sandstone and shale)*
Kp	Panoche Formation *(Marine sandstone and shale)*

0 2.5 5 Miles

Approximate scale

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

ROCKRIDGE GEOTECHNICAL

REGIONAL GEOLOGIC MAP

Date	Project No.	Figure
10/11/21	21-2097	3

Base Map: U.S. Geological Survey (USGS), National Seismic Hazards Maps - Fault Sources, 2014.

EXPLANATION

- Strike slip
- Thrust (Reverse)
- Normal

N

0 10 20 Miles

Approximate scale

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

REGIONAL FAULT MAP

ROCKRIDGE GEOTECHNICAL

Date 10/11/21	Project No. 21-2097	Figure 4

ROCKRIDGE GEOTECHNICAL

APPENDIX A
Logs of Borings

PROJECT: **GRETCHEN TALLEY PARK**
1551 DOVE DRIVE
Tracy, California

Log of Boring B-1

Boring location: See Site Plan, Figure 2

Date started: 09/28/2021 Date finished: 09/28/2021

Drilling method: 4-inch-diameter solid-stem flight auger

Hammer weight/drop: 140 lbs./30 inches Hammer type: Rope & cathead safety hammer

Sampler: Modified California (MC), Standard Penetration Test (SPT)

Logged by: A. Bourret
Drilled by: Benevent Building
Rig: Portable Hydraulic Unit

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1					SC	CLAYEY SAND with GRAVEL (SC) light brown, loose, dry, fine to coarse gravel						
2												
3	MC		4 4 6	7		LL = 23, PI = 9; see Appendix B Particle Size Distribution; see Appendix B				33	6.9	88
4					GW-GC	SANDY GRAVEL with CLAY (GW-GC) light brown, medium dense, dry, fine to coarse gravel, cobbles up to 2", subangular						
5	MC		12 14 16	21								
6						dense						
7	SPT		12 14 7	31								
8					CL	GRAVELLY CLAY with SAND (CL) light brown, very stiff, dry, fine to coarse gravel, cobbles, angular						
9	SPT		6 7 9	19								
10					CL	SANDY CLAY (CL) brown, hard, dry to moist						
11	SPT		10 14 15	35								
12												
13												
14												
15												
16												
17												
18												
19												
20												

Boring terminated at a depth of 11.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] MC and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively, to account for sampler type and hammer energy.

ROCKRIDGE GEOTECHNICAL

Project No.: 21-2097 Figure: A-1

PROJECT: **GRETCHEN TALLEY PARK**
1551 DOVE DRIVE
Tracy, California

Log of Boring B-2

Boring location: See Site Plan, Figure 2

Date started: 09/28/2021 Date finished: 09/28/2021

Drilling method: 4-inch-diameter solid-stem flight auger

Hammer weight/drop: 140 lbs./30 inches Hammer type: Rope & cathead safety hammer

Sampler: Modified California (MC), Standard Penetration Test (SPT)

Logged by: A. Bourret
Drilled by: Benevent Building
Rig: Portable Hydraulic Unit

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1						CLAYEY GRAVEL with SAND (GC) brown, medium dense, dry, fine to coarse gravel, cobbles up to 3", angular						
2												
3	MC		18 18 17	24		Soil Corrosivity Test; see Appendix B						
4					GC							
5	MC		14 12 15	19		decrease in gravel content, angular gravel						
6												
7	MC		9 13 13	18		angular gravel						
8												
9	SPT		3 3 5	10		SANDY CLAY (CL) brown to red-brown, stiff, moist, trace gravel						
10					CL							
11	SPT		5 9 10	23		very stiff						
12												
13												
14												
15												
16												
17												
18												
19												
20												

Boring terminated at a depth of 11.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] MC and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively, to account for sampler type and hammer energy.

ROCKRIDGE GEOTECHNICAL

Project No.: 21-2097 Figure: A-2

PROJECT: **GRETCHEN TALLEY PARK**
1551 DOVE DRIVE
Tracy, California

Log of Boring B-3

Boring location: See Site Plan, Figure 2

Date started: 09/28/2021 Date finished: 09/28/2021

Drilling method: 4-inch-diameter solid-stem flight auger

Hammer weight/drop: 140 lbs./30 inches Hammer type: Rope & cathead safety hammer

Sampler: Modified California (MC), Standard Penetration Test (SPT)

Logged by: A. Bourret
Drilled by: Benevent Building
Rig: Portable Hydraulic Unit

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1					GW	CLAYEY GRAVEL with SAND (GW) brown, medium dense, dry						
2												
3	MC		8 7 8	11								
4					SC	CLAYEY SAND (SC) light brown, loose, trace gravel Soil Corrosivity Test; see Appendix B LL = 26, PI = 12; see Appendix B					12.7	91
5	MC		6 5 5	7								
6						loose to medium dense						
7	MC		4 6 8	10								
8						medium dense, increase in gravel						
9	MC		4 8 13	15								
10						mottled white						
11	MC		11 14 23	26								
12												
13												
14												
15												
16	SPT		5 7 8	18								
17												
18												
19												
20												

Boring terminated at a depth of 16.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] MC and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively, to account for sampler type and hammer energy.

ROCKRIDGE GEOTECHNICAL

Project No.: 21-2097 Figure: A-3

PROJECT: **GRETCHEN TALLEY PARK**
1551 DOVE DRIVE
Tracy, California

Log of Boring B-4

Boring location: See Site Plan, Figure 2

Date started: 09/28/2021 Date finished: 09/28/2021

Drilling method: 4-inch-diameter solid-stem flight auger

Hammer weight/drop: 140 lbs./30 inches Hammer type: Rope & cathead safety hammer

Sampler: Modified California (MC), Standard Penetration Test (SPT)

Logged by: A. Bourret
Drilled by: Benevent Building
Rig: Portable Hydraulic Unit

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1						SANDY CLAY (CL) red-brown, medium stiff, dry, rootlets present						
2												
3	MC		3 4 6	7	CL							
4						light brown, stiff, trace gravel present LL = 28, PI = 14; see Appendix B Particle Size Distribution; see Appendix B				56	10.2	105
5	MC		6 8 7	11								
6						CLAYEY GRAVEL with SAND (GC) light brown with white mottling, medium dense, dry, coarse gravel, cobble up to 3”						
7	MC		7 10 13	16								
8					GC	light gray with brown, white and gray mottling, coarse gravel, subangular						
9	SPT		8 12 6	22								
10												
11	SPT		11 8 11	23		SANDY CLAY (CL) light brown to red-brown, very stiff, dry to moist						
12												
13					CL							
14												
15						trace gravel						
16	SPT		4 5 16	25								
17												
18												
19												
20												

Boring terminated at a depth of 16.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] MC and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively, to account for sampler type and hammer energy.

ROCKRIDGE GEOTECHNICAL

Project No.: 21-2097 Figure: A-4

PROJECT: **GRETCHEN TALLEY PARK**
1551 DOVE DRIVE
Tracy, California

Log of Boring B-5

Boring location: See Site Plan, Figure 2

Date started: 09/28/2021 Date finished: 09/28/2021

Drilling method: 4-inch-diameter solid-stem flight auger

Hammer weight/drop: 140 lbs./30 inches Hammer type: Rope & cathead safety hammer

Sampler: Modified California (MC), Standard Penetration Test (SPT)

Logged by: A. Bourret
Drilled by: Benevent Building
Rig: Portable Hydraulic Unit

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION
1					CL	SANDY CLAY with GRAVEL (CL) brown, very stiff, dry to moist
2						
3	MC		4 5 30	25		
4					GC	CLAYEY GRAVEL with SAND (GC) light gray with white, brown and gray mottling, dense, dry, fine to coarse gravel, cobble up to 2”
5	MC		16 25 32	40		
6						
7	SPT		15 7 5	14		medium dense
8					CL	SANDY CLAY (CL) brown, stiff, dry to moist
9	SPT		4 4 7	13		
10						
11	SPT		8 12 16	34		hard, trace gravel
12						
13						
14						
15						
16						
17						
18						
19						
20						

LABORATORY TEST DATA

Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft

Boring terminated at a depth of 11.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] MC and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively, to account for sampler type and hammer energy.

ROCKRIDGE GEOTECHNICAL

Project No.: 21-2097 Figure: A-5

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	**GW**	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	**SW**	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	**ML**	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	**MH**	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		**PT**	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.075 4.76 to 2.00 2.00 to 0.420 0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

Unstabilized groundwater level

Stabilized groundwater level

SAMPLE DESIGNATIONS/SYMBOLS

Sample taken with California or Modified California split-barrel sampler. Darkened area indicates soil recovered

Classification sample taken with Standard Penetration Test sampler

Undisturbed sample taken with thin-walled tube

Disturbed sample

Sampling attempted with no recovery

Core sample

Analytical laboratory sample

Sample taken with Direct Push sampler

Sonic

SAMPLER TYPE

C Core barrel

CA California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter

D&M Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube

O Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube

PT Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube

MC Modified California sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter

SPT Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter

ST Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

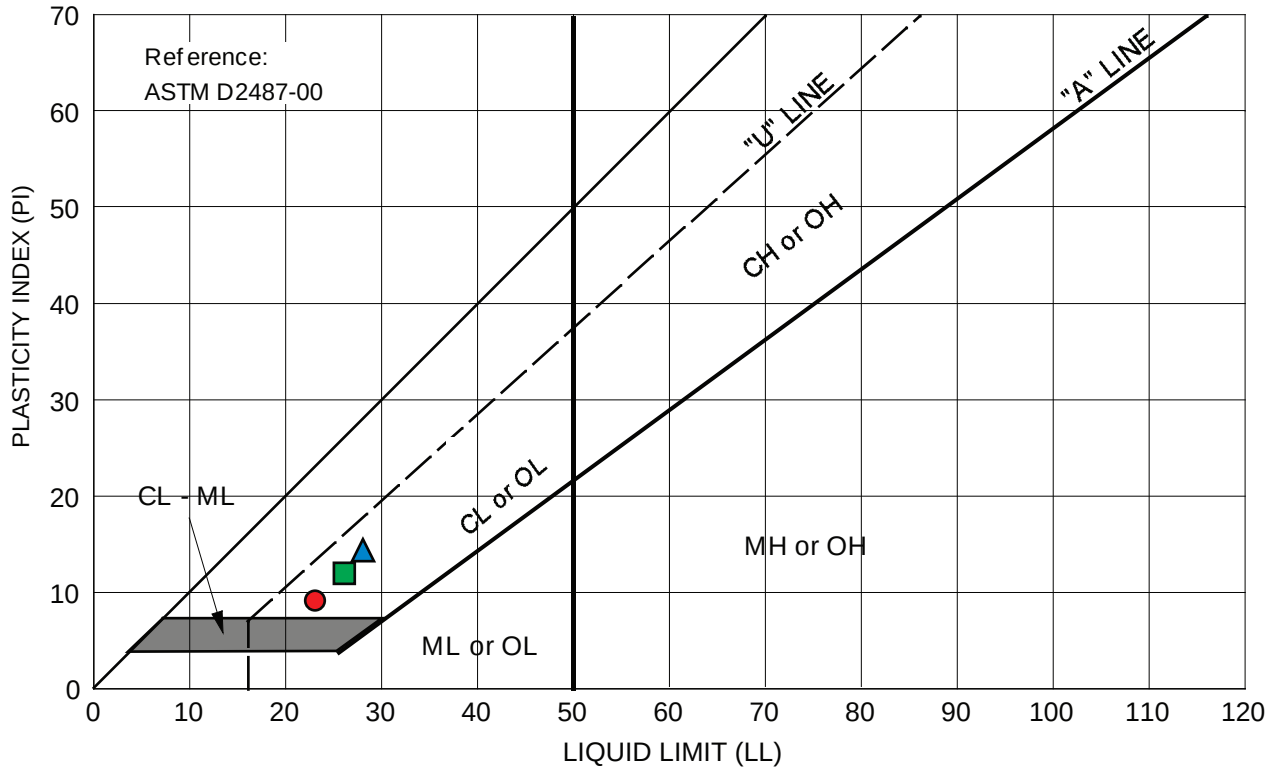
ROCKRIDGE GEOTECHNICAL

CLASSIFICATION CHART

Date 10/11/21 | Project No. 21-2097 | Figure A-6

ROCKRIDGE GEOTECHNICAL

APPENDIX B
Laboratory Test Results



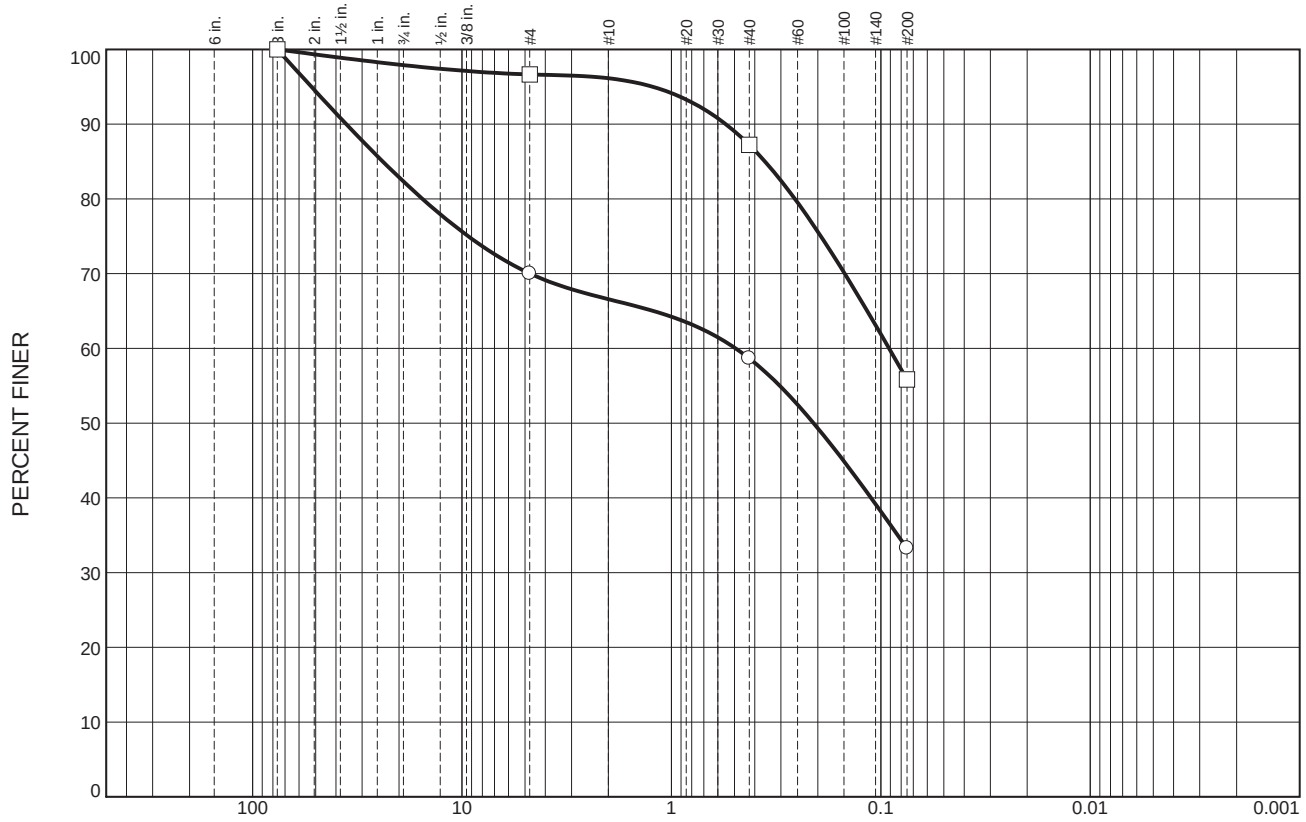
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
●	B-1 at 2.0 feet	CLAYEY SAND with GRAVEL (SC), light brown	6.9	23	9	33
■	B-3 at 5.0 feet	CLAYEY SAND (SC), light brown	12.7	26	12	--
▲	B-4 at 4.0 feet	SANDY CLAY (CL), light brown	10.2	28	14	56

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

ROCKRIDGE GEOTECHNICAL

PLASTICITY CHART

Date 10/19/21 | Project No. 21-2097 | Figure B-1



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	17.7	12.3	3.4	7.9	25.4	33.3	
□	0.0	2.1	1.2	0.6	8.9	31.4	55.8	

SOIL DATA

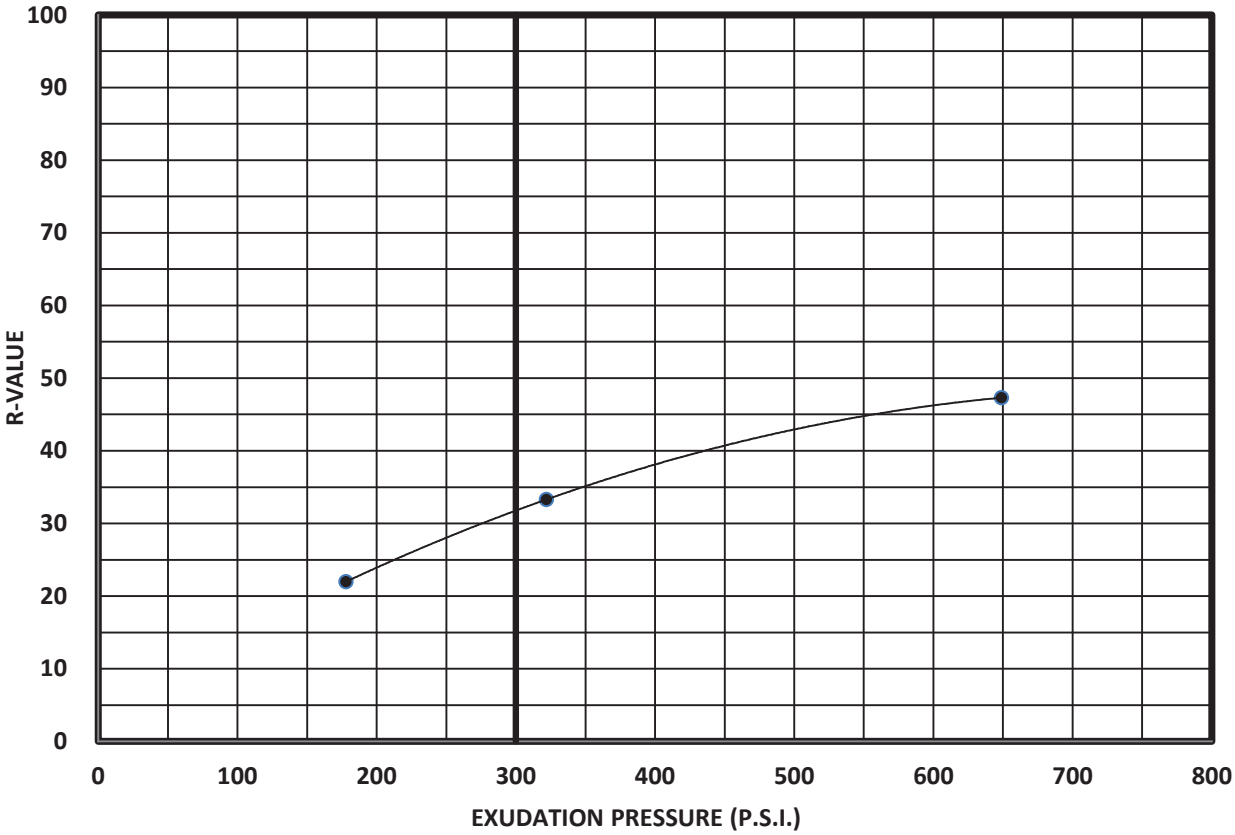
SYMBOL	SOURCE	DEPTH (ft.)	Material Description	USCS
○	B-1	2.0'	CLAYEY SAND with GRAVEL, light brown	SC
□	B-4	4.0'	SANDY CLAY, light brown	CL

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

ROCKRIDGE GEOTECHNICAL

PARTICLE SIZE DISTRIBUTION REPORT

Date 10/19/21 | Project No. 21-2097 | Figure B-2



Exudation (psi)	Compaction (psi)	Expansion (0.0001")	Expansion (psf)	Moisture %	Dry Density	Resistance Value
649	293	50	217	18.8	101.0	47
322	153	9	39	20.9	97.6	33
178	108	9	39	22.6	94.8	22

Test Results	**Material Description**
R-Value at 300 psi exudation pressure = 32	CLAYEY GRAVEL with SAND (GW), brown
	Sample Source: Boring B-3, 0-2 feet

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

ROCKRIDGE GEOTECHNICAL

RESISTANCE VALUE TEST REPORT

Date 10/19/21	Project No. 21-2097	Figure B-3

Project X
Corrosion Engineering
Corrosion Control – Soil, Water, Metallurgy Testing Lab

REPORT S211001A

	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM D4972	ASTM G200	ASTM D4658	ASTM D4327	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D4327	ASTM D4327
Bore# / Description	**Depth**	**Sulfates** SO_4^{2-}		**Chlorides** Cl^-		**Resistivity** As Rec'd | Minimum		**pH**	**Redox**	**Sulfide** S^{2-}	**Nitrate** NO_3^-	**Ammonium** NH_4^+	**Lithium** Li^+	**Sodium** Na^+	**Potassium** K^+	**Magnesium** Mg^{2+}	**Calcium** Ca^{2+}	**Fluoride** F_2^-	**Phosphate** PO_4^{3-}
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ohm-cm)	(Ohm-cm)		(mV)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
B-2: CLAYEY GRAVEL with SAND (GC), brown	2.5	225.5	0.0226	51.1	0.0051	10,720	3,216	9.0	106	<0.01	14.3	4.5	0.02	136.9	0.5	43.9	129.4	3.7	252.7
B-3: CLAYEY SAND (SC) light brown	4.5	165.7	0.0166	120.8	0.0121	2,814	938	8.2	159	0.09	318.4	0.8	ND	142.6	1.5	57.4	170.7	4.7	2.7

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown
Chemical Analysis performed on 1:3 Soil-To-Water extract
PPM = mg/kg (soil) = mg/L (Liquid)

29990 Technology Dr., Suite 13, Murrieta, CA 92563 Tel: 213-928-7213 Fax: 951-226-1720
www.projectxcorrosion.com

GRETCHEN TALLEY PARK
1551 DOVE DRIVE
Tracy, California

ROCKRIDGE GEOTECHNICAL

SOIL CORROSIVITY TEST RESULTS

Date 10/19/21 | Project No. 21-2097 | Figure B-4

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Appendix C: Noise Study

Environmental Noise Assessment

Gretchen Talley Park

City of Tracy, California

July 20, 2023

Project #230520

Prepared for:

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Table of Contents

INTRODUCTION **1**

ENVIRONMENTAL SETTING **1**

Background Information on Noise *1*

EXISTING NOISE AND VIBRATION ENVIRONMENTS **6**

Existing Noise Receptors *6*

Existing General Ambient Noise Levels *6*

EVALUATION OF TRANSPORTATION NOISE SOURCES ON THE PROJECT SITE **7**

Tracy Muncipal Airport Noise *7*

EVALUATION OF PROJECT OPERATIONAL NOISE ON EXISTING SENSITIVE RECEPTORS **9**

CONSTRUCTION NOISE ENVIRONMENT **11**

CONSTRUCTION VIBRATION ENVIRONMENT **11**

REGULATORY CONTEXT **12**

Federal *12*

State *12*

Local *12*

Criteria for Acceptable Vibration *14*

IMPACTS AND MITIGATION MEASURES **16**

Thresholds of Significance *16*

Project-Specific Impacts and Mitigation Measures *17*

REFERENCES **21**

List of Figures

Figure 1: Site Plan 2

Figure 2: Noise Measurement Sites and Receptor Locations 3

Figure 3: Airport Noise Contours (CNEL) 8

Figure 4: Project Operational Noise Contours, L_{eq} 10

List of Tables

Table 1: Typical Noise Levels 4
Table 2: Summary of Existing Background Noise Measurement Data 7
Table 3: Construction Equipment Noise 11
Table 4: Vibration Levels for Various Construction Equipment 11
Table 5: Land Use Compatibility for Community Noise Environment 12
Table 6: General Sound Level Limits at Base District Zone 14
Table 7: Effects of Vibration on People and Buildings 15
Table 8: Project Operational Noise Significant Increase at Adjacent Noise Sensitive Receptors 17

Appendices

Appendix A: Acoustical Terminology
Appendix B: Field Noise Measurement Data

INTRODUCTION

The Gretchen Talley Park project is located in the City of Tracy, California. The project includes the addition of various amenities to the existing park such as dog parks, new sport courts, and recreation areas. The project is be bordered by residences to the north, west, and south. Hirsch Elementary School is located east of the Park.

Figure 1 shows the project site plan. **Figure 2** shows an aerial photo of the project site.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

GRETCHEN TALLEY PARK

PHASE 3 EXPANSION
CONCEPTUAL MASTER PLAN

MAY 2021

1. ENTRY PLAZA
2. PARK MONUMENT
3. ADA PARKING
4. SPLIT-RAIL FENCING
5. NEW LAWN
6. LANDSCAPED MOUND
7. POLLINATOR GARDEN
8. NATURE PLAY ZONE
9. DECOMPOSED GRANITE PATH
10. TENNIS COURTS (LIGHTED)
11. PICKLEBALL COURTS (LIGHTED)
12. OUTDOOR LOBBY WITH SHADE
13. FITNESS ZONE WITH SHADE
14. BASKETBALL COURT (LIGHTED)
15. WALKING LOOP (LIGHTED)
16. PARK RESTROOM
17. LARGE DOG PARK
18. SMALL DOG PARK

Gretchen Talley Park

City of Tracy, California

Figure 1

Project Site Plan

Gretchen Talley Park

City of Tracy, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement Site - Long Term

0 ft 100 ft 200 ft 300 ft

Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 07/10/2023

SAXELBY ACOUSTICS
Acoustics · Noise · Vibration

The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60-dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September, 2013.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regards to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

EXISTING NOISE RECEPTORS

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise-sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include by residences to the north, west, and south and Hirsch Elementary School to the east.

EXISTING GENERAL AMBIENT NOISE LEVELS

The existing noise environment in the project area is primarily defined by traffic on Mits Way and Dove Drive. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted continuous (24-hr.) noise level measurements at two locations on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

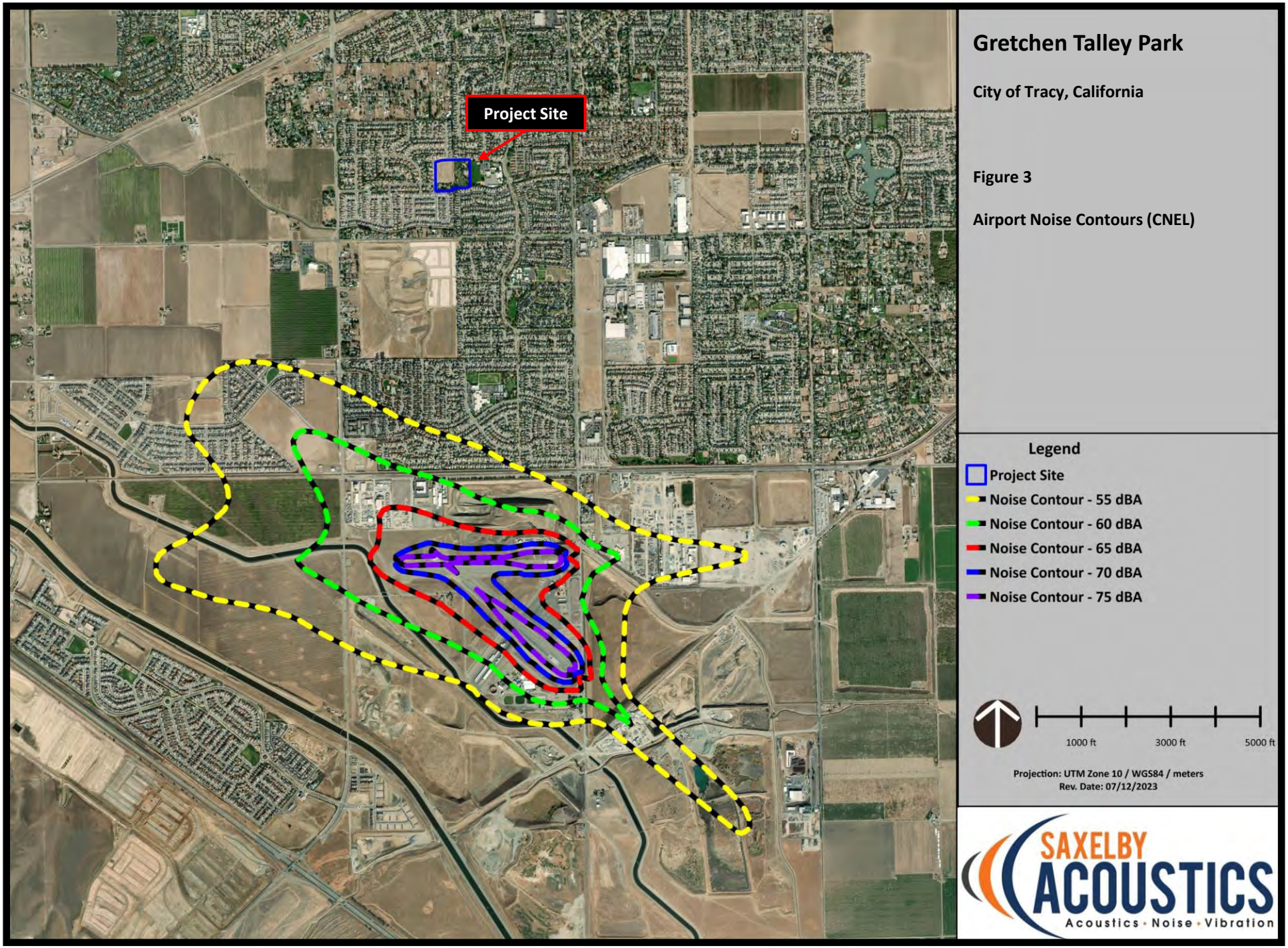
Location	Date	L_{dn}	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1: 150 ft. to CL of Mits Way.	6/16/2023	54	51	47	70	48	46	58
	6/17/2023	53	52	45	70	44	42	59
	6/18/2023	56	57	53	71	45	42	61
LT-2: 640 ft. to CL of Dove Dr.	6/16/2023	52	48	44	64	46	41	62
	6/17/2023	52	48	43	64	46	41	59
	6/18/2023	53	52	49	65	44	38	63

- *All values shown in dBA*
- *Daytime hours: 7:00 a.m. to 10:00 p.m.*
- *Nighttime Hours: 10:00 p.m. to 7:00 a.m.*
- *Source: Saxelby Acoustics, 2023.*

EVALUATION OF TRANSPORTATION NOISE SOURCES ON THE PROJECT SITE

TRACY MUNCIPAL AIRPORT NOISE

The Tracy Municipal Airport is located approximately 1.6 miles south of the project site and aircraft overflights were observed during visits to the project site. The site is generally located outside the airport noise contours. **Figure 3** shows the noise contours for the airport as published in the City of Tracy General Plan.



Gretchen Talley Park

City of Tracy, California

Figure 3

Airport Noise Contours (CNEL)

Legend

- Project Site
- Noise Contour - 55 dBA
- Noise Contour - 60 dBA
- Noise Contour - 65 dBA
- Noise Contour - 70 dBA
- Noise Contour - 75 dBA

1000 ft 3000 ft 5000 ft

Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 07/12/2023

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EVALUATION OF PROJECT OPERATIONAL NOISE ON EXISTING SENSITIVE RECEPTORS

The basketball courts, tennis courts, the small and large dog parks, and pickleball courts are considered to be the primary noise sources for this project.

The following is a list of assumptions used for the noise modeling. The data used is based upon a combination of manufacturer's provided data and Saxelby Acoustics data from similar operations.

Dog Parks:	Recreational activity producing 52 dBA L_{eq} at 150 feet as measured from the center of the park. Daytime use only. Saxelby Acoustics data.
Basketball Court:	Recreational activity producing 60 dBA L_{eq} at 50 feet as measured from the center of court. Daytime use only. Saxelby Acoustics data.
Tennis Courts:	Recreational activity producing 55 dBA L_{eq} at 50 feet as measured from the center of court. Daytime use only. Saxelby Acoustics data.
Pickleball Courts:	Saxelby Acoustics predicted noise levels associated with the operation of the pickleball courts at the nearby sensitive receptors. The proposed project includes four pickleball courts located east of the project. Saxelby Acoustics used pickleball noise level data collected at a single court (Saxelby Acoustics 2022) to predict project noise levels. Pickleball gameplay is expected to produce noise levels of approximately 60 dBA L_{eq} at 25 feet from the edge of the end of a single court and 55 dBA L_{eq} at 25 feet from the edge of the side of a single court.[1] Daytime use only.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed amenities, existing and proposed buildings, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation. The project noise level contours for the daytime (7:00 a.m. to 10:00 p.m.) average (L_{eq}) are shown in **Figure 4**, respectively.

[1] Data was collected using Fast meter response to capture peak pickleball impulsive sounds.

Gretchen Talley Park

City of Tracy, California

Figure 4

Project Operational Noise on Existing Receptors Leq, dB(A)

Noise Level, dB(A)

55 <		<=	56
56 <		<=	57
57 <		<=	58
58 <		<=	59
59 <		<=	60
60 <			

Legend

- Existing Building
- Project Site
- Sound Wall

Scale 1:150

0 30 60 120 180 240 feet

N

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CONSTRUCTION NOISE ENVIRONMENT

During the construction of the proposed project, noise from construction activities would temporarily add to the noise environment in the project vicinity. As shown in **Table 3**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 3: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

CONSTRUCTION VIBRATION ENVIRONMENT

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. **Table 4** shows the typical vibration levels produced by construction equipment.

TABLE 4: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: Transit Noise and Vibration Impact Assessment Guidelines. Federal Transit Administration. May 2006.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

LOCAL

City of Tracy General Plan

Policies

P5. For new residential land uses, noise from external sources shall not cause building interiors to exceed 45 L_{dn}.

P6. For new multi-family residential land uses, noise from external sources shall not cause the community outdoor recreation areas to exceed 65 L_{dn}. This policy shall not apply to balconies.

P8. Measures to attenuate exterior and/or interior noise levels to acceptable levels shall be incorporated into all development projects. Acceptable, conditionally acceptable and unacceptable noise levels are presented in Figure 9-3.

TABLE 5: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT

Land Use Category	Exterior Noise Exposure (L_{dn})					
	55	60	65	70	75	80
Single-Family Residential						
Multi-Family Residential, Hotels, and Motels		(a)				
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches						
Office Buildings, Business Commercial, and Professional						
Auditoriums, Concert Halls, Amphitheaters						

(a) Residential development sites exposed to noise levels exceeding 60 L_{dn} shall be analyzed following protocols in Appendix Chapter 12, Section 1208A, Sound Transmission Control, California Building Code

	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 Specified land use may be permitted only after detailed analysis of the noise reduction requirements and the needed noise insulation features included in the design.
	UNACCEPTABLE New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: City of Tracy General Plan Figure 9-3

Policies

P2. Mitigation measures shall be required for new development projects that exceed the following criteria:

- Cause the L_{dn} at noise-sensitive uses to increase by 3 dB or more and exceed the "normally acceptable" level.
- Cause the L_{dn} at noise-sensitive uses to increase 5 dB or more and remain "normally acceptable."
- Cause new noise levels to exceed the City of Tracy Noise Ordinance limits.

Source: Develop Code Section 16.60.040, Standards.

P4. All construction in the vicinity of noise sensitive land uses, such as residences, hospitals, or convalescent homes, shall be limited to daylight hours or 7:00 a.m. to 7:00 p.m. In addition, the following construction noise control measures shall be included as requirements at construction sites to minimize construction noise impacts:

- 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 as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

City of Tracy Municipal Code

4.12.750 - General sound level limits.

Except for exempted activities and sounds as provided in this chapter or exempted properties as referenced in Section 4.12.800, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property in the applicable Base District Zone on which the sound is produced exceeds the applicable limits set forth below:

TABLE 6: GENERAL SOUND LEVEL LIMITS AT BASE DISTRICT ZONE

Base District Zone	Sound Level Limits (Decibels)
1. Residential Districts RE (Residential Estate) LDR (Low Density) MDR/MDC (Medium Density) HDR (High Density) RMH (Mobile Home)	55
2. Commercial Districts MO (Medical Office) POM (Professional Office and Medical) NS (Neighborhood Shopping) CBD (Central Business District) GHC (General Highway) H-s (Highway Service)	65
3. Industrial Districts M-1 (Light Industrial) M-2 (Heavy Industrial)	75
4. A (Agricultural)	75
5. AMO Aggregate Mineral Overlay Zone	75

Source : City of Tracy Muncipal Code 4.12.750

Summary of Applicable Noise Level Criteria

City of Tracy General Plan requires mitigation measures when the following occurs:

- The L_{dn} at noise-sensitive uses to increase by 3 dB or more due to project noise and exceed the "normally acceptable" (See **Table 5)** level.
- The L_{dn} at noise-sensitive uses to increase 5 dB or more due to project noise and remain "normally acceptable." (See **Table 5)**.
- New noise levels to exceed the City of Tracy Noise Ordinance limits.

Table 6 shows the noise level standard of a one-hour average sound level permitted at any point on or beyond the boundaries of the property. The table indicates the proposed project shall not produce non-transportation noise levels of 55 dBA L_{eq} at adjacent noise sensitive receptors.

CRITERIA FOR ACCEPTABLE VIBRATION

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception

as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. **Table 7**, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 7 indicates that the threshold for architectural damage to structures is 0.20 in/sec p.p.v. A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 7: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Transportation Related Earthborne Vibrations. Caltrans. TAV-02-01-R9601. February 20, 2002.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

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 on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-c]).

Would the project:

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

b. Generate excessive groundborne vibration or groundborne noise levels?

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

The proposed project is not located within two miles of a public or private airport, therefore item "c" is not discussed any further in this study.

Noise Level Increase Criteria for Long-Term Project-Related Noise Level Increases

The City of Tracy General Plan Noise Element specifies criteria for determination of significant noise impacts in Policy P2. As stated in the City of Tracy General Plan Policy P2, mitigation measures shall be required for new development projects under the following conditions:

- Causes the L_{dn} at noise-sensitive uses to increase 3 dB or more and exceed the "normally acceptable level;
- Causes the L_{dn} at noise-sensitive uses increase 5 dB or more and remain "normally acceptable" level;
- Cause new noise levels to exceed the City of Tracy Noise Ordinance limits.

Based on Policy P2, an increase in the traffic noise level of 3 dB or more and exceed the "normally acceptable" level would be significant, or 5 dB or more and remain "normally acceptable". Extending this concept to lower noise levels, new noise levels that exceed the City of Tracy Noise Ordinance limits would be significant. The rationale for the Policy P2 criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

Impact 1: ***Would the project generate 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?***

Operational Noise at Existing Sensitive Receptors

As shown on **Figure 3**, the project is predicted to expose nearby residences to noise levels up to 52 dBA L_{eq}. The predicted project noise levels would meet the City of Tracy Municipal Code noise level standard of 55 dBA, L_{eq}.

Based on **Table 8** data, the proposed project will result in a 2.0 dBA L_{dn} increase in the ambient noise level of nearby noise-sensitive receptors. As stated in the City of Tracy General Plan Policy P2, mitigation measures shall be required for new development projects under the following conditions:

- Causes the L_{dn} at noise-sensitive uses to increase 3 dB or more and exceed the "normally acceptable level;
- Causes the L_{dn} at noise-sensitive uses increase 5 dB or more and remain "normally acceptable" level;
- Cause new noise levels to exceed the City of Tracy Noise Ordinance limits.

TABLE 8: PROJECT OPERATIONAL NOISE SIGNIFICANT INCREASE AT ADJACENT NOISE SENSITIVE RECEPTORS

Noise Sensitive Receptor	Ambient Noise Level	Project Noise Level[3]	Ambient + Project Noise Level	Difference
R1	52.6 L_{dn}[1]	41.0 L_{dn}	52.9 L_{dn}	0.3
R2	52.6 L_{dn}[1]	45.0 L_{dn}	53.3 L_{dn}	0.7
R3	52.6 L_{dn}[1]	45.0 L_{dn}	53.5 L_{dn}	0.9
R4	52.6 L_{dn}[1]	49.0 L_{dn}	54.2 L_{dn}	1.6
R5	52.4 L_{dn}[2]	49.0 L_{dn}	54.4 L_{dn}	1.6
R6	52.4 L_{dn}[2]	50.0 L_{dn}	54.4 L_{dn}	2.0
R7	52.4 L_{dn}[2]	48.0 L_{dn}	54.4 L_{dn}	2.0

- *Notes:*
- *[1] As measured at LT-1*
- *[2] As measured at LT-2*
- *[3] Assumes continous day operation*
- *[4] Considered "Normally Acceptable"*

The predicted project noise levels are predicted to comply with the City of Tracy General Plan Policy P2. This is a ***less-than-significant*** impact, and no mitigation is required.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in **Table 3**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Construction activities would also be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours.

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given this noise attenuation rate and assuming no noise shielding from either natural or human-made features (e.g., trees, buildings, fences), outdoor receptors within approximately 250 feet of construction sites could experience maximum instantaneous noise levels of greater than 60 dBA when on-site construction-related noise levels exceed approximately 90 dBA at the boundary of the construction site. As previously discussed, nearby noise-sensitive receptors consist predominantly of residential dwellings located near the northern and western boundaries of the project site.

The City of Tracy Noise Ordinance places limitations on the acceptable hours of construction. During development of the proposed project, construction activities shall be limited to the hours of 7 AM to 7 PM. Additionally, there are several residential uses directly north, east, and west of the project site which may be subject to construction noise. As a result, noise-generating construction activities would be considered to have a ***potentially significant*** short-term impact.

Mitigation Measure

1(a) The City shall establish the following as conditions of approval for any permit that results in the use of construction equipment:

- Construction shall be limited to 7:00 a.m. to 7:00 p.m.
- All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- "Quiet" construction equipment, particularly air compressors, are to be selected whenever possible.
- All stationary noise-generating construction equipment such as generators or air compressors are to be located as far as is practical from existing residences. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- Unnecessary idling of internal combustion engines is prohibited.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

Timing/Implementation: Implemented prior to approval of grading and/or building permits
Enforcement/Monitoring: City of Tracy Community Development Services Department

Implementation of mitigation measures 1(a) would help to reduce construction-generated noise levels. With mitigation, this impact would be considered ***less-than-significant***.

Impact 2: Would the project generate excessive groundborne vibration or groundborne noise levels?

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The **Table 7** data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less-than-significant** impact and no mitigation is required.

Impact 3: ***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?***

Based upon **Figure 4**, the proposed project is located approximately 1.0 miles outside of the predicted 55 dBA CNEL noise contour. According to **Table 5** of the City of Tracy General Plan Land Use Compatibility Chart, the noise environment of the proposed project is considered normally acceptable.

This is a **less-than-significant** impact, and no mitigation is required.

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

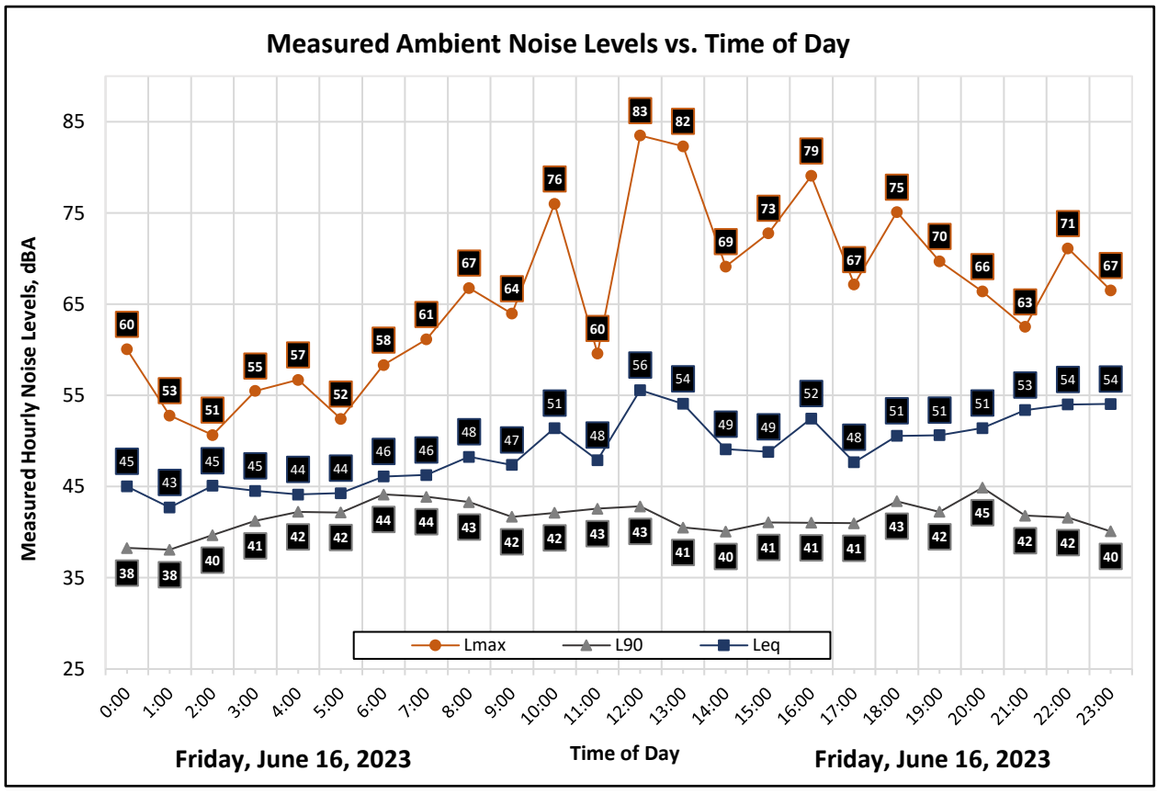
Appendix B: Continuous and Short-Term Ambient Noise Measurement Results

Appendix B1a: Continuous Noise Monitoring Results

Site: LT-1
Project: Gretchen Talley Park
Location: South West Project Boundary
Coordinates: (37.7135604, -121.4447949)
Meter: LDL 820-1
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Friday, June 16, 2023	0:00	45	60	41	38
Friday, June 16, 2023	1:00	43	53	40	38
Friday, June 16, 2023	2:00	45	51	44	40
Friday, June 16, 2023	3:00	45	55	43	41
Friday, June 16, 2023	4:00	44	57	44	42
Friday, June 16, 2023	5:00	44	52	44	42
Friday, June 16, 2023	6:00	46	58	45	44
Friday, June 16, 2023	7:00	46	61	45	44
Friday, June 16, 2023	8:00	48	67	46	43
Friday, June 16, 2023	9:00	47	64	45	42
Friday, June 16, 2023	10:00	51	76	46	42
Friday, June 16, 2023	11:00	48	60	46	43
Friday, June 16, 2023	12:00	56	83	48	43
Friday, June 16, 2023	13:00	54	82	45	41
Friday, June 16, 2023	14:00	49	69	44	40
Friday, June 16, 2023	15:00	49	73	45	41
Friday, June 16, 2023	16:00	52	79	45	41
Friday, June 16, 2023	17:00	48	67	45	41
Friday, June 16, 2023	18:00	51	75	48	43
Friday, June 16, 2023	19:00	51	70	47	42
Friday, June 16, 2023	20:00	51	66	50	45
Friday, June 16, 2023	21:00	53	63	54	42
Friday, June 16, 2023	22:00	54	71	54	42
Friday, June 16, 2023	23:00	54	67	55	40

Statistics	Leq	Lmax	L50	L90
Day Average	51	70	47	42
Night Average	48	58	46	41
Day Low	46	60	44	40
Day High	56	83	54	45
Night Low	43	51	40	38
Night High	54	71	55	44
Ldn	54	Day %		81
CNEL	55	Night %		19

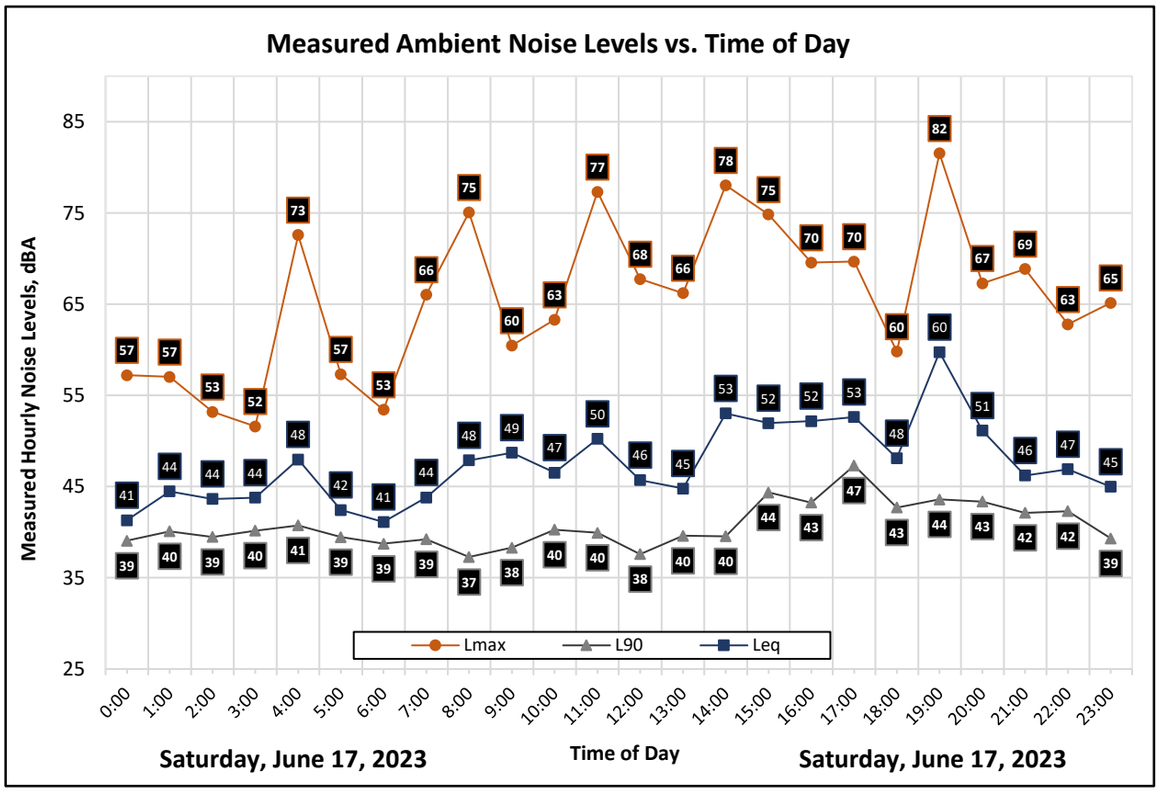


Appendix B1b: Continuous Noise Monitoring Results

Site: LT-1
Project: Gretchen Talley Park
Meter: LDL 820-1
Location: South West Project Boundary
Calibrator: CAL200
Coordinates: (37.7135604, -121.4447949)

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Saturday, June 17, 2023	0:00	41	57	41	39
Saturday, June 17, 2023	1:00	44	57	45	40
Saturday, June 17, 2023	2:00	44	53	42	39
Saturday, June 17, 2023	3:00	44	52	42	40
Saturday, June 17, 2023	4:00	48	73	43	41
Saturday, June 17, 2023	5:00	42	57	41	39
Saturday, June 17, 2023	6:00	41	53	41	39
Saturday, June 17, 2023	7:00	44	66	42	39
Saturday, June 17, 2023	8:00	48	75	41	37
Saturday, June 17, 2023	9:00	49	60	45	38
Saturday, June 17, 2023	10:00	47	63	44	40
Saturday, June 17, 2023	11:00	50	77	44	40
Saturday, June 17, 2023	12:00	46	68	42	38
Saturday, June 17, 2023	13:00	45	66	43	40
Saturday, June 17, 2023	14:00	53	78	46	40
Saturday, June 17, 2023	15:00	52	75	49	44
Saturday, June 17, 2023	16:00	52	70	49	43
Saturday, June 17, 2023	17:00	53	70	51	47
Saturday, June 17, 2023	18:00	48	60	47	43
Saturday, June 17, 2023	19:00	60	82	47	44
Saturday, June 17, 2023	20:00	51	67	48	43
Saturday, June 17, 2023	21:00	46	69	44	42
Saturday, June 17, 2023	22:00	47	63	46	42
Saturday, June 17, 2023	23:00	45	65	42	39

Statistics	Leq	Lmax	L50	L90
Day Average	52	70	45	41
Night Average	44	59	42	40
Day Low	44	60	41	37
Day High	60	82	51	47
Night Low	41	52	41	39
Night High	48	73	46	42
Ldn	53	Day %		91
CNEL	55	Night %		9

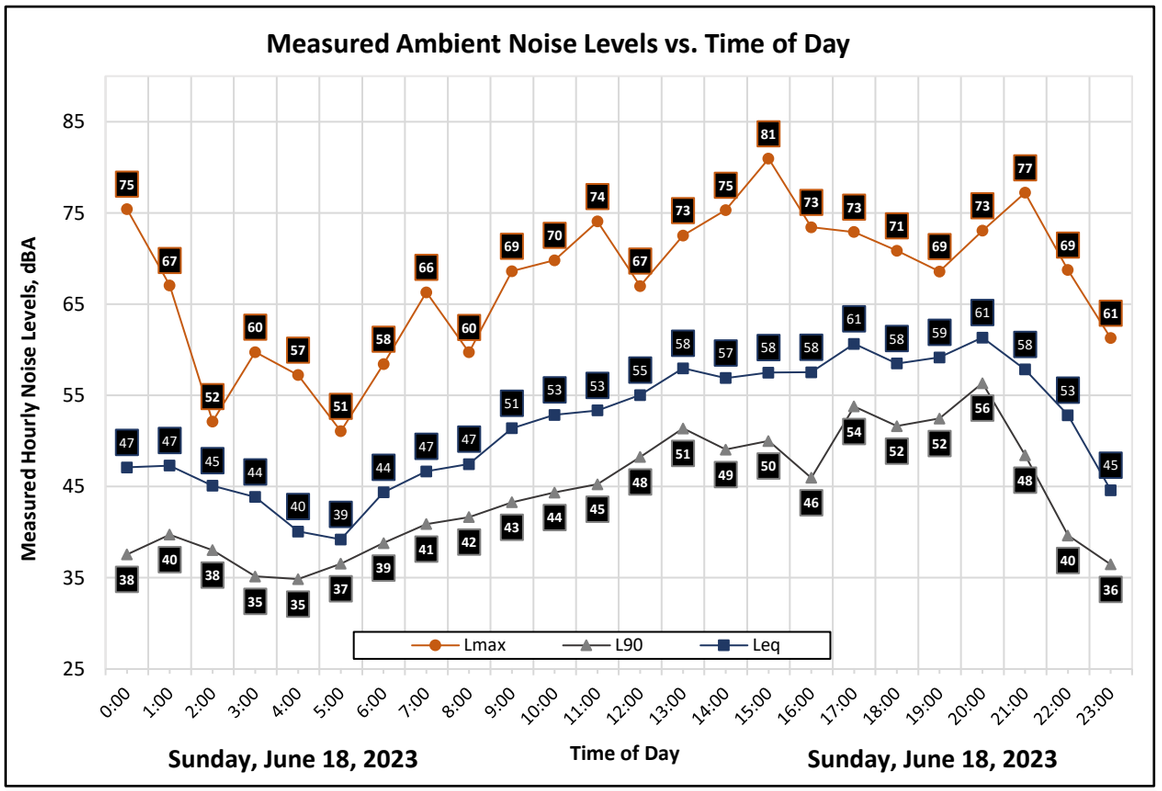


Appendix B1c: Continuous Noise Monitoring Results

Site: LT-1
Project: Gretchen Talley Park
Meter: LDL 820-1
Location: South West Project Boundary
Calibrator: CAL200
Coordinates: (37.7135604, -121.4447949)

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Sunday, June 18, 2023	0:00	47	75	41	38
Sunday, June 18, 2023	1:00	47	67	46	40
Sunday, June 18, 2023	2:00	45	52	45	38
Sunday, June 18, 2023	3:00	44	60	39	35
Sunday, June 18, 2023	4:00	40	57	38	35
Sunday, June 18, 2023	5:00	39	51	38	37
Sunday, June 18, 2023	6:00	44	58	43	39
Sunday, June 18, 2023	7:00	47	66	44	41
Sunday, June 18, 2023	8:00	47	60	45	42
Sunday, June 18, 2023	9:00	51	69	48	43
Sunday, June 18, 2023	10:00	53	70	49	44
Sunday, June 18, 2023	11:00	53	74	50	45
Sunday, June 18, 2023	12:00	55	67	53	48
Sunday, June 18, 2023	13:00	58	73	56	51
Sunday, June 18, 2023	14:00	57	75	54	49
Sunday, June 18, 2023	15:00	58	81	54	50
Sunday, June 18, 2023	16:00	58	73	54	46
Sunday, June 18, 2023	17:00	61	73	59	54
Sunday, June 18, 2023	18:00	58	71	57	52
Sunday, June 18, 2023	19:00	59	69	57	52
Sunday, June 18, 2023	20:00	61	73	60	56
Sunday, June 18, 2023	21:00	58	77	55	48
Sunday, June 18, 2023	22:00	53	69	47	40
Sunday, June 18, 2023	23:00	45	61	39	36

Statistics	Leq	Lmax	L50	L90
Day Average	57	71	53	48
Night Average	45	61	42	37
Day Low	47	60	44	41
Day High	61	81	60	56
Night Low	39	51	38	35
Night High	47	75	47	40
Ldn	56	Day %		97
CNEL	58	Night %		3

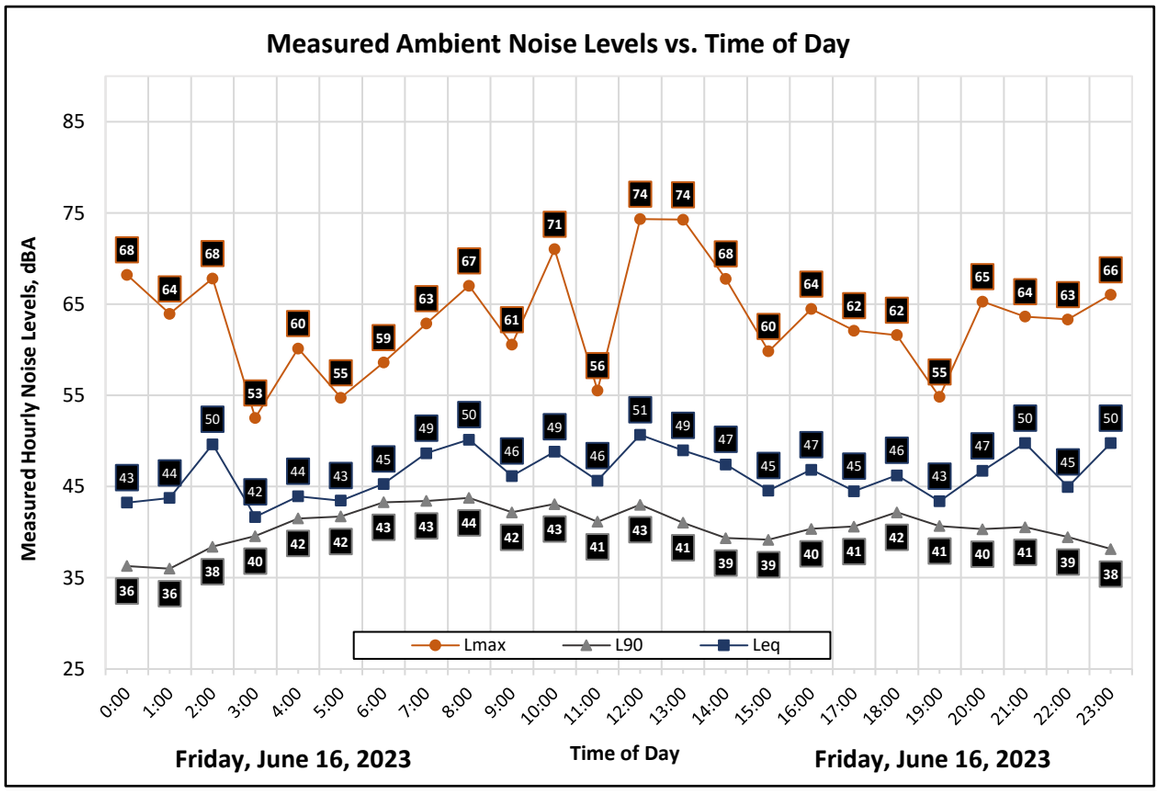


Appendix B2a: Continuous Noise Monitoring Results

Site: LT-2
Project: Gretchen Talley Park
Location: Southern Project Boundary
Coordinates: (37.7137222, -121.4435950)
Meter: LDL 820-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Friday, June 16, 2023	0:00	43	68	38	36
Friday, June 16, 2023	1:00	44	64	38	36
Friday, June 16, 2023	2:00	50	68	41	38
Friday, June 16, 2023	3:00	42	53	41	40
Friday, June 16, 2023	4:00	44	60	43	42
Friday, June 16, 2023	5:00	43	55	43	42
Friday, June 16, 2023	6:00	45	59	45	43
Friday, June 16, 2023	7:00	49	63	45	43
Friday, June 16, 2023	8:00	50	67	46	44
Friday, June 16, 2023	9:00	46	61	45	42
Friday, June 16, 2023	10:00	49	71	46	43
Friday, June 16, 2023	11:00	46	56	44	41
Friday, June 16, 2023	12:00	51	74	46	43
Friday, June 16, 2023	13:00	49	74	44	41
Friday, June 16, 2023	14:00	47	68	42	39
Friday, June 16, 2023	15:00	45	60	42	39
Friday, June 16, 2023	16:00	47	64	44	40
Friday, June 16, 2023	17:00	45	62	43	41
Friday, June 16, 2023	18:00	46	62	45	42
Friday, June 16, 2023	19:00	43	55	43	41
Friday, June 16, 2023	20:00	47	65	43	40
Friday, June 16, 2023	21:00	50	64	43	41
Friday, June 16, 2023	22:00	45	63	42	39
Friday, June 16, 2023	23:00	50	66	41	38

Statistics	Leq	Lmax	L50	L90
Day Average	48	64	44	41
Night Average	46	62	41	39
Day Low	43	55	42	39
Day High	51	74	46	44
Night Low	42	53	38	36
Night High	50	68	45	43
Ldn	52	Day %		73
CNEL	53	Night %		27

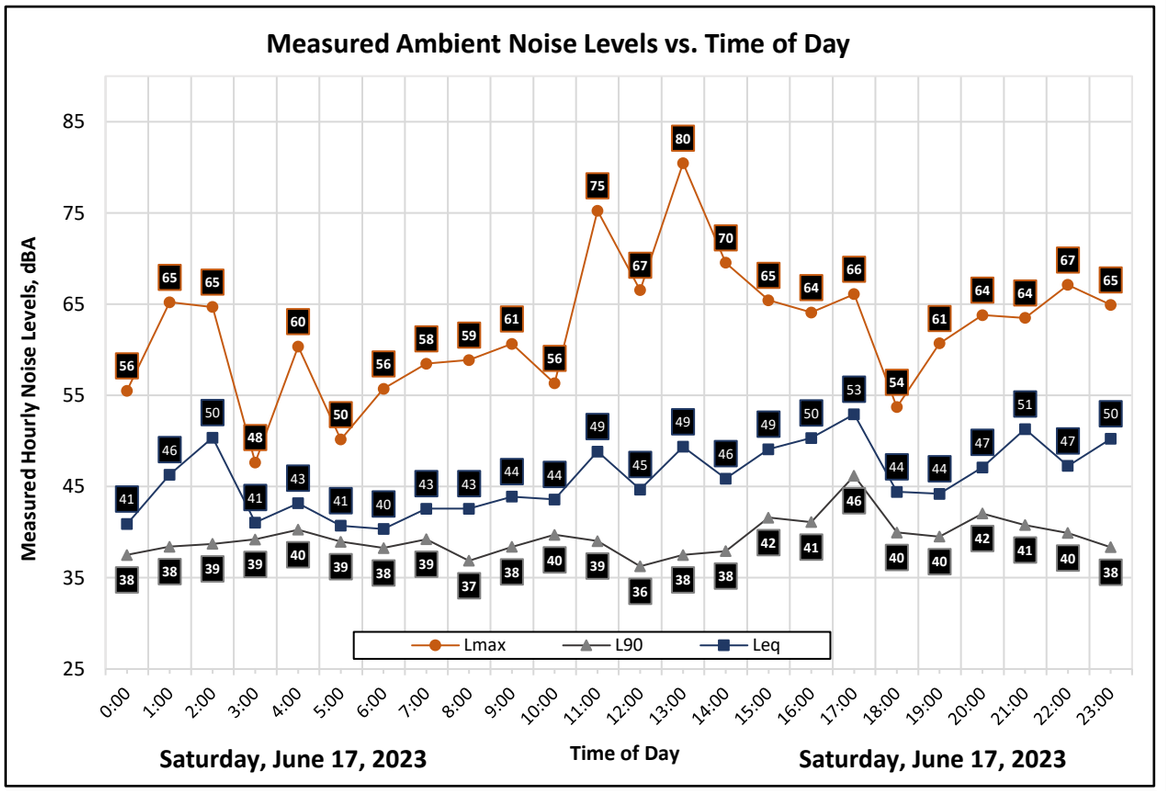


Appendix B2b: Continuous Noise Monitoring Results

Site: LT-2
Project: Gretchen Talley Park
Location: Southern Project Boundary
Coordinates: (37.7137222, -121.4435950)
Meter: LDL 820-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Saturday, June 17, 2023	0:00	41	56	40	38
Saturday, June 17, 2023	1:00	46	65	40	38
Saturday, June 17, 2023	2:00	50	65	40	39
Saturday, June 17, 2023	3:00	41	48	41	39
Saturday, June 17, 2023	4:00	43	60	42	40
Saturday, June 17, 2023	5:00	41	50	40	39
Saturday, June 17, 2023	6:00	40	56	40	38
Saturday, June 17, 2023	7:00	43	58	41	39
Saturday, June 17, 2023	8:00	43	59	39	37
Saturday, June 17, 2023	9:00	44	61	43	38
Saturday, June 17, 2023	10:00	44	56	43	40
Saturday, June 17, 2023	11:00	49	75	42	39
Saturday, June 17, 2023	12:00	45	67	39	36
Saturday, June 17, 2023	13:00	49	80	41	38
Saturday, June 17, 2023	14:00	46	70	41	38
Saturday, June 17, 2023	15:00	49	65	46	42
Saturday, June 17, 2023	16:00	50	64	47	41
Saturday, June 17, 2023	17:00	53	66	52	46
Saturday, June 17, 2023	18:00	44	54	43	40
Saturday, June 17, 2023	19:00	44	61	42	40
Saturday, June 17, 2023	20:00	47	64	44	42
Saturday, June 17, 2023	21:00	51	64	43	41
Saturday, June 17, 2023	22:00	47	67	43	40
Saturday, June 17, 2023	23:00	50	65	41	38

Statistics	Leq	Lmax	L50	L90
Day Average	48	64	43	40
Night Average	46	59	41	39
Day Low	43	54	39	36
Day High	53	80	52	46
Night Low	40	48	40	38
Night High	50	67	43	40
Ldn	52	Day %		74
CNEL	53	Night %		26

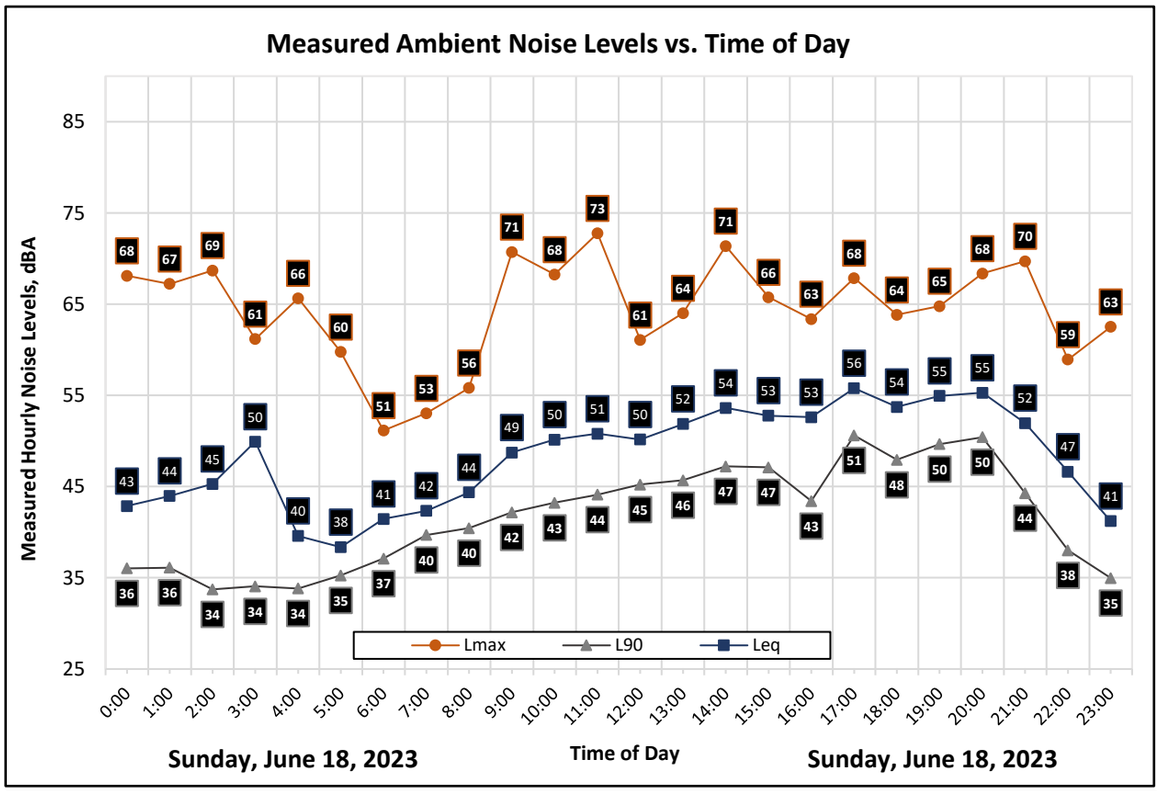


Appendix B2c: Continuous Noise Monitoring Results

Site: LT-2
Project: Gretchen Talley Park
Meter: LDL 820-2
Location: Southern Project Boundary
Calibrator: CAL200
Coordinates: (37.7137222, -121.4435950)

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Sunday, June 18, 2023	0:00	43	68	38	36
Sunday, June 18, 2023	1:00	44	67	38	36
Sunday, June 18, 2023	2:00	45	69	37	34
Sunday, June 18, 2023	3:00	50	61	36	34
Sunday, June 18, 2023	4:00	40	66	37	34
Sunday, June 18, 2023	5:00	38	60	37	35
Sunday, June 18, 2023	6:00	41	51	41	37
Sunday, June 18, 2023	7:00	42	53	42	40
Sunday, June 18, 2023	8:00	44	56	43	40
Sunday, June 18, 2023	9:00	49	71	46	42
Sunday, June 18, 2023	10:00	50	68	48	43
Sunday, June 18, 2023	11:00	51	73	48	44
Sunday, June 18, 2023	12:00	50	61	49	45
Sunday, June 18, 2023	13:00	52	64	50	46
Sunday, June 18, 2023	14:00	54	71	51	47
Sunday, June 18, 2023	15:00	53	66	51	47
Sunday, June 18, 2023	16:00	53	63	49	43
Sunday, June 18, 2023	17:00	56	68	55	51
Sunday, June 18, 2023	18:00	54	64	52	48
Sunday, June 18, 2023	19:00	55	65	54	50
Sunday, June 18, 2023	20:00	55	68	54	50
Sunday, June 18, 2023	21:00	52	70	50	44
Sunday, June 18, 2023	22:00	47	59	43	38
Sunday, June 18, 2023	23:00	41	63	38	35

Statistics	Leq	Lmax	L50	L90
Day Average	52	65	49	45
Night Average	44	63	38	35
Day Low	42	53	42	40
Day High	56	73	55	51
Night Low	38	51	36	34
Night High	50	69	43	38
Ldn	53	Day %		92
CNEL	54	Night %		8



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