NOTICE OF A REGULAR MEETING

Pursuant to Section 54954.2 of the Government Code of the State of California, a Regular meeting of the City of Tracy Planning Commission is hereby called for:

Date/Time: Wednesday, April 11, 2018
7:00 P.M. (or as soon thereafter as possible)

Location: City of Tracy Council Chambers
333 Civic Center Plaza

Government Code Section 54954.3 states that every public meeting shall provide an opportunity for the public to address the Planning Commission on any item, before or during consideration of the item, however no action shall be taken on any item not on the agenda.

REGULAR MEETING AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

ELECTION OF VICE CHAIR

MINUTES – 03/28/18

DIRECTOR'S REPORT REGARDING THIS AGENDA

ITEMS FROM THE AUDIENCE - *In accordance with Procedures for Preparation, Posting and Distribution of Agendas and the Conduct of Public Meetings, adopted by Resolution 2015-052 any item not on the agenda brought up by the public at a meeting, shall be automatically referred to staff. If staff is not able to resolve the matter satisfactorily, the member of the public may request a Commission Member to sponsor the item for discussion at a future meeting.*

1. NEW BUSINESS

   A. PUBLIC HEARING TO CONSIDER THE TRACY VILLAGE DEVELOPMENT PROJECT AND RELATED ANNEXATION OF LANDS TO THE CITY OF TRACY AND CERTIFICATION OF AN ENVIRONMENTAL IMPACT REPORT. TRACY VILLAGE PROPOSES TO DEVELOP 590 SINGLE-FAMILY RESIDENTIAL LOTS WITHIN A 135.2-ACRE GATED AND AGE-RESTRICTED COMMUNITY LOCATED ON THE SOUTH SIDE OF VALPICO ROAD, EAST OF CORRAL HOLLOW ROAD. THE PROJECT PROPOSES ANNEXATION/PREZONING, AND INCLUDES A SPECIFIC PLAN AND VESTING TENTATIVE SUBDIVISION MAP. ADDITIONALLY, THE CITY IS PROPOSING ANNEXATION/PREZONING OF 42 LOTS CURRENTLY LOCATED IN UNINCORPORATED SAN JOAQUIN COUNTY, LOCATED IMMEDIATELY WEST OF THE TRACY VILLAGE SITE ALONG CORRAL HOLLOW ROAD AND NORTH OF THE TRACY VILLAGE PROJECT SITE ALONG VALPICO ROAD. TRACY VILLAGE CONSISTS OF ASSESSOR'S PARCEL NUMBERS: 244-040-01 AND 244-030-01 AND 02. THE 42 LOTS FOR ANNEXATION PREZONING CONSIST OF ASSESSOR'S PARCEL NUMBERS 244-030-01 THROUGH 244-030-21 ALONG CORRAL HOLLOW ROAD, AND ASSESSOR'S PARCEL NUMBERS 242-050-01 THROUGH 242-050-21 AND 242-040-29 ON THE NORTH SIDE OF VALPICO ROAD. APPLICATION NUMBERS A/P13-0002, SPA18-0001 AND TSM17-0003

2. ITEMS FROM THE AUDIENCE

3. DIRECTOR'S REPORT

4. ITEMS FROM THE COMMISSION

5. ADJOURNMENT

Posted: April 6, 2018

The City of Tracy complies with the Americans with Disabilities Act and makes all reasonable accommodations for the disabled to participate in public meetings. Persons requiring assistance or auxiliary aids in order to participate should call City Hall (209-831-6000) at least 24 hours prior to the meeting.

Any materials distributed to the majority of the Planning Commission regarding any item on this agenda will be made available for public inspection in the Development Services Department located at 333 Civic Center Plaza during normal business hours.

MINUTES
TRACY CITY PLANNING COMMISSION
MARCH 28, 2018, 7:00 P.M.
CITY OF TRACY COUNCIL CHAMBERS
333 CIVIC CENTER PLAZA

CALL TO ORDER

Chair Orcutt called the meeting to order at 7:00 p.m.

PLEDGE OF ALLEGIANCE

Chair Orcutt led the pledge of allegiance.

ROLL CALL

Roll Call found Chair Orcutt and Commissioners Hudson, Kaur, Krogh, and Tanner present. Also present were: Bill Dean, Assistant Development Services Director; Bianca Rodriguez, Deputy City Attorney; Kimberly Matlock, Associate Planner; and Gina Peace, Recording Secretary.

MINUTES

It was moved by Commissioner Tanner, and seconded by Commissioner Hudson, that the Planning Commission meeting minutes of March 14, 2018, be approved. Voice vote found all in favor, 5-0-0; passed and so ordered.

DIRECTOR'S REPORT REGARDING THIS AGENDA

Bill Dean, Assistant Development Services Director, mentioned that Assistant City Attorney Leticia Ramirez is out today, and Deputy City Attorney, Bianca Rodriguez, is in attendance.

ITEMS FROM THE AUDIENCE

None.

1. NEW BUSINESS

A. CONSIDERATION OF A CONDITIONAL USE PERMIT AND A DEVELOPMENT REVIEW PERMIT FOR THE EXPANSION OF THE COSTCO GASOLINE SERVICE STATION AT 3250 W. GRANT LINE ROAD - APPLICANT IS ANGELO BOLOGNA FOR BARGHAUSEN CONSULTING ENGINEERS, INC. AND PROPERTY OWNER IS COSTCO WHOLESALE CORPORATION - APPLICATION NUMBERS CUP18-0001 AND D17-0035

Kimberly Matlock presented the staff report.

At 7:07 p.m. Chair Orcutt called for a brief recess. The meeting reconvened at 7:08 p.m.

The applicant Angelo Bologna for Barghausen Consulting Engineers addressed the commission and answered questions about vehicle queuing and design alternatives. Mr. Bologna introduced their transportation consultant, Kelly Laustsen, Senior Engineer with Kittelson & Associates, who addressed the commission and answered questions.

Chair Orcutt opened the Public Hearing at 7:40 p.m.

Seeing as no one came forward, Chair Orcutt closed the Public Hearing.

ACTION: It was moved by Commissioner Hudson, and seconded by Commissioner Tanner, that the Planning Commission approve Application Number CUP18-0001 for the expansion of the Costco gasoline service station, based on the findings contained in the Planning Commission Resolution dated March 28, 2018. Roll call vote found all in favor, 5-0-0; passed and so ordered.

ACTION: It was moved by Commissioner Hudson, and seconded by Commissioner Tanner, that the Planning Commission approve Application Number D17-0035 for the expansion of the Costco gasoline service station, based on the findings contained in the Planning Commission Resolution dated March 28, 2018. Voice vote found all in favor, 5-0-0; passed and so ordered.

2. ITEMS FROM THE AUDIENCE

None.

3. DIRECTOR'S REPORT

Bill Dean provided an Informational Memo to each of the commissioners regarding the Ellissagaray turn lane, as previously requested.

Mr. Dean mentioned that a portion of the Tracy Village materials, for the upcoming April 11, 2018 Planning Commission meeting was available tonight, and available on the City's website, and commissioners could pick up those materials from Gina Peace, Recording Secretary, after tonight's meeting.

Mr. Dean expressed his gratitude for the two departing Planning Commissioners Krogh and Tanner. On behalf of the City, Mr. Dean presented Commissioner Krogh and Commissioner Tanner with a small token of appreciation.

4. ITEMS FROM THE COMMISSION

Commissioner Krogh and Commissioner Tanner each expressed their gratitude for the opportunity to serve on the Planning Commission. Chair Orcutt and Commissioner Hudson each thanked the two departing commissioners.

5. ADJOURNMENT

It was moved by Chair Orcutt, seconded by Commissioner Hudson, to adjourn. Voice vote found all in favor; passed and so ordered.

Time: 7:52 p.m.

_____
CHAIR

_____
STAFF LIAISON

April 11, 2018

AGENDA ITEM 1.A

REQUEST

PUBLIC HEARING TO CONSIDER THE TRACY VILLAGE DEVELOPMENT PROJECT AND RELATED ANNEXATION OF LANDS TO THE CITY OF TRACY AND CERTIFICATION OF AN ENVIRONMENTAL IMPACT REPORT. TRACY VILLAGE PROPOSES TO DEVELOP 590 SINGLE-FAMILY RESIDENTIAL LOTS WITHIN A 135.2-ACRE GATED AND AGE-RESTRICTED COMMUNITY LOCATED ON THE SOUTH SIDE OF VALPICO ROAD, EAST OF CORRAL HOLLOW ROAD. THE PROJECT PROPOSES ANNEXATION/PREZONING, AND INCLUDES A SPECIFIC PLAN AND VESTING TENTATIVE SUBDIVISION MAP. ADDITIONALLY, THE CITY IS PROPOSING ANNEXATION/PREZONING OF 42 LOTS CURRENTLY LOCATED IN UNINCORPORATED SAN JOAQUIN COUNTY, LOCATED IMMEDIATELY WEST OF THE TRACY VILLAGE SITE ALONG CORRAL HOLLOW ROAD AND NORTH OF THE TRACY VILLAGE PROJECT SITE ALONG VALPICO ROAD. TRACY VILLAGE CONSISTS OF ASSESSOR'S PARCEL NUMBERS: 244-040-01 AND 244-030-01 AND 02. THE 42 LOTS FOR ANNEXATION PREZONING CONSIST OF ASSESSOR'S PARCEL NUMBERS 244-030-01 THROUGH 244-030-21 ALONG CORRAL HOLLOW ROAD, AND ASSESSOR'S PARCEL NUMBERS 242-050-01 THROUGH 242-050-21 AND 242-040-29 ON THE NORTH SIDE OF VALPICO ROAD. APPLICATION NUMBERS A/P13-0002, SPA18-0001 AND TSM17-0003

DISCUSSION

In order for the project to be constructed, several actions require approval, including the following:

- Annexation and prezoning of the Tracy Village development project site and annexation and prezoning of 42 adjacent parcels currently in unincorporated San Joaquin County (A/P13-0002)
- Approval of a Specific Plan for the Tracy Village development plan site and outparcels (SPA18-0001)
- Approval of a Vesting Tentative Subdivision Map to allow for the subdivision of the Tracy Village development project site (TSM17-0003)

Tracy Village Development Project

The Tracy Village Development Project site is designated "Resource Conservation (OS/RC)" by the County of San Joaquin General Plan and zoned "Agriculture-Urban Reserve (AU-20)" by the San Joaquin County Zoning Ordinance. The Tracy Village Development Project site is designated "Active Adult Residential" by the City of Tracy General Plan.

The project proponent for the Tracy Village Development Project is Ponderosa Homes. The application to the City includes a Specific Plan, Annexation and Prezoning, and a Tentative Subdivision Map. The Tracy Village Development Project is proposed as an active adult, gated and age-restricted community consisting of 590 single-family dwelling units ranging from 1,450 square feet to 3,000 square feet. The Tracy Village Specific Plan would reflect the City of Tracy General Plan land use designation of Active Adult Residential. The Specific Plan serves as pre-zoning to set the requirements for future

development. The Tracy Village Development Project will comply with all applicable development regulations contained in the Specific Plan.

The project will feature 3 man-made lakes totaling approximately 10.6 acres and a community recreation center with pool, spa, bocce courts, open space, and a community building. The project also includes a 3.2-acre park, a 0.5-acre secondary recreation area (containing a pool, spa and open space), and a dog park. The project is proposed as a gated community, with private streets and open space areas which would be maintained by the project homeowner's association.

Residential Development

A variety of lot sizes and types (590 total lots) are proposed for the project, generally ranging in size from 4,370 sq ft to 6,000 sq ft, summarized below. All of the lots are proposed for single-family detached residential development, with home sizes generally ranging from 1,350 sq ft to 3,000 sq ft.

Approximate Lot Size	Number of Lots
Estates: 6000 sf	119
Classics: 5500 sf	116
Villas: 5335 sf	103
Bungalows: 4500 sf	86
Casitas I: 4600 sf	73
Casitas II: 4370 sf	93

The Specific Plan includes a series of design styles and floor plans for the project which would be utilized in guiding development of each lot. The plan styles include:

- European Country
- Farmhouse
- Hacienda
- Italian
- Prairie
- Spanish
- Tuscan
- Contemporary
- Progressive Cottage
- Progressive Farmhouse
- Progressive Spanish

Lake System

The Tracy Village Specific Plan would feature a man-made lake system to provide a focal aesthetic feature for the community, serve as the primary drainage conveyance and peak

attenuation/storage facility, and provide water quality treatment for urban storm water runoff. The system would consist of a series of three lakes that also incorporate wetlands to serve as natural filtration systems. During periods of abundant precipitation, lake water levels would be reduced to accommodate storm water flows. Reclaimed water, once available to the site, would supply the lake system and water would be pumped into the highest lake to then flow to the lowest lake. A solar and natural gas-powered co-generation facility would power this water pumping system and would simultaneously provide a continuous heat source for the community pool.

Recreation/Open Space

The Tracy Village Development Project will include a community center, which will serve the social and recreational needs of Tracy Village residents. The community center includes amenities such as a pool and spa, bocce courts, open space/park areas, a pet park, covered and open outdoor seating, a putting green, a community building, and other recreational uses. The community building would be centralized at the community center and will include a kitchen for daily and event use by residents, coffee bar, library, multi-media room, meeting rooms for social groups, exercise facilities, and bathrooms. In addition to the community center, the Tracy Village Development Project also includes smaller neighborhood recreational areas.

The Tracy Village Development Project will also include a walking promenade along the circular main project roadway, which surrounds the lake system. This walking path would consist of an eight-foot wide concrete pathway, landscaping, and seating areas. Pedestrian and bicycle trails will connect to pedestrian and bicycle facilities on Valpico Road and Middlefield Drive.

Infrastructure

The City of Tracy will be able to provide all necessary urban services to the project site upon annexation, as summarized below:

Sanitary Sewer

There is an existing 18-inch sanitary sewer main in Corral Hollow Road near the intersection of Parkside Drive that flows northerly in Corral Hollow Road, increasing in size and eventually reaching the City of Tracy Wastewater Treatment. The City's Wastewater Master Plan currently proposes to extend the existing sewer line down Corral Hollow Road, from Parkside Drive to West Linne Road. The Tracy Village Development Project's proposed internal sanitary sewer network would collect effluent from the tract into the main line to be constructed in Valpico Road. From there the Tracy Village Development Project effluent would flow to the Master Plan proposed 21-inch Corral Hollow trunk line and then to the City of Tracy Wastewater Treatment Facility.

Water

The Tracy Village Development Project is located in Pressure Zone Two of the Tracy municipal water system, which serves areas between elevation 75 and 150. There is an existing 24-inch Zone 2 water main in Corral Hollow Road and an existing 16-inch

water main in Valpico Road. There are also existing 12-inch water mains in Middlefield Drive and Bluegrass Lane on the south and east side of the Tracy Village Development Project that extends to the site.

The Tracy Village Development Project will extend the existing 12-inch water main at Middlefield Drive through Tracy Village with a connection to the existing 16-inch water main in Valpico Road. In addition, the water main will connect to the existing 12-inch water main in Bluegrass Lane. The City plans to develop a recycled water system, which, once completed, is expected to be made available to the project site. There is an existing groundwater well located near the northwest corner of the Development Project site, which will be removed. A water supply assessment was completed by the City, which confirmed the availability of water to serve the project.

Stormwater

The Tracy Village Development Project storm drain improvements include a 36-inch storm drain main in Valpico Road from Tracy Village to the Westside Channel as identified in the City-wide Storm Drain Master Plan. However, because of the flat terrain, existing improvements and the shallow depth (5 feet to 6 feet) of the Westside Channel, a storm drain pump station and force main may be required to convey stormwater runoff from Tracy Village to the Westside Channel.

The primary stormwater treatment control measure for the Tracy Village Development Project would be the on-site lake system. All stormwater runoff from the project will drain to the lake system, where it would be circulated on a continuous basis with pumps. This system will include media filters to treat the water and remove pollutants as it is being circulated.

Other Urban Services

Solid Waste

Solid waste from the Tracy Village Development Project will be accommodated at the Tracy Materials Recovery Facility (MRF transfer facility), and would then be hauled to the County Foothill landfill east of Tracy. On a designated day, the City's solid waste franchisee (currently Tracy Delta Solid Waste Management, Inc.) will collect solid waste and take it to their disposal facilities.

Utilities

PG&E provides electricity to the Tracy Village Development Project site. Transformers would be located above ground as per PG&E requirements. This above-ground transformer would likely be placed in between the front yards of residential units and screened if possible. Where feasible, PG&E will locate the transformers within the common areas.

PG&E also provides natural gas service to the Tracy Village Development Project site. Gas pressure regulators will be placed within common areas. However, individual gas meters will be placed in the side yards of each home.

AT&T will provide telephone service. Comcast provides television cable for Tracy and unincorporated areas. It is anticipated that electric, gas, telephone, and cable services to the proposed development will be provided through extension of existing facilities adjacent to the community. Overhead lines located on the north side of Valpico Road will be placed underground.

Emergency Services

Fire protection is provided by the Tracy Fire Department, serviced by Fire Station No. 97 located at 595 West Central Avenue, less than 2 miles from the site. The City is also considering a new fire station, to be located east of the project site. The City has recently finalized an agreement that would merge City fire services with those in the County (Tracy Rural Fire). On February 6, 2018, the Tracy City Council considered a JPA for creation of the South San Joaquin Fire Authority, which will effectively merge the services of the Tracy Rural Fire Protection District and the City of Tracy as of July 1, 2018. Payment of applicable City fees will also be required in support of fire and policy services and facilities as development of the site occurs. Additional funding of fire and police services will come from annual payment of property taxes (a Community Facilities District for services), along with sales taxes and other revenues generated by future development. The design of the roadways and alleys has been reviewed by the Fire Department to ensure adequate physical access is available to emergency response vehicles and personnel.

Police protection is provided by the Tracy Police Department, serviced from their headquarters at 1000 Civic Center Drive, approximately 3.5 miles north of the site.

Residential Annexation Area

The Residential Annexation Area is located in San Joaquin County, but within the City of Tracy Sphere of Influence. The City seeks annexation of these lands at this time to ensure appropriate continuation of the City boundary as a result of the Tracy Village Development Project. All 42 properties are designated Low Density Residential (R/L) by both the San Joaquin and City of Tracy General Plans, as well as the San Joaquin County zoning code. The majority of the lots are developed with single family residences. The proposed prezoning for the properties is Residential Estate, which is reflective of the type and intensity of residential development on most of the lots, and would permit single family residential development on the undeveloped sites. The existing homes are served with private wells and septic systems; these would be allowed to continue to be used, though property owners could seek to voluntarily connect to City water and sewer systems at their own expense. Similarly, any new development would be required to connect to City water and sewer systems at developer expense.

Surrounding Land Uses

North

The area north of the Project Area consists of single-family homes and undeveloped land, with approvals in place for more single-family homes.

East

Residential-low land uses form the eastern boundary of the Project Area. Small residential parks are scattered through the residential uses. Monticello Elementary School is also located east of the Project Area.

South

Residential-low land uses form the southern boundary of the Project Area. Small residential parks are scattered through the residential uses. Anthony Traina Elementary and Jefferson Middle Schools are also located south of the Project Area.

West

Agricultural/vacant land and a church are located on the western edge of Coral Hollow Road. Land to the southwest of the Project Area is approved for residential and commercial development as well as a swim center, as part of the Ellis project on Corral Hollow Road and West Linne Road.

Analysis

General Plan

There are many General Plan policies applicable to the proposed project, including (but not limited to):

- Maintain a Sphere of Influence that is consistent with the long-term land use vision in this General Plan.
- Establish a clearly defined urban form and city structure.
- Commitments to provide water and wastewater services to areas outside the City limits is accomplished by a pre-annexation agreement and approved by LAFCO if required.
- The City shall encourage residential growth that follows an orderly pattern, with initial expansion in Secondary Residential Growth Areas.
- The City provides fire and emergency response facilities and personnel necessary to meet residential and employment growth in the city.
- Promote efficient residential development patterns and orderly expansion of residential areas to maximize the use of existing public services and infrastructure.
- Land development that mitigates its environmental, design and infrastructure impacts.
- Use of berms, landscaped buffer zones, sound walls, and other similar measures between quarrying operations and noise sensitive adjacent uses is encouraged to ensure consistency with standards established in the City's Noise Element of the General Plan.
- Ensure that development near the Tracy Municipal Airport is compatible with airport uses and conforms to safety requirements.
- Size and design neighborhoods to be walkable.
- Provision of parks, open space, and recreation facilities and services that maintain and improve the quality of life for Tracy residents.

The proposed map shows 590 single-family lots, which will be located in six distinct neighborhoods of varying lot sizes. All of the homes in the Tracy Village Development Project are proposed to be single story to accommodate ease of access and aging-in-place, with an optional second floor living space. Home sizes would range from approximately 1,350 square feet to 3,000 square feet, with a wide variety of housing designs. The residential neighborhood would provide housing for Active Adults, which would allow them to remain in the City of Tracy. The development is intended to be a uniform style of housing to best serve this population. The development would also meet all of California's Title 24 Energy Efficiency Standards through several design features, including the use of solar roofs and an on-site stormwater treatment system and pollution control system that would utilize the manmade lakes.

For noise reduction regarding vehicle noise on Valpico Road, the project would incorporate a sound wall facing the street to meet applicable noise regulations in the General Plan. The entire annexation area is located within the Tracy Municipal Airport Safety Zone and is consistent with the land use restrictions. SJCOG review concluded that the project is consistent with the 2009 SJCOG Airport Land Use Compatibility Plan.

The TVSP includes approximately 22.6 acres of community open space that includes the lake system, the two recreation areas, a dog park, and the landscape areas at the two entries to the community. In addition, a loop promenade is provided around the lake system.

Environmental Review – Project EIR

The City has completed a Draft and Final Environmental Impact Report for the project ("EIR," SCH #2916112016), which evaluated a full range of potential environmental impacts that may result from the project[1], including:

Aesthetics, Light, and Glare
Agriculture and Forest Resources
Air Quality
Biological Resources
Cultural Resources
Geology, Soils and Seismicity
Greenhouse Gas Emissions
Hazards/Hazardous Materials
Hydrology and Water Quality
Land Use and Planning
Mineral Resources
Noise
Population and Housing
Public Services
Recreation
Transportation and Traffic
Utilities and Service Systems

This analysis included, more specifically, evaluation of the following:

- Impacts on the visual character of the project site and surrounding area, as well as impacts related to light and glare from the project on adjacent uses.
- Conversion of agricultural land to non-agricultural uses, including the potential direct, indirect and cumulative impacts.

[1] The project evaluated by the EIR includes both the Tracy Village Development project and the City's annexation of the 42 lots (or "outparcels").

- Impacts to sensitive plant and animal species in the area, including to special status species that may be present, as well as to habitat which can support them and migration corridors.
- Air quality and Greenhouse Gas (GHG) emissions impacts during the construction and operational phases of the Project in view of the existing cumulative conditions in the San Joaquin Valley.
- Land use compatibility and any growth-inducing impacts, and buffering of the proposed residential uses from surrounding rural uses.
- Traffic and circulation impacts on local roadways in the vicinity of the Project site.
- Water quality impacts as well as impacts on water supply, wastewater treatment, and solid waste disposal capacity to accommodate the Project.

Based on the EIR analysis, a series of mitigation measures has been identified which would ensure mitigation of potentially significant environment impacts to levels of insignificance. These include mitigation in the areas of air quality, geology, cultural resources, hydrology, land use, traffic/transportation, utilities and cumulative impacts. Even with mitigation, air quality conditions will not be reduced to a less-than-significant level. Adoption of a statement of overriding considerations is therefore recommended.

RECOMMENDATION

Staff recommends that the Planning Commission recommend that the City Council take the following actions:

1. Certify the project Environmental Impact Report.
2. Approve execution of a LAFCO application to request annexation of the Tracy Village Development Project site, including the 42 outparcels, into the Tracy City Limits.
3. Pre-zone the site to reflect the Tracy Village Specific Plan, and pre-zone the 42 outparcels as Residential Estate.
4. Approve the Tracy Village Specific Plan.
5. Approve the Tracy Village Vesting Tentative Subdivision Map.
6. Prepare an application for approval of annexation request for San Joaquin (LAFCO).

Prepared by: Brian Millar, AICP, Planning Consultant and Victoria Lombardo, Senior Planner
Reviewed by: Bill Dean, Assistant Development Services Director
Approved by: Andrew Malik, Development Services Director

ATTACHMENTS

Attachment A – Tracy Village Specific Plan (provided to Planning Commission on 3/28/17)
Attachment B – Tracy Village Vesting Tentative Subdivision Map
Attachment C – Draft EIR and Final EIR (Draft EIR provided to Planning Commission on 8/22/17)
Attachment D – Planning Commission Resolution

Tracy Village



Draft Specific Plan
March 2018

Table of Contents

Chapter One: Introduction

1.1 Vision and Executive Summary 1-1

1.2 Purpose and Intent 1-2

Figure 1.1: Illustrative Site Plan 1-3

1.3 Site Location 1-4

Figure 1.2: City Context 1-4

1.4 Surrounding Land Uses 1-5

Figure 1.3: Vicinity Land Use 1-5

1.5 Authority for Specific Plans 1-6

1.6 General Plan 1-6

Figure 1.4: General Plan Designations 1-7

1.7 How to Use This Document 1-8

Chapter Two: Zoning and Development Standards

2.1 Zoning and Development Standards 2-1

Figure 2.1 TVSP Areas 2-2

2.2 Maximum Permitted TVSP Development 2-2

Table 2-1: TVSP Zone Lot Types 2-3

2.3 Permitted Uses – TVSP Zone 2-3

2.4 Development Regulations – TVSP Zone 2-4

Table 2-2: TVSP Zone Development Regulations 2-4

Figure 2.2 TVSP Zone Land Use Plan 2-5

2.5 Parks and Open Space – TVSP Zone 2-6

Table 2-3: Open Space 2-6

2.6 Landscaping Standards – TVSP Zone 2-7

2.7 Sustainable Design Criteria – TVSP Zone 2-7

2.8 Accessibility 2-8

2.9 Residential Estate Lots 2-8

Chapter Three: Design Guidelines

3.1 Open Space Design 3-2

Figure 3.1: Conceptual Landscape Plan 3-3

Figure 3.2a: Lake Edge Treatments 3-8

Figure 3.2b: Lake Edge Treatments 3-9

3.2 Landscape Guidelines 3-10

Figure 3.3: Wall and Fence Location Plan 3-15

Figure 3.4: Wall and Fence Types 3-16

3.3 Site Planning Guidelines 3-17

Figure 3.5: Plan/Elevation Style Plotting 3-21

Figure 3.6: Color Scheme Plotting 3-21

3.4 Architectural Requirements 3-22

European Cottage Style 3-24

Farmhouse Style 3-26

Hacienda Style 3-28

Italian Style 3-30

Prairie Style 3-32

Spanish Style 3-34

Tuscan Style 3-36

Contemporary Style 3-38

Progressive Cottage Style 3-40

Progressive Farmhouse Style 3-42

Progressive Spanish Style 3-44

3.5 Recreation Facilities Architecture 3-51

Figure 3.7: Conceptual Recreation Center 3-53

3.6 Sustainable Design Criteria 3-54

Chapter Four: Infrastructure and Services

4.1 Access and Circulation 4-2

Figure 4.1: Circulation Plan 4-3

Figure 4.2a: Cross Section A-A and Plan .. 4-4

Figure 4.2b: Cross Section B-B 4-6

Figure 4.2c: Cross Sections C-C and D-D 4-7

Figure 4.2d: Cross Sections E-E and F-F .. 4-8

Figure 4.2e: Alley Cross Section G-G 4-9

Figure 4.2f: Cross Sections H-H and I-I .. 4-10

Figure 4.2g: Cross Section J-J 4-11

4.2 Public Transportation 4-12

4.3 Grading 4-12

Figure 4.3: Preliminary Grading Plan 4-13

4.4 Wastewater 4-14

Figure 4.4: Preliminary Wastewater Improvement Plan 4-17

4.5 Water 4-18

Figure 4.5: Preliminary Potable Water Improvement Plan 4-21

Figure 4.6: Recycled Water Improvement Plan 4-23

4.6 Storm Drainage 4-25

Figure 4.7: Storm Drain Improvement Plan 4-27

Figure 4.8: Stormwater Treatment and Water Quality Management Systems 4-28

Figure 4.9: Conceptual Tracy Village Water Treatment Plan 4-29

4.7 Lake Water Quality Management 4-30

Figure 4.10: Typical Lake Sections 4-31

Figure 4.11: Example of a Cogeneration System 4-33

4.8 Public Facilities and Services 4-34

4.9 Public Services 4-35

Chapter Five: Implementation Administration

5.1 Overview of Financing 5-2

5.2 Maintenance 5-3

5.3 Project Construction Phasing 5-4

5.4 Specific Plan Implementation 5-5

5.5 Specific Plan Amendment Procedures 5-6

Appendix A: Plant Palette

Figure A-1: Plant Palette A-3

Appendix B: Water Quality Details

B.1 Water Quality Details B-2

Figure B-1: Concept Water Quality Filter (Stormwater Extended Detention Basin) B-2

Figure B-2: Water Quality Filter Pre and Post-Construction B-3

Figure 3: Biofilter, Pre and Post-Construction B-4

Figure B-4: Biofilter Section B-4

Figure B-6: Vegetated Wetland Planter B-5

Figure B-5: Aeration System B-5

Appendix C: Lake Operations & Maintenance (O&M)

C.1 Debris Removal C-3

C.2 Lake Watershed Management C-3

C.3 Maintenance of Water Flows C-3

C.4 Intake Screen Maintenance C-3

C.5 Shoreline Maintenance C-4

C.6 Aeration C-4

C.7 Aquatic Planters C-5

Chapter One Introduction

1.1 Vision and Executive Summary

Tracy Village is an age-qualified, master-planned residential community that includes up to 600 single-family detached homes. Based upon the provisions of Measure K, approved by Tracy voters in December 2015, changes to the Tracy Municipal Code and General Plan have provided Tracy Village the allocation of 600 Active Adult Residential Allotments for construction of the residential units. The Allotments can only be used on property that is a senior citizen housing development under provisions of state law and is so restricted by deed restriction or other legal mechanism; Tracy Village meets these requirements.

The Specific Plan addresses the use of Tracy Village as an age-qualified community, based on the developer's applications to the City. As noted above, restrictions are in place through the approval of the Specific Plan and related documents to ensure future use of the community as an age-qualified development.

The project includes several lot sizes and home styles within a gated community. Key features at Tracy Village are private streets and parks, community building, pool, recreational uses, and a series of lakes and open spaces. All of the homes planned for Tracy Village provide single-level living for aging-in-place. Some homes will include optional second floor living space for lifestyle choices and guest use. It provides opportunities for Tracy residents to stay in the community as they transition towards retirement and post-employment pursuits.

The 135.2-acre Tracy Village community is organized around an interconnected lake and open space system. The lake system incorporates wetlands to serve as natural filtration systems as part Tracy Village's storm water management program. In addition, during the rainy season, lake water levels can be reduced to accommodate storm water flows, eliminating peak off-site storm water impacts.

Tracy Village also includes a walking promenade along the main thoroughfare, which surrounds the lake and open space systems. The promenade connects to a community park which spans the central loop neighborhood, providing passive open space, walking trails, gardens and ornamental landscaping which also serves as a buffer for the residential neighborhoods within the project. Tracy Village includes smaller neighborhood recreation and open space areas. Pedestrian and bicycle trails will connect to pedestrian and bicycle facilities on Valpico Road, Corral Hollow Road, and Middlefield Drive.

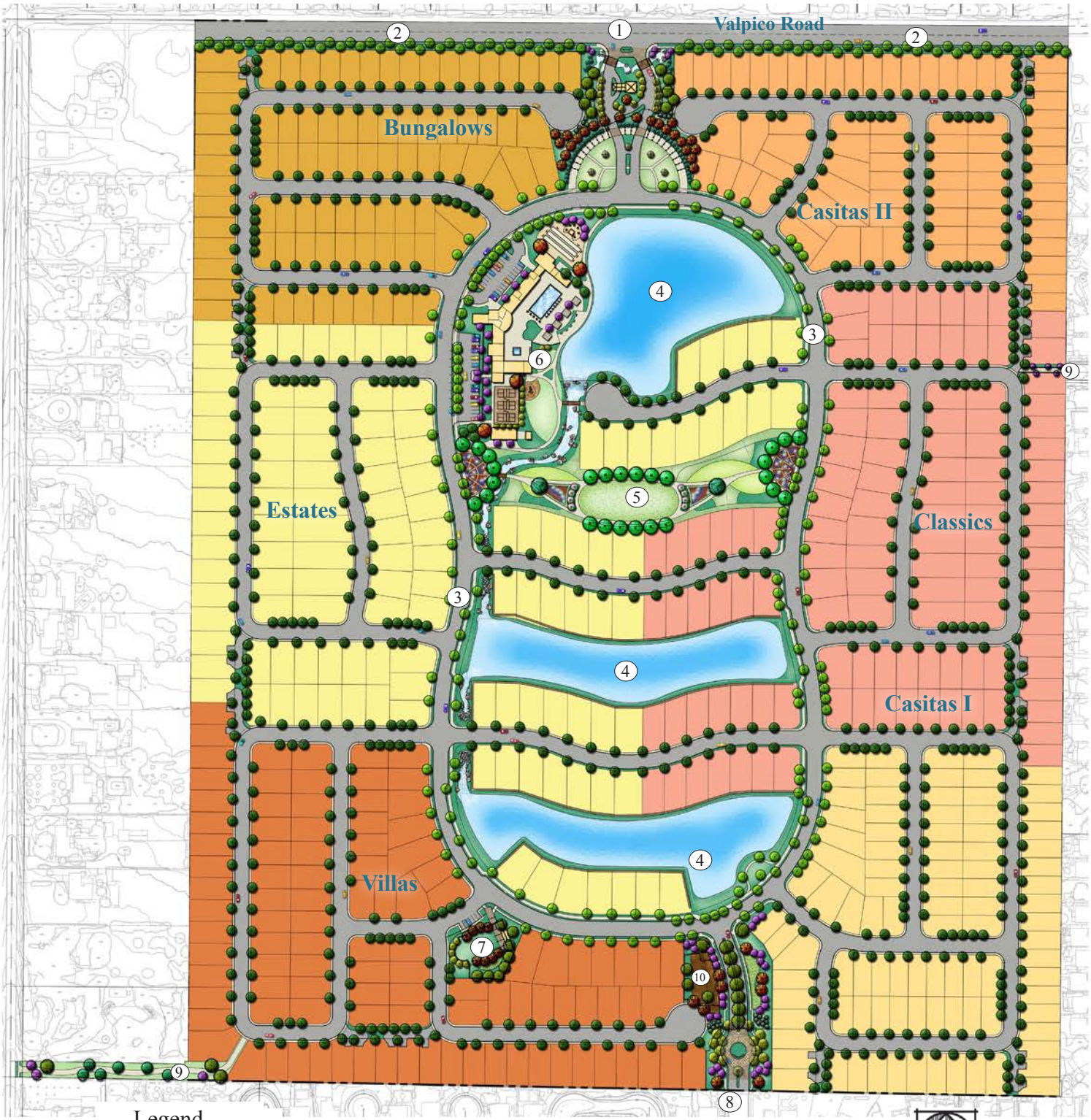
All Tracy Village homes will have photovoltaics (PV) systems, reducing energy use in the community. Landscaped areas will be designed for low water use. All front yard landscaping improvements will be installed by the builder.

In addition, the Tracy Village Specific Plan (TVSP) includes the prezoning of 42 existing residential lots located immediately west of the Tracy Village development along Corral Hollow Road (Assessor's Parcel Numbers 244-030-01 through -21) and immediately north of the TVSP site along the north side of Corral Hollow Road (Assessor's Parcel Numbers 242-050-01 through -21). These lots have a prezoning of Residential Estate (RE). The Specific Plan includes these parcels in order to allow them to annex into the City of Tracy along with Tracy Village. If these parcels are not annexed, then their land uses will remain under the governance of San Joaquin County.

1.2 Purpose and Intent

The TVSP provides for a master-planned single-family residential community intended to:

- Provide housing opportunities responsive to the needs of the Tracy's active adults (age-qualified as defined in California Civil Code §51.3).
- Create a cohesive enclave through coordinated architectural and landscape design, resulting in a distinctive community identity and strong sense of place.
- Provide a desirable community for people to live.
- Promote local residents supporting Tracy businesses and social programs.
- Result in quality home design.
- Utilize technologies and solar roofs to achieve cost-effective energy use.
- Integrate resource-efficient design, climate-appropriate landscaping, stormwater quality treatment, and products that conserve resources.
- Promote indoor/outdoor living as a central feature of the neighborhoods and homes.
- Include 42 existing lots on Corral Hollow and Valpico Roads adjacent to the Tracy Village development, utilizing a prezoning of RE.



Legend

1. Main Entrance
2. Public ROW
3. Main Loop Road
4. Lake
5. Park
6. Main Recreation
7. Minor Recreation
8. Secondary Entrance
9. Pedestrian Connections
10. Dog Park

Figure 1.1: Illustrative Site Plan

The TVSP coordinates the land use development and zoning standards, scale, and aesthetic characteristics of development with the goals and policies of the City of Tracy General Plan, along with details on infrastructure improvements and TVSP implementation for both the TVSP zone and the RE prezoned lots.

1.3 Site Location

Located at the southeast corner of Corral Hollow and Valpico Roads in San Joaquin County, the Tracy Village site and adjacent residential lots are surrounded on two sides by existing residential development and on the north side by a vacant lot zoned single family in the City of Tracy. Corral Hollow Road is a north-south arterial on the west side of the City of Tracy, and Valpico Road is an east-west arterial in the southern portion of the City of Tracy. The project also includes the 42 existing lots along the east side of Corral Hollow Road and the north side of Valpico Road.

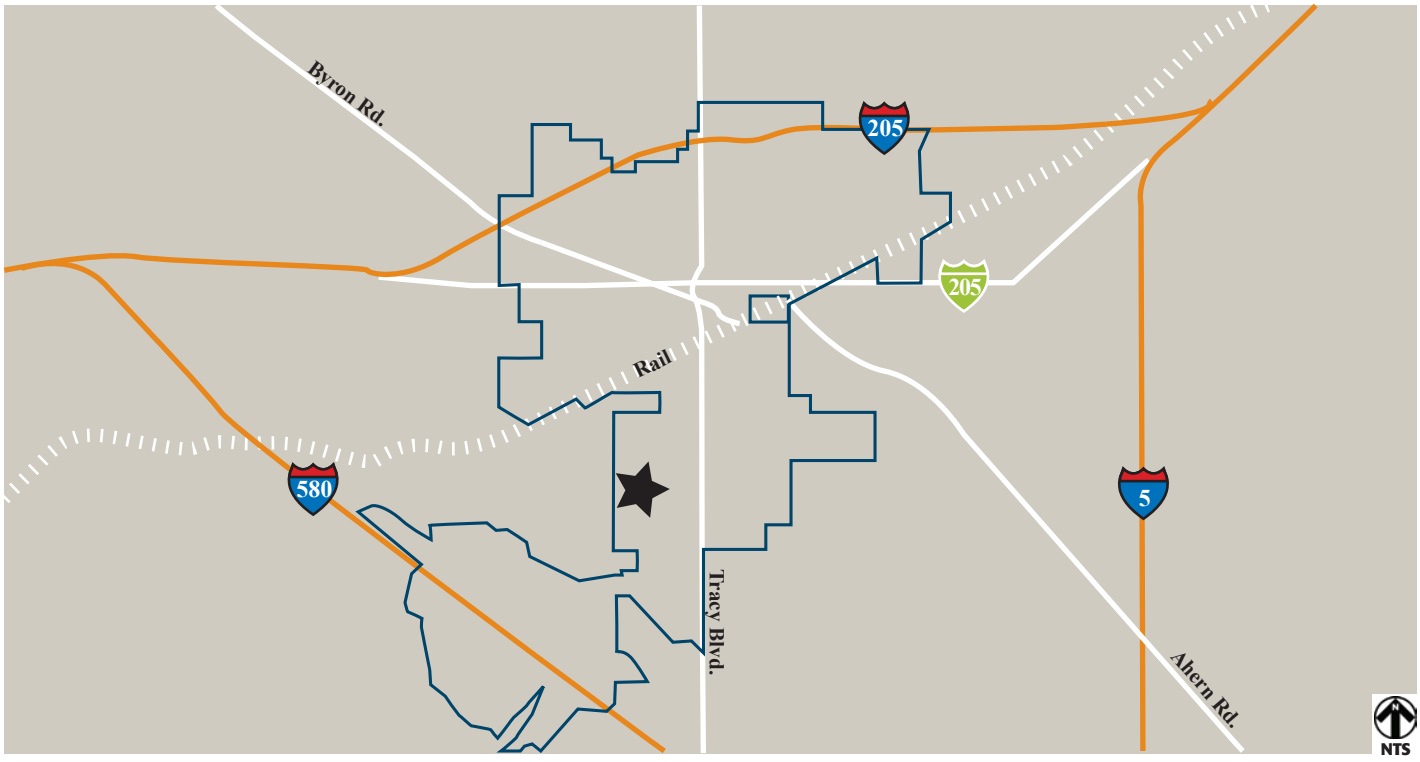


Figure 1.2: City Context

1.4 Surrounding Land Uses

Tracy Village is adjacent to single-family homes to the east and south. To the north is Valpico Road and single-family homes and to the west, along Corral Hollow Road, are single-family homes that are part of the annexation/prezoning, and are included in the TVSP. Further to the west are planned residential uses (in farmland use at the time of adoption of this TVSP). There are five parks within walking distance of the TVSP, some with active uses like ball courts, and others with passive amenities like trails. The Altamont Corridor Express (ACE) Tracy station is approximately one mile away to the south.



Figure 1.3: Vicinity Land Use

1.5 Authority for Specific Plans

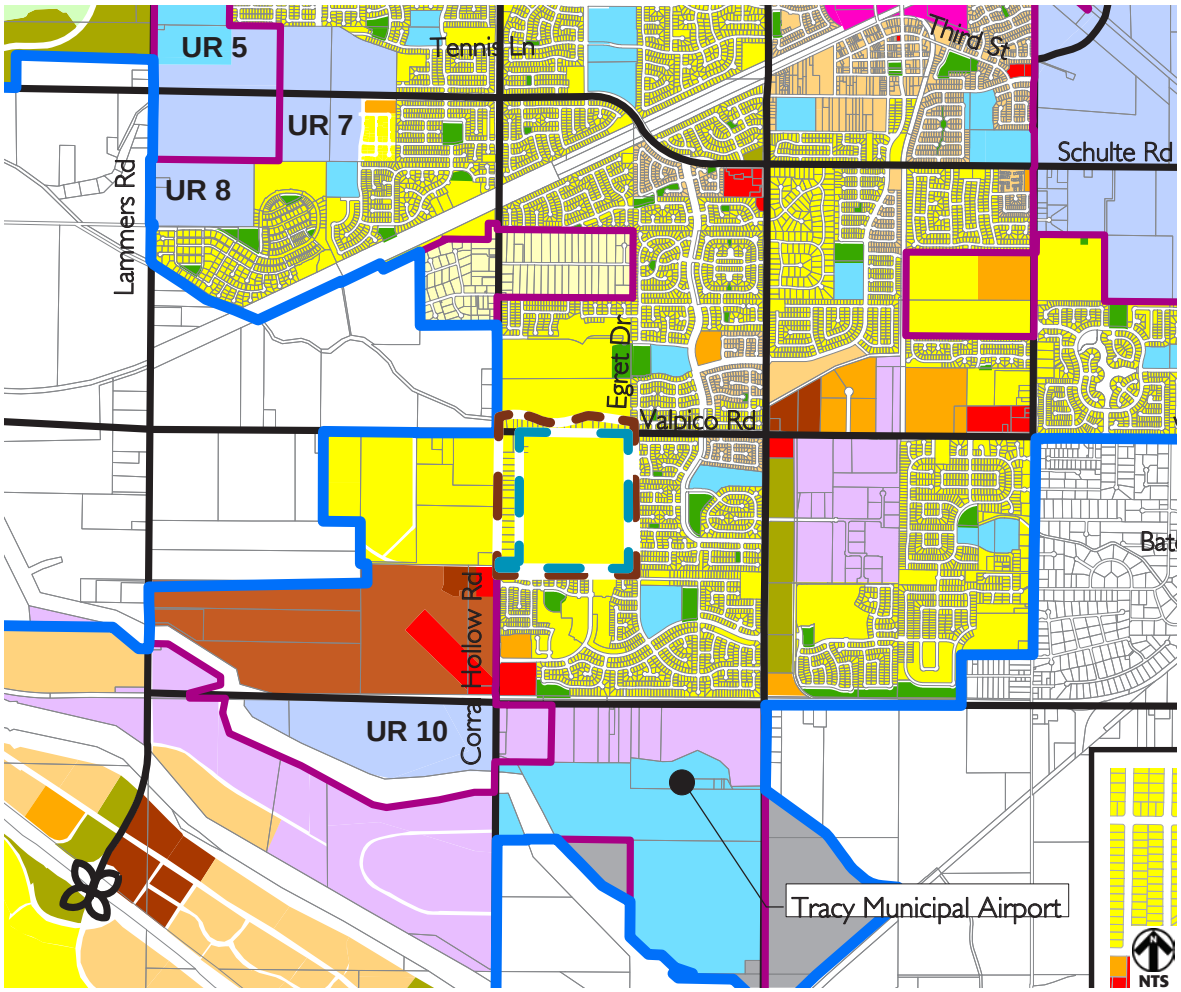
The TVSP has been prepared and established under the authority granted to the City of Tracy in accordance with the requirements of the California Government Code, Title 7, Division 1, Chapter 3, Article 8, Sections 65450 and 65457. The California Government Code authorizes cities to adopt specific plans by resolution or ordinance. A public hearing is required, after which the specific plan must be adopted by the Tracy City Council for final approval.

The TVSP is intended to be a regulatory document that serves as the zoning regulation for the property. Development plans or agreements, tract maps or any actions requiring ministerial or discretionary approval on this property must be consistent with the TVSP.

The Illustrative Plan and program summary reflects the scale of development that could be developed under the TVSP zone. The exact sites to be developed, the timing of development and the final program mix will be determined by a number of factors, including market conditions, construction costs, land costs (i.e., opportunity costs) and lot size and configuration, among others.

1.6 General Plan

The City of Tracy General Plan, adopted February 1, 2011, provides a vision for the City's future and establishes a framework for how Tracy should grow and change over the next two decades. While embracing change, the General Plan establishes goals, objectives, policies, and actions that empower the City and the community to guide change consistent with the City's vision. The nine elements of the Tracy General Plan govern land use and planning decisions. All planning and development actions must be consistent with the General Plan, including the TVSP. As noted above, Tracy voter-approved Measure K included action to amend the General Plan for the Tracy Village site, recognizing a Residential Low land use designation and the project's Active Adult Residential use. The TVSP is consistent with Tracy's General Plan as amended.



Legend

- Sphere of Influence
- City Limits
- Residential Very Low
- Residential Low
- Residential Medium
- Residential High
- Traditional Residential - Ellis
- Commercial
- Office
- Industrial
- Downtown
- Village Center
- Public Facilities
- Park
- Open Space
- Agriculture
- Aggregate
- UR — Urban Reserve
- Major Arterial/Expressway/Boulevard
- TVSP Area
- Tracy Village Development

Figure 1.4: General Plan Designations

1.7 How to Use This Document

The TVSP defines a vision and establishes standards and requirements for site development and land use. The Specific Plan is arranged into five Chapters as follows:

Chapter 1: Introduction

This Chapter provides the purpose and intent of the Specific Plan, development overview, site location, and a summary of the existing conditions affecting the Specific Plan area, including existing City land use and zoning designations, as well as existing and surrounding development area land uses.

Chapter 2: Zoning and Development Standards

Forming the core of the Specific Plan document, this Chapter presents the Land Use Plan, describes the zoning, specifies the permitted and conditionally permitted uses, and establishes development standards and requirements.

Chapter 3: Design Guidelines

This Chapter includes both architectural and landscape design guidelines and standards to promote high quality development.

Chapter 4: Infrastructure and Services

This Chapter describes the transportation requirements, public services, solid waste disposal, utilities, emergency services, and school provisions.

Chapter 5: Implementation and Administration

Provisions for financing/maintenance of improvements and the process for implementation are discussed in this Chapter.

Chapter Two Zoning and Development Standards

2.1 Zoning and Development Standards

The TVSP is a regulatory document, is incorporated into the City's Zoning Ordinance, and serves as the zoning for all properties within the TVSP area. In addition to the development standards and design guidelines (together referred to as zoning regulations or regulations) contained in this TVSP properties within the TVSP area are subject to applicable regulations of the Tracy Municipal Code, such as parking requirements, sign regulations, and general provisions. Definitions are the same as in the Tracy Municipal Code. To the extent any regulation in the TVSP conflicts with the Tracy Municipal Code, the regulation set forth herein shall prevail.

In addition to the zoning and development standards contained in this chapter, the Tracy Village Design Guidelines shall apply to all projects subject to Development Review (see Chapter 3, Design Guidelines).

There are two areas within the TVSP; one main area will receive the TVSP zone (the Tracy Village development community) while the secondary area will include the existing single family residential lots that are being annexed to the City at the same time as the Tracy Village area. The existing single family lots are prezoned Residential Estate (RE).

2.2 Maximum Permitted TVSP Development

The TVSP zone provides for a maximum of 600 single-family active adult detached homes with a overall maximum density of approximately 5 dwelling units per gross acre across the entire 135.2-acre project site. The TVSP zone is shown on Figure 2.1 TVSP Areas.

Six different lot sizes may be provided within the TVSP zone to accommodate a mixture of housing types. The density is permitted to range from 0.1 to 9.0 units per gross acre for the individual neighborhoods. Refer to Table 2-1: TVSP Zone Lot Types, for lot sizes and Figure 2.2 TVSP Zone Land Use Plan, for location of lot types. The individual neighborhood areas may exceed the overall density; however, no more than 600 homes may be located in the community; and overall density shall be consistent with the General Plan land use designation of Residential Low, which provides for a maximum residential density of 5.8 dwelling units/acre.

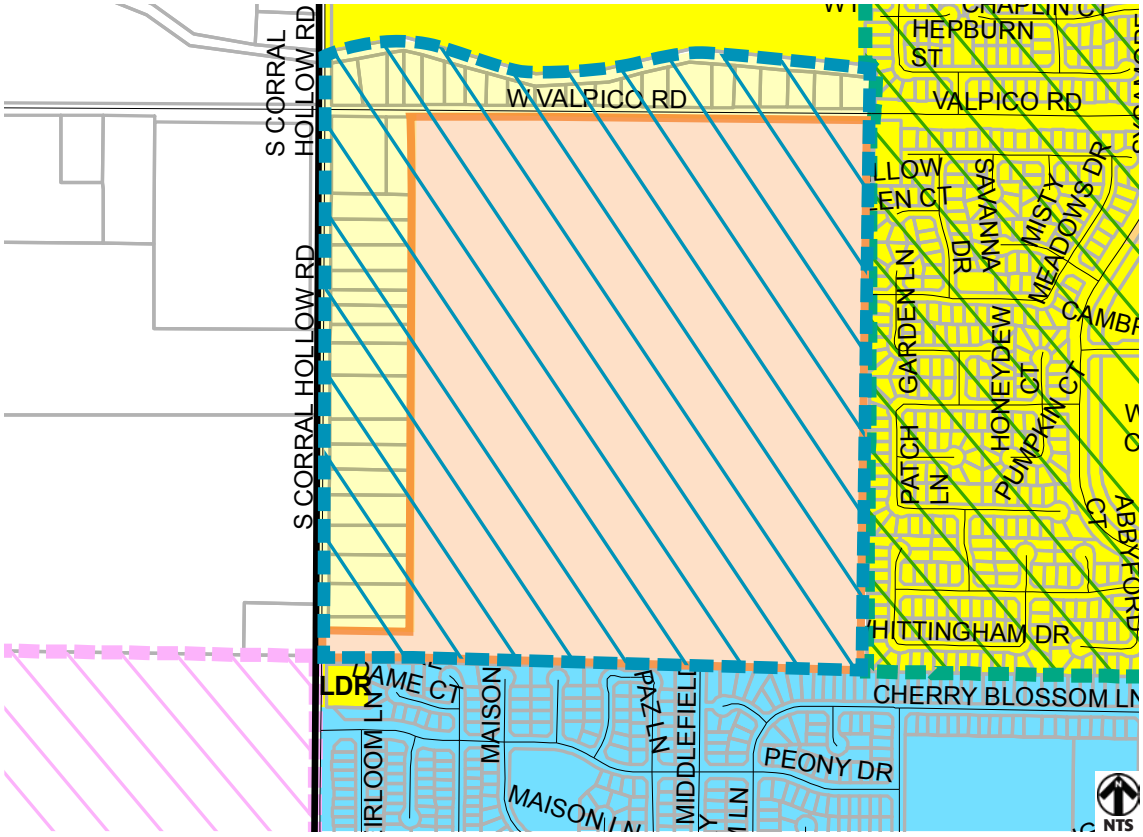


Figure 2.1 TVSP Areas

Table 2-1: TVSP Zone Lot Types		
Neighborhood Name	**Lot Size**	**Anticipated Number of Lots***
Estates	60′ x 100′	104
Classics	55′ x 100′	98
Villas	55′ x 95′	110
Bungalows	50′ x 90′	97
Casitas I	46′ x 100′	85
Casitas II	46′ x 95′	106
* Number of lots in each type may be adjusted provided total number of lots may not exceed 600.		

The Residential Estates, also shown on Figure 2.1 TVSP Areas, lots have a minimum lot size of 15,000 square feet. Development standards and land use restrictions for these lots are addressed in Section 2.8, below.

2.3 Permitted Uses – TVSP Zone

The following uses are permitted within the TVSP zone:

- Single-family dwellings.
- Recreation facilities.
- Parks and dog parks.
- Lakes and lake facilities, including piping, wells, pumps, enclosures for same and related facilities.
- Home occupations, in compliance with title 10, Chapter 10.08, Article 36 of the Tracy Municipal Code.
- Accessory uses shall be allowed as listed in TMC §10.08.1080(28) and (29).

The following temporary uses are permitted within the TVSP zone:

- Garage Sales that comply with TMC §10.08.3160.
- Special events at the project's main recreation facility.

2.4 Development Regulations – TVSP Zone

Table 2-2: TVSP Zone Development Regulations lists development regulations within the TVSP zone.

Table 2-2: TVSP Zone Development Regulations

Lot Sizes	**4,275 SF - 4,500 SF Lots**		**5,000+ SF Lots**		
Neighborhood Name	Casitas II	Casitas I & Bungalows	Villas	Classics	Estates
Min. Lot Size (square feet)	4,275	4,500	5,225	5,500	6,000
Min. Lot Width (feet)[1]	46′	46′ - 50′	55′	55′	60′
Min. Lot Depth (feet)	95′	90′ - 100′	95′	100′	100
Setbacks[2]					
Min. Front - Porch	10′				
Min. Front - 1st Floor Living	15′				
Min. Front - 2nd Floor Living	20′				
Min. Front - Front Facing Garage	20′				
Min. Front - Side Facing Garage	N/A			10′	
Min. Side - Internal	5′				
Min. Side - Street	10′				
Min. Rear	10′ Minimum, Average 13′				
Heights					
Homes	30′ Maximum				
Entry Gate House	20′ Maximum				
Walls and Fences					
Valpico Road Soundwall Height[3]	8′ or per acoustical requirements				
Perimeter Wall Height[3]	8'				
Boulevard Fence Height	6′ with 1′ lattice				
Good Neighbor & View Fence Height	6′				
Front Yard Height	3′				
Street Side; Side Yard	Fences shall be setback 5′ from back of sidewalk				
Lot Coverage[4]					
	60% Maximum		60% Maximum		
Accessory Structures					
Shade Structures[3]	Setbacks same as main building setbacks				
Recreation Center Requirements					
Min. Setbacks	10′				
Max. Height	35′				
Vehicular Parking	45 parking spaces on-site with dimensions of 9′ wide by 18.5′ long; Additional parking spaces will be provided on the street with dimensions of 8′ wide by 22′ long				
Compact stalls	30% of parking may be compact with dimensions of 8′ wide by 16′ long, to be dispersed through the project area				

[1] Minimum width of lot measured at front setback line.
[2] Setbacks measured from property line (5' back of face of curb on interior streets and 10' back of face of curb on loop road).
[3] Measured, from top of wall to top of retaining wall, unless a sound report requires a higher fence.
[4] Shade structures shall not be included when calculating maximum lot coverage or average setback; second floor can't exceed 30% of first floor SF.

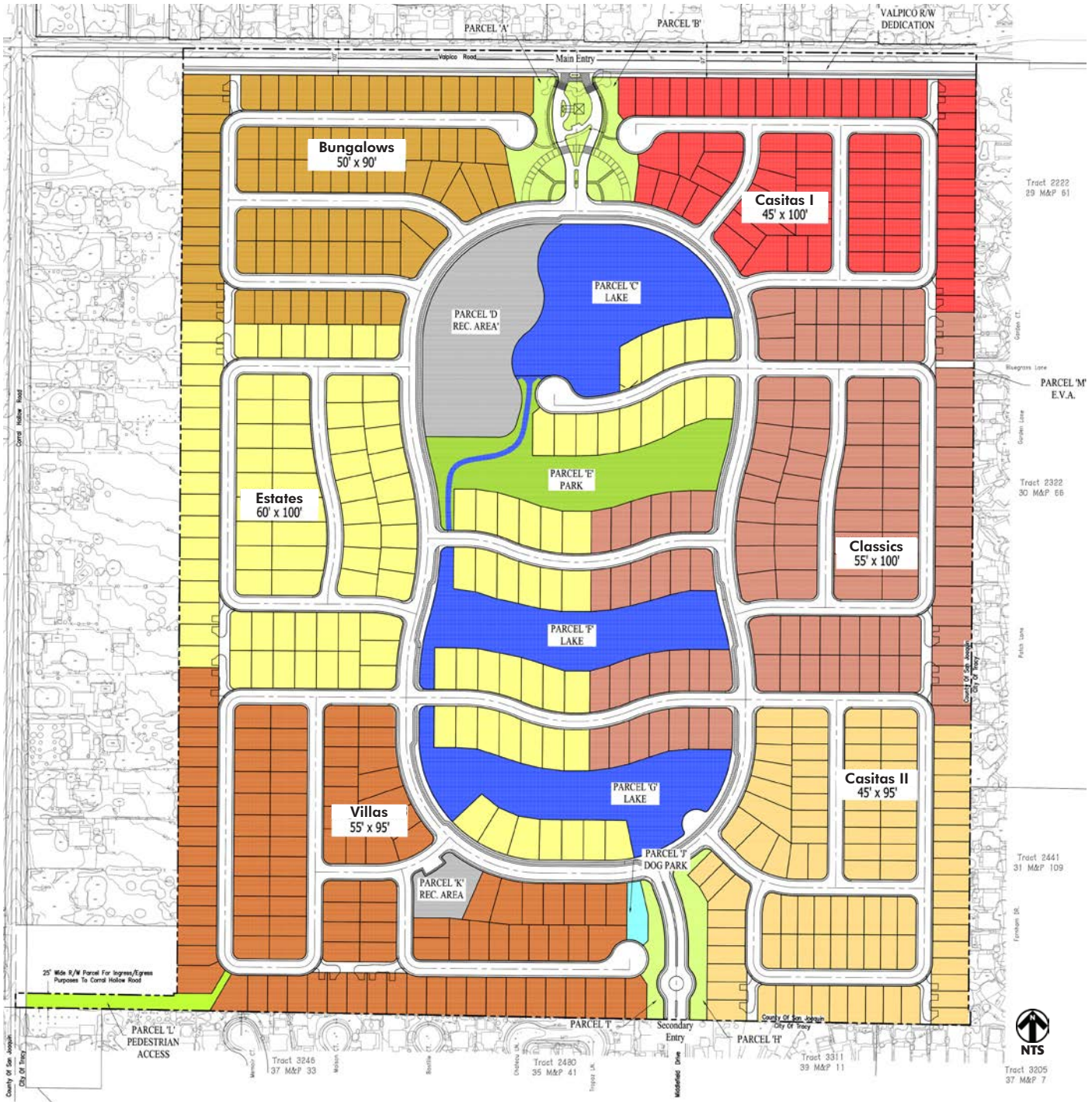
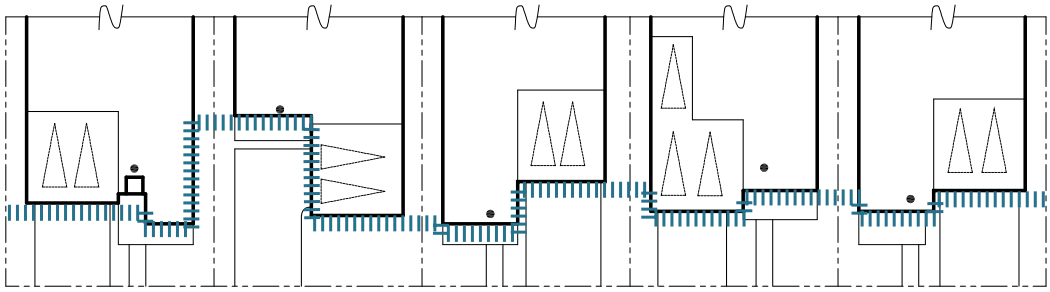


Figure 2.2 TVSP Zone Land Use Plan

2.4.1 Staggered Front Yard Setbacks

In order to ensure visual interest and charm within the streetscene, homes are required to provide a staggered array of massing along the street. The techniques used shall vary using floor plans, and garage locations and style details to provide diversity and to allow homes to undulate along the streetscape. The staggering should be achieved without sacrificing backyard area. In no case shall the garage setback be less than 20 feet. The garage setback does not need to vary between adjacent homes (see also section 3.3.5).

- Only two-car side-by-side garage doors are permitted, and three-car garage spaces are permitted only as a tandem garage.



Example of Varied Front Yard Setbacks

2.5 Parks and Open Space – TVSP Zone

The Land Use Plan identifies the open space areas at Tracy Village. Approximately 21 acres of open space is provided that includes the lake system, two recreation areas including recreational buildings, open space landscape areas at the two entries to the Tracy Village, a walking park, a dog park and a pedestrian connection to Coral Hollow Road. In addition, a loop promenade is provided around the lake and open space systems.

Table 2-3: Open Space

Open Space Type	Acreage
Lake System	10.5
Recreation Facilities	4.0
Open Space System	2.4
Private Park	3.2
Dog Park	0.2
Pedestrian Connection	0.7
Total	**21**

2.5.1 Lakes Plan

The man-made lake system at Tracy Village has the following four primary functions:

- Provides a focal aesthetic feature for Tracy Village,
- Serves as the primary drainage conveyance and peak attenuation/storage facility,
- Uses recycled water, and
- Provides water quality treatment for urban storm water runoff.

2.6 Landscaping Standards – TVSP Zone

2.6.1 Plant Sizes for Recreation Center

The minimum size of trees at planting is 24-inch box. The minimum size of shrubs will vary by species. A minimum of 30% of shrubs shall be 1-gallon size, 50% 5-gallon size and 20% 15-gallon size. Groundcover planting shall be installed at sizes and spacing to provide complete cover within one year of installation. Vines shall be installed in 5-gallon size. See additional landscape standards and guidelines in Chapter 3.

2.6.2 Tree Locations

The street trees shall have on-center spacing in relation to lot size and tree variety, consistent with City standards.

Trees shall be placed to comply with the following minimum setbacks:

- 5 feet setback from any residential walk, curb, and/or pavement.
- 30 feet minimum from street corners for sight line visibility (greater setbacks may be required based on specific conditions).
- 5 feet setback from residential driveways.
- 5 feet setback from water, sewer, gas and fire service laterals.
- Continuous root barriers shall be installed in the front yards.

2.7 Sustainable Design Criteria – TVSP Zone

All homes shall meet the requirements of Title 24 of the California Code of Regulations to reduce energy use and encourage the preservation of natural resources. The following additional elements are required:

- All homes shall have photovoltaics on their roofs.
- Provide photovoltaics and/or solar water heaters on community buildings.
- Use of recycled water when available.
- Wood-burning fireplaces are prohibited.

2.8 Accessibility

All amenities for the residents shall meet accessibility standards including the dog park and pedestrian bridge.

2.9 Residential Estate Lots

Existing residential lots are located immediately west of Tracy Village along the east side of Corral Hollow Road (Assessor's Parcel Numbers 244-030-01 through -21), and immediately north of the TVSP site along the north side of Valpico Road (Assessor's Parcel Numbers 242-050-01 through -21). These lots have a zoning of Residential Estate (RE) as shown on Figure 2.1 TVSP- Areas.

2.9.1 Permitted and Conditional Uses

Land use of these properties shall be regulated based on use provisions of Tracy Municipal Code Section 10.08.1100.

2.9.2 Utility Connections

Connection to City of Tracy water and sewer services will not be required for those lots already developed with private wells and sewage disposal systems supporting existing single-family residences, unless a property owner seeks to make the connections. Development of new single-family residences will be required to connect to City water and sewer services. When such connections are made, the property owner shall be required to remove existing, private on-site wells and sewage disposal systems, consistent with City standards, and pay applicable City connection fees.

Chapter Three Design Guidelines

The purpose of these Design Guidelines is to provide design direction for the development of the TVSP zone and is intended to promote individuality, high quality design and construction. Overall compatibility throughout neighborhoods will be achieved by application of site planning standards and a landscape program. Design regulation of development of the 42 lots located along Corral Hollow and Valpico Roads, which are part of this TVSP, shall be pursuant to applicable City design guidelines.



Conceptual Main Entrance Rendering



Legend
1. Tracy Village Signage
2. Enhanced Paving
3. Boulders and Stream
4. Guardhouse
5. Seating Areas and Pergola
6. Fruit Trees

Conceptual Park Landscape Plan

3.1 Open Space Design

The open space design for Tracy Village emphasizes drought-tolerant, native, and edible landscaping provide abundant trees, definition of spaces, and habitat enhancement; and create a comfortable and healthy community in the City of Tracy. Attractive and shaded streets, parks, community gardens, buffers, trails, and the promenade will establish strong community character and quality living environments.

Valpico Road landscaping and other improvements, such as monumentation, walls and fences, furniture and accessories, and lighting, shall be reviewed by the City through project infrastructure, grading and related improvement plans.

All landscaping and other improvements which are located on private property shall be subject to review, as specified in Chapter 5 of this TVSP. Design of the paseos shall address access, safety and maintenance.

3.1.1 Open Space Amenities

Promenade, Lakes and Community Parks

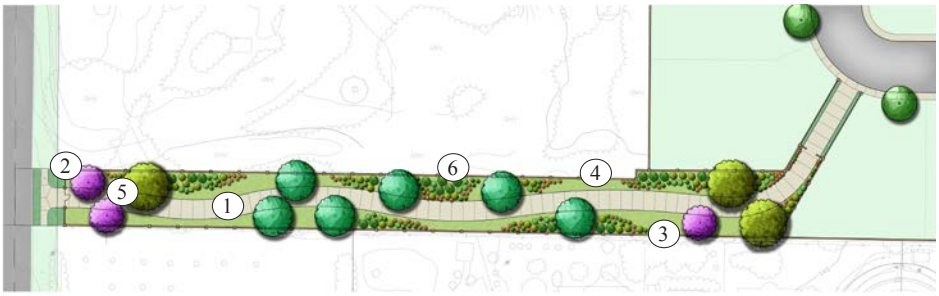
Tracy Village is designed to provide a community open space system with a wide promenade parkway along the main loop road connecting the three lakes and the large community walking park. This park, totaling 3.2 acres, provides a rose garden, concrete and decompressed granite (DG) walking paths, a pedestrian bridge which crosses the streams connecting the lakes, and passive recreational opportunities for the community. The park also serves as the backdrop for some of the residential units creating a park-like rear yard behind the property line view fence. All Tracy Village parks will be private, owned and maintained by the HOA.

Pedestrian Connections

There are two landscape pedestrian connections to Corral Hollow Road on the west, and Bluegrass Lane on the east. Both connections will have pedestrian gates.

Legend
1. Pedestrian Trail
2. Pedestrian Gate
3. Meadow Grasses
4. Masonry Wall
5. Trees
6. Drought Tolerant Shrubs

Conceptual Corral Hollow Pedestrian Connection





Legend

1. Main Entry Park
2. Main Recreation Facility
3. Pedestrian Bridge
4. Wetland Planter
5. Promenade Outlook
6. Secondary Entry Park
7. Dog Park
8. Minor Recreation Area
9. Pedestrian Connections

Figure 3.1: Conceptual Landscape Plan



Legend
1. Tracy Village Signage
2. Enhanced Paving
3. Boulders and Stream
4. Guardhouse
5. Seating Areas and Pergola
6. Fruit Trees

Conceptual Main Entrance Landscape Plan

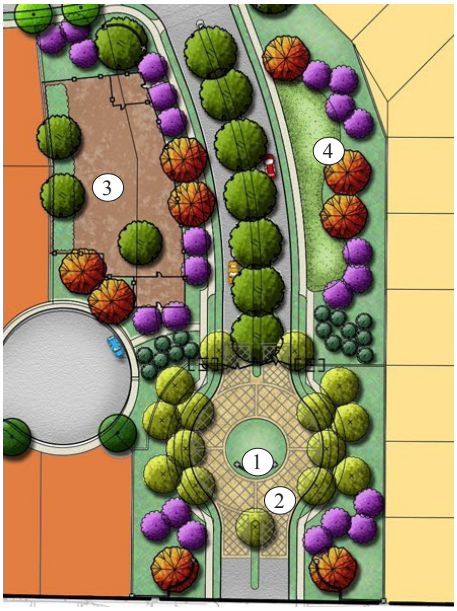
Main Entrance

Landscape theming for the Main Project Entrance area off Valpico Road will draw heavily from classic Mediterranean images utilizing olive trees, Italian cypress, lavenders, roses, and a variety of ornamental grasses.

The Tuscan inspired guardhouse design is surrounded by a variety of soft textures and flowing landscape. Olive trees planted in rows and ornamental grasses symbolic of orchards dominate the landscape.

There is a semi-circular pergola that frames the garden area and the lake system view beyond. The pergola includes both soft surface materials and paving to allow for large gatherings and informal functions.

The garden theme also includes ornamental grasses used primarily to convey informality and a rustic appearance. These grasses are also suitable for low water use and ease of maintenance.



Legend
1. Project Signage
2. Enhanced Paving
3. Dog Park
4. Passive Open Space

Conceptual Secondary Entrance Landscape Plan

Secondary Entrance

The landscape for the Secondary Entrance area from Middlefield Road reflects Mediterranean theming. The scale of the secondary entrance is understated, fitting with the existing surrounding residential character. The plant material is similar to the main entrance with olive trees, Italian cypress, lavenders, roses and a variety of ornamental grasses. The entry round-about feature is complemented by flowering accent trees. Low walls with the community name identify the Tracy Village entry and trellised pedestrian entries complete the entry.

Main Recreation Center Landscape

Recreation Center facility landscape draws heavily from classic images utilizing olive trees, Italian cypress, lavenders, roses, and a variety of ornamental grasses. The planting concept is based on an Italian theme, with a variety of soft textures and flowing landscape. Olive trees, turf areas and ornamental grasses dominate the landscape adjacent to the pergola garden.

Ornamental grasses are used to convey informality and rustic appearance. Only low to medium-water using grasses providing for ease of maintenance will be planted. Lavenders, roses, and evergreen groundcovers enhance entries, highlight sitting areas, and line walkways.



Legend

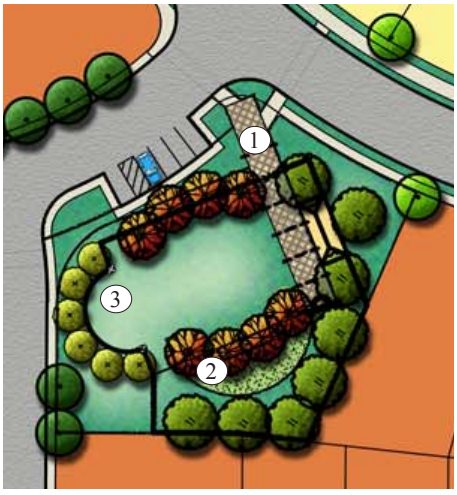
1. Pergola Garden
2. Passive Open Space
3. Orchard Planting

Conceptual Main Recreation Center Landscape Plan

Secondary Amenities Area

The secondary amenities area provides additional recreation opportunities and outdoor use areas. This area features a passive open space for quiet lounging and exercise with a shade trellis that add to the area's amenities.

Landscape enhancements within the area also include a lawn area and perimeter shade trees. All paved surfaces comply with ADA access requirements and enhanced in color and texture at entry nodes.



Legend

1. Pergola
2. Shade Trees
3. Passive Open Space

Conceptual Secondary Amenities Area Landscape Plan



Dog Park

The dog park is encircled by a 48-inch high view fence that includes a bottom screen panel. The dog park design features two transition entrances that include park benches, dog waste receptacles, and a watering station. The entrances also provide gathering areas. Canopy trees located on the project perimeter, as well as inside the fenced enclosure, provide shade. The dog park design also has a landscape buffer between the fenced area and adjacent homes.

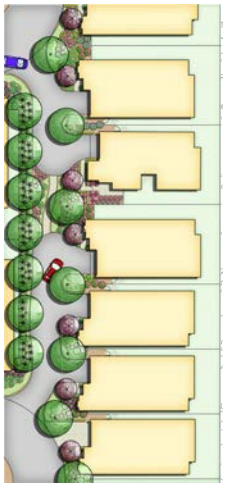






Site Furniture and Seating

Street furniture is constructed of durable, non-weathering materials utilizing recycled or eco-friendly materials where feasible and cost effective. Seating is provided in two forms: freestanding furnishings, such as benches and chairs at high activity areas, and informal seating provided by low walls located to encourage and emphasize social activities. Other site furniture includes: waste receptacles, including recycling containers, decorative oversized planters and pottery, ash urns, bicycle racks, and flag poles.



Landscape and Pedestrian Connection at Alley

Street Landscape

Strong simple vertical massing of deciduous trees along with low growing evergreen shrubs and grasses define special aspects of the central loop road. Flowering groundcover and upright vertical shrubs define entrances, walkways, and resting places.

Tree planting is designed to shade and mitigate the effects of paving, reflected heat, and light. Plant materials are selected to provide a contrast to the architecture in texture, form, and color.

Several areas of the Plan include small alleys or short cul-de-sacs designed to eliminate the need for large cul-de-sacs or bulbs at corners. These alleys create more intimate, pedestrian-friendly connections between neighborhoods and semi-private driveways for two to three homes. These treatments reduce the amount of asphalt paving in favor of landscaped driveway/paseos emphasizing pedestrian use..

Lighting

Lighting will be used to enhance, unify and reinforce the character of the overall site design. Lighting standards shall be compatible with the color and texture of the proposed monuments, walls/fences, and architecture.



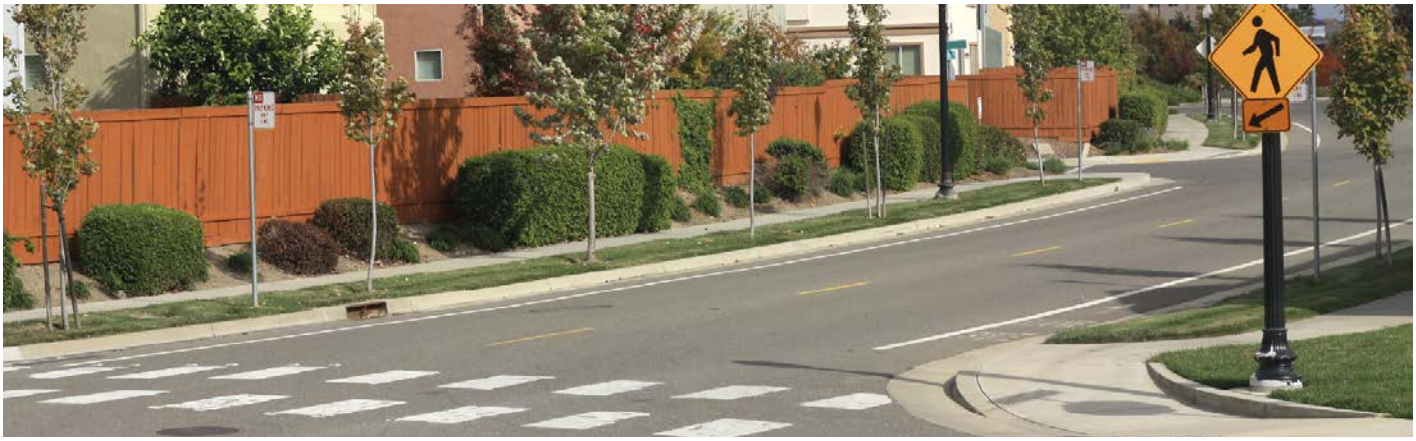
Lighting shall incorporate the following:

- All exterior light fixtures and fixture placement shall comply with the standards specified in the City's design documents. Use of energy-efficient technology is required.
- Streets and intersections should be well-lighted in accordance with the City standard illumination levels. Low-level lighting for pedestrian safety should be installed where appropriate. Intersections should have increased light levels for definition and to mitigate automobile/pedestrian conflicts.
- Accent lights should be installed at all community monumentation locations.
- Street lights shall conform to the overall project theme and City standards.
- All exterior lighting for identification, water features, and landscaping should be subdued and indirect to prevent spill over onto adjacent lots and streets.
- The type and location of building lighting should prevent direct glare onto adjacent property, streets and skyward by the use and application of shields.
- Pedestrian scale fixtures, particularly in the parks and open spaces areas, are encouraged over "high mast" poles.
- Light shall be confined on-site through orientation, the use of shading/ directional controls, and/or landscape treatment.
- Use appropriate lighting in high use areas for safety purposes.



Pedestrian Walkability

Clearly delineated crosswalks shall be provided to connect each community facility with the surrounding residential neighborhoods.



3.1.2 Lake Guidelines

Shorelines

Different shoreline treatments may be utilized along the edges of the lake system, which may include:

- Eroded concrete.
- Natural-like.
- Bulkhead.
- Boulder pockets.
- Stream-like planting.



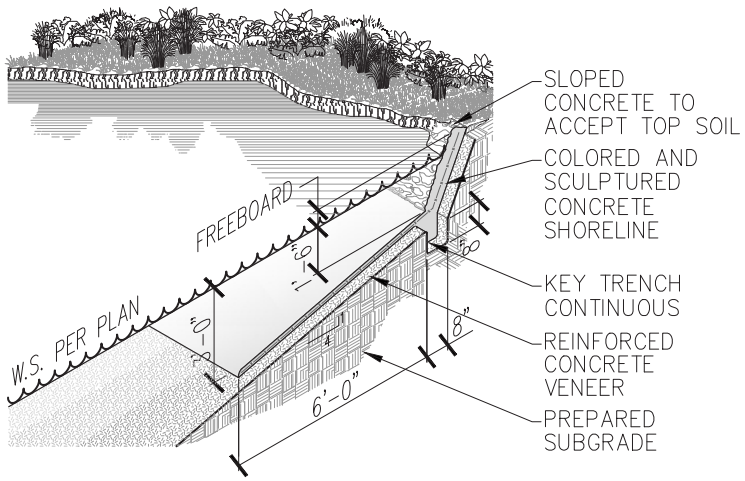
Eroded Concrete Shoreline

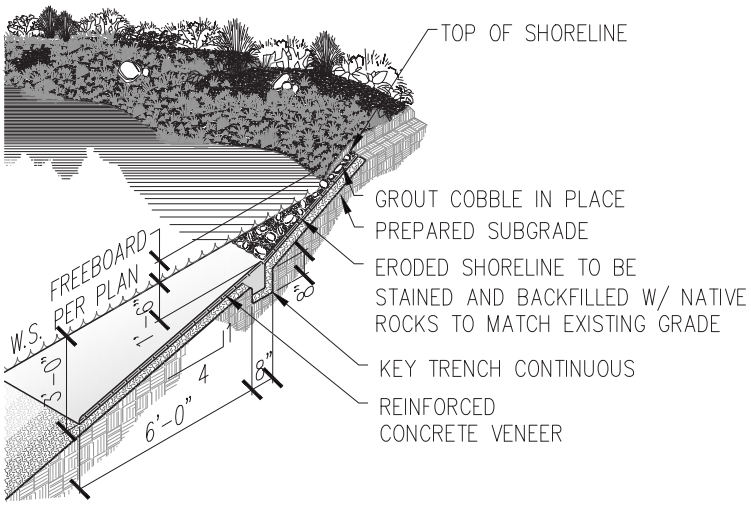


Natural Shoreline



Bulkhead Shoreline





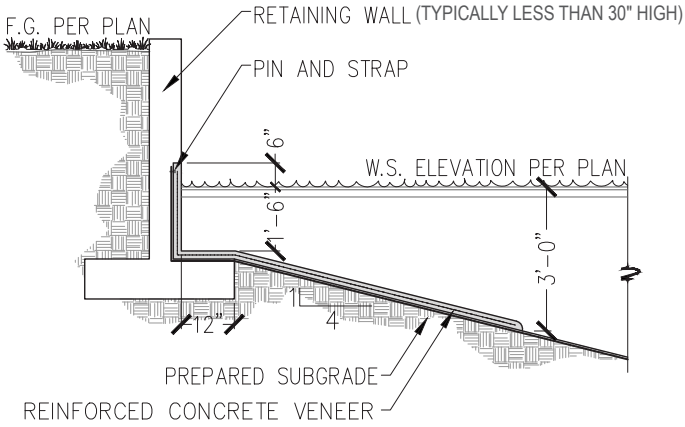


Figure 3.2a: Lake Edge Treatments



Boulder Pocket



Planter Shoreline



Stream

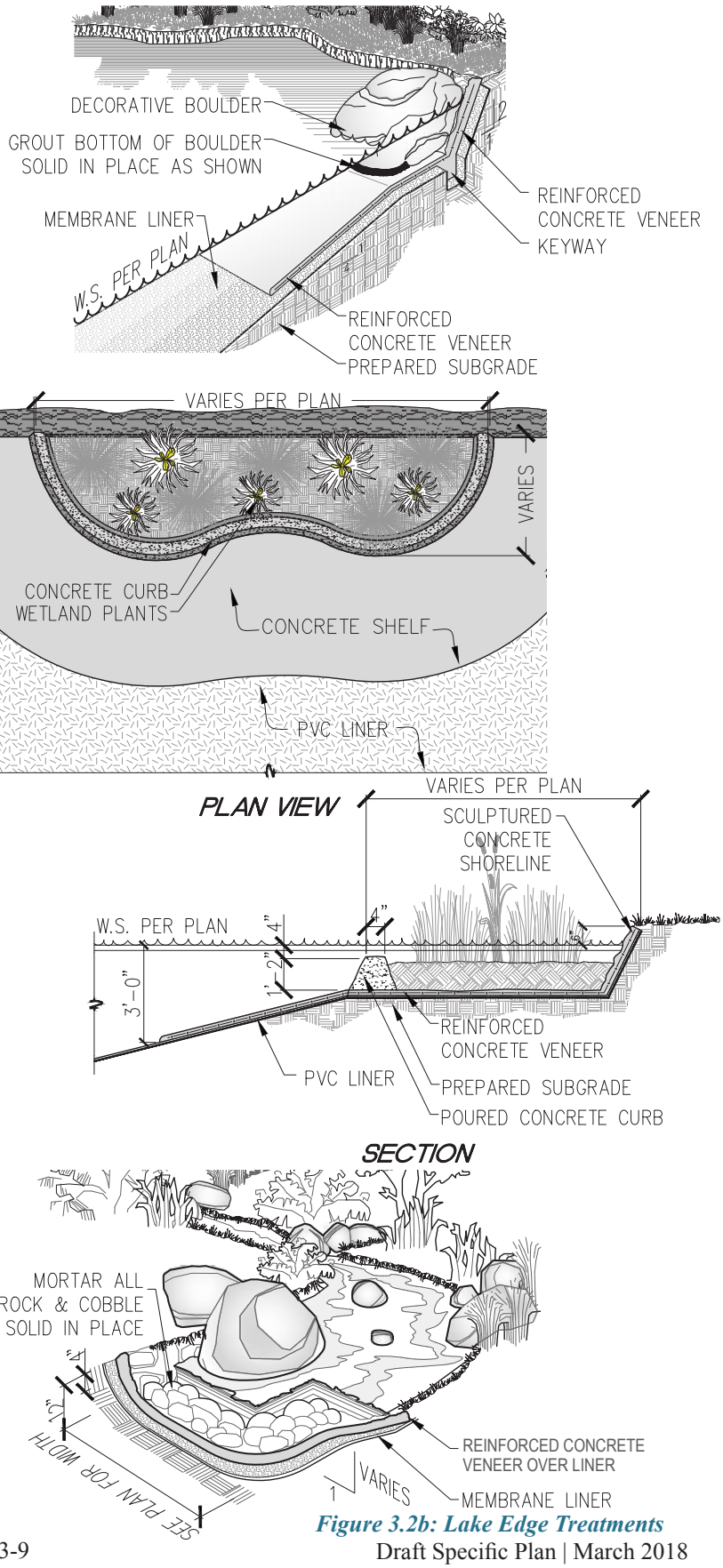


Figure 3.2b: Lake Edge Treatments



Limited access for small human-operated boats (kayaks or paddle boats) may be permitted on the Tracy Village system. However, due to the small size of each individual lake, the number of boats on the lake at any one time will be managed by the Tracy Village Homeowners Association.

3.2 Landscape Guidelines

Landscaping is designed to conserve resources while contributing to a high-quality project design. The following is a list of various 'sustainable' features to be used and/or considered for the Tracy Village development at the improvement plan phase/level.

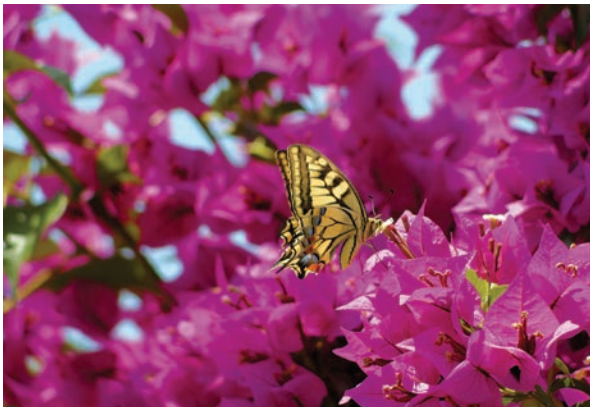
- Incorporate a state of the art water management system that allows groundwater to recharge.
- Encourage the use of low toxic wood preservatives (no CCA), or naturally rot-resistant wood for landscaping.
- Use of low water, drought tolerant, and/or native plants that match the micro-climate, and site soil conditions.
- Use of plants that are "non-invasive" according to the current California Invasive Plant Inventory, published by the California Invasive Plant Council.
- Design landscape and plant spacing to allow for plants to reach mature size.
- Locate plants to ensure proper drainage and to reduce potential damage to buildings.
- Reuse soils from the site, if appropriate, as horticultural soils.
- Maintain and/or improve soil health through responsible management including nurturing soil with organic matter, reducing synthetic fertilizer use, and restoration to sustain protected and future ecosystems.
- Use integrated pest management to control or eliminate pesticide and toxic chemical use.
- Increase tree cover to provide shade in developed areas to reduce energy demand, mitigate solar heat gain into buildings, and to reduce the amount of heat absorbed by paved areas.
- Use only low-water using grasses that are easy to maintain.
- Utilize weather and climate-smart irrigation controllers.
- Design irrigation zones to suit plant requirements and incorporate high-efficiency nozzles.

- Use sustainable materials in landscape construction and site furnishing selections including, but not limited to, recycled materials, permeable paving, environmentally preferable/responsible products, materials that can be recycled, certified "green" products, and locally available or locally manufactured products.

3.2.1 Community Gardens and Edible Landscape

The use of edible landscaping is included as part of Tracy Village's landscape concept, and may be used almost anywhere in the project, including along the trails, and in open spaces.

- Planting may include a combination of non-edible and edible species such as combinations of fruit and nut trees, berry bushes, vegetables, herbs, edible flowers, and ornamental plants. Edible landscape designs should resemble an ornamental garden and create balance, unity, rhythm, interconnection, and pattern in the landscape while integrating a host of food-producing plants into the design.
- Fruit-bearing trees, if used, should be planted to not overhang paved areas, trails, or the promenade.
- Landscape design should emphasize the use of nectar-producing and flowering plants that supply food, shelter, and breeding habitat for beneficial insects that pollinate edible crops and control pests. Gardens for butterflies, hummingbirds, and native bees are especially encouraged.
- Climbing vines such as grape and kiwi may be used for arbors, pergolas, fence lines, or trellises.





3.2.2 Landscape Irrigation

All landscaped areas, except rear yards, will be permanently irrigated by either lake or recycled water using an automatic underground irrigation system or bubbler low-flow system. The irrigation system will be separated into several systems based on water requirements of each hydrozone. Hydrozone separations will be based on sun orientation and water requirements of the plant material.

Irrigation of required landscaped areas shall be either by automatic overhead high efficiency spray nozzle or drip irrigation and matched precipitation rate, low gallonage sprinkler heads, bubblers, and timing devices. Timing devices shall include soil moisture sensors and rain sensing override devices. Sprinkler pop-up heights shall range from six inches in turf areas and 12 inches high in shrub/groundcover beds, where a drip system may not be applicable. The irrigation system shall be capable of operating automatically by incorporating an electric weather based and climate-smart irrigation controller or advanced solar technology components and low voltage electric remote control valves. Quick coupling valves, as required, shall be strategically located to provide supplemental water to plant material and for wash down purposes. All remote control and quick coupling valves shall be located and installed within the shrub beds wherever possible.

The irrigation system shall be compliant with the State's (Department of Water Resources) Model Water Efficient Landscape Ordinance. Irrigation water use shall comply with water allotments defined in the State's Model Ordinance.





3.2.3 Drought Tolerant Landscape



Plant selection shall emphasize the use of native, drought-tolerant, long-lived, pest-resistant plant species that are well adapted to the climatic and soils conditions of the site.

- Turf area is limited to active and high visibility areas.
- Homeowners may have turf in their backyards.
- Tracy Village will utilize sustainable landscape maintenance through the use of organic fertilizers and weed/pest control products through literature provided to future residents, including local resources for procurement of drought-tolerant plant materials.

3.2.4 Front Yards

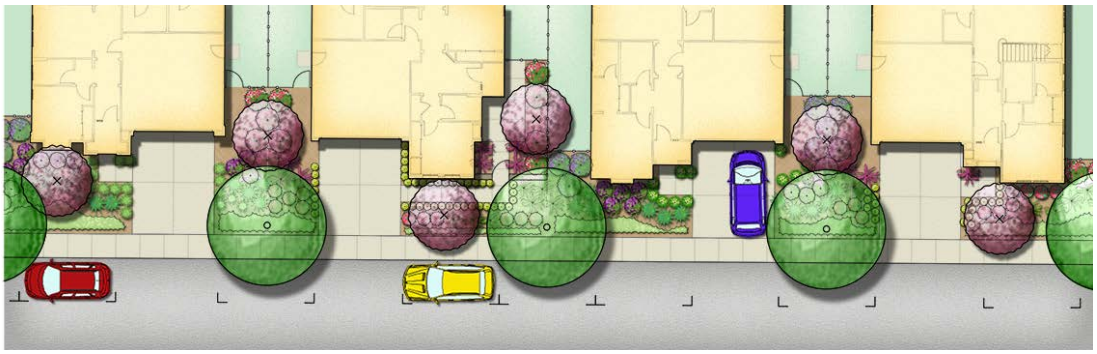
Landscape plant materials for single family residential front yards shall consist of turf and/or low-maintenance, drought tolerant shrubs and groundcovers planted in masses that combine into generous, herbaceous landscapes with diverse foliage colors, shapes, and plant sizes.

Accent and secondary trees shall be planted as part of residential front yard design and arranged to enhance architectural elements that reinforce the creation of 'private' space in each yard. Tree planting shall be limited to 2-3 varieties per street to provide a unifying landscape character throughout the community.

Shrub and ground cover areas should be designed to ensure 100% coverage within three years. All shrub areas shall utilize shredded bark mulch materials in earth tone colors.

Flowering vines, espaliers or vertical shrubs are encouraged to accentuate and enhance architecture, yard fencing, and other built elements. No self-clinging vines shall be planted directly to residences or wood fences.

For additional plant material information, refer to "Appendix A" of this TVSP.



Example of Lots with Sidewalk Adjacent to the Street

Plant Sizes for Residential Areas

The minimum size of trees is 15-gallon. A minimum of 20% of the total trees specified for each site shall be a 24-inch box. The minimum size of shrubs will vary by species. A minimum of 35% of shrubs shall be one-gallon, 55% five-gallon, and 10% shall be 15-gallon. Groundcover planting shall be installed at sizes and spacing to provide complete cover within one year of installation.

Flowering vines, espaliers or vertical shrubs are encouraged to accentuate and enhance architecture, yard fencing and other built elements. No self-clinging vines shall be planted directly adjacent to residences or wood fences.

Each front yard shall include, at planting, a minimum one 24-inch box street tree, and one 15-gallon secondary tree. Secondary tree selection shall take into consideration long-term growth and shape when installed near architecture to ensure that no conflicts occur. Corner lots are required to include two 24-inch box street trees in the side yard.

Front Yard Landscape Irrigation

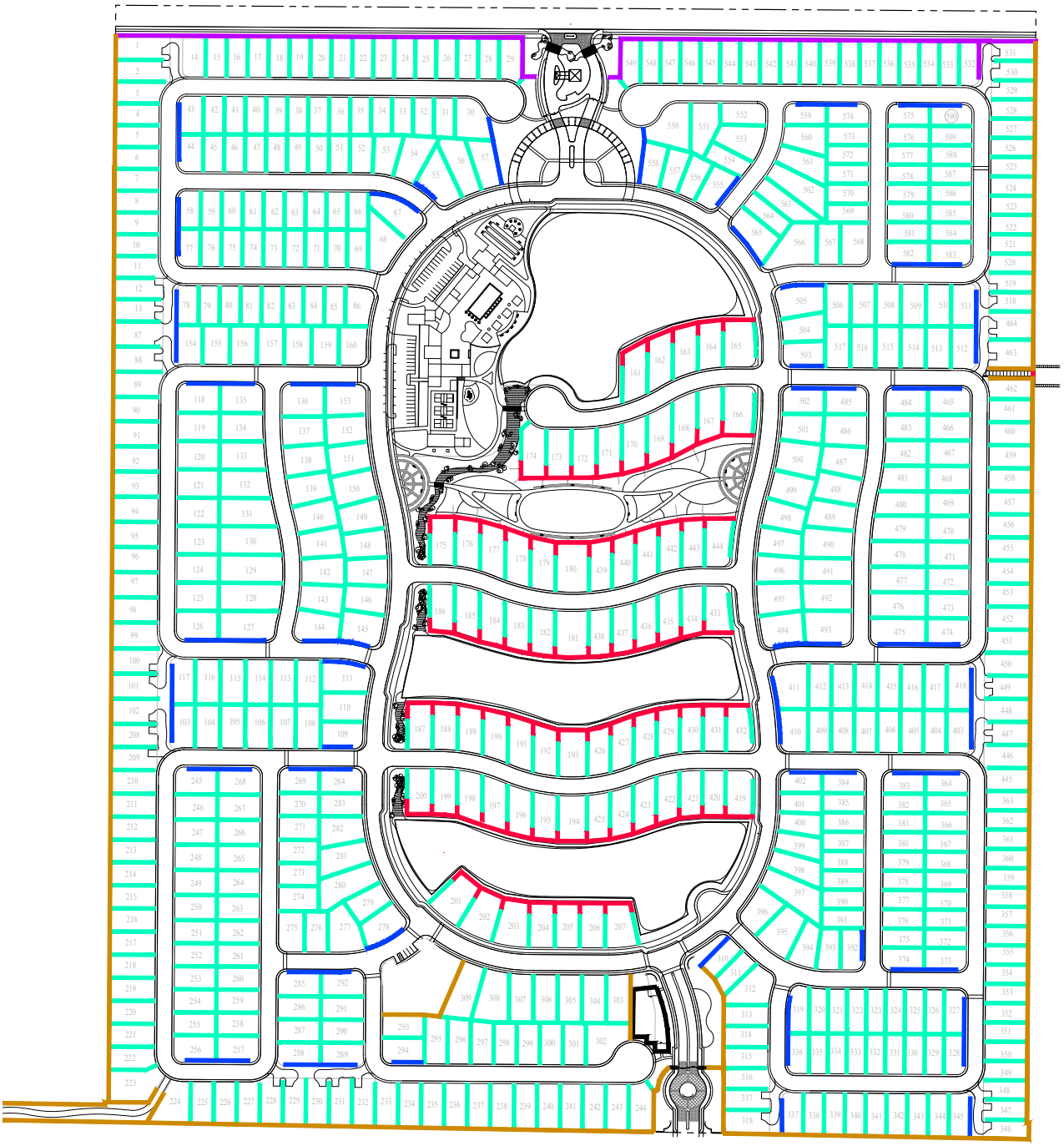
All front yards shall utilize water conserving irrigation methods. The landscape irrigation will adhere to current water use design guidelines and utilize controllers with weather station satellite and multiple program capabilities.

Drip irrigation shall be the preferred method of delivering water to the individual plant materials. Trees and shrubs shall be irrigated on separate valves to maximize water delivery efficiency and timed applications.

All valves and equipment shall be located adjacent to buildings and visually screened from public view. Under no circumstances shall irrigation equipment be located in such a way as to create a safety hazard to persons and property.

3.2.5 Wall and Fence Criteria

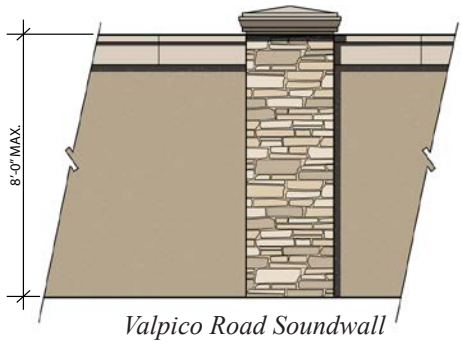
Walls and fences will meet the standards outlined in this section. Walls and fences shall be located as shown on Figure 3.3. Typical fencing types are shown on Figure 3.4: Wall and Fence Types. The maximum 8-foot sound walls adjacent to Valpico Road shall meet the City of Tracy Streetscape Design Guidelines. The perimeter walls adjacent to existing homes shall have the approved thematic design and be a maximum of 8-feet tall. Two distinct levels of privacy fencing shall be provided; ‘Good Neighbor Fence’ and a ‘Boulevard Fence.’



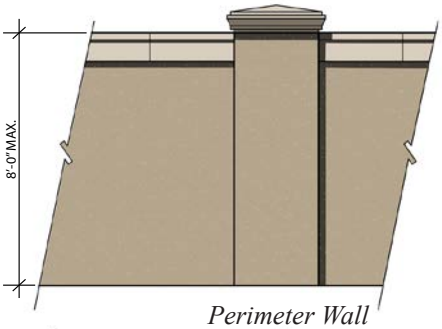
Legend

- Good Neighbor Fence
- View Fence
- Boulevard Fence
- Valpico Sound Wall
- Perimeter Masonry Wall
- Dog Park Fence

Figure 3.3: Wall and Fence Location Plan



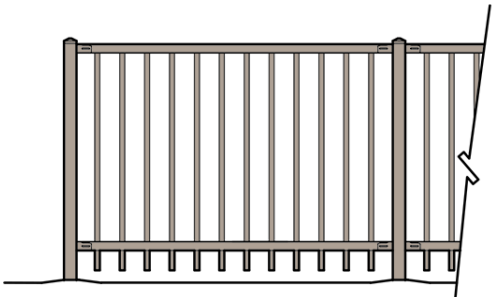
Valpico Road Soundwall



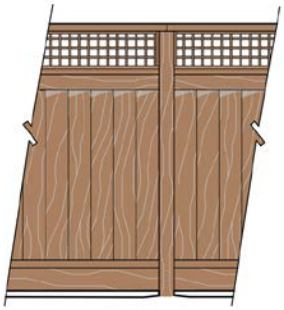
Perimeter Wall



Dog Park Fence



View Fence



Boulevard Fence

Figure 3.4: Wall and Fence Types



Example of a Corner Lot With Curb Separated Sidewalk



Example of Corner Lot With Curb Adjacent Sidewalk

Maintenance of Boulevard, View, and Good Neighbor Fencing shall be the responsibility of the homeowner, to the extent that fencing occurs within the legal property of each lot. Otherwise, maintenance of walls and fences shall be the responsibility of the Tracy Village Homeowners Association.

Walls and fencing at the Recreation facilities will be determined during Design Review.

All wall and fence heights are measured from the higher grade elevation on either side of the wall or fence.

Interior Lots - Good Neighbor Fence

The Good Neighbor Fence shall be constructed between homes on all residential property lines shared by single family homes, and as closure fencing between single family homes.

Corner Lots - Boulevard Fence

The Boulevard Fence shall occur on all exposed side yard lots, where residential property lines are adjacent to streets or the Entry Park. Five feet of landscape shall be planted between the Boulevard Fence and the sidewalk.

View Fence

The View Fence will be located adjacent to the lake and open space systems to allow views of these amenities.

3.2.6 Utility and Equipment Screening

All utilities providing service to the residential neighborhoods shall be screened to prevent unsightly conditions that detract from the overall aesthetics.

- Above ground utility equipment should be screened from street view by the use of hedge, tree or larger screening plant material and/or vines where feasible, subject to utility provider requirements or restrictions.
- Hydrants, Fire Department Connections (FDCs) and Double Detector Check Valves (DDCVs) shall have a minimum of three feet of clearance around such appurtenances at all times. Therefore, landscaping shall be designed and maintained to preserve these clearances.

3.2.7 Plant Sizes for Recreation Center

The minimum size for street trees is 24-inch box. Single trunk street trees shall be standard. The minimum size of shrubs will vary by species. Shrubs should be 5-gallon where appropriate to common landscape standards. A minimum of 30% of shrubs shall be 1-gallon size, 50% 5-gallon size and 20% 15-gallon size. Groundcover planting shall be installed at sizes and spacing to provide complete cover within one year of installation. Vines shall be installed in 5-gallon size typically. 24-inch box trees are preferred in areas of special interest such as key intersections or the Recreation Center. Trees located in the Entrance Pergola area shall be a minimum of 20 feet in height at time of installation.

3.3 Site Planning Guidelines

3.3.1 Street Activation

The living-area portions of the home should visually dominate the street scene. Home design should place entries, windows, front porches, covered terraces, and living areas directly facing the street on most plan variations. Porches and living areas will be located closer to the street than garages.

- Orient homes toward the street with clearly defined entries.
- Provide a direct pedestrian path between the home and the sidewalk/street.
- Provide a mix of garage orientations when feasible to avoid garages overly dominating the streetscape (side entry, recessed, and traditional front access).

3.3.2 Corner lots

Corner lots also have high visibility and are important to design quality. Corner lots shall be wider to accommodate the side yard setback and allow for side porches. To encourage variety, more than one plan per Lot Type shall be used as a corner plan.

- Provide the same level of architecture as the front elevation such as window trim or rafter tails except window mullions are not required on sides or rears.
- Create a massing offset.
- Trim all windows.

3.3.3 Outdoor Living

Outdoor living spaces, including porches and courtyards, activate and promote neighbor interaction. Outdoor living spaces can also create indoor/outdoor environment, to enhance livability.



Porches

Porches are encouraged to add architectural interest and functionality to the front of a residential structure. They help add depth to a building façade, break-up large wall masses, and provide a pedestrian-friendly scale and opportunity for social interaction. The design of the porch shall be consistent with the architectural style of the residence. If provided, porches shall be at least six feet deep to accommodate seating.



Front Courtyards

The Tuscan, Italian, and Hacienda styles lend themselves to the use of front courtyards to promote social interaction. A three-foot high courtyard wall is permitted in the required front setback, provided there is five-foot minimum setback from the property line to allow for landscape unless a PUE or motorist visibility issue exists. The courtyard wall and gate shall be of masonry construction with a finish material to be consistent with the architectural style of the residence (i.e., stucco, stone, etc.).

Entries

The entries shall be articulated as a focal point of the building's front elevation. Entries are encouraged to be covered or recessed in order to create a welcoming appearance, promote individuality, and increase privacy. Residences with front doors that are not visible from the street are encouraged to provide a trellis, portal element, or similar architectural feature to provide articulation and sense of arrival.

Outdoor Rooms

Outdoor rooms created from landscape and/or shade structures promote indoor/outdoor living.

3.3.4 Massing Variation

Adjacent to Valpico Road and the lake system, the row of homes are perceived by their building shape, forms, and roofline; therefore, the building mass between homes shall be varied to minimize the visual impact of similar building silhouettes and similar ridge heights. This will be achieved by using a variety of front-to-rear, side-to-side, gable, and hipped roofs.

- To avoid "saw-toothed" silhouettes, gable ends shall not be located on more than two homes in a row.
- To create interest along the streetscape, building massing shall be varied through the staggering of horizontal and vertical planes. To this end, no front or rear building wall shall extend more than 25 feet vertically or horizontally without a visual break created by a 2-foot minimum offset or architectural detail.
- Consider deep overhangs or patio covers where appropriate to the style to provide additional shade and interior cooling.

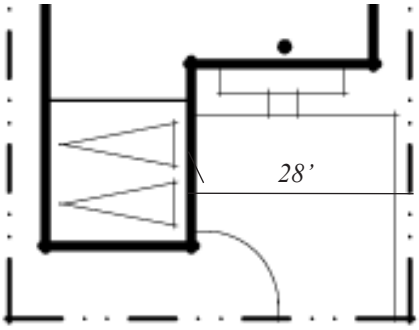
Additional Requirements Adjacent to Lake and Open Space Systems

Side-on and rear elevations oriented to the lake and open space systems shall receive architectural enhancements so that views from clubhouse and streets are pleasant and add value to the community.

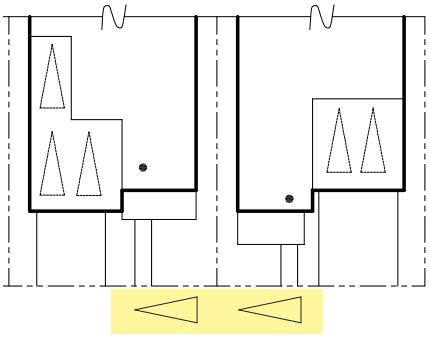
- Four-side architecture treatment is required.
- Use a combination of solid and semi-open, view transparent walls/fences (refer to the Landscape Sections).







Side-on Garage Minimum Back-up Area



Plot living areas next to each other to maximize parking spaces

3.3.5 Garages

The focus for the aesthetics of front elevation of the house should be on the living spaces of the home rather than the garage. Appropriate treatment of garage doors will further enhance the elevation and decrease the utilitarian appearance of the garage. Various garage door patterns, windows, and/or color schemes may be included as appropriate to individual architectural styles.

- Design garage door patterns consistent with the style of the home.
- Provide different style door pattern for each architectural style.

De-emphasize the visual prominence of garage doors through one of the following:

- Garage door recesses of no less than 12 inches.
- Trellis elements beneath garage roof fascias and/or above garage door header trims.
- Vine support elements at the garage.
- Side-on garage - On lots at least 55 feet wide, allow side-on garages (minimum back-up area shall be 28 feet).

Minimum garage dimensions:

- Twenty-foot x 20-foot minimum two-car garage interior dimension and 16-foot wide door or two single doors.
- Tandem garages shall be a minimum of 36 feet deep.

3.3.6 Neighborhood Plotting

In order to ensure architectural diversity, plans should have variation in floor plans, massing, and minor variations in size or the number of bedrooms.

- Plot a minimum of four floor plans for each neighborhood.
- Do not use a floor plan used consecutively more than two times in a row whether reversed or not.
- Prohibit the same plan and elevation on the lot most directly across from it and on the adjacent lots.
- Prohibit the same color scheme on two adjacent homes that use the same elevation style.
- Improve opportunities for on-street parking by plotting garages next to garages and living space next to living space.

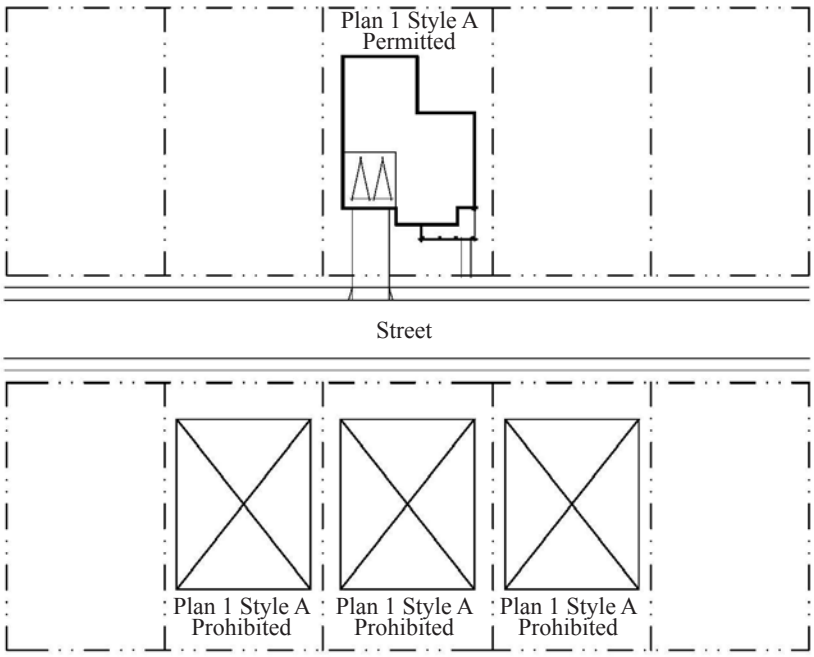


Figure 3.5: Plan/Elevation Style Plotting

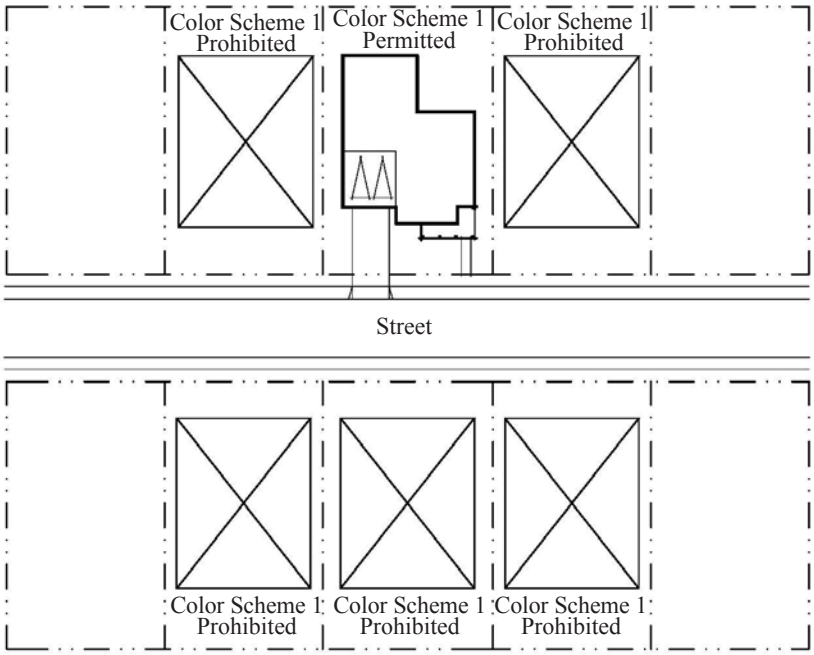


Figure 3.6: Color Scheme Plotting

3.4 Architectural Requirements

The following principles will guide the architecture to ensure quality implementation:

- Use architectural elements and details that reinforce architectural styles.
- Choose appropriate massing, roof forms, and colors to define the architectural styles.
- Ensure that plans and styles provide a degree of individual identity while being compatible.
- De-emphasize the garage in relation to the living areas of the home.
- Provide a varied and interesting street scene.
- Provide massing variation and architectural detail on rear elevations visible from open spaces and major streets.

3.4.1 Universal Design

Universal design is an important consideration for a community that is planned for active adults. Home features and products that make a home safer, more comfortable, and more livable will be provided. Single-level homes, or one-story dominant homes with at least one bedroom downstairs, with appropriate size and space for everyday experiences, are provided.

3.4.2 Styles

Tracy Village is envisioned as an innovative, contemporary community where authentic architectural massing, roof forms, detailing, walls and landscape collaborate to reflect historic and regional styles. The selected style groups intentionally blend to enhance the existing historical attributes, not compete with them. For the contemporary poised buyers, there are opportunities for progressive spins that will capture some fresh attitude within the historical base.

Composition and detail should hold true to historical variations within each style choice. The encouraged items are just that, encouraged as upgrades or enhanced treatments for front, side and rear elevations.

The design styles shall be selected from the following palette:

- European Country
- Farmhouse
- Hacienda
- Italian
- Prairie
- Spanish
- Tuscan
- Contemporary
- Progressive Cottage
- Progressive Farmhouse
- Progressive Spanish

Other styles may be submitted to the Development Services Director for consideration.

On the following pages, each architectural style is defined by elements that are listed as minimum standards that include typical characteristics of that style. Suggested elements are encouraged.



Conceptual Neighborhood Rendering



European Cottage Style

The European Cottage is a picturesque style that evolved out of medieval Tudor and Norman domestic architecture. The English "cottage look" became extremely popular with the addition of stone and brick veneer details in the 1920s.

The European Cottage's roof pitches are steeper than American traditional homes and include gable, hip, and half-hip roof forms. The primary exterior material is stucco with stone and brick bases, veneers, and tower elements. Some of the most recognizable features of this style are accents in the gable ends and sculptural swooping roofs at the front elevation.



European Cottage Style Elevation

European Cottage Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	Roof pitches 6:12 to 16:12 Standard overhangs Gable end details Flat concrete tile	Dormers Swooping roof
Walls	Medium sand float stucco finish (16/20)	Stone or brick accents 1/2 timbering
Windows	Grid patterned at front and visible windows	Dormer windows Bay windows
Details	Traditional pediment at entry Porches or covered or defined entries Appropriately sized unadorned columns Plank or Lazy-Z shutters	Tower element Metal details
Doors & Gates	Paneled front entry doors Paneled garage door with windows	









Examples of European Cottage Style

Farmhouse Style

Farmhouse Architecture has been a part of our cultural fabric for centuries, and examples of this style have dotted our landscape since settlers began expanding West. Variable adaptations of this style are plentiful, and the variety of architectural expression designed into the Farmhouse vocabulary has expanded exponentially. Of the many Farm style adaptations expressed throughout the West, the "Folk" and/or Folk Victorian style probably best exemplifies, specific structures within the early Rancho Adobe settlements.

Usually utilized for many of the housing components, the amount of detail expression on the Farmhouse varied widely, with some structures exhibiting Victorian details in the gables, porches, window and door trims, steeper pitched roofs and exterior siding. Conversely, the "Folk" adaptation tended to be less concerned with elaborate detail but rather, focused on simple, honest and unadorned design, expressing simple massing, well-proportioned windows and doors, steeper roofs and exteriors of stucco, siding or both. Although still expressed as a wood framed structure, its beauty is in its simplicity and the artful architectural balance it will provide.



Farmhouse Style Elevation

Farmhouse Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	Main hip or front-to-back gable roof with intersecting gables Roof pitch 6:12 to 12:12 standard Porch roof pitch 4:12 to 6:12 12″ to 18″ overhangs at eaves 6″ to 12″ overhangs at rakes Parapets allowed on attached product if carefully hidden within main roof structure Composition or concrete tile	
Walls	Stucco: 16/20 finish Wood siding or smooth cementitious fiberboard siding	Soffit materials to match columns/post
Windows	Vertically proportioned	Divided lites in top half of window
Details	Smooth finished wood posts (6" x 6" min.) with smooth finish wood cap and base trim Smooth finished beams Door and window surrounds shall consist of one of the following materials: Well-proportioned, stucco-wrapped, high density foam trim, 20/30 stucco finish consistent with window sill design or Smooth textured wood or Simulated trim with smooth texture Victorian-inspired lighting fixtures	Spindlework trim at porch headers Filigree details per style choice
Doors & Gates	Raised panel-style entry door and garage door	Wood or style-inspired, metal entry gates to accent main entry door





Examples of Farmhouse Style

Hacienda Style

The Hacienda was the primary focus of the ranches developed by the early Californian settlers. Representing one of California's true vernacular styles, the Hacienda developed naturally from local indigenous materials with considerations of climate and lifestyle.

The primary building materials were adobe, clay tile roofs, and wood detailing. In later years, the Hacienda was adapted to include wood shingles for roofs, board and batten siding, and other colonial features introduced in Monterey. Plans were typically organized around a courtyard, which became one of the primary living spaces. The houses were generally simple and straight forward with thick adobe walls.

In the mid-1930s, Cliff May began adapting the Hacienda design into a "ranch" layout for family living. His designs maintained much of the authentic character of early "ranchos" with contemporary materials.



Hacienda Style Elevation

Hacienda Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	Gable or hip roofs Roof pitches 3.5:12 to 5:12 12″ to 18″ overhangs at eaves Tight to 12″ overhangs at rakes Exposed rafter tails Concrete "S" tile OR flat tile OR shake tile	>18″ overhangs at eaves 2 - piece barrel clay tile Boosted tile (25%) Stacked tile on 1st two courses Mudded bird stops
Walls	Medium sand float stucco finish (16/20) Horizontal siding accents	Adobe or slump block Brick Wood, board and batt, OR shingle siding
Windows	Vertically proportioned windows Plank-style shutters on feature windows	Grouped windows with continuous head trim Vertical windows at first floor and horizontal windows at 2nd floor along belt course
Details	Open porches or meaningful entries Re-sawn wood trim with siding Prominent wood headers at larger openings	Heavy timber post & beams & columns Gable end details Tapered or double-post porch columns on brick or adobe slump block piers
Doors & Gates	Plank-style front entry doors Wood or metal entry gates to accent front entry door Raised panel or plank-style, wood grain patterned garage door	Carriage style garage door



Example of the Hacienda Style

Italian Style

In the 1860s, the Italian Villa was one of the fashionable architectural styles in the United States based on the formal and symmetrical palaces of the Italian Renaissance. Italian Villa homes are straightforward and boxy, with only window crowns and cornice moldings as ornamentation.

This old world prototype was refined, adapted and embellished into a truly eclectic classic style. The shallow pitched hipped roof often with decorative brackets identifies this style. As it became a popular building material, cast iron expanded the Italian style vocabulary to include a variety of embellished designs for porches, balconies, railings, and fences.



Italian Style Elevation

Italian Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	Main hip roof with hip ancillary roofs; 1-story shed roofs permitted 3.5:12 to 5:12 roof pitch Tight to 12-inch overhangs at rakes 12- to 18-inch overhangs at eaves Flat or low profile "S" concrete tile or clay tile	Closed/shaped eave with corbels at accent elements
Walls	Light lace or medium sand finish stucco	Tower element
Windows	Grid patterned at front and visible windows Trim around all windows Paneled or louvered shutters on accent window	Round arch top accent windows Symmetrically ordered and stacked windows and openings Recessed windows
Details	Formal entry with trimmed stucco, rectangular or full arch top Belt course	Metal balconies and pot shelves Simulated precast surrounds Simulated precast columns at entry or between windows Base trim
Doors & Gates	Paneled front entry door Paneled garage door	Garage door with windows



Example of Italian Style

Prairie Style

The roots of Prairie architecture began in the late 1800s with the Midwest homes of Frank Lloyd Wright. The Prairie School of thought came to California with its own unique interpretation. The style is characterized by horizontal expressions and proportions with an "earthy" feel while the lower pitched roof often seems to float with its deep overhangs over banded windows. Simplicity of materials and details are key expressions of this first purely American style. Horizontal massing and clean lines are two important elements of Prairie design.



Prairie Style Elevation

Prairie Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roof	Primary low hip roof 3:12 to 5:12 roof pitch* 12″ to 24″ overhangs without brackets Flat concrete tiles	24″ to 36″ overhangs in select areas
Walls	Stucco Horizontal banding or belt course	Brick or rustic ledgestone accents Horizontal wood siding accents
Windows	Windows with inserts on top panes on elevations with prominent or moderate public visibility Banding along top or bottom of windows Window trim surrounds proportionate to window size	Ribbon windows, generally in groupings of three
Details	Recessed porches OR stoop entries Appropriately sized columns Trim elements emphasizing the horizontal Boxed stucco soffits Entry door patterns should reflect architectural style of the building	Massive square porch columns with brick or stone base Solid low wall at porch Simple stucco columns with masonry base
Doors & Gates	Paneled front entry doors Horizontally paneled garage doors	Glass front doors Garage door with windows Integral door/side lite system

* Possibly lower pitch at main roof





Examples of Prairie Style

Spanish Style

The Spanish style attained wide-spread popularity after the Panama-California exposition of 1914 in San Diego. The Spanish style's most notable characteristics include the use of "S" or barrel tile roofs, stucco walls, feature entry doors, and porticos, highlighted ornamental iron work, and carefully proportioned windows appropriate to its wall mass.

Key features of this style were adapted to the California lifestyle. Plans were informally organized around a courtyard with the front elevation very simply articulated and detailed. The charm of this style lies in the directness, adaptability, and contrast of materials and textures.



Spanish Style Elevation

Spanish Style Criteria Matrix

Elements	Standards	Enhancements
Roofs	Hip or gable roofs Roof pitches 3½:12 to 5:12 Tight to 18" overhangs at eaves Tight to 12" overhangs at rakes Concrete "S" tile	Rafter tails, shaped tails preferred Parapets with barrel tile caps 2 - piece barrel clay tile Boosted tile (25%) Stacked tile on 1st two courses Mudded bird stops
Walls	Medium sand float stucco finish (16/20)	Decorative ceramic tile or brick accents
Windows	Vertically proportioned windows with divided lites at front and visible windows	Fabric awnings
Details	Stucco-wrapped, high density foam trim with fine sand float stucco finish (20/20) Closed or exposed eaves Gable end details Decorative metal Well-placed and proportional entry light fixtures	Porches, balconies or verandas Wall mounted light fixtures at garage door
Doors & Gates	Front entry doors without a porch, deeply recessed from front facade Rectangular or arched surrounds (following door design)	



Example of Spanish Style

Tuscan Style

The Tuscan style is inspired by the country villas of northern Italy. Since this region is primarily agricultural, these homes reflect the character of the farmhouse estate. Built by their owners with the indigenous materials and colors of the surroundings, these buildings blend naturally with the land.

The style is characterized by a low-pitched irregular roofline, which may be punctuated by a tower or campanile. Shutters tend to be painted deep colors. The exterior walls tend to be stucco with warm and sometimes colorful earth tones and often have stone or adobe accents at the front entry.



Tuscan Style Elevation

Tuscan Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	Main hip roof with gable ancillary roofs 3.5:12 to 5:12 roof pitch 4- to 12-inch overhangs at rakes 2- to 18-inch overhangs at eaves Flat or low profile "S" concrete or clay tile	Cross gable at front Secondary shed or gable roofs over 1-story element Rafter tails
Walls	Light lace or medium sand finish stucco Stone or adobe block accent at front elevation	Tower element Large expanses of stone or adobe block veneer from base of wall to roof overhang
Windows	Grid patterned at front and visible windows Trim around all windows Paneled shutters at accent windows	Precast or simulated pre-cast window trim Recessed windows
Details	Covered entry	Arch or flat soffit above entry Decorative metal grille work, pot shelf, balcony railing, etc.
Doors & Gates	Paneled front entry doors Paneled garage door	Garage door with windows



Example of Tuscan Style

Contemporary Style

The Contemporary style represents the current thinking in design. The style is composed of simple, rectangular geometric forms with generous window areas, accented by bold use of materials and colors and detailed by interesting railings and canopies. Flat roofs are typical but shallow-pitched roofs may also be utilized. Windows and balconies can emphasize a corner orientation to break open the mass of the building. A combination of bold background colors can distinguish architectural features as will modern exterior materials such as fiber cement siding, panels or metal siding. Windows help articulate the form to create larger organizations, whether in horizontal or vertical compositions. The Contemporary style includes many variations and can be used more than once in a neighborhood as long as the details are varied.



Contemporary Style Elevation

Contemporary Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	Parapet OR shallow-pitched roof Simple unadorned parapet walls Materials consistent with overall design, as applicable	
Walls	Light to medium stucco finish (16/20 OR 30/30) Stone veneer accents Fiber cement siding used as accent	Brick accents
Windows	Vertically proportioned windows OR ganged windows	Square OR rectangle window accents Awnings
Details	Signature form, detail OR feature Minimal ornamentation Rustic-style hardware is prohibited	Vertical elements Simulated wood accents Metal pipe balcony railings
Doors & Gates	Glass door entry doors Simple horizontal simulated wood garage doors (no panels)	Glass garage doors





Examples of Contemporary Style



Progressive Cottage Style

The Progressive Cottage style has evolved from the Eastern Seaboard and Caribbean cottage influences. The style evokes the charm and casual style of resort living. The specific detailing includes a blend of cultural traditions. These elements may include white-painted trims, columns, siding and shutter windows with asymmetrical, unpretentious massing. Various roof forms are found including variable pitched hipped, cross gables and gambrel. Wood details can be applied to stucco or plastered walls to articulate the simple forms.



Progressive Cottage Style Elevation

Progressive Cottage Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roofs	6:12 to 8:12 roof pitches* 18″ to 24″ overhangs at eave Tight to 12″ overhangs at rakes Front facing gables, hips or shed roofs Composition shingle or flat tile roof	Gambrel roofs Metal roof accents Variable roof pitches
Walls	Medium sand float stucco finish (16/20)	Limited horizontal or vertical siding accents Shingle accents Stone or masonry accents
Windows	Vertical windows preferred in patterns	Ganged windows Square window accents Divided lights
Details	Vertical, plank or board and batt siding Railing detail variation Limited traditional ornamentation elements Paneled front entry doors Paneled or planked garage doors	Sidewall shingles Awnings Simulated wood railings in pickets or patterns Shutters Bermuda shutters Fully trimmed windows Paired wood posts at porches Simple posts with banded base
Doors and Gates	Contemporary entry doors	

* Possibly lower pitch at main roof



Example of Progressive Cottage

Progressive Farmhouse Style

The Progressive Farmhouse style captures the spirit of the California agrarian living. Homes reflect an airy connection to the outdoors with simple forms and vertical windows. The style uses a play of materials from light to earthy stone colors and a mix of old traditional and new progressive materials. Use of materials connect the style to the agricultural past with stucco, stone and siding materials and metal roof accents. The Progressive Farmhouse style blends the sleek clean lines of contemporary design with warm farmhouse charm to create a uniquely fresh take on this country living inspired style.



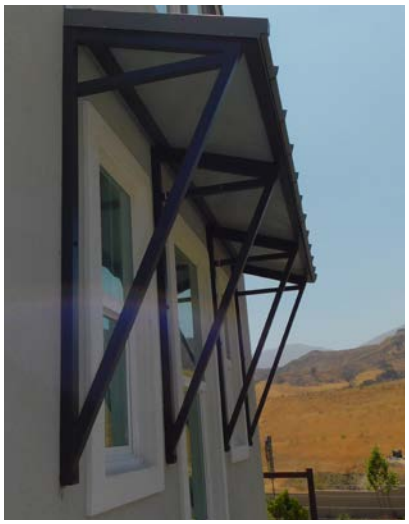
Progressive Farmhouse Style Elevation

Progressive Farmhouse Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roof	Roof pitches 6:12 to 12:12* Porch roof pitch 4:12 to 6:12 12″ to 18″ overhangs at eaves 6″ to 12″ overhangs at rakes Composition roof or concrete tile shake pattern	Porches Shed forms at porches
Walls	Medium sand float stucco finish (16/20)	Soffit materials to match columns/post Board & batt accents Stone OR brick accents Limited horizontal siding accents
Windows	Vertically proportioned	Divided lites Decorative window shutters Square window accents
Details	Limited ornamentation Raised panel-style entry door and garage door	Simulated wood railings Shutters Fully trimmed windows Paired wood posts at porches Simple posts with banded base
Doors & Gates	Paneled front entry doors Paneled OR planked garage doors	Glass front entry doors Glass garage doors Integral door/side lite system

* Possibly lower pitch at main roof





Examples of Progressive Farmhouse Style

Progressive Spanish Style

The Spanish Progressive style was also established concurrently with Panama-California Exposition and throughout Southern California most notably through the work of Irving Gill. This style represents what a popular feeling of the day exalted, “a new beginning in life and art.” This movement opposed historic architectural design reference and embraced simplicity and form minimalism.

The Progressive Spanish style includes box-like forms that can include either flat roofs with parapet or shallow-pitched roofs. The wall surfaces are simple or have lightly textured surfaces, with clean cut openings for windows and doors. Arched doorways and small balconies provide form to the Progressive Spanish style. Contemporary elements such as iron awnings, sliding barn doors and a combination of traditional light fixtures and contemporary lighting strategies provide a contemporary look.

This style combines the old and the new into one cohesive style. It utilizes traditional Spanish architectural elements, such as arches, corbels, and wood headers, and relieves them of their ornamental detail for a more simplified contemporary design.



Progressive Spanish Style Elevation

Progressive Spanish Style Criteria Matrix

Elements	Minimum Standards	Suggested Elements
Roof	Hip or gable roofs or flat roof with parapet walls Roof pitches 3.5:12 to 5:12 where applicable* Tight rake, where used Concrete "S" tile, where used	Parapets with barrel tile caps Rafter tails, shaped tails preferred Barrel tile Shed roof accent feature
Walls	Medium sand float stucco finish (16/20)	Decorative ceramic tile or brick accents Wood accents
Windows	Window openings may either have horizontal or vertical proportions or may be ganged windows	Divided lites Recessed windows Round top or arched primary window or architectural feature
Details	Front entry doors without a porch, recessed from front facade Limited ornamentation and no shutters	Decorative metal elements (pot shelf, gate, balcony, etc.) Closed or exposed eaves Well-placed and proportional entry light fixtures Balconies or verandas
Doors & Gates	Glass or horizontal paneled front entry doors with or without a porch	Arched entry stoop Horizontal paneled garage door

* Possibly lower pitch at main roof



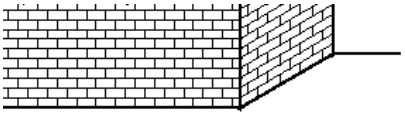
Example of Progressive Spanish Style

3.4.3 Materials and Finishes

Materials and finishes reflect a general theme of environmental harmony with the surrounding neighborhood character. A variety of natural looking materials provide the diversity required for visual interest while unifying the homes in their settings.

Specific materials are identified for each architectural style within these Design Guidelines. The natural colors of clay, wood, and slate roof tile are encouraged using concrete tile formulations. Choice of material finishes should express permanence and quality in the community.

- Use complementary building materials that provide interest and variety consistent with the architectural styles.
- Use style appropriate concrete roof tile blends; prohibit overly dramatic blends with extreme contrast.
- Use only manufactured stone and adobe that are natural in appearance.
- Specify mortar joint types and colors for each masonry product used.
- Create a more solid and permanent appearance with stone or other masonry materials, particularly as accents.
- Avoid frequent changes in materials.
- Properly finish details.
- Use high-quality, durable, low-maintenance materials.
- Provide sufficient details, notes, and specifications in the construction documents to ensure proper construction in the field.



Materials Terminate at Inside Corner



Source: Eagle Roofing

Boosted Roof Tile Example



Source: Eagle Roofing

Mudded Bird Stop Example

3.4.4 Material Wrapping

All siding and accent veneers shall wrap and terminate at an inside corner or at a logical ending place behind fence or walls.

- Wrap columns, tower elements, and pilasters entirely.

3.4.5 Roof Forms, Materials, and Colors

- Create a diversity of roof forms for an articulated streetscape by providing at a minimum three different roof plans per building plan.
- Flat roofs are not allowed except for the Contemporary style. Gable, hip, and shed roof types are allowed.
- Variety of roof colors and materials are encouraged between homes to promote diversity and interest.
- Roof materials shall be of high quality and complementary to the overall design of the building.
- Additionally, materials shall not produce glare and should consider environmental benefits (i.e., lighter color roofs to reflect heat).

3.4.6 Gateways and Doors

Main entry doors and gateways shall match the specific style of architecture. Courtyard openings and entries function as a statement for the entire home and add interest to the streetscape.

Entry doors shall:

- Accentuate and announce the main entry of the home.
- Reinforce the style of architecture.

Other doors shall:

- Use architecturally complementary garage and/or utility doors on visible elevations.





Gateway and Door Examples

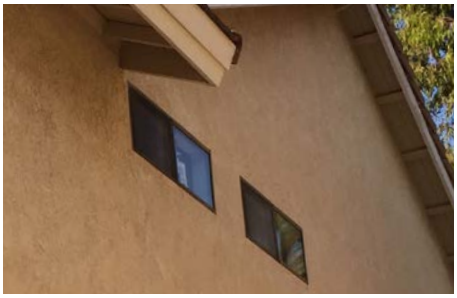
3.4.7 Windows

Window details differentiate architectural styles and can provide a high level of architectural enrichment. The selection and proportion of the windows to the façade shall be responsive to the architectural style of the building. Size and shape shall be considered to assure a balanced relationship with the surrounding roof and walls. Accent shutters are a way to further enhance the architecture and shall be proportionate to the window opening. In general, windows shall enhance rather than dominate the overall architectural character.

- No horizontal bathroom windows are permitted.
- All windows shall have trim surrounds, headers, or sills.
- Divided light windows are encouraged and should reflect the architectural style. Non street-facing and rear yard windows may delete the mullions.



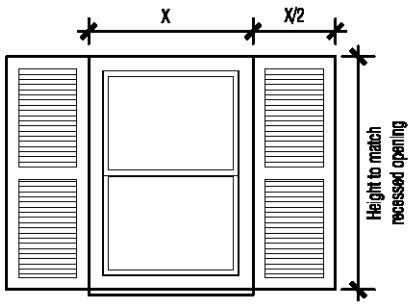




Examples of Prohibited Horizontal Bathroom Windows



Examples of Permitted Bathroom Windows



Shutter Size Corresponds to Window Size

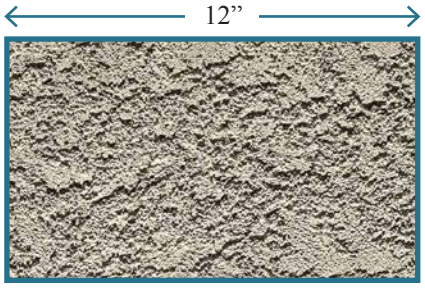
3.4.8 Stucco

Stucco finish shall project high quality and be appropriate to the architectural style. For example, the Spanish Colonial style generally has a smoother finish, where a Ranch style may have a more textured finish.

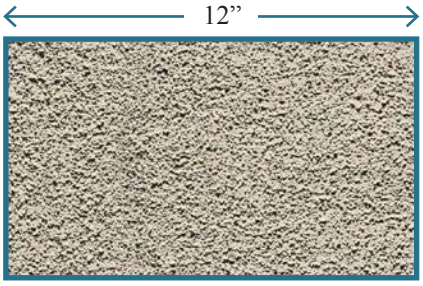
- Construct all stucco trim details (such as window surrounds, window sills, roof eaves, column details, lintels, etc.) with a level of precision and accuracy to express the authentic execution of the style.
- Use clean, crisp, and smooth stucco details.
- Use a different trim stucco finish from the wall stucco finish.
- No rough and uneven stucco finish.
- Consider placement of stucco control joints on elevation designs.

Stucco Weep Screed Details

The stucco weep screed at stone or brick adhesively applied veneers should be detailed to be as close to finish grade/finish slab as possible while still maintaining the minimum dimensions required by the Building Code. Stucco weep screeds that "float" above the finished grade by more than six inches are prohibited.



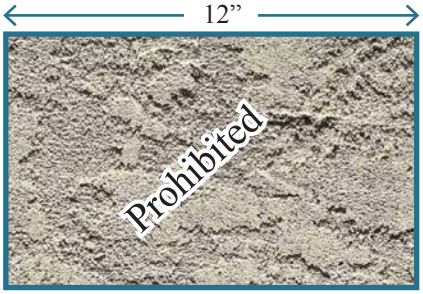
Light Lace Texture



Medium Sand Float (16/20 Aggregate)



Fine Sand Float (20/30 Aggregate)



Spanish Texture - Prohibited



Heavy Lace Texture - Prohibited

3.4.9 Porch Posts/Columns

Porch post or column finish veneers (stone or brick adhesively applied veneers) shall not hang past the face of the porch foundation wall. The veneers should extend to grade.



Example of a Prohibited Column with a Veneer that Hangs Past the Face of the Porch Foundation

3.4.10 Wood

Wood is a material used in many architectural styles. New manufactured alternative wood materials, when of a high-quality, may be considered as an alternative to real wood materials.

3.4.11 Shutters

- Use only wood or wood-like material for shutters; foam shutters are prohibited.
- Mount shutters on finished wall material; embedded shutters are prohibited.
- Match shutter size to the recessed opening window width.
- Use material at least 1.5 inches thick.
- Use of authentic hardware preferred.

3.4.12 Lighting

Appropriate lighting is essential in creating an inviting evening atmosphere for the community. All lighting shall be non-obtrusive.

- Limit all exterior lighting to the minimum necessary for safety.
- Shield all exterior lighting to minimize glare and light spill onto adjacent properties.
- Use exterior entry lights that complement the architectural style.

In common areas, use low voltage lighting whenever possible.



Exterior Lighting Matches Architectural Style



Example of Lazy-Z Shutters



Example of Synthetic Wood-Like Material

Source: Mastic Home Exteriors by Ply Gem

3.4.13 Other Architectural Details

Gutters and Downspouts

- Integrate gutters and downspouts into the home design when used.

Eave Paint

- Eaves shall match the fascia color (spray paint of the wall color is prohibited on the eaves).

Addresses

Provide night lighted building address numbers and meet City addressing standards.

Non-Architectural Elements

Mechanical equipment shall be screened from the street. Mechanical equipment includes:

- HVAC equipment.
- Gas and electric meters.
- Cable/TV panels.
- Pool and spa equipment.
- Exterior landscape/lighting equipment.

Mechanical equipment is prohibited in front yards, patio/porch areas, and on roofs.

Technology

If available at Valpico Road, connect the homes with fiber optics.

Solid Waste

Space shall be provided in the interior portion of the garage, or in the adjacent side yard to handle up to 3 recycling/waste containers (30-inch by 30-inch each). Space shall be identified on plans to ensure fire access to/around the home.

Mailboxes

Mail will be delivered to grouped mail delivery location. Design and location of these elements are to be determined.

3.5 Recreation Facilities Architecture

The Recreation Facilities at Tracy Village will have a Tuscan theme. These recreation facilities may include the following:

- Parking shall be adequate to accommodate daily use of the recreation facilities.
- The pool decking area should be sized to allow for lounge chairs and tables.
- A spa area separate from the pool may also be located within the recreation area.
- A group barbecue facility and shade structure may be located within the pool deck area.
- Landscaping shall harmonize with the surrounding streetscapes. Large specimen trees should be used within the open turf areas to help provide shade and screening of unwanted views. Accent trees should also be used at pedestrian entries and around the pool area for color and seasonal interest.
- A strong visual connection shall be created between the private recreation area and the lake system. These connections will be in the form of sight lines, paseos and architectural style.
- A paseo walkway system will be designed to provide connections to adjacent neighborhoods.
- Docks may be located at the Recreation Facility with lake boats managed through the Tracy Village Homeowners Association from the main recreation facility.
- Emergency access shall be provided to the recreation building to the satisfaction of the Tracy Fire Department.









Example of a Recreation Building



Conceptual Recreation Center Rendering



Conceptual Bird's Eye View of the Recreation Center



Figure 3.7: Conceptual Recreation Center

Potential Amenities

- Building (Min. 8,000 S.F.)
- Pool
- Spa
- Bocce Courts
- Open Space
- Dock & paddle boats/kayaks
- Pickleball





Examples of a Recreation Facilities

3.6 Sustainable Design Criteria

It is the intent to install sustainable elements where feasible including:

3.6.1 Building Design

- Energy Star or equivalent appliances.
- Energy Star or equivalent water heating systems.
- High reflectivity, Cool Roof Rating Council (CRRC) roofing when appropriate to the architectural style.
- Awnings and overhangs to shade south and west facing windows.
- Locally produced building and landscaping materials, whenever commercially available and economically feasible.
- Rapidly renewable/recycled materials where feasible.

3.6.2 Site Design and Landscaping

- Canopy shade trees to shade buildings, paved areas such as driveways, parking lots, walkways, and other non-roof hardscape surfaces.

3.6.3 Community Facilities

- If possible, use community energy systems for common area energy needs.

Chapter Four Infrastructure and Services

The City of Tracy has completed an extensive infrastructure master-planning process for sewer, water, storm drainage, and traffic facilities to meet the demands of future growth identified in the General Plan. The TVSP implements the City's master plans, with specific on-site construction of infrastructure as noted herein as part of Tracy Village development. Additional public services for Tracy Village are discussed in Section 4.9, Public Facilities and Services.

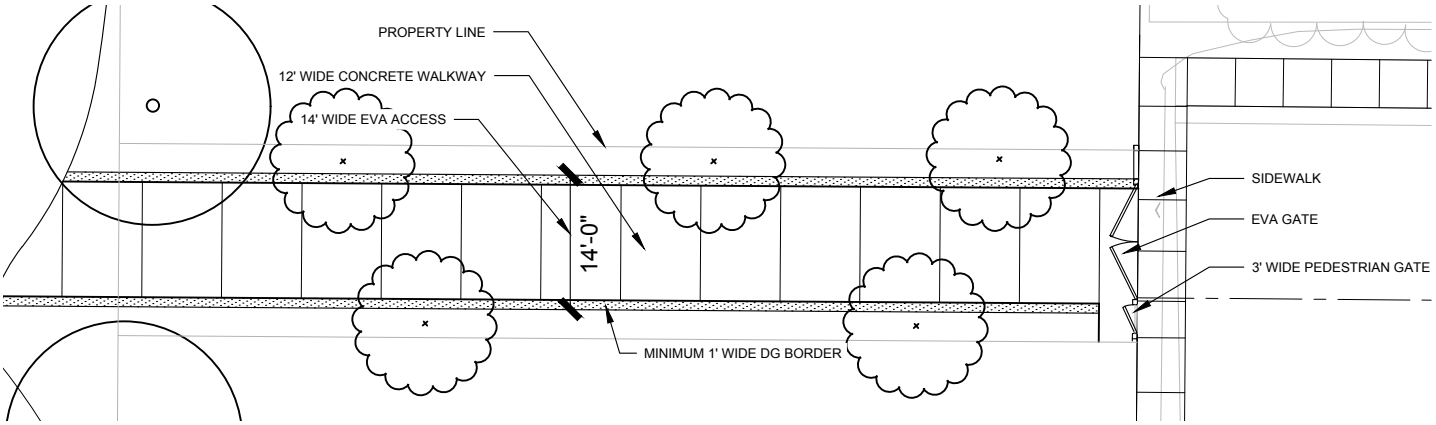
4.1 Access and Circulation

The land use concept for Tracy Village contains a framework for private street circulation consisting of both a Primary Street Network and an Internal Street Network. Access to the community will be provided by a main entrance from Valpico Road, the main east/west arterial defining the northern edge of Tracy Village, and a minor entrance from Middlefield Road, connecting the new community to the residential development to the south. A main community loop street will provide access within Tracy Village to all neighborhoods and recreational areas by encircling the interior lake system. This street will provide two-way travel consisting of one lane in each direction, parallel parking spaces on either side of the street, and sidewalks along the neighborhood side. A wide sidewalk and landscape between the street and the lake system provides a strolling "Promenade" around the lake and open space systems.

Several private residential streets will flow off of the loop street providing direct access to the neighborhoods and residential areas. The residential private streets will provide two-way travel with one lane in each direction and parallel parking on either side of the street. Each neighborhood will have two points of ingress and egress to the loop street providing easy circulation within Tracy Village.

In order to create pedestrian- and bike-friendly streets, the design of Tracy Village includes paseos, sidewalks, and the pedestrian Promenade. The Promenade will meander along the loop street and the exterior of the lake and open space system. Paseos will provide residents direct access to different parts of the neighborhood without the need to travel along a street. The paseos will also provide pedestrian access to Valpico Road, Corral Hollow Road and the residential development to the east. Sidewalks will be provided along one side of the residential streets as shown in Figure 4.1: Circulation Plan.

All cul-de-sacs, streets, knuckles and intersections shall meet City standards for minimum width and turning radius of fire trucks. Gates are to be accessible by the Fire Department for emergency applications (Knox Box, Knox Padlock, Opticon, etc.).



Conceptual EVA (Emergency Vehicle Access) Plan

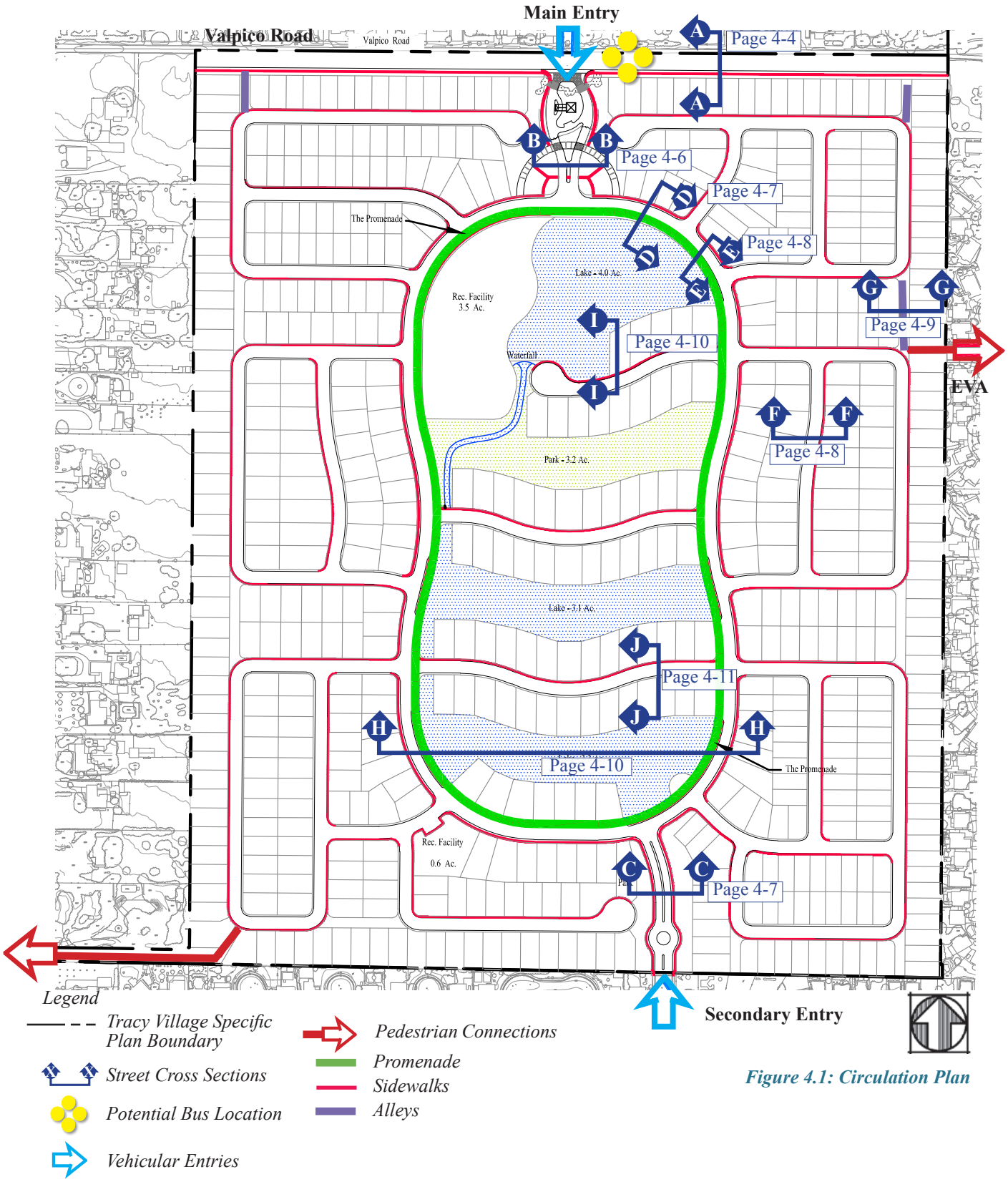
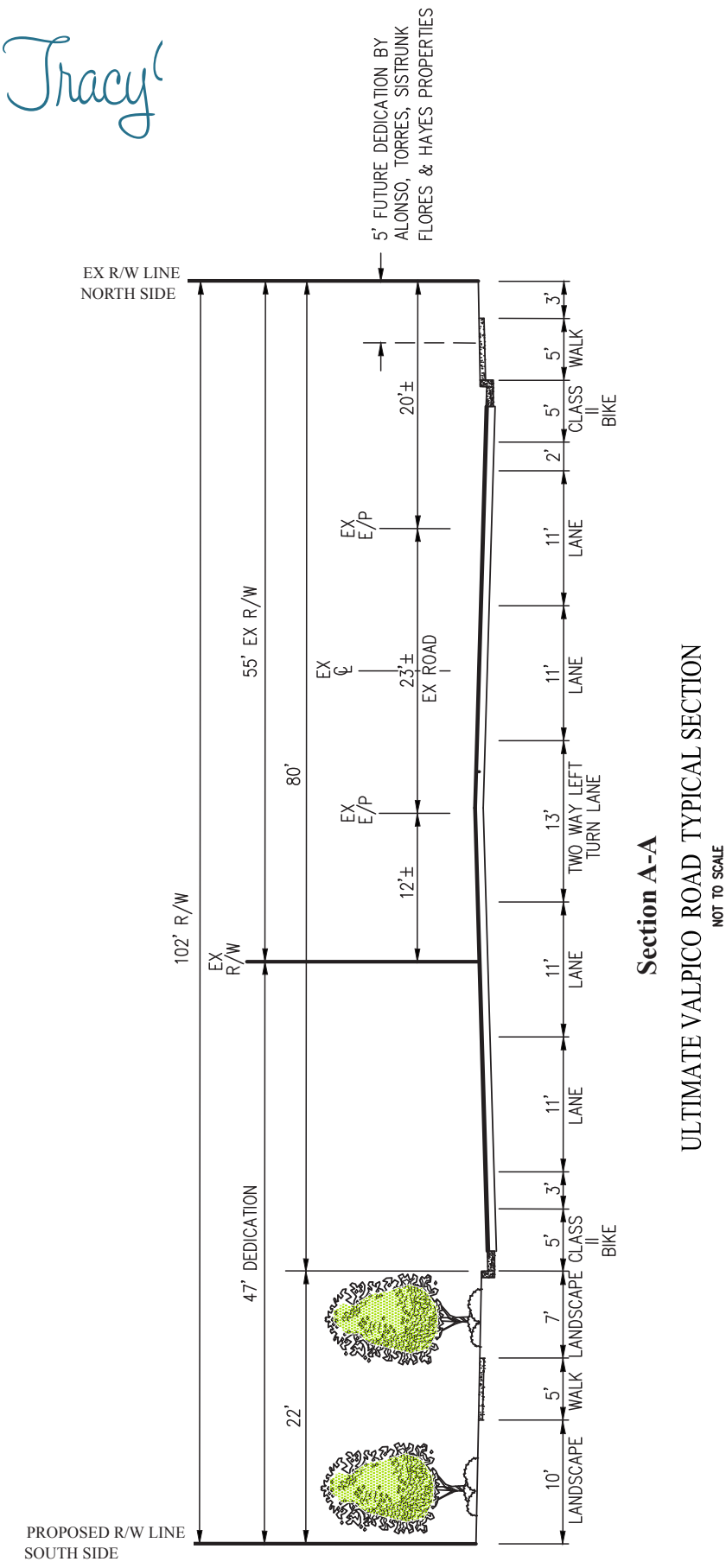


Figure 4.1: Circulation Plan



Section A-A

ULTIMATE VALPICO ROAD TYPICAL SECTION

NOT TO SCALE

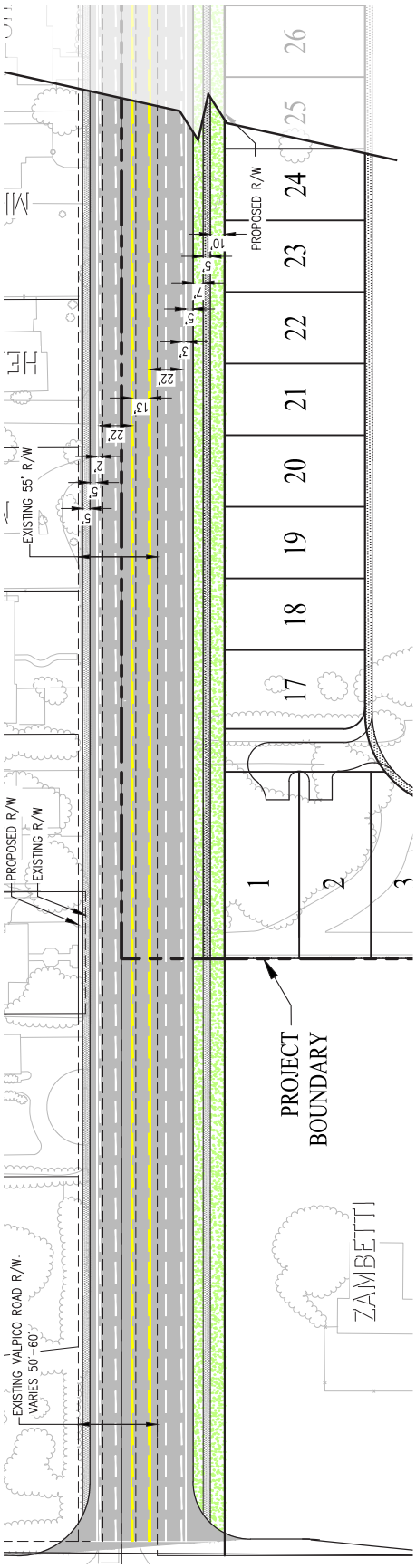
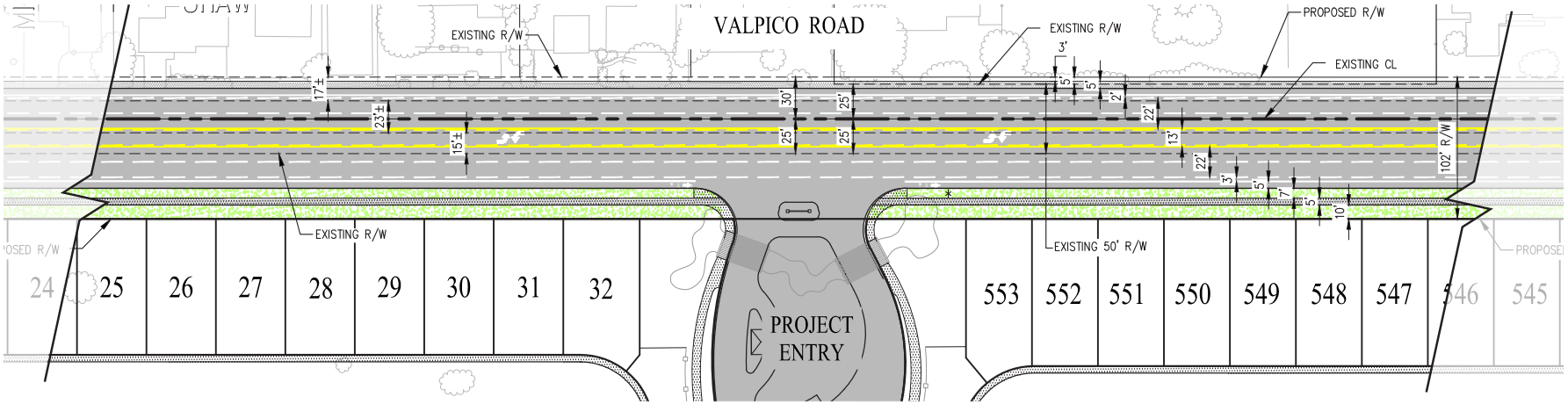
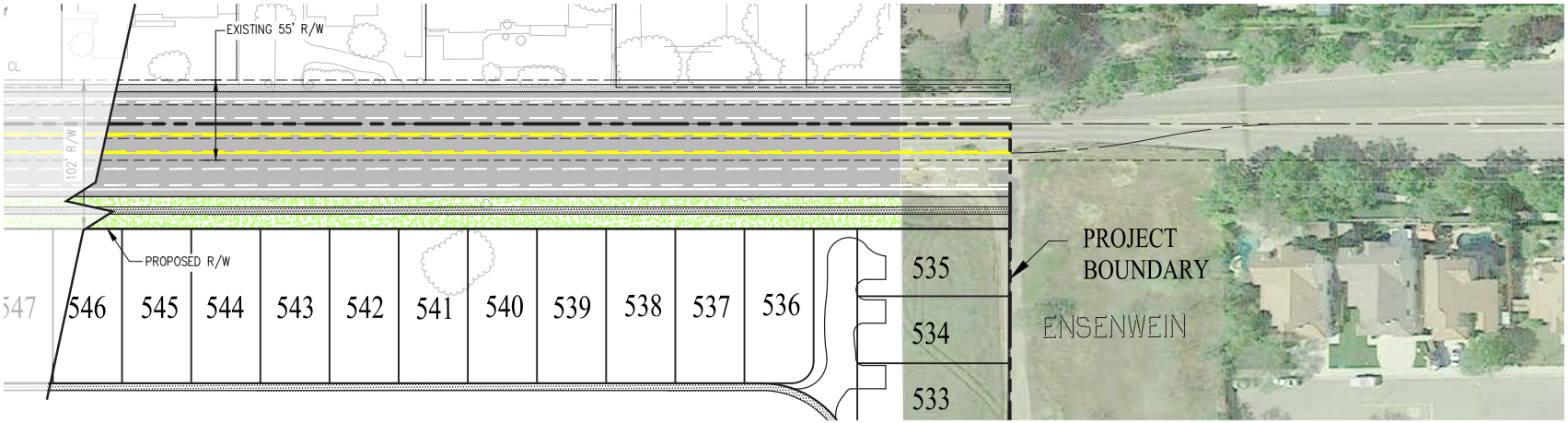


Figure 4.2a: Cross Section A-A and Plan

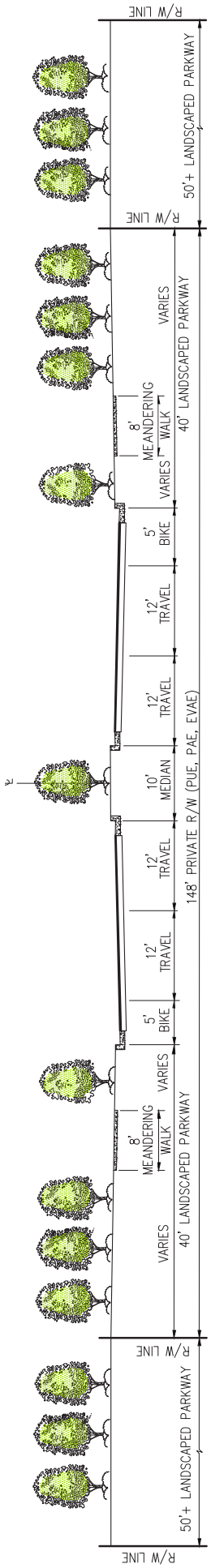


* POTENTIAL BUS STOP LOCATION



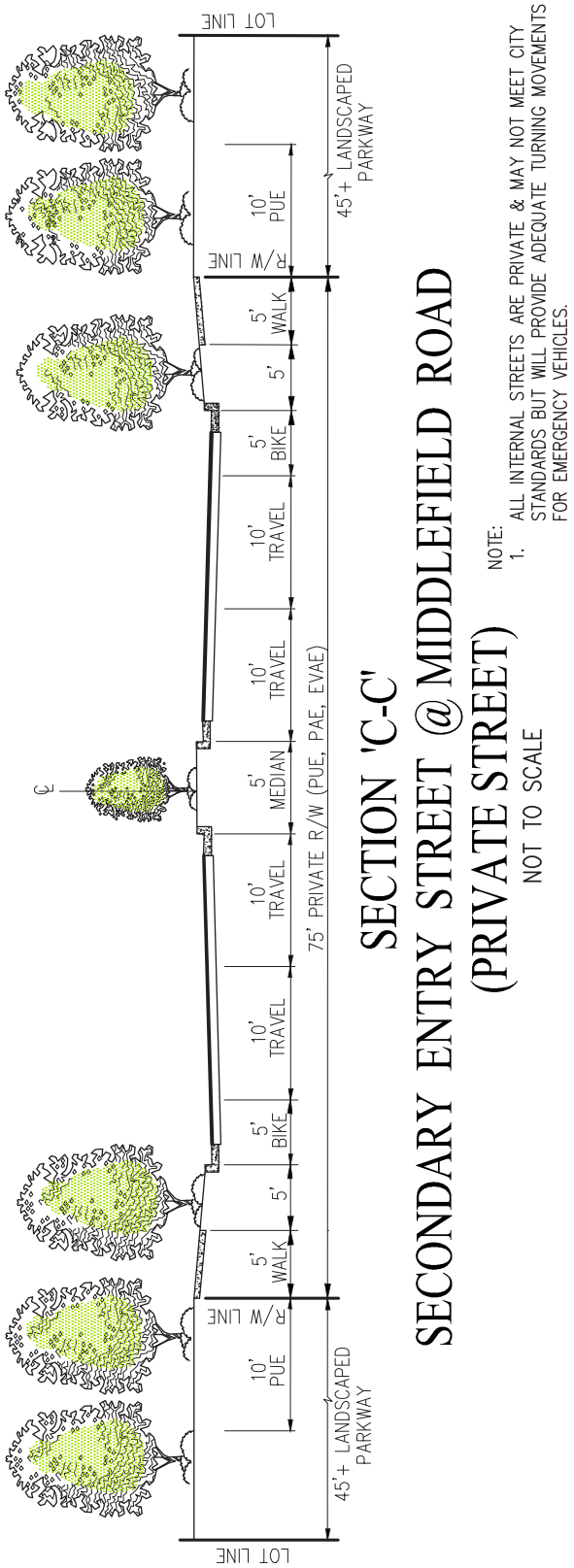
ULTIMATE VALPICO ROAD PLAN

NOT TO SCALE



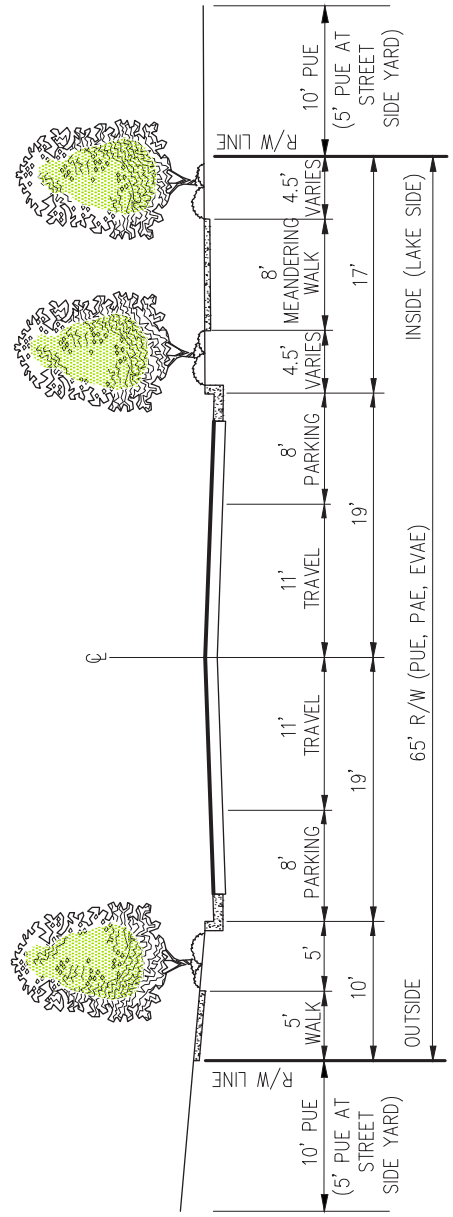
SECTION 'B-B'
MAIN ENTRY STREET @ VALPICO ROAD
(PRIVATE STREET)
NOT TO SCALE

Figure 4.2b: Cross Section B-B



SECTION 'C-C'
SECONDARY ENTRY STREET @ MIDDLEFIELD ROAD
(PRIVATE STREET)
NOT TO SCALE

NOTE:
1. ALL INTERNAL STREETS ARE PRIVATE & MAY NOT MEET CITY STANDARDS BUT WILL PROVIDE ADEQUATE TURNING MOVEMENTS FOR EMERGENCY VEHICLES.



SECTION 'D-D'
LOOP STREET
(PRIVATE STREET)
NOT TO SCALE

Figure 4.2c: Cross Sections C-C and D-D

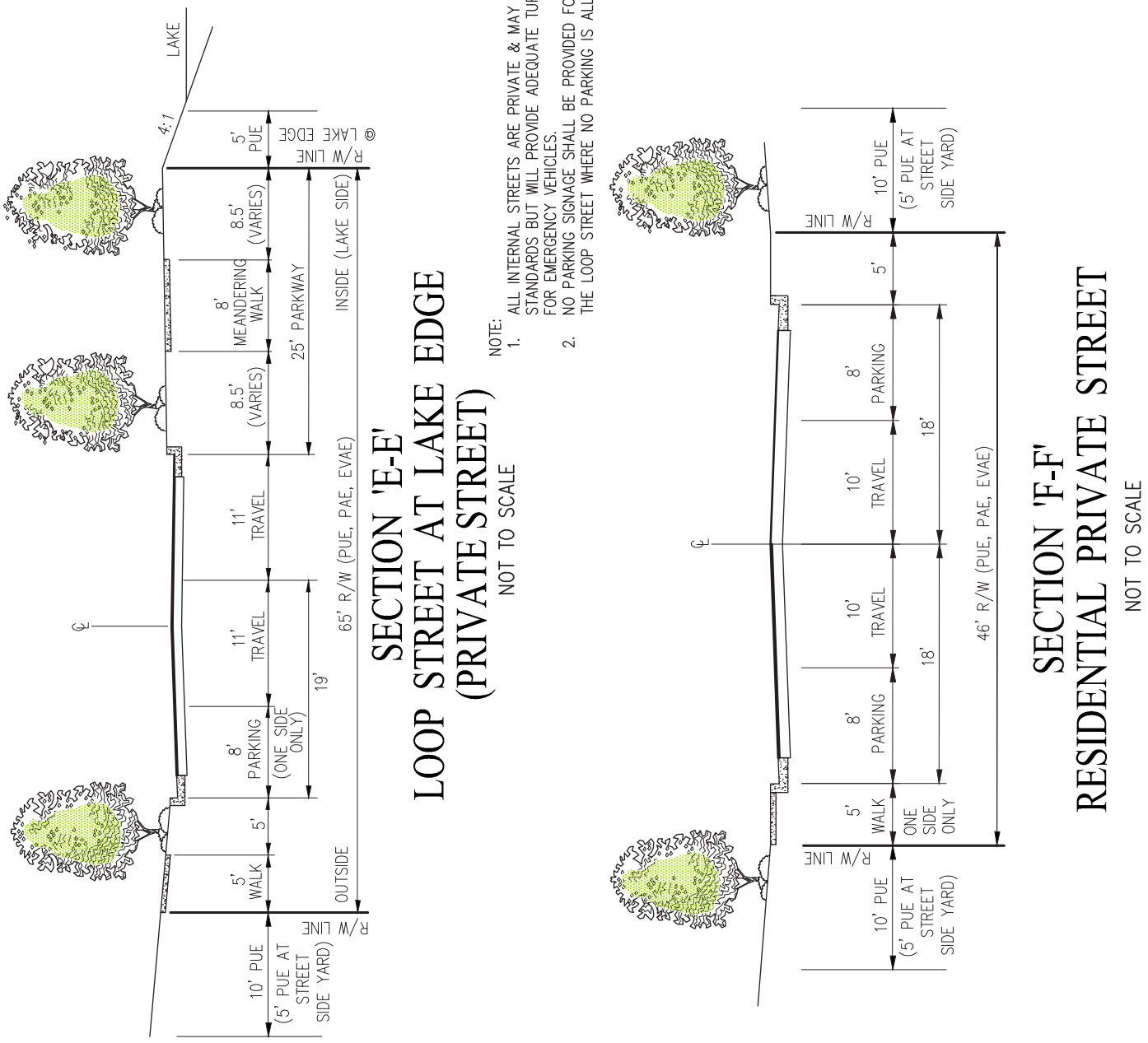
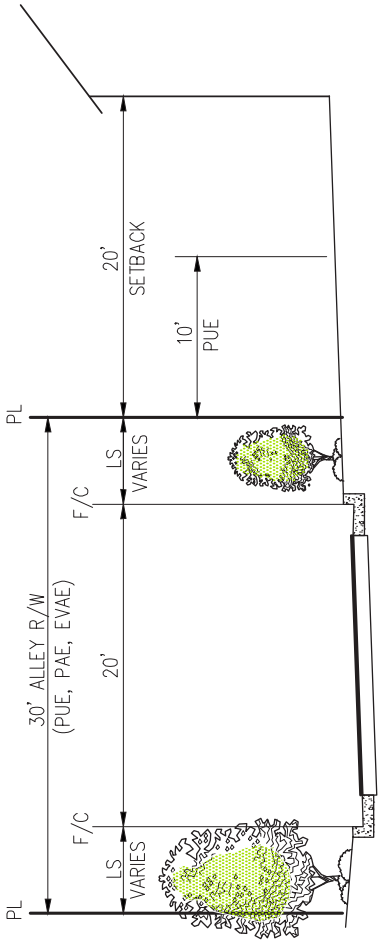


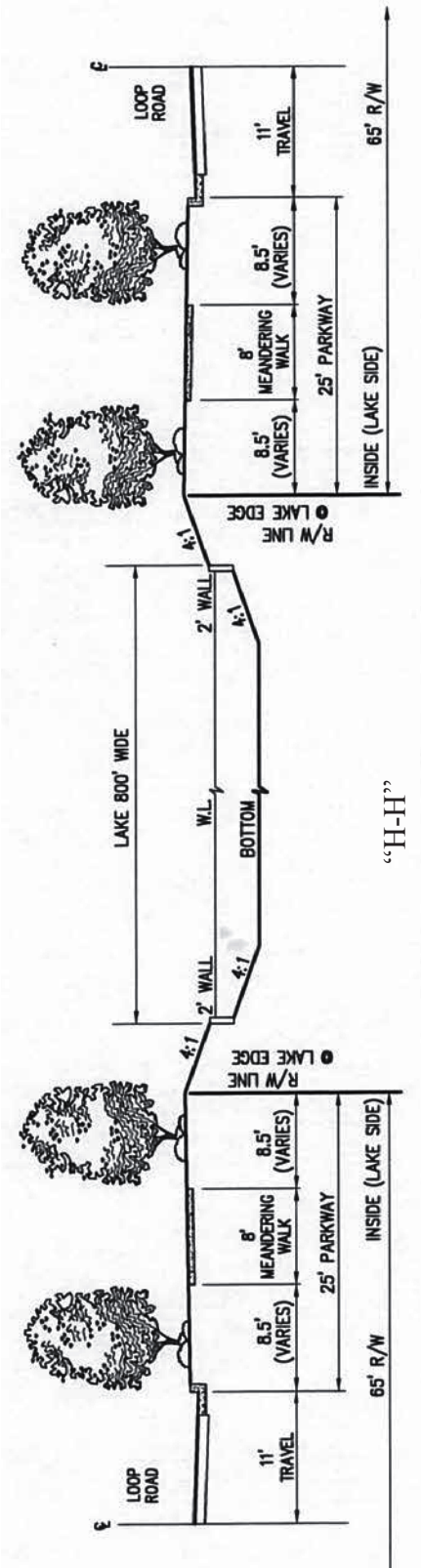
Figure 4.2d: Cross Sections E-E and F-F



NOTE:
1. THE ALLEYS CANNOT BE USED FOR PARKING AND SHALL BE MARKED WITH "NO PARKING" SIGNAGE ON BOTH SIDES OF THE ALLEY AND BE PROVIDED RED PAINTED CURBING WITH WHITE LETTERING "NO PARKING – FIRE LANE". ADDITIONALLY, THE APPROPRIATE TURNING RADIUS SHALL BE PROVIDED TO ACCESS AND EGRESS SUCH ALLEYS. ANY DEAD-END ALLEYS SHALL BE LIMITED TO 150 FEET IN LENGTH.

SECTION 'G-G'
ALLEY DRIVEWAY
NOT TO SCALE

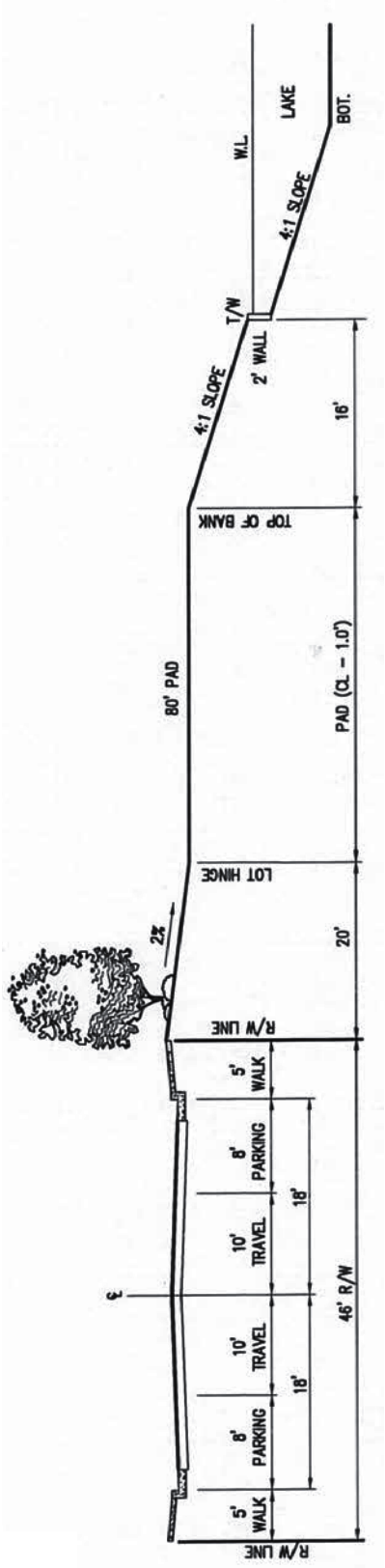
Figure 4.2e: Alley Cross Section G-G



"H-H"

TYPICAL LAKE CROSS SECTION

Not to Scale

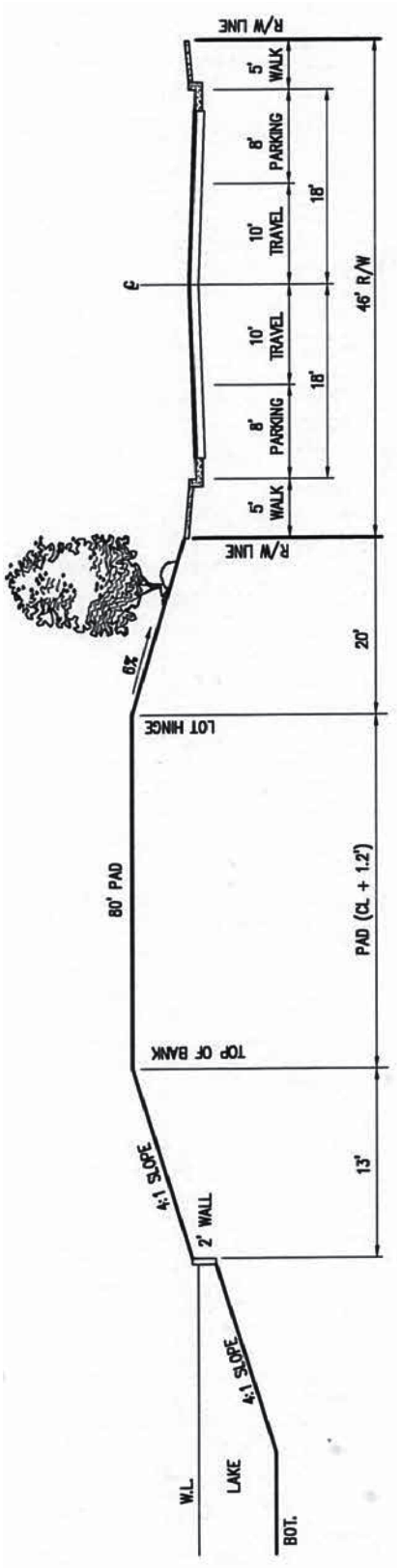


"I-I"

TYPICAL LOT TO LAKE CROSS SECTION (Downhill Condition)

Not to Scale

Figure 4.2f: Cross Sections H-H and I-I



"J-J"

TYPICAL LOT TO LAKE
CROSS SECTION (Uphill Condition)
Not to Scale

Figure 4.2g: Cross Section J-J

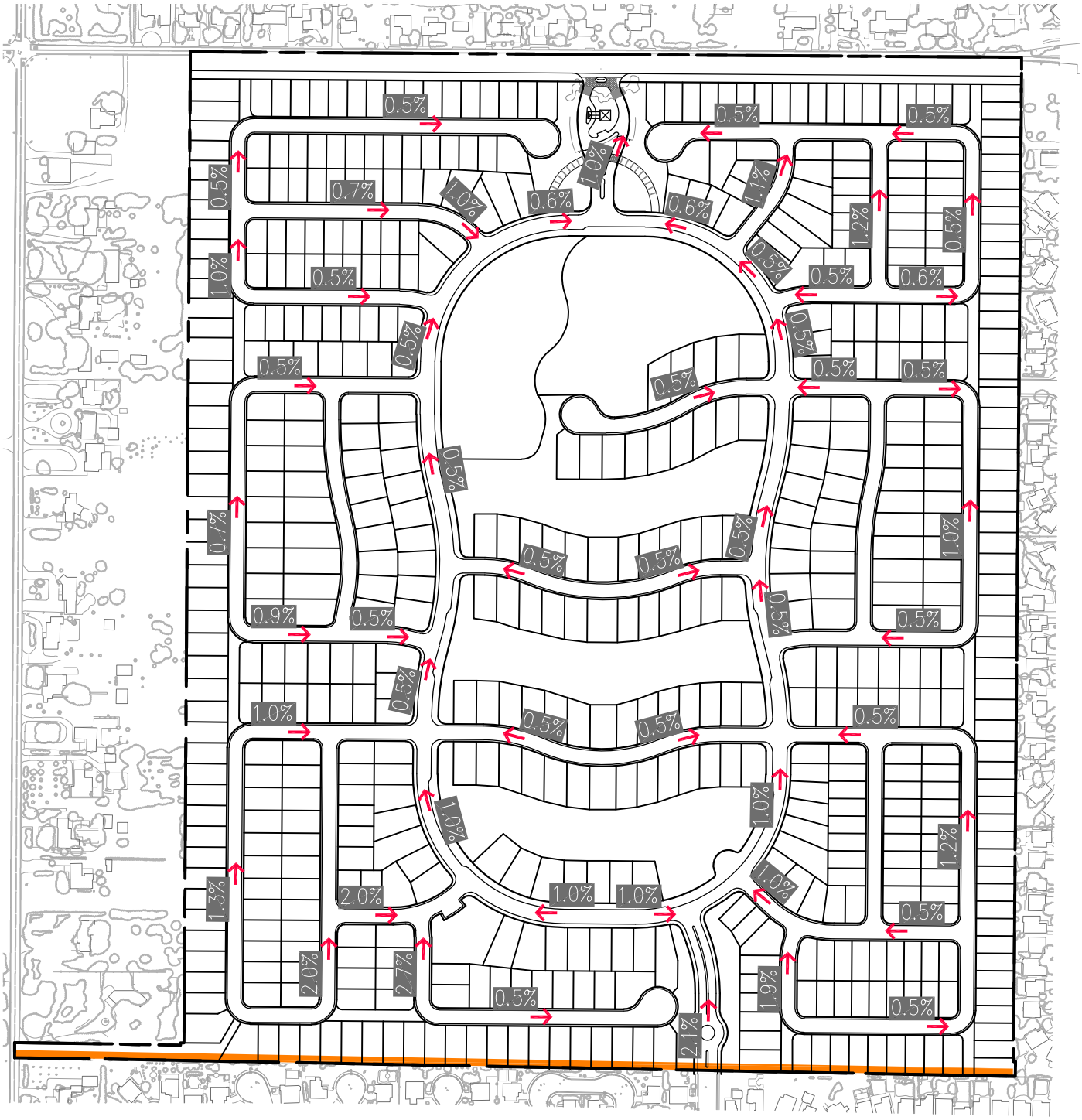
4.2 Public Transportation

There are several public transit options to serve the residents of Tracy Village, accommodating the needs of a wide variety of users for local and regional travel needs. Regional rail service is provided by the Altamont Corridor Express (ACE) passenger rail line running between Stockton and San Jose, with a Bay Area Rapid Transit (BART) connection to the Bay Area from Pleasanton. Regional bus service is also available within San Joaquin County provided by the San Joaquin Regional Transit District (SJRTD), County Area Transit, the San Joaquin Commuter bus, Greyhound and Amtrak California.

Local bus service is provided by the City's TRACER bus system. TRACER offers Fixed Route and Paratransit services providing local public transportation to most major destinations within Tracy including connecting to other public transportation options such as the City's Transit Station and the ACE station. The TRACER Fixed Route is routinely updated and Tracy Village will accommodate extension of the Fixed Route system through reservation of a bus stop location. The type and location of the bus facility adjacent to Valpico Road, timing improvements, and developer's responsibilities will be determined at the time of Tentative Map approval.

4.3 Grading

A preliminary grading plan is shown on Figure 4.3: Preliminary Grading Plan. The grading for the community is projected to balance on site. The grading concept proposes retaining walls, most under two feet high with a maximum height of six feet along the southern perimeter to maintain the grades of adjacent properties. Internal retaining walls may be located between lots to allow for proper drainage of the site.



Legend

Tracy Village Specific Plan Boundary

Grade Direction

Retaining Wall (up to 6')

Figure 4.3: Preliminary Grading Plan

4.4 Wastewater

4.4.1 Existing Wastewater Facilities

There is an existing 18-inch sanitary sewer main in Corral Hollow Road near the intersection of Parkside Drive which flows northerly in Corral Hollow Road increasing in size and eventually reaches the City of Tracy Wastewater Treatment Plant located near Holly Drive and West Larch Road north of Interstate 205.

4.4.2 Wastewater Master Plan Improvements

The City of Tracy completed a Wastewater Master Plan in December 2012. The Master Plan identified infrastructure requirements for both wastewater treatment and conveyance based on wastewater flows from existing and future service areas. Tracy Village was included as a future service area in the Master Plan.

The Master Plan recommended a phased expansion of the existing wastewater treatment plant from its current capacity of 10.8 million gallons per day (mgd) to 21.0 mgd and also recommended conveyance improvements for the east and west catchment areas in the City. City has limited wastewater treatment capacity in the City's Wastewater Treatment Plant until current and future expansion capital improvement projects are completed and operational. As of January 2017, the City had an unused capacity of approximately 1850 EDU's within its wastewater treatment plant available to new development within the City on a first come-first served basis. These EDU's are currently available to serve the proposed project, but as other development projects within the City come forward and building permits are issued, this remaining capacity will be reduced.

Tracy Village is located in the west catchment area which will include an extension of the existing Corral Hollow Road Sewer from Parkside Drive to West Linne Road as well as upgrades to increase the capacity of the existing Corral Hollow Road sewer, a new Lammers Road sewer, and other downstream improvements.

Wastewater analysis is necessary by the City's wastewater consultant and shall address both interim wastewater improvements needed to serve the development, if the master plan infrastructure is not completed at the time of development, and the ultimate improvements to comply with the master plans.

The master developer will participate in the implementation of the Wastewater Master Plan through the payment of fees and/or the construction of Master Plan facilities with corresponding fee credits.

4.4.3 Projected Wastewater Demand

The projected wastewater demand was calculated for Tracy Village using the wastewater generation factors contained in the Master Plan. Those factors are based on a per capita flow of gallons per day/capita (gpd/capita) and the projected number of residents per dwelling unit of 3.3 for very low and low density, 2.7 for medium density and 2.2 for high density residential development.

Tracy Village is being planned as an age-qualified community which will have less residents per dwelling unit than conventional residential development and consequently generate less wastewater. The homes in Tracy Village are anticipated to have 2.0 residents per dwelling unit resulting in a wastewater generation factor of 160 gallons per day/dwelling unit (gpd/du).

Table 4-1: Projected Wastewater Demand shows a projected wastewater demand of 220,256 gpd based on land use assumptions contained in the Master Plan. Table 4-2: Projected Wastewater Demand shows a projected wastewater demand of 162,960 gpd based on the proposed Specific Plan land uses which are approximately 74% of the amount projected by the Master Plan. Table 4-3: Projected Wastewater Demand shows a projected wastewater demand of 100,560 gpd based on the Specific Plan land uses and an age-qualified wastewater generation factor which is approximately 46% of the amount projected by the Master Plan.

4.4.4 Specific Plan Wastewater Improvements

The wastewater improvements for Tracy Village consist of a conventional on-site gravity sanitary sewer system with mains, manholes, and laterals designed in accordance with the City of Tracy Design Standards. The on-site sanitary sewer mains collect wastewater from the homes and flow towards the interior loop road and then flows north in the loop road towards Valpico Road.

The wastewater improvements also include an off-site sanitary sewer main in Valpico Road that conveys wastewater from Tracy Village and connects to the extension of the proposed Corral Hollow Road sewer as described in the Tracy Wastewater Master Plan. In the event that the Corral Hollow Road sewer has not been extended from Parkside Drive to Valpico Road, the master developer of Tracy Village would construct it and enter a fee credit or reimbursement agreement with the City of Tracy.

Table 4-1: Projected Wastewater Demand

(Based on Tracy Wastewater Master Plan Land Use)

Land Use	Acres (ac)	Dwelling Units (du)	Generation Factor (gpd/du)	Average Dry Weather Flow (gpd)
Low Density Residential	70	305	264	80,520
Medium Density Residential	43	387	216	83,592
High Density Residential	17	319	176	56,144
Total	130	1,011		220,256

Table 4-2: Projected Wastewater Demand

(Based on Proposed Specific Plan Land Uses)

Land Use	Acres (ac)	Dwelling Units (du)	Generation Factor (gpd/du or ac)	Average Dry Weather Flow (gpd)
Low Density Residential	109.9	600	264	158,400
Clubhouse	4.0	-	1,140[1]	4,560
Total	113.9			162,960

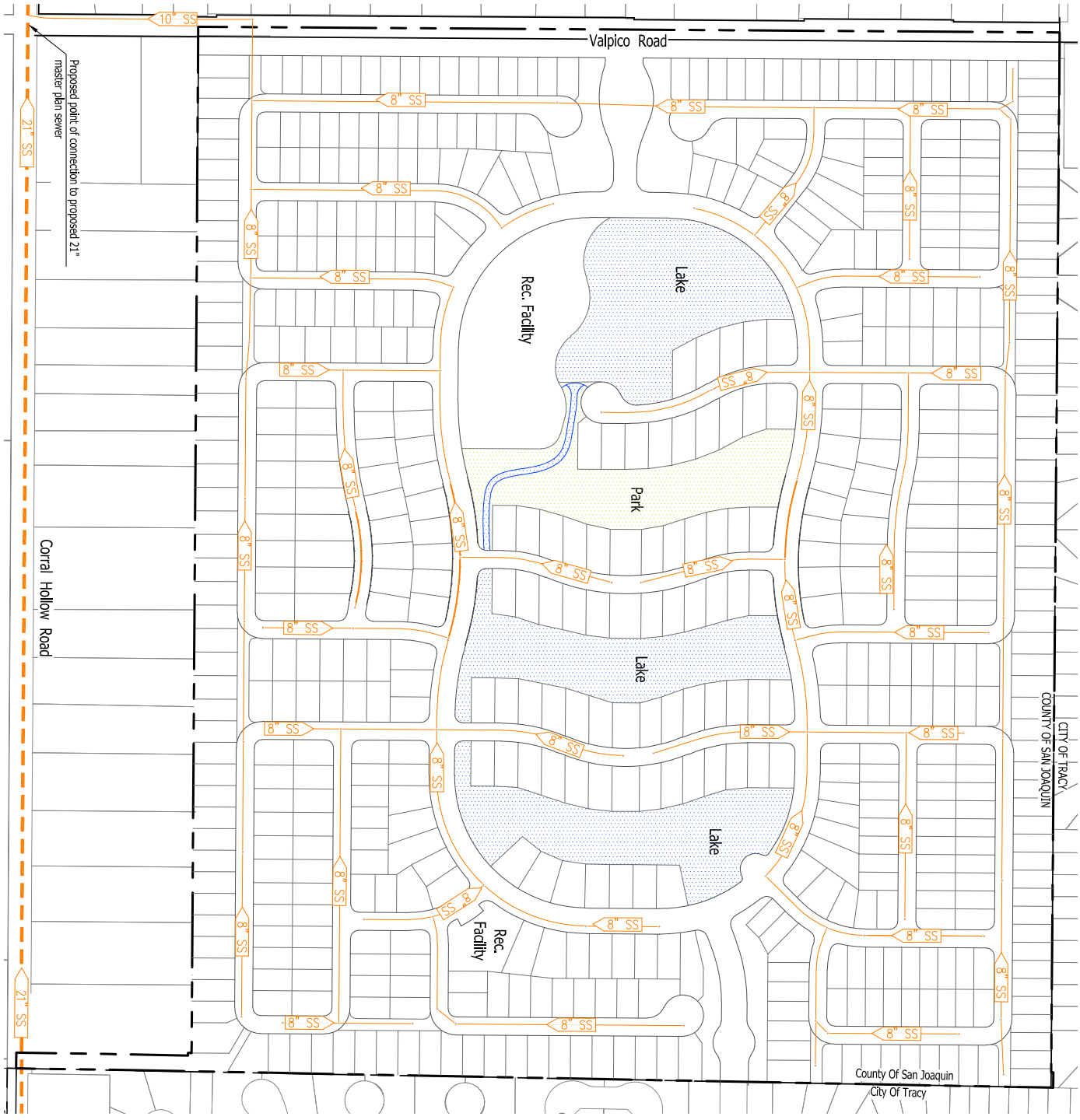
(1)The Wastewater Generation Factor for the Clubhouse is assumed to be equal to the retail factor used in the Tracy Wastewater Master Plan.

Table 4-3: Projected Wastewater Demand

(Based on Proposed Specific Plan Land Uses and Age-Qualified Generation Factor)

Land Use	Acres (ac)	Dwelling Units (du)	Generation Factor (gpd/du or ac)	Average Dry Weather Flow (gpd)
Age-Qualified Residential	109.9	600	160[1]	96,000
Clubhouse	4.0	-	1,140[2]	4,560
Total	113.9			100,560

(1)The wastewater generation factor for age-qualified residential is based on a per capita flow rate of 80 gpd/capita x 2 residents per dwelling unit.
(2)The Wastewater Generation Factor for the Clubhouse is assumed to be equal to the retail factor used in the Tracy Wastewater Master Plan.



Legend

- *Tracy Village Specific Plan Boundary*
- *Proposed Sanitary Sewer - Specific Plan*
- *Proposed Sanitary Sewer - Master Plan*

Figure 4.4: Preliminary Wastewater Improvement Plan

4.5 Water

4.5.1 Water Supply

The City of Tracy provides potable water from multiple sources including groundwater wells and surface water from the Central Valley Project and the South County Water Supply Project. The City treats the surface water obtained from the Central Valley Project at their John Jones Water Treatment Plant located near the airport in the southeast portion of the City. The surface water obtained from the South County Water Supply Project is treated and delivered to the City by the South San Joaquin Irrigation District.

4.5.2 Existing Water Facilities

The City's water system is comprised of three existing Pressure Zones (One, Two and Three) . Tracy Village is located in Pressure Zone Two which serves areas between elevation 75 and 150.

Treated water leaves the City's water treatment plant at Zone 2 Pressure. There is an existing 24-inch Zone 2 water main in Corral Hollow Road and an existing 16-inch water main in Valpico Road. There are also existing 12-inch water mains in Middlefield Drive and Bluegrass Lane on the south and east side of Tracy Village that extends to the site.

4.5.3 Water Master Plan Improvements

The City of Tracy completed the Citywide Water System Master Plan in December 2012. The Master Plan identified the required potable and recycled water system facilities required to serve the buildout of the City's General Plan including existing and future service areas within the sphere of influence. Tracy Village was included as a future service area in the Master Plan.

The Master Plan recommended treatment, storage, pumping, and piping improvements as well as new ground water wells to support the General Plan buildout of the City. These improvements included the extension of the existing 12-inch water main at Middlefield Drive through Tracy Village with a connection to the existing 16-inch water main in Valpico Road.

The master developer will participate in the implementation of the water system Master Plan through the payment of fees and/or the construction of Master Plan facilities with corresponding fee credits. Because Tracy Village will be an age-qualified community with less residents and demand for services per dwelling unit, fee credits may be adjusted accordingly.

4.5.4 Projected Water Demand

The projected water demand was calculated for Tracy Village using the water demand factors contained in the Master Plan. Those factors are based on a per capita demand and projected number of residents per dwelling unit of 130 gallons per day/capita (gpd/capita) and 3.3 for very low and low density, 115 gpd/capita and 2.7 for medium density, and 100 gpd/capita and 2.2 for high density residential development.

Tracy Village is being planned as an age-qualified community which will have less residents per dwelling unit than conventional residential development and consequently have less demand for water. The homes in Tracy Village are anticipated to have 2.0 residents per dwelling unit resulting in a water demand factor of 200 gpd/capita.

Table 4-4: Projected Water Demand shows the projected water demand of 264,540 gpd based on the land use assumptions contained in the Master Plan. Table 4-5: Projected Water Demand shows the projected water demand of 263,469 gpd based on the proposed Specific Plan land uses or approximately 89% of the amount projected by the Master Plan. Table 4-6: Projected Water Demand shows a projected water demand of 127,140 gpd/capita based on the Specific Plan land uses and an age-qualified water demand factor which is approximately 43% of the amount projected by the Master Plan.

4.5.5 Specific Plan Water Improvements

The water improvements for Tracy Village consist of a conventional on-site water system with mains, services, and fire hydrants designed in accordance with the City of Tracy Design Standards.

The proposed water mains provide the connection from the existing 12-inch water main at Middlefield Drive to the existing 16-inch water main in Valpico Road as described in the Tracy water Master Plan. In addition, the water main connects to the existing 12-inch water main in Bluegrass Lane.

Water line sizing, looping requirements and layout shall comply with the recommendations of the analysis of the City's water consultant and approved by the City Engineer.

Table 4-4: Projected Water Demand

(Based on Tracy Water Master Plan Land Use)

Land Use	Acres [1] (ac)	Dwelling Units[1] (du)	Demand Factor (gpd/du)	Average Daily Demand (gpd)
Low Density Residential	70	305	429	130,845
Medium Density Residential	43	387	310	119,970
High Density Residential	17	319	150	47,850
Total	130	1,011		298,665

(1) Assumes the same acreage and dwelling unit count used in Tracy Wastewater Master Plan

Table 4-5: Projected Water Demand

(Based on Proposed Specific Plan)

Land Use	Acres (ac)	Dwelling Units (du)	Demand Factor (gpd/du)	Average Daily Demand (gpd)
Low Density Residential	109.9	600	429	257,400
Clubhouse	4.0	-	1,785[1]	7,140
Total	113.9			264,540

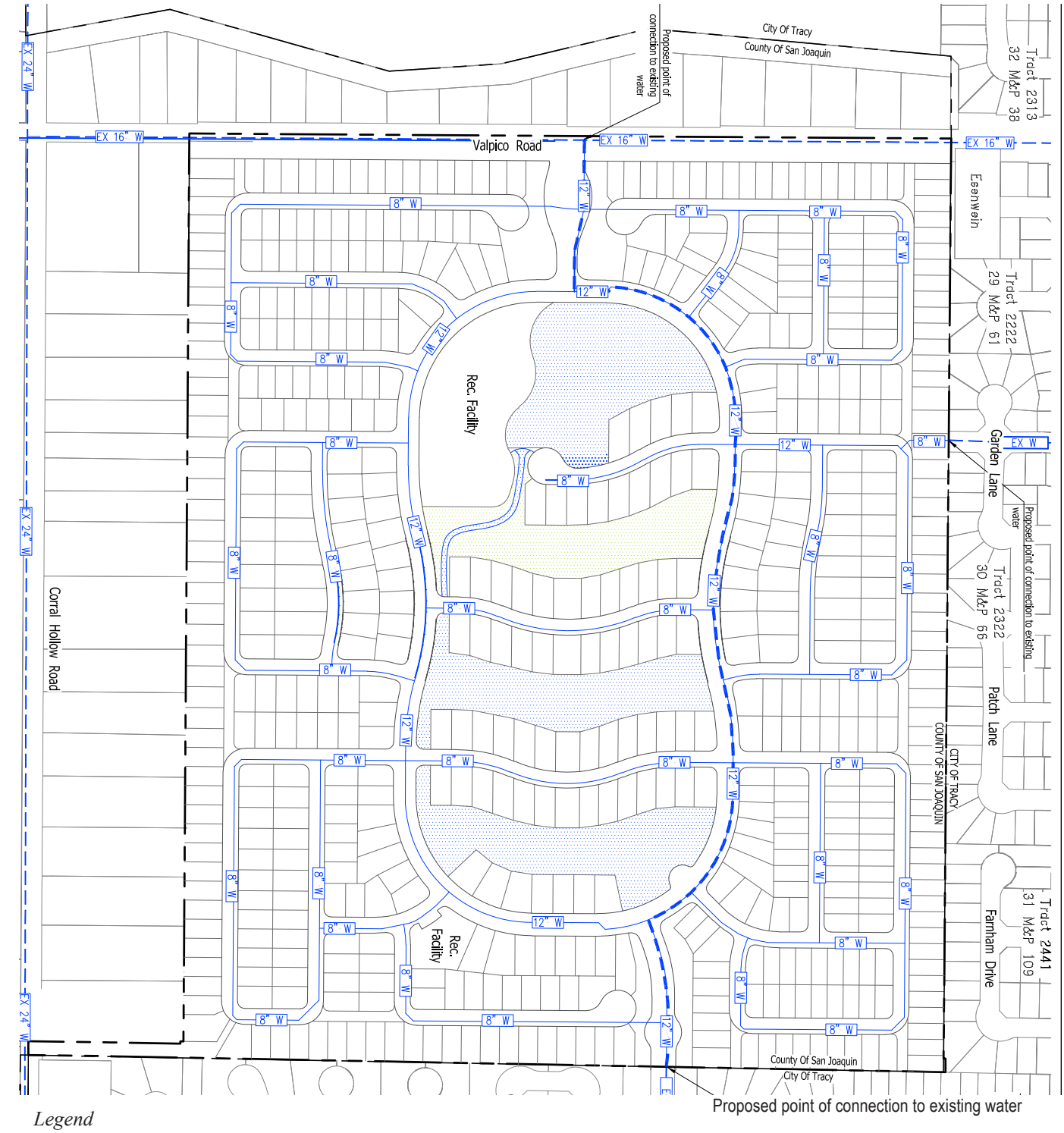
(1) The water demand factor for Clubhouse is assumed to be equal to the commercial factor of 2 acre-feet/acre/year (acft/ac/yr) or 1,785 gallon per day/acre (gpd/ac) used in the Tracy Water Master Plan.

Table 4-6: Projected Water Demand

(Based on Proposed Specific Plan Land Uses and Age-Qualified Demand Factors)

Land Use	Acres (ac)	Dwelling Units (du)	Demand Factor (gpd/du)	Average Daily Demand (gpd)
Age-Qualified Residential	109.9	600	200[1]	120,000
Clubhouse	4.0	-	1,785[2]	7,140
Total	113.9			127,140

(1) The water demand factor for age-qualified residential is based on a per capita demand of 100 gpd/capita x 2 residents per dwelling unit.
(2) The water demand factor for Clubhouse is assumed to be equal to the commercial factor of 2 acft/ac/yr or 1,785 gpd/ac used in the Tracy Water Master Plan.



Legend

- *Tracy Village Specific Plan Boundary*
- *Proposed Water Main - Specific Plan* (W)
- *Proposed Water Main - Master Plan* (W)
- *Existing Water Main* (EX W)

Figure 4.5: Preliminary Potable Water Improvement Plan

4.5.6 Recycled/Non Potable Water

The Citywide Wastewater System Master Plan anticipates that there will be recycled water available to meet the projected recycled water demands. The required infrastructure (such as dual-distribution pipelines) to provide recycled water to meet the non-potable water demands for the Tracy Village development will be installed as part of the project's infrastructure planning. These facilities will then connect to the City-wide recycled facilities when available.

4.5.6.1 Recycled Water Master Plan Improvements

The City of Tracy completed the Citywide Water System Master Plan in December 2012. At the time that the Master Plan was prepared, the City had no existing recycled water facilities. The Master Plan identified the required potable and recycled water system facilities required to serve the build-out of the City's General Plan including existing and future service areas within the sphere of influence. Tracy Village was included as a future service area in the Master Plan.

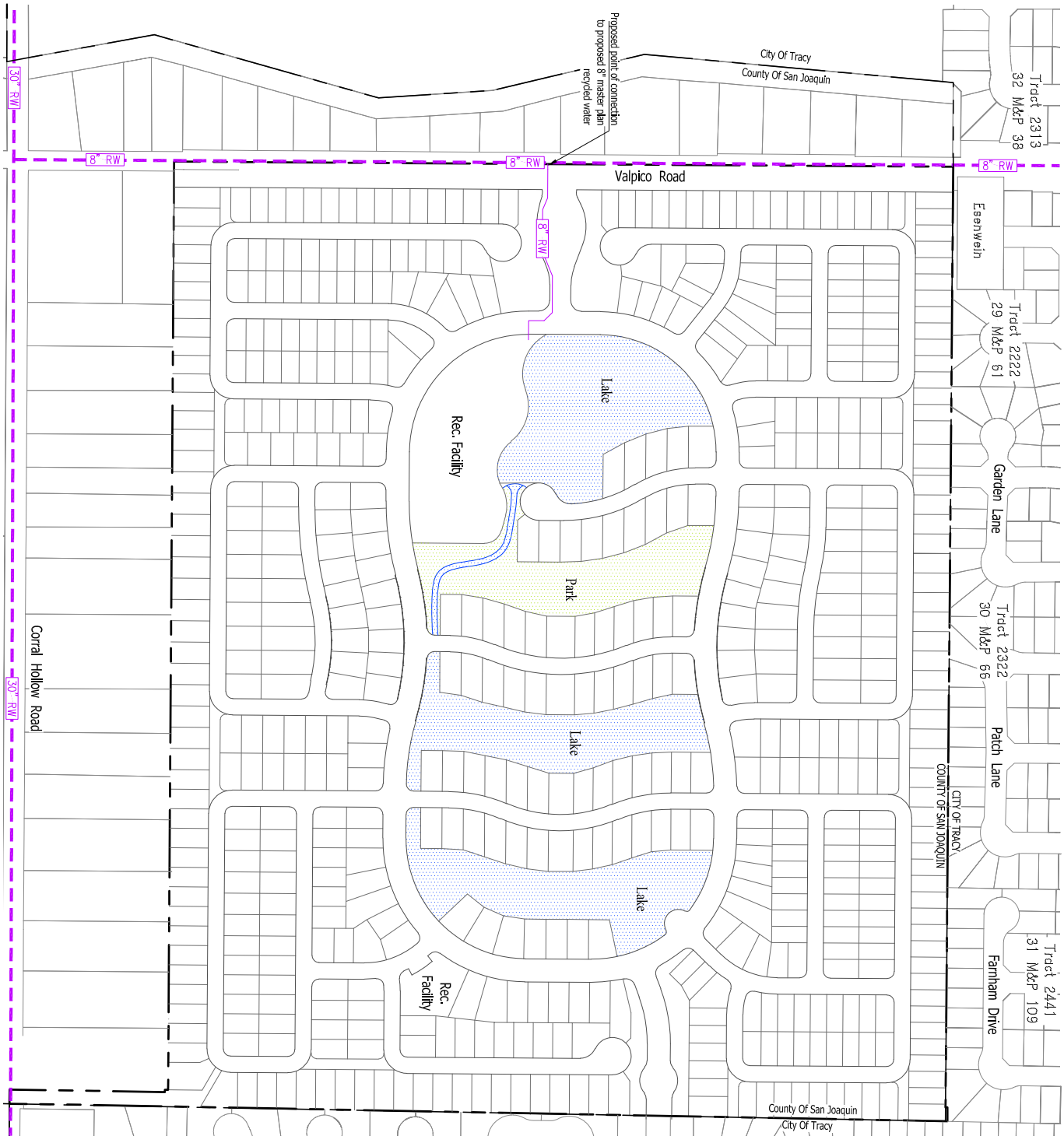
The City plans to distribute tertiary treated effluent from their Wastewater Treatment Plant located on Holly Drive.

The Master Plan recommended a main pump station and storage tank at the wastewater treatment plant, three additional pump stations, two additional storage tanks, and recycled water mains to distribute recycled water to four planned pressure zones throughout the City of Tracy. These improvements will include a 30-inch main in Corral Hollow Road and an 8-inch main along Tracy Village's frontage on Valpico Road.

Tracy Village will participate in the implementation of the recycled water system through the payment of fees and/or construction of Master Plan facilities.

4.5.6.2 Projected Recycled Water Demand

There are significant opportunities for the use of recycled water at Tracy Village. The City of Tracy was recently awarded a federal grant which will facilitate the construction of a recycled water main from the Wastewater Treatment Plan down Lammers Road to Valpico Road. It is anticipated that the Recycled Water Project will construct recycled water main from the Wastewater Treatment Plant terminating near the intersection of Old Schulte Road and Lammers Road (depending upon the construction bid amount and the available funds). In the event, the bids are higher, the scope of project may be further reduced. The Recycled Water Project is tentatively



Legend

- *Tracy Village Specific Plan Boundary*
- *Proposed Recycled Water Main- Specific Plan*
- *Proposed Recycled Water Main - Master Plan*

Figure 4.6: Recycled Water Improvement Plan

scheduled for completion in early 2019. The connection from the termination point to Tracy Village site along with a booster pump station will be needed to be constructed by the developer since sufficient program funds may not be available to extend the recycled water line to the Project. Recycled Water Fees will be credited to Tracy Village for this mainline extension.

Recycled water will be used to fill and maintain the water levels in the lakes. As a majority of the common area landscape will be in close proximity to the proposed lakes, it will be efficient to use the lakes as a water supply for the common area and front yard landscaping. This will also facilitate the cycling of water through the lakes, which is important to prevent the buildup of nutrients, silt and other contaminants which can reduce water quality in the lakes. It may be necessary to obtain a discharge permit for storm drainage from the lakes from the California Regional Water Quality Control Board as described below. There will be opportunities to irrigate landscaping proposed at Tracy Village's entry, along the Valpico Road frontage and portions of the recreation site and other common area landscaping as well as the front yards if this proposal is acceptable, and if a discharge permit is obtained.

The City of Tracy is currently working to complete the installation of the recycled water mains which could then be extended to serve the proposed development. Delays in the ability to hook-up to the recycled water main could temporarily delay the ability of Tracy Village to use recycled water, requiring an alternative source of water in the interim. In this case, Tracy Village will need to use city water supplies to fill the lakes and provide irrigation water until the recycled water supply is complete and available for use.

The ability to use recycled water and the commitment by the development sponsor to use recycled water for landscaping greatly reduces the impact of the development on the City's water supply. The lake is also used as part of the storm drainage and storm water quality treatment systems. Storm water will be discharged to the lake for treatment prior to discharging to the downstream watershed. If recycled water is used for lake makeup water and the storm water mixes with recycled water, the storm water will be classified as recycled water. Recycled water cannot be freely discharged to a downstream watershed without a discharge permit through the California Regional Water Quality Control Board. A process to obtain the permit will be required.

4.6 Storm Drainage

4.6.1 Topography/Watershed

The Tracy Village site slopes gently from south to north at approximately 1% and has an elevation change of approximately 35 feet. The site is bordered by rural residential on the west that drains towards Tracy Village, and suburban residential on the south and east, that drains away from Tracy Village.

4.6.2 Existing Storm Drain Facilities

There is a small basin/impoundment adjacent to Valpico Road that may be a former irrigation return pond, and a relatively shallow roadside swale adjacent to Valpico Road. There are no other improved storm drain facilities located on the site. There is an existing 15-inch storm drain located approximately 450 feet to the east in Valpico Road that flows easterly to the West Side Channel at the intersection of Valpico Road and Sycamore Parkway.

4.6.3 Storm Drain Master Plan Improvements

The City of Tracy completed the Citywide Storm Drainage Master Plan in November 2012. The Master Plan identified new storm drainage infrastructure needed to serve new development included in the City's General Plan as well as to correct existing deficiencies. The City's General Plan includes future service areas within its sphere of influence. Tracy Village was included as a future service area in the Master Plan.

The City is comprised of a number of watersheds. Tracy Village lies within the Westside Channel Watershed which includes a portion of the West Side Irrigation District (WSID) main channel, the Westside Open Channel, several large diameter pipes, and a number of detention basins.

The Master Plan identifies a 36-inch storm drain main in Valpico Road from Tracy Village to the Westside Channel to serve Tracy Village, as well as other improvements related to the development of specific properties.

Tracy Village will participate in the implementation of the storm drainage Master Plan through the payment of fees and/or the construction of Master Plan facilities with corresponding credits.

4.6.4 Projected Stormwater Runoff

The Master Plan identified a projected stormwater flow for Tracy Village of 34 cubic feet per second (cfs) for a 10-year storm and 52 cfs for a 100-year storm. Table 4-7: Projected Impervious Cover shows the projected impervious cover based on land use assumptions in the Master Plan of 21.3%. Table 4-8: Projected Impervious Cover shows the projected impervious cover based on the proposed Specific Plan land uses of 22.2%.

4.6.5 Specific Plan Storm Drain Improvements

The proposed storm drain system for Tracy Village consists of conventional on-site storm drain system with mains, catch basins, and manholes that conveys storm water runoff from the development to a lake system. The central location of the lake system reduces the length and size of storm drain mains and provides an opportunity to reduce peak storm water flows before leaving Tracy Village by functioning as a detention basin. If a high flow event occurs, the low shoreline and grades around the lake system allow water to overflow to the street for drainage. If the pump station is needed, backup power would be provided for the pump.

Table 4-7: Projected Impervious Cover

(Based on Tracy Storm Drain Master Plan Land Use)

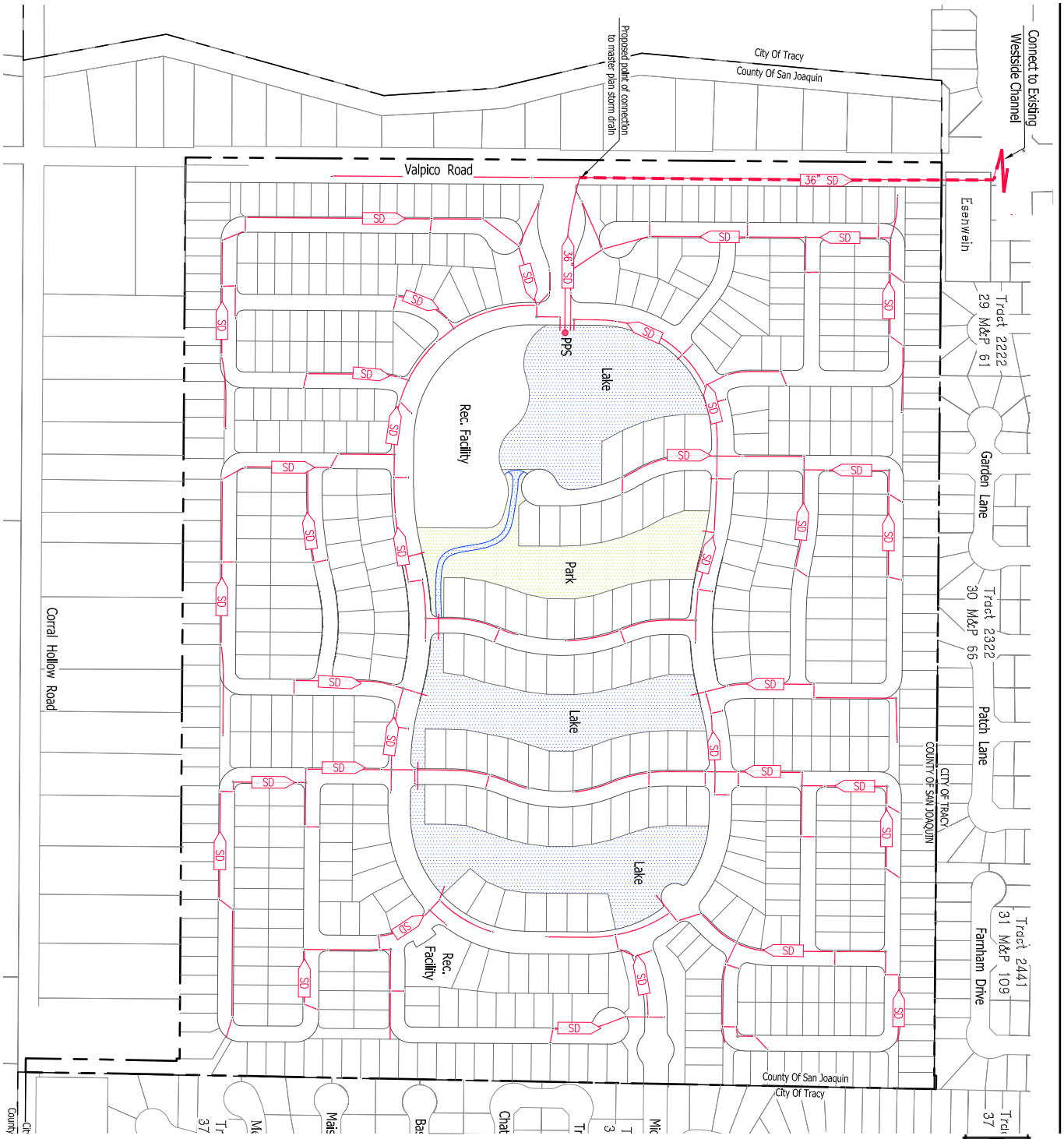
Land Use	Acres(ac)	Dwelling Units (du)	Impervious Cover (%)	Impervious Area (ac)
Low Density Residential	70	305	16	11.20
Medium Density Residential	43	387	22	9.46
High Density Residential	17	319	41	6.97
Total	130	1,011		27.63
Average Impervious Cover			21.3%	

Table 4-8: Projected Impervious Cover

(Based on Proposed Specific Plan Land Uses)

Land Use	Acres (ac)	Dwelling Units (du)	Impervious Cover (%)	Impervious Area (ac)
Low Density Residential	109.9	600	16	17.58
Clubhouse	4.0	-	57[1]	0.17
Open Space	8.3	-	2	9.3
Lake	9.3	-	100	13.7
Dog Park	0.2	-	6	0.01
Total	131.7			29.3
Average Impervious Cover			22.2%	

(1)The Impervious Cover Factor for the Clubhouse is assumed to be equal to the retail factor used in the Tracy Storm Drain Master Plan.



Legend

- *Tracy Village Specific Plan Boundary*
- *Proposed Storm Drain - Specific Plan*
- *Proposed Storm Drain - Master Plan*
- *Conceptual Pump Station Location*

Figure 4.7: Storm Drain Improvement Plan

The storm drain improvements also include a 36-inch storm drain main in Valpico Road from Tracy Village to the Westside Channel as identified in the City-wide Storm Drain Master Plan. However, because of the flat terrain, existing improvements and the shallow depth (5 feet to 6 feet) of the Westside Channel, a storm drain pump station and force main may be required to convey stormwater runoff from Tracy Village to the Westside Channel. The details and engineering analysis required to determine the feasibility of constructing a gravity storm drain main will be evaluated during engineering design of Tracy Village.

4.6.6 Storm Water Quality

On February 5, 2013, the State Water Board adopted order No. 2013-0001-DWQ, which replaced Order No. 2005-005-DWQ and required that the Agencies regulate post-construction development (Provision E.12) through a number of different program elements. In response to this order, five cities, including Tracy, and San Joaquin County collaborated together to develop this "Multi Agency Post-Construction Stormwater Standards Manual," dated June 2015.

BMPs used for stormwater treatment are classified as treatment and source control. Treatment measures may include biofilters, wetlands, drain inserts, entry strips, infiltration basins, or media filters and are designed to remove pollutants from the stormwater, however the 2013 Board Order and 2015 Multi Agency Manual identify bioretention as the standard, or baseline, stormwater quality treatment measure, but allow for alternative treatment measures provided that they treat the required design volume / flow and are as effective as bioretention. Source control measures include things such as street sweeping, public education, or hazardous substance/recycling centers and are preventative measures intended to control the source of pollutants. Tracy Village will include both types of BMPs.

The primary treatment control measure at Tracy Village will be the on-site lake system. As described above, all stormwater runoff from Tracy Village will drain to the lake system, where it will be circulated on a continuous basis with pumps. The water quality treatment measures that will be incorporated into the lake are described in the following section.

The new City of Tracy stormwater manual includes Wet Ponds as one of the approved stormwater treatment BMPs. The lakes at Tracy Village can be designed to meet the requirements of the City of Tracy Stormwater Manual for Wet Ponds with little to no impact on the appearance or aesthetic function of the lakes.

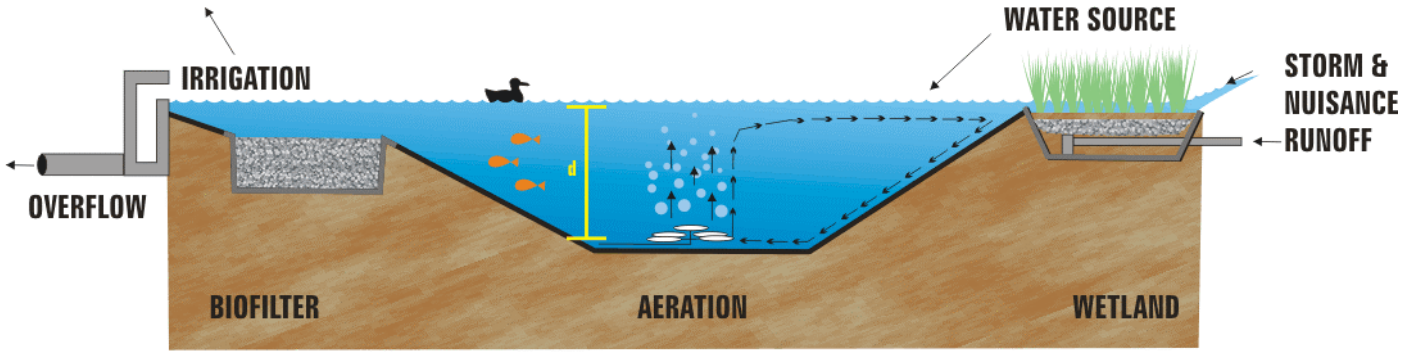


Figure 4.8: Stormwater Treatment and Water Quality Management Systems

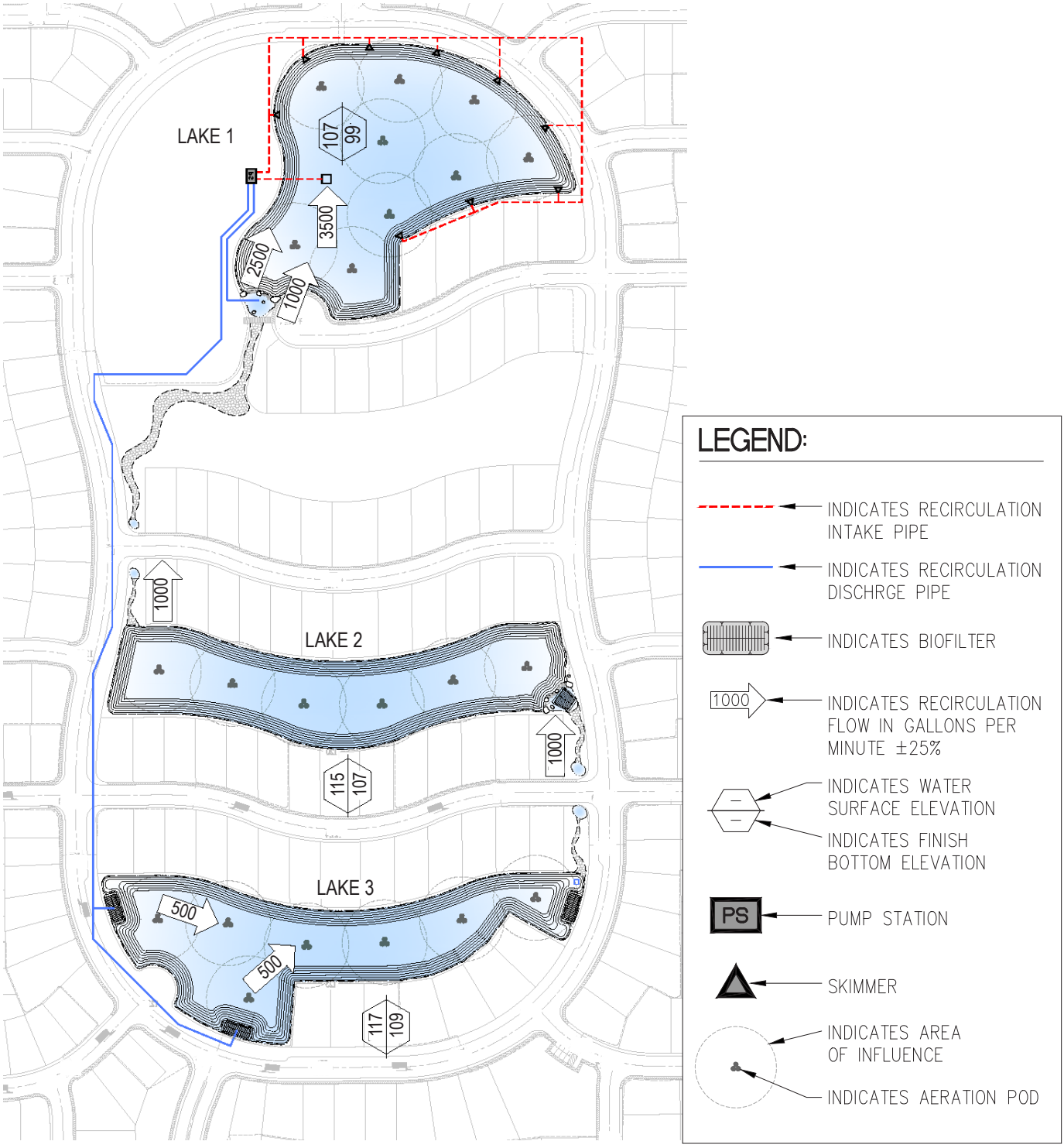


Figure 4.9: Conceptual Tracy Village Water Treatment Plan

Requirements of the Stormwater Permit include:

- The lakes must temporarily detain the stormwater quality volume, which is equivalent to approximately 0.75 inches of runoff from the portion of the site tributary to the lakes. Thus, the lake's water level will rise after a rainfall event. Water level can return to normal in 12 hours, and detention is typically achieved through an orifice or weir at the outlet.
- The lakes must include a vehicle access ramp to allow access to the bottom of the lake. This can typically be incorporated into the lake shoreline with minimal impact on aesthetics.

Source control measures to be used at Tracy Village will include an on-going street sweeping program as a part of the maintenance of the private streets, a public education package to be distributed to homeowners, upon purchase of their home, and catch basins stenciled with the words "No Dumping – Drains to River."

4.7 Lake Water Quality Management

4.7.1 Runoff Treatment and Water Quality Management

This section describes the lake water quality management as discussed in Chapter 2. The lake treatment system employs multiple layers of water quality management to improve water quality, including:

- Lake water quality measures (biofilters and aeration),
- Urban storm water runoff controls (water quality filters and wetland planter areas),
- Lake retention of dry weather runoff, and
- Detention of storm water runoff.

These four elements ensure that the water within the lake system - and any discharge from the development to the storm drain outlet – is of the same or better quality than pre-development discharge conditions.

Treatment of runoff and management of water quality relies on re-creation of the natural chemical and biological processes within the lake system resulting from a unique combination of different layers of treatment and is schematically illustrated on Figure 4.8: Stormwater Treatment and Water Quality Management Systems. The general treatment processes for the different target pollutants include:

- Filtering suspended solids in pretreatment wetlands,
- Reducing concentration of dissolved pollutants, nutrients, and salts through lake water volume flushing utilizing the lake system as the irrigation supply source,
- Reducing of nutrient concentrations (Nitrogen and Phosphorous) from inflows, and preventing algal blooms by using constructed gravel biofilter beds that relies on "biological filtration,"
- Maintaining oxygen levels through aeration promoting oxygen exchange to prevent anaerobic conditions which allows natural process to occur such as denitrification for removal of nitrogen,

- Removing BOD and heavy metals through wetland planters,
- Pretreating and primary control through wetland water quality filters designed as attached-growth biological reactors.

For more information, refer to Appendix C Lake Operations and Maintenance.

4.7.2 Lake Geometry and Operating Requirements

The lake system is lined with existing clay soils, amended soil, or a geomembrane liner to maintain the water level without noticeable fluctuations. A constructed lake system edge is designed specifically to provide a natural appearance and non-erodible shoreline. Since sunlight can't penetrate water deeper than 3 feet, the Tracy Village average operating depth of eight feet will eliminate light penetration, maintain lower average temperature, allow temperature stratification, and reduce evaporation. In addition, a submerged concrete veneer lining to a depth of 36 inches below the water level is installed around the perimeter and extend out ten feet from the lake system edge to protect the liner in the shallow areas and provide a hard surface instead of a slippery surface for people who may enter the lake. The remainder of the lake system bottom section is constructed at a 4:1 slope. Refer to Figure 4.10: Typical Lake Sections. Due to the sloping of the land and the tiered and interconnected lakes of Tracy Village, a back-up pump of the same capacity of the primary pump is provided. In addition, an emergency back-up generator capable of operating of the pump system in case of power loss is also provided.

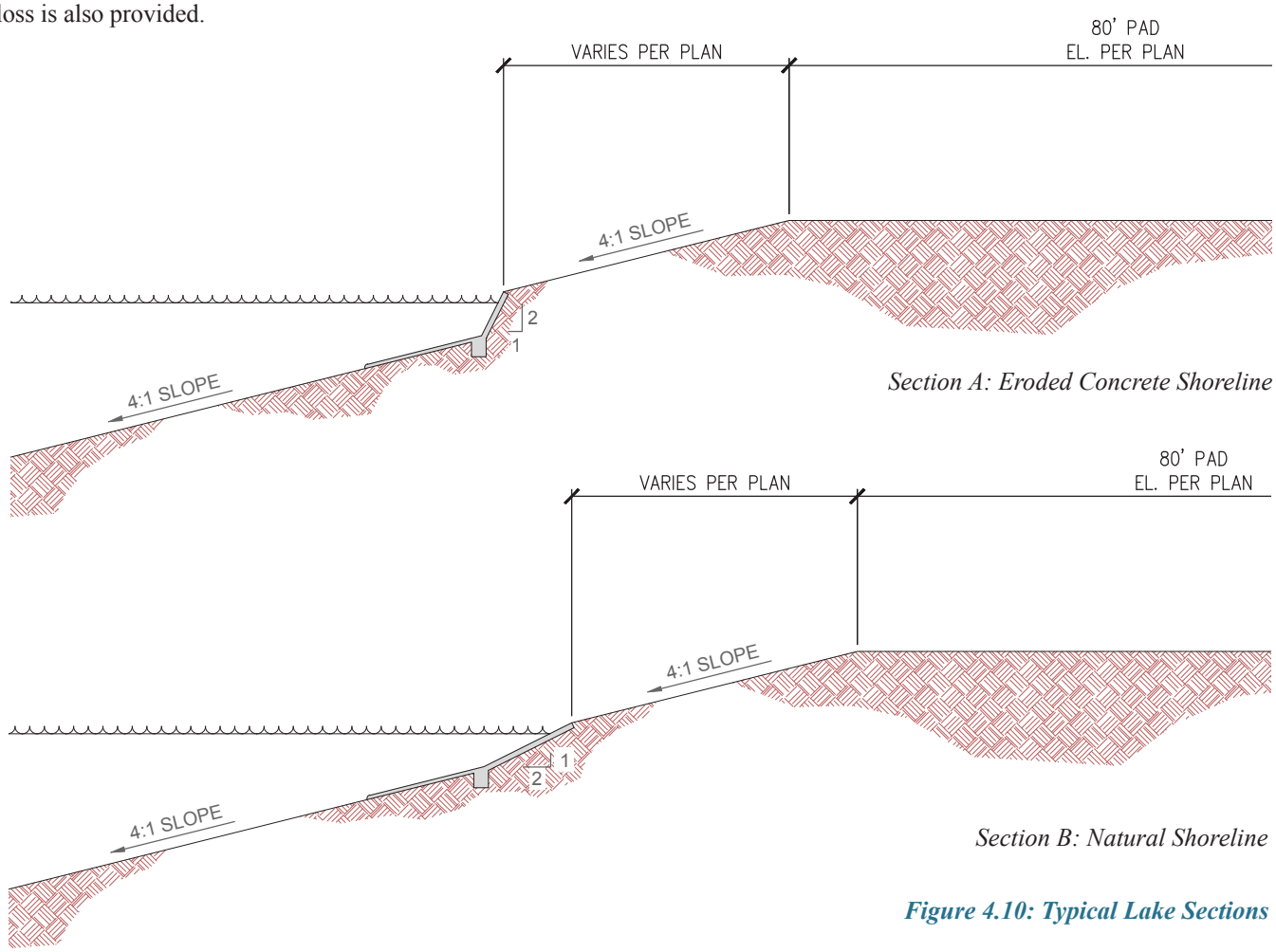


Figure 4.10: Typical Lake Sections

4.7.3 Water Harvesting

The lake system receives 100 percent of the runoff from the Tracy Village residential watershed area. Therefore, any nuisance water generated by the homes through over irrigation, washing driveways, etc., is collected through the storm drain system and conveyed to pre-treatment areas of the lake system for treatment. These pretreatment areas or water quality filters are an aesthetic part of the lake system and conduct an important function in pre-treatment prior to the water mixing with the main lake system water body. There is a potential for a 25% to 40% decrease in water usage due to the conveyance of dry weather flows to the lake system.

4.7.4 Water Replacement/Irrigation Reservoir

Due to the continual and daily nutrient loading that will occur in the lake system (from various sources including birds, landscaping, urban runoff, etc.) and the subsequent difficulty in maintaining low concentrations of nutrients which contribute to poor water quality, irrigation water for the common areas will be taken out of the lake system to be replaced with makeup water with higher water quality.

Typically lakes function as a passive irrigation reservoir where the inflow equals the outflow. At Tracy Village, the irrigation from the lake system uses a proactive method to improve water quality by continuously removing “old” water and replacing it with “new” make-up water. The goal is to replace the lake system water within 30 days. However this water turnover depends on irrigation need.

Since recycled water will be used for makeup water for the lake, the addition of alum and/or monochloramines will be required on occasion. It will be added once or twice a year to maintain the nutrients to a low level. This addition will not affect the wildlife, aquatic plants, and use of water as an irrigation reservoir.

Refer to Appendix B for more information about how the Tracy Village water quality filters work.

4.7.5 Cogeneration System

It is intended that a cogeneration system be used to provide power for the lake system equipment. This will reduce the lake system treatment energy use and further reduce energy consumption by using the heat generated with the cogeneration system to heat the pools for the Clubhouse at Tracy Village. Cogeneration is a means of producing both electrical and thermal energy from a single fuel source, such as natural gas. Typical recreational, commercial, and industrial facilities purchase electricity from the power company for lighting, computers, pumping, etc. and fuel from the gas company to operate boilers for hot water and heating. A cogeneration system can provide both of these services from a single fuel source and doing so is much more efficient. This efficiency significantly reduces electric and heating costs while simultaneously reducing carbon footprint.

The cogeneration facility remains connected to the power grid. The system uses natural gas and provides power to pumps, aeration systems, or any other system that requires power for the building. A controller that understands the power usage and power rates will determine the best use of the cogeneration unit. If the system determines that the power rates from the electric company are low compared to the natural gas rates from the gas company, it will use electricity to provide power (i.e., in the middle of the night not peak day). If the natural gas rates are less expensive, then it will use gas and provide power through the unit. The secondary use of the cogeneration system is to use the heat generated to either heat the pools or cool the recreation facility.

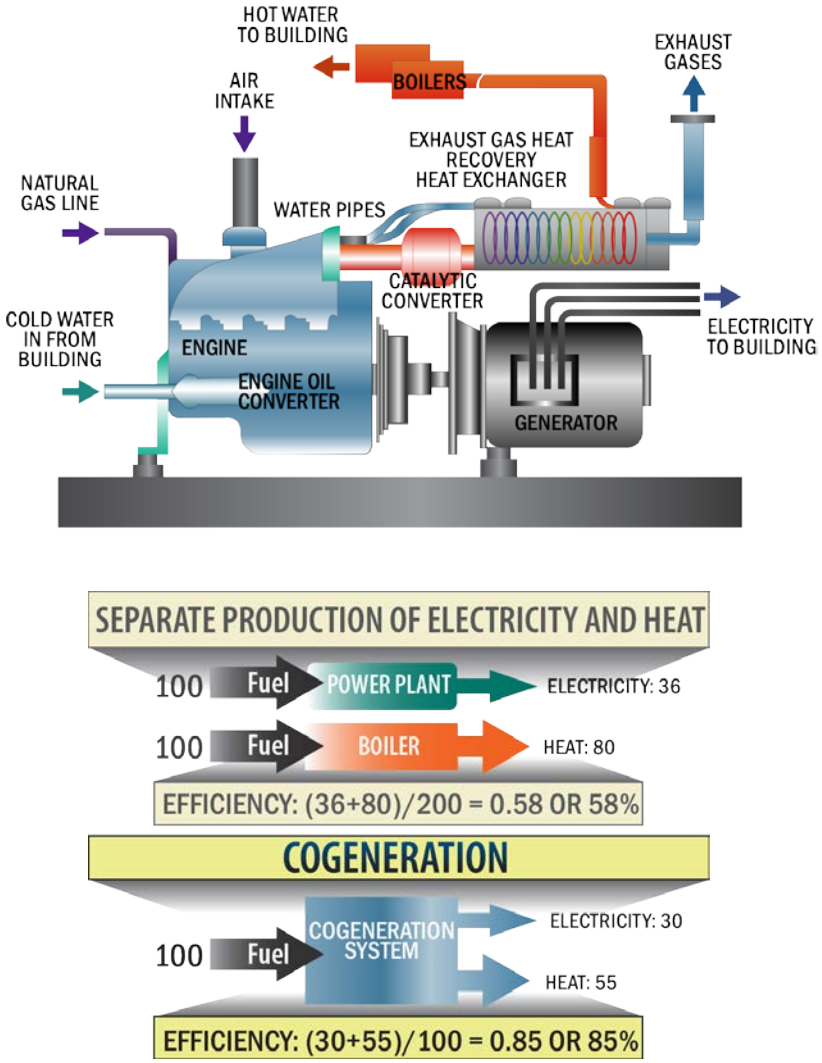


Figure 4.11: Example of a Cogeneration System

4.7.6 Vector Control

Mosquitoes, midges, and other vectors will be controlled through physical and chemical means. The lake system water system will be designed with physical characteristics to minimize the habitat for propagation of mosquito larvae (by eliminating stagnant water surfaces and allowing the sun and wind to contact the open water surface, it is impossible for mosquito larvae to survive). In addition, habitat will be provided for predator species to control vectors.

4.8 Public Facilities and Services

The Tracy Village requires a full range of public services. This section addresses the services to be provided by a variety of public and private entities including infrastructure, educational facilities, and parks and recreation.

4.8.1 Solid Waste Disposal

Solid waste from Tracy Village will be accommodated at the Tracy Materials Recovery Facility (MRF transfer facility). The MRF transfer facility is planned to accommodate a City of Tracy population which includes Tracy Village in accordance with the County Solid Waste Master Plan. Solid waste will eventually be hauled from the MRF transfer facility to the County Foothill landfill east of Tracy.

It is the responsibility of each homeowner to start service for solid waste collection. Each home will be provided with enough space within their private yards to store individual trash and recycling bins. On a designated day, the City's solid waste franchisee (currently Tracy Delta Solid Waste Management, Inc.) will collect solid waste and take it to their disposal facilities.

4.8.2 Utilities

PG&E provides electricity to the site. Transformers will be located above ground as per PG&E requirements. This above ground transformer will likely be placed in between the front yards of residential units and screened if possible. Where feasible, PG&E will locate the transformers within the common areas.

PG&E also provides natural gas service to the site. Although not yet designed, gas pressure regulators will be placed within common areas. However, individual gas meters will be placed in the side yards of each home.

AT&T provides telephone service. Comcast provides television cable for this community. It is anticipated that electric, gas, telephone, and cable services to the proposed development will be provided through extension of existing facilities adjacent to the community.

All service providers will be granted an easement to access and maintain their infrastructure on site. All easements will be non-exclusive in nature, which opens up the opportunity for other service providers to serve the site in the future. Increased competition between service providers may result in cost savings to the end user.

All on-site dry utilities will be provided through underground infrastructure.

4.9 Public Services

4.9.1 Emergency Services

Fire protection is provided by the Tracy Fire Department, with the TVSP area presently serviced by Fire Station No. 97 located at 595 West Central Avenue, approximately 2 miles from the site. Specific design measures will be incorporated into project approvals, including Tentative Maps, to ensure appropriate Fire Department access and public safety considerations, addressing such issues as roadway and alley design, operation of gates, location of hydrants, placement of “No Parking” signage at key locations, and landscape maintenance.

Police protection is provided by the Tracy Police Department, serviced from their headquarters at 1000 Civic Center Drive, approximately 3.5 miles north of the site.

[This Page Intentionally Left Blank]

Chapter Five

Implementation and Administration

This chapter describes the financing and maintenance plan for the Tracy Village area of the TVSP to complete the needed public facilities, utilities, and other necessary capital improvements, as well as the proper maintenance of these facilities. It also describes the process for Specific Plan implementation.

5.1 Overview of Financing

This section provides a generalized overview of financing measures which may be utilized to finance the development and construction of public infrastructure and capital facilities necessary to support the build-out of Tracy Village area. Public infrastructure and capital facilities will include both on-site and off-site improvements:

- Water distribution.
- Wastewater conveyance.
- Recycled water distribution.
- On-site storm water conveyance and retention.
- Dry utilities (electric, gas, phone and cable TV).
- Off-site transportation improvements.
- On-site roads, sidewalks, and trails.
- Parks and open space.
- Public and private landscaping and lighting.
- Right-of-way acquisition.

5.1.1 Funding Sources

The development and construction of on-site and off-site infrastructure improvements, the timing at which these improvements are to occur, and the ability to finance improvements are related to a number of factors including development phasing and project absorption. It is estimated that Tracy Village area will develop in multiple phases, and public and private infrastructure needed to serve Tracy Village may be constructed through a combination of funding sources including, but not limited to, the following:

- Development impact fees.
- Community Facilities Districts.
- Bond proceeds.
- Private capital.
- Lighting and Landscape Districts or Landscape Maintenance Districts.
- Utility connection charges and user fees.
- Credits and reimbursements related to oversizing infrastructure, pursuant to Chapter 13.08 of the Tracy Municipal Code.

5.2 Maintenance

Upon acquisition of permits, it shall be the responsibility of the developer to pay for all improvements associated with Tracy Village and all other related approvals as described in Table 5.1: Financing and Maintenance Plan, below.

Table 5.1: Financing and Maintenance Plan

Service or Facility	Party(ies) Executing Construction	Party(ies) Financing Construction	Party(ies) Responsible for Operation and Maintenance
Streets and Sidewalks	Master Developer	Master Developer	HOA
Storm Drainage Facilities	Master Developer	Master Developer	HOA
On-Site Water	Master Developer	Master Developer	City of Tracy
Off-site Water Facilities	Master Developer	Master Developer	City of Tracy
Sewer	Master Developer	Master Developer	City of Tracy
Residential Front yard	Master Developer	Master Developer	HOA
Common Area & Landscaping Improvements	Master Developer	Master Developer	HOA
Community Walls/Fences[1]	Master Developer	Master Developer	HOA
Good Neighbor Fences	Builder	Builder	Homeowner
Rear yard Landscape	Builder	Homeowner	Homeowner

(1) As defined on the Tentative Map

The developer will establish a Tracy Village Homeowners Association (HOA) for the long-term maintenance of items on site not maintained by the City of Tracy. All streets and sidewalks within the community will be maintained by the HOA. The HOA will also be responsible for:

- Project roadways and sidewalks.
- The Lake system.
- Any special landscape feature areas.
- All community parks, open space, and recreation facilities.
- Signage elements and visual icons in the public right-of-way that are integral components of the Tracy Village identification and monumentation.
- Walkways.
- Common areas within the HOA (as defined by the Tentative Map).
- All front yards.

The HOA will maintain all emergency access roads and gates that may be associated with them within the boundaries of the project. The City will also have an easement over the internal circulation system of private streets for access to and maintenance of on-site water and wastewater facilities. The City easements will also be utilized for emergency services and trash collection. Utilities will be maintained by the appropriate service providers. Utility easements will also be maintained by the City, and/or appropriate service provider, excepting maintenance responsibilities for the HOA as noted above.

Private areas are located behind fences and walls and are maintained by the individual homeowners. Any revisions to front yard landscaping must be approved by the HOA.

5.3 Project Construction Phasing

It is anticipated that construction of the Tracy Village community would be initiated as soon as Summer 2018 and would be phased based on market demand. Project grading and frontage improvements will be constructed in the initial phase of development. Off-site improvements will occur as defined in the Tentative Map application or as the City determines as part of City-wide infrastructure improvements.

It is anticipated that the backbone infrastructure within the Tracy Village boundary will be installed in two or more phases. These improvements include rough grading, lake construction, storm drain, water, sewer, dry utilities, recreation facilities, open

space, and loop street improvements. Remaining residential development would be constructed in phases from the north to south. It is expected that construction would occur over an approximate five- to seven-year time frame.

Home construction will include multiple phases within each neighborhood. Starts will be based on sales of homes in the previous phase and market conditions, with the final number of phases to be determined accordingly. The number of phases and number of units in phases may be altered from time to time, subject to City review and approval of the City and consistency with the TVSP and any other City entitlements for development, including Tentative Maps.

5.4 Specific Plan Implementation

5.4.1 Subdivisions

All subdivision maps processed within Tracy Village shall follow the process set forth in the Tracy Municipal Code. All streets, sidewalks, landscaping and public property improvements shall be consistent with the regulations and guidelines of this TVSP and applicable Municipal Code regulations. Each Tentative Map application shall demonstrate compliance with the street sections, lot sizes, and other standards of this TVSP to the extent applicable.

The form and content of final maps shall conform to the requirements of the Tracy Municipal Code and State law. The final maps and associated improvement plans shall demonstrate compliance with the street sections, lot sizes, and all other applicable standards of the TVSP.

5.4.2 Design Review

Construction of any new single-family dwelling is subject to Development Review. Additions, improvements or repairs to a single-family dwelling may not be subject to Development Review, depending upon the scope of the work. Development Review shall be required for any other improvements as specified by the Tracy Municipal Code.

For Development Review of a residential subdivision, or a portion of a residential subdivision, an exhibit showing the distribution of house types (i.e., floor plan type and elevation type) throughout the subdivision is required as part of the Development Review process.

5.4.3 Interpretation

Every effort has been made to provide policies and regulations that are clear; however, interpretations will be necessary when issues that were not anticipated arise. In those situations, the City of Tracy's Development Services Director is responsible for interpretation of the Tracy Village Specific Plan, subject to the Director's ability to refer interpretations to the Planning Commission or City Council.

If any situation arises in the implementation of the TVSP that is not addressed by specific development regulations or if an issue, condition, or situation arises that is not clearly addressed, the Development Services Director shall provide an interpretation based on such City codes, goals, policies, plans, and requirements as are most closely related to the subject matter of the issue or situation to be interpreted, subject to the Director's ability to refer implementation questions to the Planning Commission or City Council.

In all matters, if there is a conflict between the provisions of the TVSP and the provision of the Tracy Municipal Code, the TVSP shall prevail. As to matters not categorically superseded and not otherwise specifically addressed by this Specific Plan, the Tracy Municipal Code shall apply and shall be interpreted in a manner that is consistent with the goals and objectives of the TVSP.

Administrative interpretations of the Development Services Director may be appealed pursuant to the appeal procedures and timelines set forth in the Tracy Municipal Code regarding appeals of administrative interpretation.

5.5 Specific Plan Amendment Procedures

5.5.1 Minor Variations to the Specific Plan

Proposed variations to the TVSP zone that substantially conform to the standards, regulations, and guidelines of this Specific Plan, and are not in conflict with any provisions of the Tracy Municipal Code that may apply to the TVSP zone, may be permitted as "Minor Variations." Minor Variations may include, but are not limited to:

Technical Revisions

- The addition of new information, in the form of maps and/or text that clarifies but does not change the effect or intent of any regulation.
- Changes to infrastructure location and/or service providers (such as drainage systems, roads, water and sewers), if found acceptable by the City Engineer.

- Changes to the lake pumping, drainage, circulation, and related systems due to technical challenges and practical applications of systems, if found acceptable by the City Engineer.
- Changes of less than 20% in land use areas shown on Figure 2.2 TVSP Zone Land Use Plan resulting from final road alignments and/or geotechnical or engineering refinements to the tentative and/or final tract map(s).
- Changes to acres allocated to various lot sizes so long as the total units does not exceed 600.
- Changes in the plan required by government or quasi-government agencies.
- Changes in the location of the recreation facilities as long as the total square footage allocated to recreation remains the same.
- Modifications to informational material contained in the TVSP that does not have regulatory effect or otherwise impact development within the TVSP.
- Any other modification determined by the Development Services Director to be in accordance with the required findings for a Minor Variation.
- Typographical and grammatical errors.

A request for a Minor Variation shall be submitted in writing to the Development Services Department and shall include an application processing fee equal to the City's Development Review Class B fee, and shall include the specific text, exhibits, or other changes proposed for the Minor Variation and other applicable material, if any, to the Development Services Department in order to review the proposal and document all the findings identified above.

All approved Minor Variations shall be documented in writing and maintained by the City within the TVSP. A Minor Variation is not intended to replace the Variance process or approve Variances described in the Tracy Municipal Code.

The Development Services Director, acting upon any application for Minor Variation that is determined to be complete, shall take one of the following actions:

- Approve the request.
- Approve the request with conditions or modifications.
- Deny the request.
- Refer the request to the Planning Commission for consideration, if after meeting with the applicant no resolution is possible at the Development Services Department level.

In order to approve a Minor Variation, the Development Services Director must make the following findings for the Minor Variation:

- The Minor Variation substantially conforms to the standards, regulations, and guidelines for the Tracy Village Specific Plan.

Other changes to the Specific Plan require a Specific Plan amendment, according to the processes required by the applicable provisions of the Government Code and the City of Tracy Municipal Code.

5.5.2 Major Variations to the Specific Plan

Proposed variations that will substantially vary from the standards, regulations, and guidelines of this Specific Plan, will be considered as Major Variations, and will require amendment to this Specific Plan. Such actions may include, but are not limited to:

- Technical revisions which do not qualify as and which extend beyond the scope of those actions listed in Section 5.5.1, above, for Minor Variations.
- Proposed increase in the number of single-family residential lots beyond 600.
- Removal of or modifications to restrictions for use of Tracy Village as an age-restricted community, or other actions which would be in conflict with provisions of Chapter 10.18 of the Municipal Code regulating the use of Active Adult Residential Allotments in Tracy Village.

The amendment process to the Specific Plan shall be based on Chapter 10.20 Municipal Code requirements, and will require compliance with applicable General Plan goals and policies.

Appendix: A

Plant Palette

[This Page Intentionally Left Blank]

BOTANICAL NAME	COMMON NAME	LOCATION: PROJECT ENTRIES	LOCATION: RESORT & RECREATION CENTER	LOCATION: RESIDENTIAL NEIGHBORHOOD	LOCATION: NEIGHBORHOOD PARKS	LOCATION: OPEN SPACE	ATTRIBUTE: SOLAR	ATTRIBUTE: EDIBLE	ATTRIBUTE: LOW WATER USE
TREES									
Acer buergerianum	Trident Maple	■		■	■				
Acer rubrum	Red Maple	■		■	■				
Arbutus 'Marina'	NCN		■	■			■	■	■
Arbutus unedo	Strawberry Tree		■					■	■
Calocedrus decurrens	Incense Cedar		■						■
Carpinus fastigiata	European Hornbeam		■						
Cedrus deodara	Deodar Cedar			■	■	■			■
Cercis canadensis	Eastern Redbud	■	■		■				
Cercis occidentalis	Western Redbud	■	■		■				■
Citrus sp.	Orange/Kumquat		■					■	
Cupressus sempervirens	Italian Cypress		■	■					■
Eriobotrya deflexa	Bronze Loquat		■					■	■
Gingko biloba	Maiden Hair Tree		■	■					
Koelreuteria bipinnata	Chinese Flame Tree			■	■		■		
Koelreuteria paniculata	Goldenrain Tree				■	■	■		
Lagerstroemia spp.	Crape Myrtle	■	■		■	■	■		■
Laurus nobilis 'saratoga'	Grecian Laurel	■	■	■				■	■
Magnolia 'St. Mary's'	Magnolia		■	■					
Malus sp.	Apple		■	■				■	
Melaleuca linariifolia	Flaxleaf Paperbark		■	■					■
Nyssa sylvatica	Sour Gum				■	■			
Olea europaea 'Swan Hill'	Swan Hill Olive		■			■	■	■	■
Pinus eldarica	Japanese Black Pine		■	■					■
Pinus pinea	Italian Stone Pine					■	■	■	■
Pistacia chinensis 'Keith Davey'	Chinese Pistache 'Keith Davey'				■	■	■		■
Platanus acerifolia 'Columbia'	London Plane Tree		■	■	■	■	■		
Populus nigra 'Italica'	Lombardy Poplar	■							
Prunus sp.	Cherry/Plum	■	■	■	■			■	■
Prunus sargenti 'columnaris'	Sargent's Cherry		■			■	■		
Punica granatum	Pomegranate		■					■	■
Quercus agrifolia	Coast Live Oak	■	■			■	■		■
Quercus lobata	Valley Oak	■				■	■		■
Quercus suber	Cork Oak	■				■	■		
Quercus virginiana	Southern Live Oak	■			■	■	■		
Ulmus parvifolia 'True green'	Chinese Elm				■	■	■		■
Ulmus parvifolia 'Prospector'	Chinese Elm				■	■	■		■
Zelkova Serrata 'Village Green'	Sawleaf Zelkova				■	■			
Zelkova Serrata 'Green Vase'	Sawleaf Zelkova			■	■	■			

Figure A-1: Plant Palette

BOTANICAL NAME	COMMON NAME	LOCATION: PROJECT ENTRIES	LOCATION: RESORT & RECREATION CENTER	LOCATION: RESIDENTIAL NEIGHBORHOOD	LOCATION: NEIGHBORHOOD PARKS	LOCATION: OPEN SPACE	ATTRIBUTE: SOLAR	ATTRIBUTE: EDIBLE	ATTRIBUTE: LOW WATER USE
SHRUBS									
Abelia x grandiflora	Dwarf Abelia			■					
Arbutus unedo	Strawberry Tree		■		■			■	■
Aloe spp.	Aloe		■						■
Arctostaphylos spp.	Manzanita	■	■	■	■	■	■		■
Artemisia 'Powis Castle'	NCN		■						■
Berberis buxifolia	Magellan Barberry	■		■	■				■
Ceanothus spp.	Wild Lilac					■	■		■
Chionanthus retusus	Chinese Fringe Tree			■	■	■			
Cistus hybridus	White Rockrose	■	■						■
Cuphea hyssopifolia juncus spp.	Rush			■					
Cyanara cardunculus var. scolymus	Globe Artichoke	■	■		■	■	■		
Dietes spp.	Fortnight Lily	■	■	■	■	■	■		■
Feijoa sellowiana	Pineapple Guava		■					■	
Grevillea canberra 'Noellii'	NCN	■	■	■	■	■	■		■
Hemerocallis spp.	Evergreen Daylily	■	■	■	■	■	■	■	
Lavandula spp.	Lavender		■	■					■
Leucophyllum spp.	Texas Ranger		■	■	■	■	■		■
Myrtus communis	Myrtle		■						■
Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo		■						■
Osmanthus fragrans	Sweet Olive		■	■	■	■	■		
Penstemon spectabilis	Showy Penstemon		■	■					■
Perovskia atriplicifolia	Russian Sage		■						
Phlomis fruticosa	Jerusalem Sage		■						■
Phormium spp.	New Zealand Flax	■	■	■	■	■	■		■
Potentilla spp.	Cinquefoil			■					
Prunus virginiana	Chokecherry	■	■		■	■	■	■	
Punica granatum	Non-Fruiting Pomegranate		■						■
Rhamnus spp.	Coffee Bush					■	■		■
Rhaphiolepis indica	Indian Hawthorn	■	■	■	■	■	■		■
Ribes spp.	Currant	■	■		■	■	■	■	
Rosa spp.	Rose	■	■	■	■	■	■		
Rosmarinus spp.	Rosemary	■	■		■	■	■	■	■
Rubus fruticosus 'Triple Crown'	Thornless Blackberry	■	■		■	■	■		
Salvia spp.	Sage	■		■	■	■	■	■	
Salvia leucantha	Mexican Bush Sage	■	■						■
Santolina spp.	Lavender Cotton		■	■					■
Vaccinum ovatum	Evergreen Huckleberry	■	■		■	■	■	■	
Viburnum spp.	Viburnum		■	■					
Westringia fruticosa	Coast Rosemary	■	■	■	■	■	■		■
Woodluardia spp.	Giant Chain Fern	■	■	■					

		LOCATION					ATTRIBUTE		
		PROJECT ENTRIES	RESORT & RECREATION CENTER	RESIDENTIAL NEIGHBORHOOD	NEIGHBORHOOD PARKS	OPEN SPACE	SOLAR	EDIBLE	LOW WATER USE
VINES									
Actinidia deliciosa	Kiwifruit	■	■		■	■	■	■	
Campis radicans	Trumpet Vine		■	■					■
Distictis buccinatoria	Blood Red Trumpet Vine		■	■	■	■	■		
Gelsemium sempervirens	Carolina Jasmine		■	■	■	■	■		■
Jasminum polyanthum	Pink Jasmine		■	■	■	■	■		
Parthenocissus tricuspidata	Boston Ivy		■	■	■	■	■		■
Passiflora edulis 'Maypop'	Passion fruit	■	■		■	■	■	■	
Vitis spp.	Grape	■	■		■	■	■	■	■
Wisteria spp.	Wisteria		■	■					
GROUNDCOVER									
Abelia Prostrate Form	NCN	■							
Arctostaphylos spp.	Prostrate Manzanita	■	■	■	■	■	■		■
Ceanothus spp.	Prostrate Wild Lilac				■	■	■		■
Coprosma spp.	Coprosma			■					
Fragaria chiloensis	Wild Strawberry		■	■	■				
Fragaria x ananassa	Garden Strawberry	■	■		■	■	■	■	■
Juniperus spp.	Juniper					■	■		■
Lantana montevidensis	Lantana	■	■	■	■				■
Myoporum parvifolium	NCN	■			■	■	■		■
Rosa spp.	Groundcover Rose								
Rosmarinus spp.	Rosemary					■	■	■	■
Salvia spp.	Sage					■	■	■	
Tuecrium spp.	Germander		■						■
Thymus spp.	Thyme		■		■	■	■	■	■
Trachelospermum asiaticum	Jasmine			■					
Verbena spp.	NCN		■	■	■				
GRASSES									
Acorus spp.	Forest Grass			■					
Carex spp.	Sedge		■	■	■	■	■		
Eleocharis spp.	Spike Rush		■	■	■	■	■		
Festuca spp.	Fescue		■	■	■	■	■		
Juncus spp.	Rush		■	■	■	■	■		■
Leymus spp.	Wild Rye	■	■	■	■	■	■		■
Miscanthus spp.	Eulalia Grass	■	■	■	■	■	■		
Muhlenbergia capillaris	Hairy Awn	■	■			■	■		■
Pennisetum spp.	Fountain Grass	■	■	■	■	■	■		
TURF									
Fescue Turf	Fescue	■	■	■	■	■	■		
Festuca rubra	No-Mow Fescue	■	■	■	■	■	■		

[This Page Intentionally Left Blank]

Appendix: B

Water Quality Details

B.1 Water Quality Details

Water Quality Filters - Stormwater Runoff Extended Detention Basin

The first line of stormwater treatment will occur in the wetland water quality filters situated at the outfall from each drainage area. The filters will consist of organic-rich sediment. The filters provide primary treatment of first flush storm and nuisance flow. The outfalls from the drainage areas will discharge to water quality filter basins (extended detention basin) for a quantity of time exceeding 18 hours.

These stormwater detention and water quality basins improve nuisance (dry weather) flow water quality prior to lake-input via the following mechanisms:

- Sediment reduction.
- Settling of particulate phosphorus and metals.
- Denitrification and filtration by wetland plants and indigenous bacteria.
- Biological removal (consumption) of pesticides and hydrocarbons.

The preferred detention time for surface flows varies based on density of submergent and emergent vegetation, water depth, and water temperature. Higher flows will result in lower detention time, but higher flows also have lower concentrations of water quality pollutant constituents due to dilution.

Typically the "first flush" or initial volume of surface flow to the lake system will contain the highest concentrations of nutrient and other constituents (salts and trace metals) due to suspension of loose debris and minerals accumulated during dry periods. Subsequent flow after the first flush will generally be of higher quality. More significant stormwater flows will be transported by gravity through the filters and into the lake system with shorter treatment retention times.

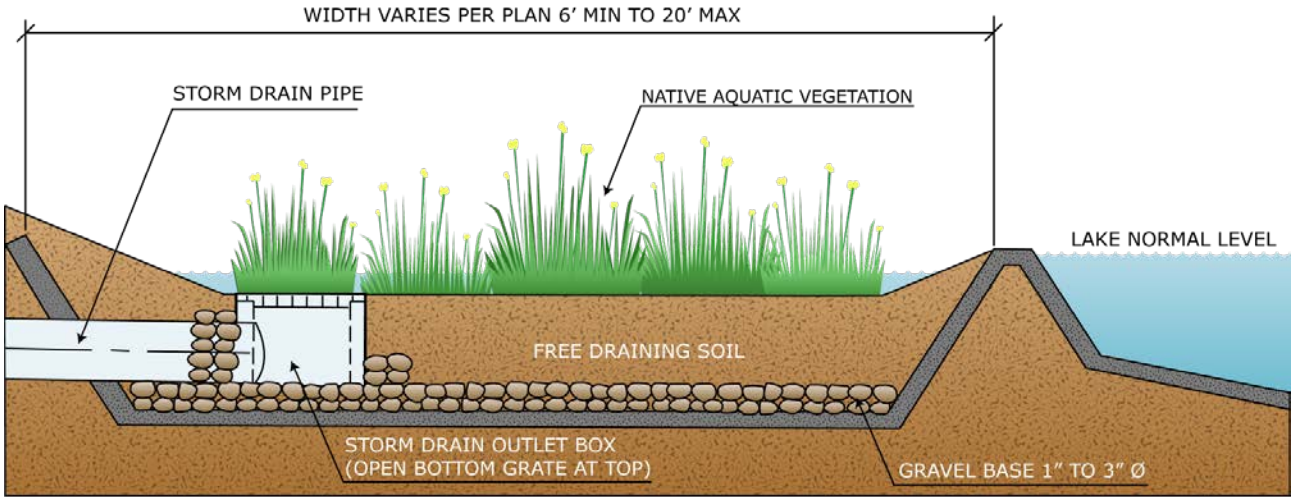


Figure B-1: Concept Water Quality Filter (Stormwater Extended Detention Basin)

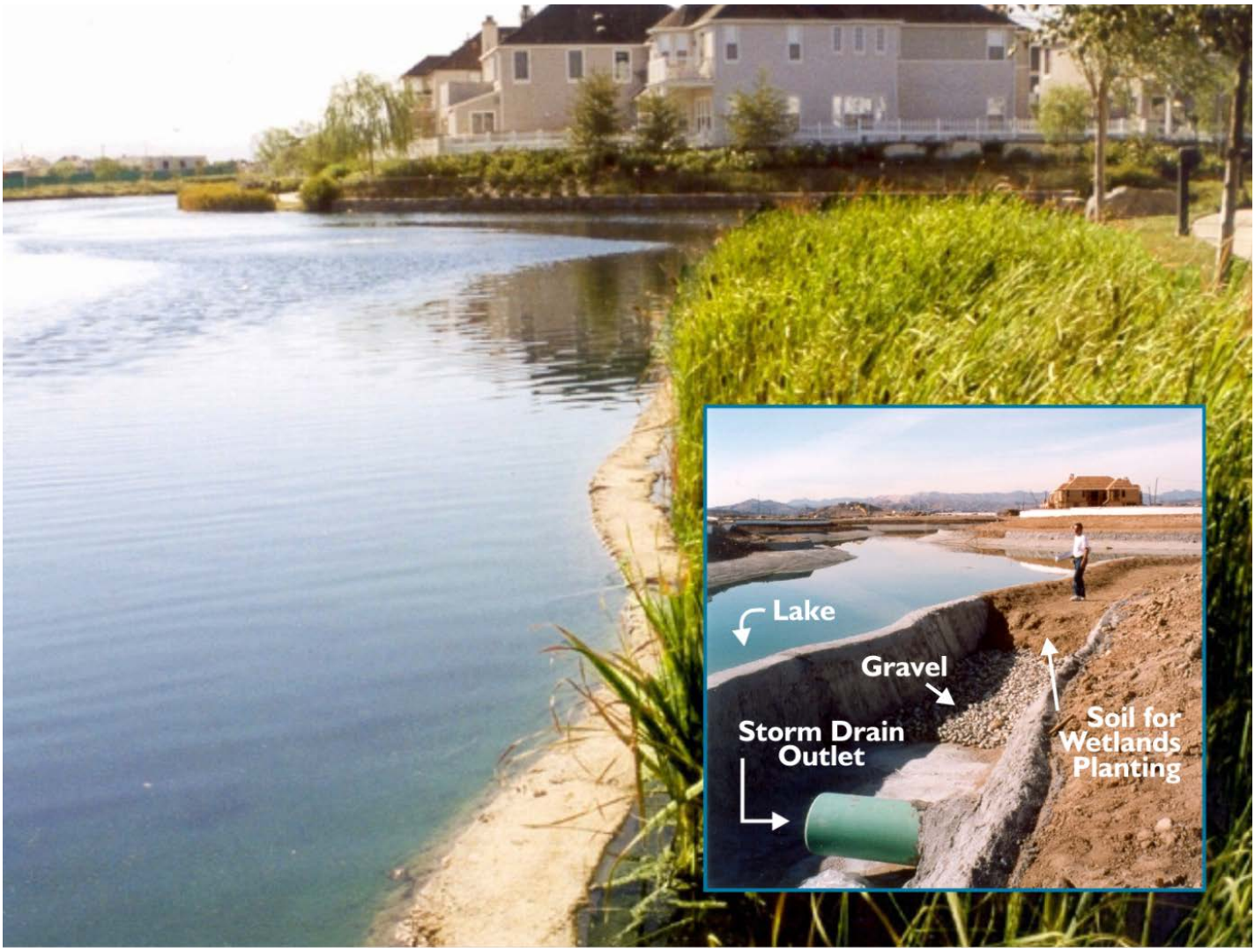


Figure B-2: Water Quality Filter Pre and Post-Construction

The smaller nuisance and first flush stormwater volumes will be detained in the water quality filters for a longer period of time. Reduction of nitrogen concentrations of 1 mg/L per day or more for water temperatures exceeding 70 degrees Fahrenheit can be expected assuming adequate detention. Reduction of phosphorus and metals via settling can occur dependent on detention time, bonding with particulate wetland carbon, and oxidation conditions in the detention basins. Sedimentation may successfully remove over 50% of particulates in less than 6 hours of detention. Sediment which accumulates in the detention basin will eventually need to be dredged and removed from the basin every 5 to 10 years by the HOA. Salinity will likely be unaffected by the storm-water detention and water quality basins.

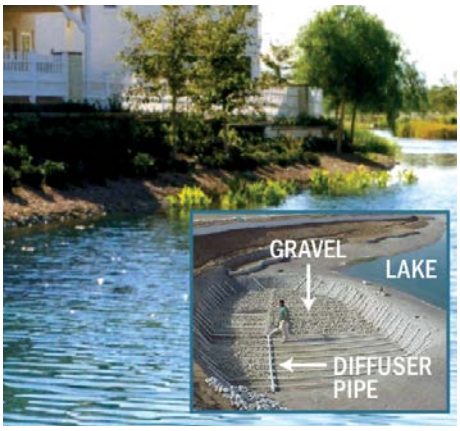


Figure 3: Biofilter, Pre and Post-Construction

Biofilters

The biofilters will be 3 feet deep, filled with gravel media and submerged 18 inches below the lake water surface. The media provides attachment sites for activated biomass used for nutrient removal. A perforated herringbone piping network will be located beneath the media for distributed water flow upward through the media for biological treatment and physical filtration. Water will be pumped through the piping network from the recirculation system pumps (see Figure 3: Biofilter, Pre and Post-Construction and Figure B-4: Biofilter Section). Similar to a wastewater treatment nutrient removal filter, the custom gravel media biofilter is capable of high rate biological organic carbon consumption and denitrification (nitrogen conversion and removal) compared to wetlands. Combined areas of aerobic and anoxic conditions in the biofilter, particularly on the biological flocs, provide an ideal environment for aerobic, nitrification and anoxic nitrate reduction. In addition, phosphorus removal via physical filtration and biological uptake has been shown in the biofilter. Coliform, an indicator of pathogens, may be effectively removed by biological predadation in the media biofilters.

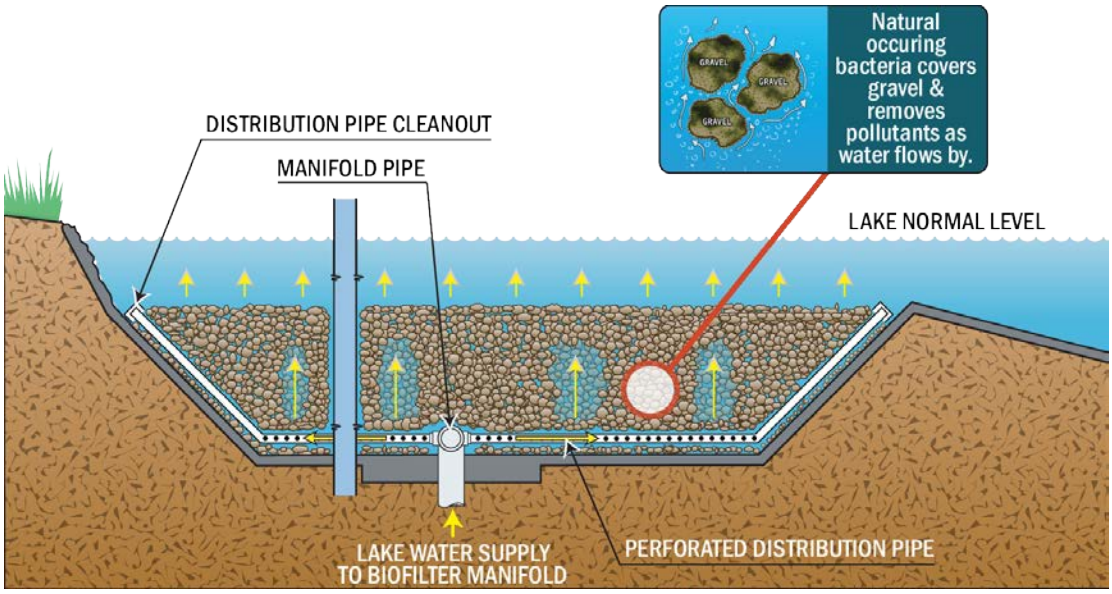


Figure B-4: Biofilter Section

Aeration

Aeration for lake system is provided via a fine bubble diffusion system placed at the bottom of the lake. As air temperatures warm in the spring and summer, the upper layer(s) of the lake become warmer than the ambient lake temperature. The warmed upper layers become temporarily separated from the cooler lower layers due to density differences. Sediment and lake oxygen demand on the lower layers deplete oxygen, which has no means of replenishment as it is separated from the atmosphere until the following autumn.

Providing compressed air to the bottom of the lake provides multiple means to replenish depleted oxygen. Introducing oxygen in the form of air at the bottom of the lake is achieved via 1) direct oxygen transfer from aeration-pod diffusers and 2) destratification of top and bottom liquid layers. The top of the lake is exposed to the atmosphere where oxygen is transferred into solution; destratification mixes water from the top with the typically lower-oxygen layer. In addition to the enhanced conditions for lake biology, specific metals are less toxic and less bio-available when oxidized. Limiting nutrient phosphorus tends to remain in its solid state in lake sediment and does not dissolve efficiently under the presence of oxygen.



Figure B-5: Aeration System

Oxidized conditions within the lake column are important for aesthetic reasons. In aerobic conditions odorous compounds such as gaseous sulfur and methane will be reduced. Sulfur typically remains in a precipitated state in lake sediment under the presence of oxygen. Methane may be produced by biological fermentation under anaerobic (reduced or non-oxidized) conditions. In addition, the solubility of iron and manganese (dark colored compounds present in northern California waters) is significantly reduced under oxidized conditions. Aeration also enhances water clarity and color.

Wetland Planters

Lake water quality is further enhanced and supported by submerged wetland planter areas placed along the lake system edge. This promotes and enhances water quality through naturally occurring biological processes, as opposed to costly and potentially environmentally harmful chemical treatment systems.

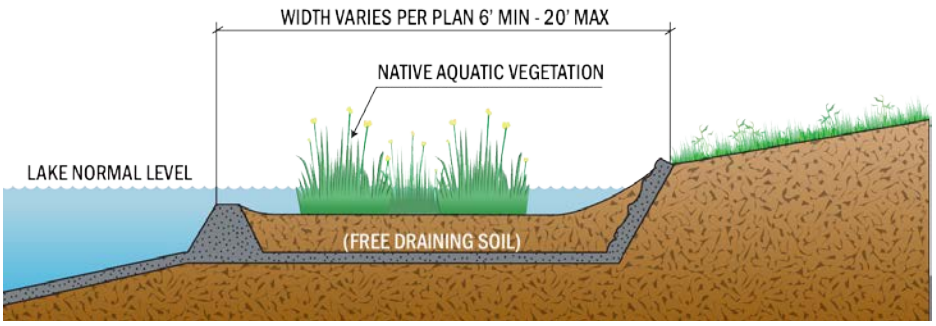




Figure B-6: Vegetated Wetland Planter

Water Circulation

A recirculation system is part of the overall treatment system for Tracy Village. It enables high nutrient waters under reduced (low oxygen conditions) to be mixed with oxidized water. When significant movement of water is created in a lake system, regions of critically high temperature and low dissolved oxygen can be decreased. Recirculation occurs naturally via wind, convection, and wave action at low efficiency. By coupling a mechanical recirculation system with wetland filtration, and biofiltration water from all regions of the lake can be passed through a system that removes dissolved and particulate constituents efficiently. Thus, low quality water may be processed at a higher removal rate as compared to high quality water.

Appendix: C

Lake Operations and Maintenance (O&M)

[This Page Intentionally Left Blank]

The following are the typical activities required for proper lake maintenance.

C.1 Debris Removal



Debris removal should be conducted along the shoreline (with a hand dip net) a minimum of twice a week and more frequently during the fall months. Debris will normally build up on the prevailing windward side of the lake but all areas need to be cleaned. Any larger branches in the water or other debris will be removed by hand. All debris will be bagged and placed in a designated dumpster on site.

C.2 Lake Watershed Management

The Tracy lakes have a small watershed consisting of the area just immediately surrounding the water feature. Rain and irrigation water coming off the surrounding slopes on even a small watershed like this one can still contain pollutants, such as silt, metals, pesticides, herbicides, and fertilizers if not managed properly. Setting good management objectives forthright for the entire watershed, no matter how big or small, will ensure that lake water quality will remain healthy. It is the intent to drain storm water from Tracy Village to specific areas of the lakes for treatment. These pre-treatment areas will fill with debris and trash and shall be managed regularly and specially after a storm event.

C.3 Maintenance of Water Flows

The optimum flows over each water feature (waterfall) should be maintained. Any reduction of flow is an indication of potentially clogging pumps, lines or debris piled up in the path of the water and is an indication of potential issues including lake overflow and/or mechanical problems.

C.4 Intake Screen Maintenance

On an annual basis, a boat should be used to service the intake screen. The screen needs to be clear to allow for optimum flow. A buoy may be used to mark the location of the intake screen. An appropriate-sized brush will be used to clean the intake screen and clear it of any debris that may accumulate in the screen area. The top and three sides of the intake screen will be brushed annually or as required. While brushing the screen, it should be monitored for wear or damage.



C.5 Shoreline Maintenance

In general, the shoreline surface water level will only vary slightly (less than 6 inches) during non-storm events and should not interfere with any shoreline maintenance. The site manager should coordinate a regular site reconnaissance once every four months to assess shoreline integrity and make immediate repairs if necessary. In addition, shoreline landscape erosion must be spotted and controlled before it has a chance to run off. Runoff is usually highly nitrogenous silt (containing fertilizers), which can quickly cause undesirable algae blooms in the lake. In addition, shoreline maintenance also includes debris removal and control over herbicide and pesticide use discussed below.

C.6 Aeration

Aeration systems can add dissolved oxygen into the water directly via mass transfer from air bubbles into solution. Aeration systems also transport water from the lake bottom to the top using the surface tension of the air bubbles to bring water to the surface where it can then absorb the oxygen from the atmosphere.

C.6.1 Aeration Equipment Maintenance

There will be an air compressor or blower located inside the pump station that will supply air to all the aeration diffusers in the lake. The aeration units run 24 hours a day seven days a week and will only be turned off during maintenance.

C.6.1.1 Compressor Unit

This unit should be checked frequently for performance. This can be done by visually checking the areas where the aeration pods are located to see if air is being discharged from the pods. Pressure gauges, bearings, drive alignment and drive belt, oil change, air filter change, etc. should be checked regularly. The inlet air filter should be cleaned monthly as per manufacturer's suggestions.

C. 6.1.2 Aeration Valves

- Inspect clamps and hoses inside aeration valve boxes for cracks and/or leaks.
- Exercise each ball valve inside aeration valve boxes monthly to maintain proper operation.
- Check and tighten all hose connections.
- Adjust ball valve to get appropriate airflow to each bubble diffuser. Even airflow for each diffuser is recommended.

C. 6.1.3 Weighted Tubing and Self Cleaning Bubble Diffuser

- Inspect hose for cracks and/or leaks at the valve box.
- Visually verify the presence of bubbles coming out of the diffusers.

C.7 Aquatic Planters

There are aquatic planters located in the lake. These planters will be installed with aesthetic aquatic vegetation that will also provide some nutrient absorption to help control unwanted algae blooms.

C.7.1 Aquatic Plant Management

There are many species of aquatic plants and numerous ways of managing them. It is important to access all management techniques available and then to choose what is best for the community. The following sections will discuss different methods used to manage aquatic plants including; hand removal, lake bottom barriers, chemical shading, and chemical control.

C.7.1.1 Hand Removal of Aquatic Plants

Aggressive Plants

The most effective, environmentally friendly way to control aggressive aquatic plants is to have an ongoing reconnaissance program. The lake manager should identify the species and if found, the undesirable plant should be removed.

Beneficial Plants

Submerged aquatic plants considered beneficial to the aquatic ecosystem require cutting when they are approximately 12” from the surface water level (except for lily species). Lake maintenance personnel can perform hand harvesting at the Tracy lakes with water rakes and hand cutters.

C.7.1.2 Lake Bottom Barriers to Manage Aquatic Plants



A lake bottom barrier is a screen that covers the lake bottom, inhibiting aquatic plants from growing. This barrier can be used for non-desirable (aggressive) aquatic species or in areas that no plant growth is wanted. Typically, synthetic fabrics or burlap is used as a barrier. Bottom barriers can be used at any depth. Usually, bottom conditions (presence of rocks or debris) do not impede barrier applications, although pre-treatment clearing of the site is highly recommended.

C.7.1.3 Chemical Shading

Shading water areas with soluble dyes can successfully inhibit aquatic plant growth (i.e., Aquashade). Shading inhibits plant growth by limiting the amount of light penetrating through the water surface, which will block sunlight to the bottom areas where plant growth begins. Although this is a popular course of action, it is typically overused and the result is a very unnatural blue appearance.

C.7.1.4 Algae and Cyanobacteria Management





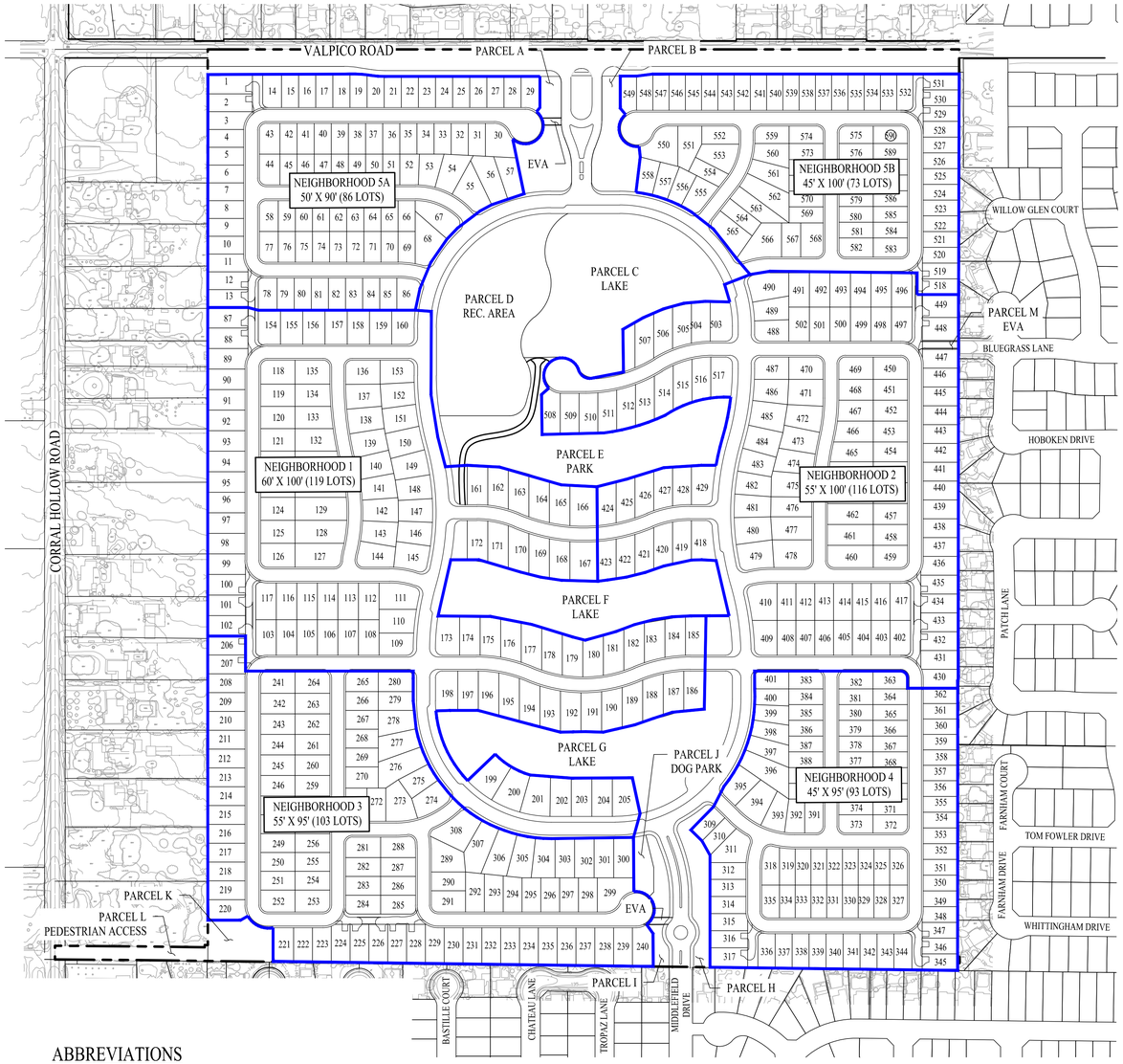
Water Rakes for Aquatic Vegetation Management

Algae and cyanobacteria at varying quantities can be present in the lake. Unsightly outbreaks of algae are usually caused either by tangled masses of filamentous algae or of certain planktonic algae that float on the lake surface. The regular occurrence of visible algae or cyanobacteria outbreaks indicates that nutrient levels of the lake, especially phosphorus and nitrates, are too high and the aquatic ecosystem is out-of- balance.

If a lake has an algae or cyanobacterial outbreak, the typical solution to resolve this issue is to harvest those algae species that can be raked up by hand. There are many types of water rakes available on the market.

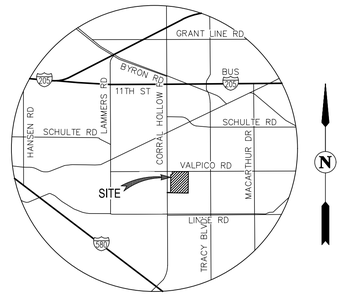
Physical removal of the algae or cyanobacteria also removes the nutrients it has absorbed. In contrast, applications of herbicides to kill these species will leave them dead in the water, returning the nutrients into the water column after decomposition and encouraging algae growth. Always use protective waterproof clothing when handling algae and cyanobacteria. Algae that have been hand removed can be used effectively for composting or as garden mulch.

It is also very important to investigate the source of the nutrients so this process will not be repeated. If the source of nutrients is an accidental application of fertilizer from the terrestrial environment, it is important to discuss fertilization schedules, quantities, types and location of application with the landscape personnel. Extreme caution should be used when applying fertilizer on the adjacent 10 feet of landscape area, the “Red Zone,” to avoid this problem in the future.



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE
		CURB, GUTTER AND SIDEWALK
		NEIGHBORHOOD BOUNDARY
		CENTERLINE
x 165.0	x 165.0	SPOT ELEVATIONS
EX SD	SD	STORM DRAIN LINE (PUBLIC) MINIMUM SLOPE (12")=0.0020
EX SS	SS	SANITARY SEWER (PUBLIC) 8" MIN SLOPE = 0.0034
EX W	W	WATER (PUBLIC)
EX RW	RW	RECYCLED WATER (PUBLIC)
EX IRR		IRRIGATION PIPELINE (PRIVATE)
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
		CURB INLET
		FIELD INLET
		FIRE HYDRANT
	20 / P-1	LOT NUMBER / PARCEL NUMBER
	0.40%	APPROXIMATE STREET SLOPE (MINIMUM 0.40%)



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1. OWNER: J C TRACY GROUP LLC, 11150 W VALPICO ROAD, TRACY, CA 95376
2. SUBDIVIDER: PONDEROSA HOMES, INC., 5020 FRANKLIN DRIVE, SUITE 200, PLEASANTON , CA 94588, (925)460-8900, ATTN: JEFF SCHROEDER
3. CIVIL ENGINEER: CARLSON, BARBEE & GIBSON, INC., 2633 CAMINO RAMON, SUITE 350, SAN RAMON, CA 94583, (925) 866-0322, GORDON ZANIN, R.C.E 76794
4. GEOTECHNICAL ENGINEER: ENGEO, INC., 580 NORTH WILMA AVENUE, SUITE A, RIPON, CA 95366, (209) 835-0610, STEVE HARRIS
5. ASSESSORS PARCEL NO.: 244-040-01, 244-030-01, 244-030-02
6. SITE ADDRESS: VALPICO ROAD
7. SITE AREA: 135.2± ACRES
8. EXISTING ZONING: TRACY VILLAGE SPECIFIC PLAN(TVSP)
9. EXISTING LAND USE: VACANT
10. PROPOSED LAND USE: MEDIUM DENSITY, TOTAL 590 UNITS
11. BENCHMARK: CITY OF TRACY BM#11, 3/4" BOLT W/ PUNCH IN MONUMENT WELL LOCATED 280' EAST OF CORRAL HOLLOW ROAD & LINNE ROAD 40' SOUTH OF THE RAILROAD TRACKS, ELEVATION 171.33 (NAVD 88)
12. STREETS: ALL STREETS WITHIN THE SUBDIVISION WILL BE PRIVATE STREETS MAINTAINED BY THE HOMEOWNERS ASSOCIATION. STREET SECTIONS SHOWN ON THIS MAP ARE PER THE TVSP, CITY MASTER PLANS OR OTHER CITY PLANS.
13. SANITARY SEWER: PROPOSED SANITARY SEWER FACILITIES TO BE DESIGNED PER CITY STANDARDS OR APPLICABLE TVSP STANDARDS AND PUBLICLY MAINTAINED PER THE CITY OF TRACY.
14. STORM DRAIN: PROPOSED STORM DRAIN FACILITIES TO BE DESIGNED PER CITY STANDARDS OR APPLICABLE TVSP STANDARDS AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
15. WATER: PROPOSED WATER FACILITIES TO BE DESIGNED PER CITY STANDARDS OR APPLICABLE TVSP STANDARDS AND PUBLICLY MAINTAINED PER THE CITY OF TRACY.
16. FLOOD ZONE: ZONE X PER SAN JOAQUIN COUNTY INSURANCE RATE MAP (FIRM) PANEL 06077C0730F. AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANGE (500-YEAR) FLOOD PLAIN.
17. GAS & ELECTRIC: PG&E
18. CABLE/TV/TELEPHONE: AT&T & COMCAST
19. DIMENSIONS: ALL DIMENSIONS SHOWN ARE PRELIMINARY AND SUBJECT TO FINAL DESIGN AND MAPPING.
20. PHASING: THIS SUBDIVISION IS EXPECTED TO BE CONSTRUCTED IN MULTIPLE PHASES. MULTIPLE FINAL MAPS MAY BE FILED ON THE LANDS SHOWN ON THIS MAP PURSUANT TO THE SUBDIVISION MAP ACT SECTION 66456.1.
21. PRIVATE STREETS: THIS SUBDIVISION WILL HAVE PRIVATE STREETS. THE PRIVATE STREETS ARE EXPECTED TO HAVE THEIR OWN INDIVIDUAL PARCEL TO BE DETERMINED WITH FINAL DESIGN AND WILL BE BASED ON ULTIMATE PROJECT PHASING.
22. ALL STORMWATER TO BE TREATED BY THE ON-SITE LAKE SYSTEM PER CHAPTER FOUR AND APPENDIX B OF TRACY VILLAGE SPECIFIC PLAN.
23. SIGNING AND STRIPING PLAN WILL BE PROVIDED TO THE CITY OF TRACY FOR REVIEW DURING PROCESSING OF FINAL IMPROVEMENT PLAN.

ABBREVIATIONS

AE	ACCESS EASEMENT
BNDY	BOUNDARY
CL	CENTERLINE
E/P	EDGE OF PAVEMENT
EX	EXISITING
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
FL	FLOW LINE
HP	HIGH POINT
INV	INVERT
LF	LINEAR FEET
LP	LOW POINT
P	PAD ELEVATION
PAE	PUBLIC ACCESS EASEMENT
PL	PROPERTY LINE
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
R/W	RIGHT OF WAY
S	SLOPE
SS	SANITARY SEWER
SD	STORM DRAIN
TC	TOP OF CURB
TVSP	TRACY VILLAGE SPECIFIC PLAN
W	WATER
WSE	WATER SURFACE ELEVATION

LAND USE SUMMARY

LOTS	LOT SIZE	NO. OF LOTS	AREA (AC)
NEIGHBORHOOD 1	60' X 100'	119	19.3±
NEIGHBORHOOD 2	55' X 100'	116	17.4±
NEIGHBORHOOD 3	55' X 95'	103	14.6±
NEIGHBORHOOD 4	45' X 95'	93	10.7±
NEIGHBORHOOD 5A	50' X 90'	86	10.2±
NEIGHBORHOOD 5B	45' X 100'	73	8.9±
RESIDENTIAL NEIGHBORHOOD		590	81.1±
PARK (PARCEL E)			3.2±
LAKES (PARCEL C, F & G)			10.6±
OPEN SPACE (PARCEL A, B, H & I)			2.4±
REC. FACILITIES (PARCEL D)			3.5±
PARCEL K			0.5±
DOG PARK (PARCEL J)			0.2±
STREETS			28.3±
ALLEYS			1.2±
E.V.A. (PARCEL M)			0.05±
PEDESTRIAN ACCESS (PARCEL L)			0.4±
VALPICO DEDICATION			3.7±
SITE TOTALS		590	135.2±

CITY ENGINEER'S STATEMENT

I HEREBY CERTIFY THAT THIS MAP HAS BEEN REVIEWED FOR COMPLIANCE WITH THE REQUIREMENTS OF THE TRACY MUNICIPAL CODE AND THE SUBDIVISION MAP ACT AS TO FORM AND CONTENT.

CITY ENGINEER _____ DATE _____

PLANNING COMMISSION FILING CERTIFICATE

TENTATIVE MAP FILED THIS _____ DAY OF _____ 20___ IN THE OFFICE OF THE TRACY PLANNING COMMISSION, TRACY, CALIFORNIA. ACCOMPANIED WITH APPROPRIATE FILING FEES. THIS CERTIFICATE DOES NOT DEEM THIS APPLICATION COMPLETE.

CITY COUNCIL CERTIFICATE

I HEREBY CERTIFY THAT THE CITY COUNCIL OF TRACY HAS CONDITIONALLY APPROVED THIS TENTATIVE MAP ON _____ BY RESOLUTION NO. _____.

CITY CLERK _____ DATE _____

ENGINEER'S STATEMENT

THIS MAP WAS PREPARED BY CARLSON, BARBEE & GIBSON, INC. UNDER MY DIRECTION

GORDON ZANIN, R.C.E. 76794 _____ DATE _____
LICENSE EXPIRATION DATE: 12-31-2018

SHEET INDEX

TM01	TITLE SHEET AND GENERAL NOTES
TM02	SITE PLAN
TM03	SITE PLAN
TM04	LOT AREA SUMMARY
TM05	GRADING AND DRAINAGE PLAN
TM06	GRADING AND DRAINAGE PLAN
TM07	UTILITY PLAN
TM08	UTILITY PLAN
TM09	VALPICO ROAD IMPROVEMENTS

0' 200' 600' 800'
SCALE: 1" = 200' DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.
ROBERT ARMIJO, CITY ENGINEER, DATE:

TRACY — Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL. (925) 866-0322
FAX (925) 866-8575

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

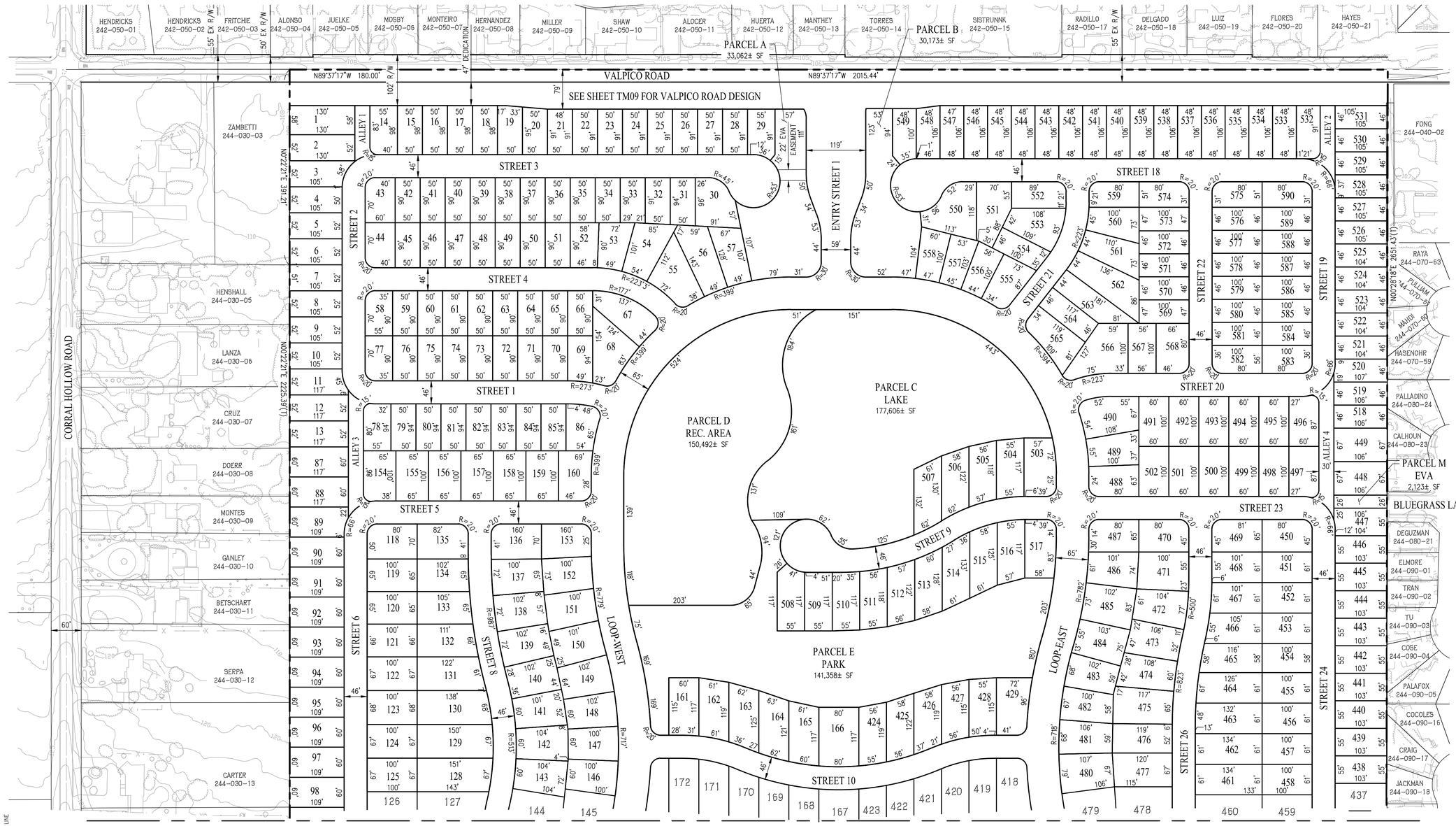
DESIGNED BY: AP
DRAWN BY: MSM
CHECKED BY: GDM
SCALE: AS SHOWN

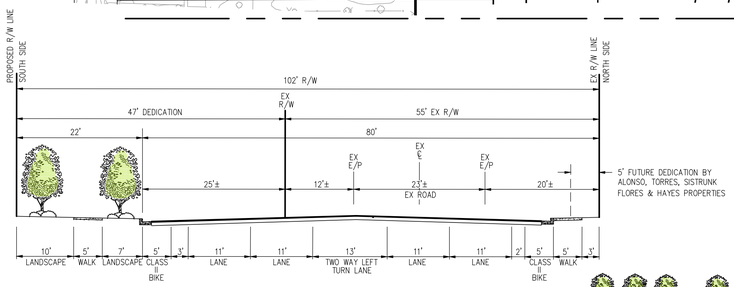
TITLE SHEET AND GENERAL NOTES

TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET
TM01
OF 9 SHEETS

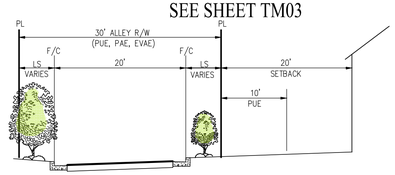
12/20/2018 3:20 PM
G:\2043\ACAD\TM\TM01.DWG





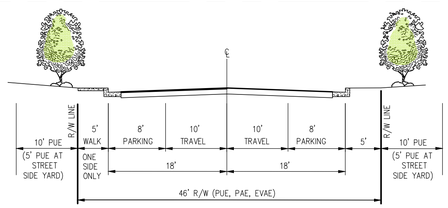
VALPICO ROAD TYPICAL SECTION

NOT TO SCALE



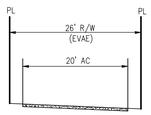
ALLEY DRIVEWAY TYPICAL SECTION

(ALLEY 1–9)
NOT TO SCALE



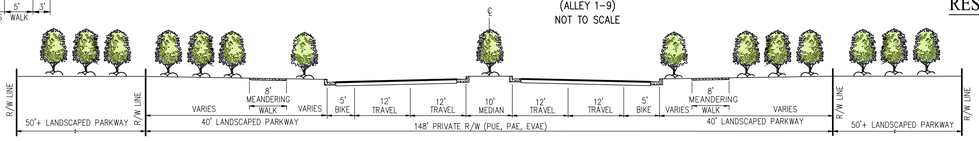
RESIDENTIAL PRIVATE STREET TYPICAL SECTION

(STREETS 1–32)
NOT TO SCALE



EMERGENCY VEHICLE ACCESS TYPICAL SECTION

(PARCEL M)
NOT TO SCALE



MAIN ENTRY STREET AT VALPICO ROAD

(ENTRY STREET 1)
WIDTH VARIES BASED ON LOCATION
NOT TO SCALE

0' 100' 300' 400'

SCALE: 1" = 100'

DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL (925) 866-0322
FAX (925) 866-8575

REVISIONS			
SYMBOL	DATE	DESCRIPTION	APPROVED

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:
AP	MSM	CDM	AS SHOWN

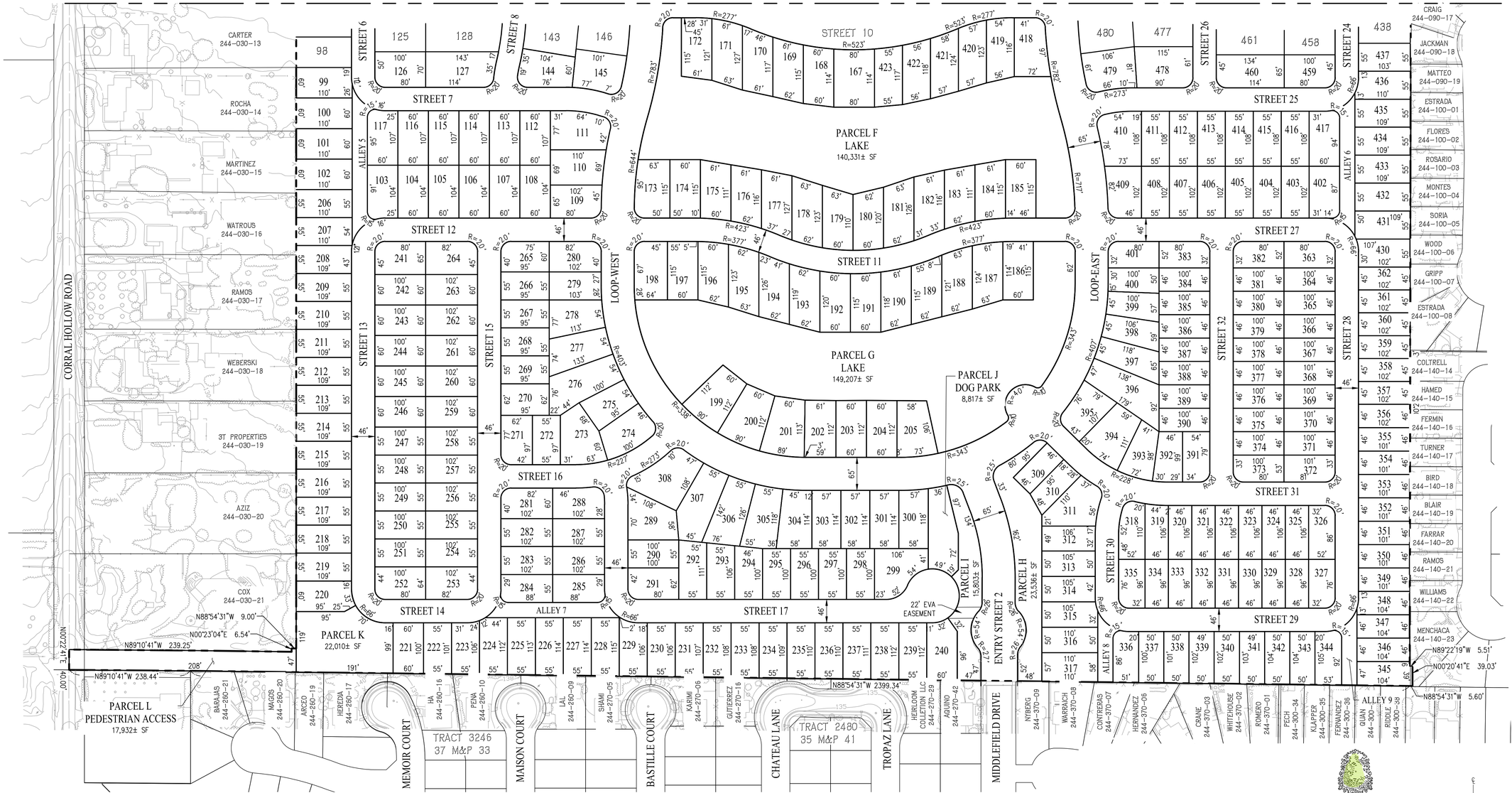
SITE PLAN

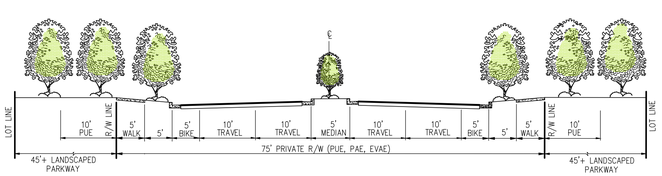
TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET
TM02
OF 9 SHEETS

3/21/2018 4:40:34 PM

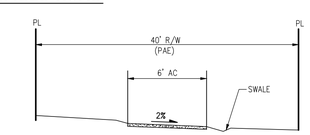
SEE SHEET TM02





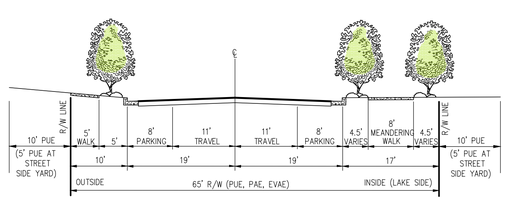
SECONDARY ENTRY STREET AT MIDDLEFIELD ROAD

(ENTRY STREET 2)
WIDTH VARIES BASED ON LOCATION
NOT TO SCALE



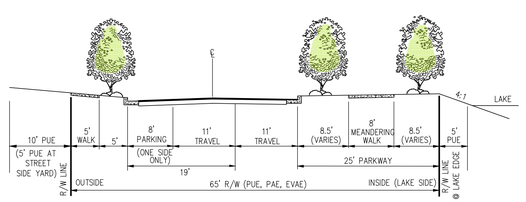
PEDESTRIAN ACCESS TYPICAL SECTION

(PARCEL L)
NOT TO SCALE



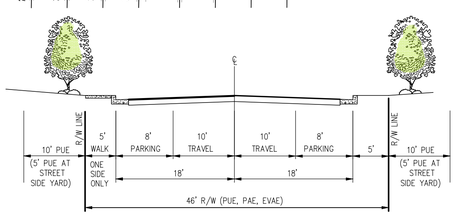
LOOP STREET TYPICAL SECTION

NOT TO SCALE



LOOP STREET AT LAKE EDGE

NOT TO SCALE



RESIDENTIAL PRIVATE STREET TYPICAL SECTION

(STREETS 1–32)
NOT TO SCALE

0' 100' 300' 400'

SCALE: 1" = 100'

DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL: (925) 866-0322
FAX: (925) 866-8575

REVISIONS			
SYMBOL	DATE	DESCRIPTION	APPROVED

DESIGNED BY: AP
DRAWN BY: MSM
CHECKED BY: CDM
SCALE: AS SHOWN

SITE PLAN

TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET TM03
OF 9 SHEETS

2172001B.4X1.PM

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
1	7565
2	6782
3	5909
4	5461
5	5461
6	5460
7	5460
8	5460
9	5460
10	5459
11	5729
12	6109
13	6108
14	5337
15	4895
16	4895
17	4895
18	4895
19	4849
20	4651
21	4545
22	4545
23	4545
24	4545
25	4545
26	4545
27	4545
28	4545
29	5185
30	7394
31	4752
32	4620
33	4511
34	4500
35	4500
36	4500
37	4500
38	4500
39	4500
40	4500
41	4500
42	4500
43	5314
44	5315
45	4500
46	4500
47	4500
48	4500
49	4500
50	4500
51	4500
52	5021
53	5671
54	7615
55	8446
56	8292
57	6641
58	4864
59	4500
60	4500
61	4500
62	4500
63	4500
64	4500
65	4500
66	4500
67	7785
68	8748
69	4573
70	4500

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
71	4500
72	4500
73	4500
74	4500
75	4500
76	4500
77	4864
78	5132
79	4700
80	4700
81	4700
82	4700
83	4700
84	4700
85	4700
86	5633
87	7048
88	7047
89	6809
90	6537
91	6536
92	6536
93	6535
94	6535
95	6535
96	6534
97	6534
98	6534
99	6576
100	6612
101	6612
102	6612
103	6247
104	6240
105	6240
106	6240
107	6240
108	6240
109	6440
110	7280
111	8371
112	6430
113	6430
114	6430
115	6430
116	6430
117	6437
118	6914
119	6500
120	6500
121	6550
122	6750
123	6750
124	6750
125	6700
126	6914
127	9496
128	9928
129	10224
130	9784
131	8776
132	7640
133	6990
134	6694
135	7054
136	6970
137	6982
138	7036
139	7026
140	6818

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
141	6752
142	6880
143	6853
144	7262
145	7450
146	6541
147	6518
148	6600
149	7164
150	7375
151	6905
152	6800
153	6620
154	6474
155	6498
156	6500
157	6500
158	6500
159	6500
160	6522
161	6916
162	7012
163	7298
164	7422
165	7191
166	9465
167	9068
168	6852
169	6928
170	7286
171	7506
172	7122
173	7761
174	6900
175	6733
176	6746
177	7257
178	7531
179	7026
180	6935
181	7409
182	7252
183	6775
184	6751
185	6901
186	6893
187	7217
188	7431
189	7051
190	6959
191	6959
192	7019
193	7140
194	7350
195	7541
196	7193
197	6900
198	7408
199	8493
200	8515
201	8475
202	6903
203	6708
204	6708
205	7658
206	6060
207	6060
208	5991
209	5986
210	5986

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
211	5986
212	5985
213	5985
214	5985
215	5984
216	5984
217	5984
218	5983
219	5983
220	6585
221	5985
222	5525
223	5598
224	6121
225	6192
226	6230
227	6268
228	6305
229	5924
230	5826
231	5864
232	5902
233	5939
234	5977
235	6015
236	6052
237	6090
238	6128
239	6165
240	6797
241	6414
242	6000
243	6000
244	6000
245	6000
246	6000
247	5500
248	5500
249	5500
250	5500
251	5500
252	6322
253	6450
254	5610
255	5610
256	5610
257	5610
258	5610
259	6120
260	6120
261	6120
262	6120
263	6120
264	6544
265	5614
266	5225
267	5225
268	5225
269	5225
270	5890
271	5928
272	5335
273	8160
274	7049
275	5909
276	9713
277	7701
278	7012
279	5637
280	6053

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
281	6034
282	5610
283	5610
284	5576
285	5576
286	5610
287	5610
288	6090
289	7796
290	5500
291	6114
292	6279
293	5968
294	5656
295	5500
296	5500
297	5500
298	5500
299	8253
300	6704
301	6526
302	6526
303	6526
304	7341
305	7733
306	8555
307	9178
308	10002
309	4370
310	4697
311	7725
312	5149
313	5250
314	5251
315	5452
316	5500
317	6293
318	5571
319	4929
320	4876
321	4876
322	4876
323	4876
324	4876
325	4876
326	5426
327	4906
328	4416
329	4416
330	4416
331	4416
332	4416
333	4416
334	4416
335	4906
336	5042
337	4987
338	5017
339	5048
340	5130
341	5109
342	5139
343	5170
344	5513
345	5140
346	4775
347	4779
348	4704
349	4648
350	4651

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
351	4655
352	4658
353	4661
354	4665
355	4668
356	4672
357	4574
358	4577
359	4580
360	4583
361	4587
362	4590
363	5140
364	4623
365	4623
366	4623
367	4623
368	4623
369	4623
370	4623
371	4623
372	5267
373	5241
374	4600
375	4600
376	4600
377	4600
378	4600
379	4600
380	4600
381	4600
382	5114
383	5114
384	4600
385	4600
386	4600
387	4600
388	4600
389	4600
390	4600
391	5240
392	5234
393	5909
394	8466
395	6790
396	10008
397	6766
398	5686
399	5197
400	4798
401	5114
402	6072
403	5610
404	5610
405	5610
406	5610
407	5610
408	5610
409	6846
410	8522
411	5944
412	5944
413	5944
414	5944
415	5944
416	5944
417	6461
418	7397
419	6627
420	6851

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
421	6625
422	6438
423	6329
424	6531
425	6680
426	6647
427	6397
428	6294
429	7344
430	5654
431	5999
432	6009
433	6014
434	6019
435	6024
436	5800
437	5649
438	5654
439	5659
440	5664
441	5669
442	5673
443	5678
444	5683
445	5688
446	5693
447	5775
448	7118
449	7126
450	6414
451	6100
452	6100
453	6100
454	5800
455	6100
456	6100
457	6100
458	6100
459	6414
460	8612
461	8163
462	8163
463	8139
464	7908
465	7034
466	6684
467	6222
468	6131
469	6447
470	6414
471	7759
472	7281
473	7051
474	7246
475	8392
476	6949
477	7924
478	9043
479	7949
480	7848
481	6814
482	6487
483	6468
484	7327
485	7971
486	6827
487	6420
488	6081
489	6404
490	8584

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
491	6000
492	6000
493	6000
494	6000
495	6000
496	5999
497	5999
498	6000
499	6000
500	6000
501	6000
502	6000
503	7291
504	6415
505	6536
506	6863
507	7250
508	6404
509	6435
510	6828
511	6431
512	6571
513	6825
514	7187
515	7132
516	6696
517	7157
518	4896
519	4900
520	4851
521	4792
522	4795
523	4799
524	4802
525	4805
526	4809
527	4812
528	4816
529	4819
530	4823
531	4858
532	4987
533	5035
534	5035
535	5035
536	5035
537	5035
538	5035
539	5035
540	5035
541	5035
542	5035
543	5035
544	5035
545	5035
546	5035
547	5035
548	4890
549	4931
550	9192
551	7497
552	5682
553	7431
554	4805
555	6316
556	5109
557	5199
558	5480
559	5015
560	6108

LOT AREA SUMMARY

LOT NO.	LOT AREA (SF)
561	6870
562	9222
563	6977
564	5419
565	7554
566	9991
567	5600
568	6514
569	4700
570	4600
571	4600
572	4600
573	4700
574	5014
575	5014
576	4600
577	4600
578	4600
579	4600
580	4600
581	4600
582	5514
583	5514
584	4600
585	4600
586	4600
587	4600
588	4600
589	4600
590	5014

PARCEL AREA SUMMARY

PARCEL	PARCEL AREA (SF)
PARCEL A	33846
PARCEL B	29665
PARCEL C	177606
PARCEL D	150492
PARCEL E	141358
PARCEL F	140331
PARCEL G	149207
PARCEL H	23536
PARCEL I	15803
PARCEL J	8817
PARCEL K	22010
PARCEL L	17932
PARCEL M	2760

DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

TRACY — Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL: (925) 866-0322
FAX: (925) 866-8575

REVISIONS

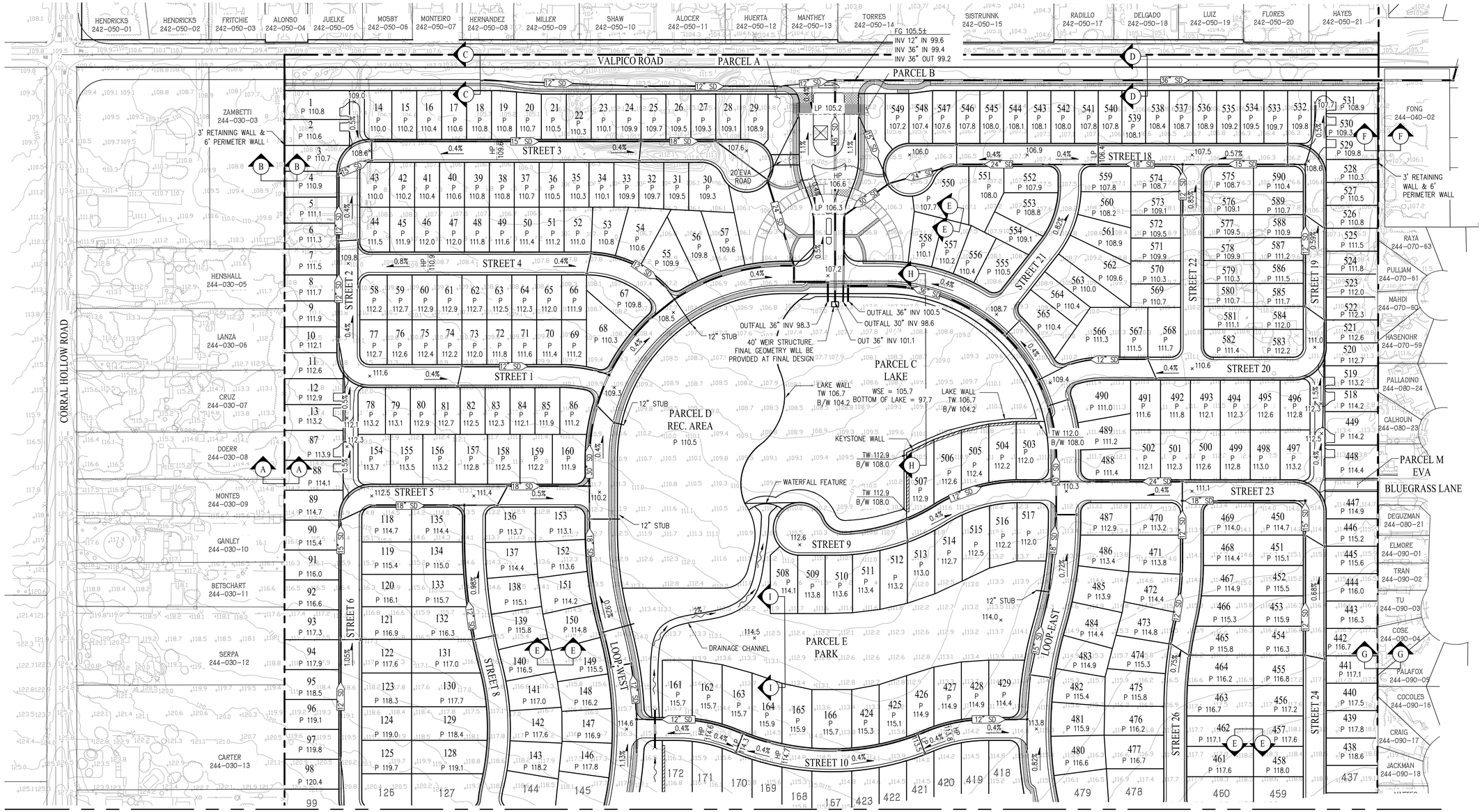
SYMBOL	DATE	DESCRIPTION	APPROVED

DESIGNED BY: AP
DRAWN BY: MSM
CHECKED BY: CDM
SCALE: AS SHOWN

LOT AREA SUMMARY
TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET
TM04
OF 9 SHEETS

2/21/2018 4:41 PM



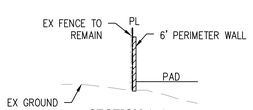
SEE SHEET TM06

EARTHWORK SUMMARY

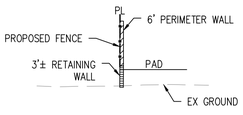
DESCRIPTION	CUT (CY)	FILL (CY)
ROUGH GRADING	264,500	264,500
TOTAL	264,500	264,500

NET CUT/FILL = 0 CY

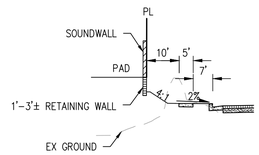
NOTES:
1. ALL GRADING IS PRELIMINARY AND SUBJECT TO CHANGE WITH THE FINAL DESIGN.
2. SLOPES GREATER THAN 3:1 SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.



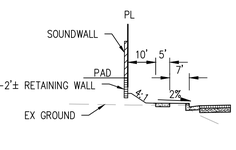
SECTION A-A
NOT TO SCALE



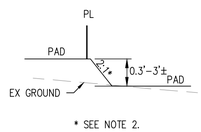
SECTION B-B
NOT TO SCALE



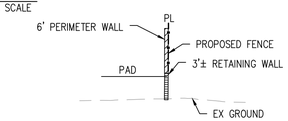
SECTION C-C
NOT TO SCALE



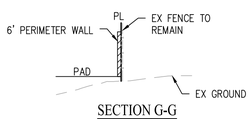
SECTION D-D
NOT TO SCALE



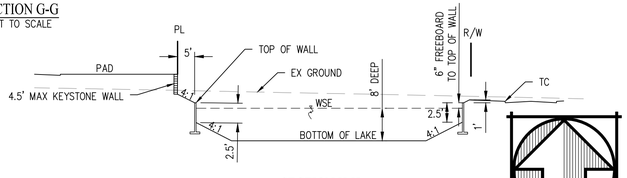
* SEE NOTE 2.
SECTION E-E
NOT TO SCALE



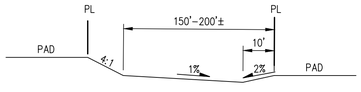
SECTION F-F
NOT TO SCALE



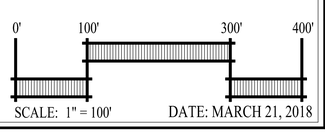
SECTION G-G
NOT TO SCALE



SECTION H-H
NOT TO SCALE



SECTION I-I
NOT TO SCALE



0' 100' 300' 400'

SCALE: 1" = 100'

DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL (925) 866-0322
FAX (925) 866-8575

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

DESIGNED BY: AP
DRAWN BY: HSM
CHECKED BY: GDM
SCALE: AS SHOWN

GRADING AND DRAINAGE PLAN

TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET
TM05
OF 9 SHEETS

2/2/2018 4:31 PM

MATCH SEE SHEET TM05

CORRAL HOLLOW ROAD

CARTER 244-030-13
ROCHA 244-030-14
MARTINEZ 244-030-15
WATROUS 244-030-16
RAMOS 244-030-17
WEBERSKI 244-030-18
3T PROPERTIES 244-030-19
AZIZ 244-030-20
COX 244-030-21

STREET 6 | STREET 7 | STREET 8 | STREET 10 | STREET 24 | STREET 25 | STREET 26
STREET 12 | STREET 13 | STREET 14 | STREET 15 | STREET 16 | STREET 17
STREET 11 | LOOP-WEST | LOOP-EAST
STREET 27 | STREET 28 | STREET 29 | STREET 30 | STREET 31 | STREET 32

PARCEL F LAKE
WSE = 113.2
BOTTOM OF LAKE = 105.2

PARCEL G LAKE
WSE = 117.7
BOTTOM OF LAKE = 109.7

PARCEL J DOG PARK
PARCEL K
PARCEL L PEDESTRIAN ACCESS
PARCEL H
PARCEL I

KEYSTONE WALL
WEIR STRUCTURE
OUTFALL 30" INV 110.3
OUTFALL 30" INV 109.0
OUTFALL 24" INV 116.7
OUTFALL 30" INV 115.7
LAKE WALL TW 114.2 B/W 111.7
LAKE WALL TW 118.7 B/W 116.2
20' EVA ROAD

COCOLES 244-090-16
CRAIG 244-090-17
JACKMAN 244-090-18
MATTEO 244-090-19
ESTRADA 244-100-01
FLORES 244-100-02
ROSARIO 244-100-03
MONTES 244-100-04
SORIA 244-100-05
WOOD 244-100-06
GRIPP 244-100-07
ESTRADA 244-100-08
COLTRELL 244-140-14
HAMED 244-140-15
FERMIN 244-140-16
TURNER 244-140-17
BIRD 244-140-18
BLAIR 244-140-19
FARRAR 244-140-20
RAMOS 244-140-21
WILLIAMS 244-140-22
MENCHACA 244-140-23

BARAJAS 244-260-21 | MAGOS 244-260-20 | ARCEO 244-260-19 | HERRERA 244-260-17 | BA 244-260-16 | PENA 244-260-10 | LAL 244-260-09 | SHAMI 244-270-05 | KARIMI 244-270-06 | GUTIERREZ 244-270-16 | HEIRLOOM COLLETION LLC 244-270-29 | AQUINO 244-270-42 | NYBERG 244-370-09 | WARRAICH 244-370-08 | CONTRERAS 244-370-07 | HERNANDEZ 244-370-06 | CRANE 244-370-03 | WHITEHOUSE 244-370-02 | ROMERO 244-370-01 | PECH 244-300-34 | KLAPPER 244-300-35 | FERNANDEZ 244-300-36 | QUAN 244-300-37 | RIDDLE 244-300-38

MEMOIR COURT | MAISON COURT | BASTILLE COURT | CHATEAU LANE | TROPAZ LANE | MIDDLEFIELD DRIVE

TRACT 3246 37 M&P 33
TRACT 2480 35 M&P 41
TRACT 3205 37 M&P 7

SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE

LOTS 221–233
SECTION C-C
NOT TO SCALE

LOTS 234–240
SECTION D-D
NOT TO SCALE

LOTS 336–344
SECTION E-E
NOT TO SCALE

SECTION F-F
NOT TO SCALE

SECTION G-G
NOT TO SCALE

SECTION H-H
NOT TO SCALE

* SEE NOTE 2 ON SHEET TM05
SECTION I-I
NOT TO SCALE

SECTION J-J
NOT TO SCALE

SCALE: 1" = 100'

DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE

TRACY — Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL (925) 866-0322
FAX (925) 866-8575

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

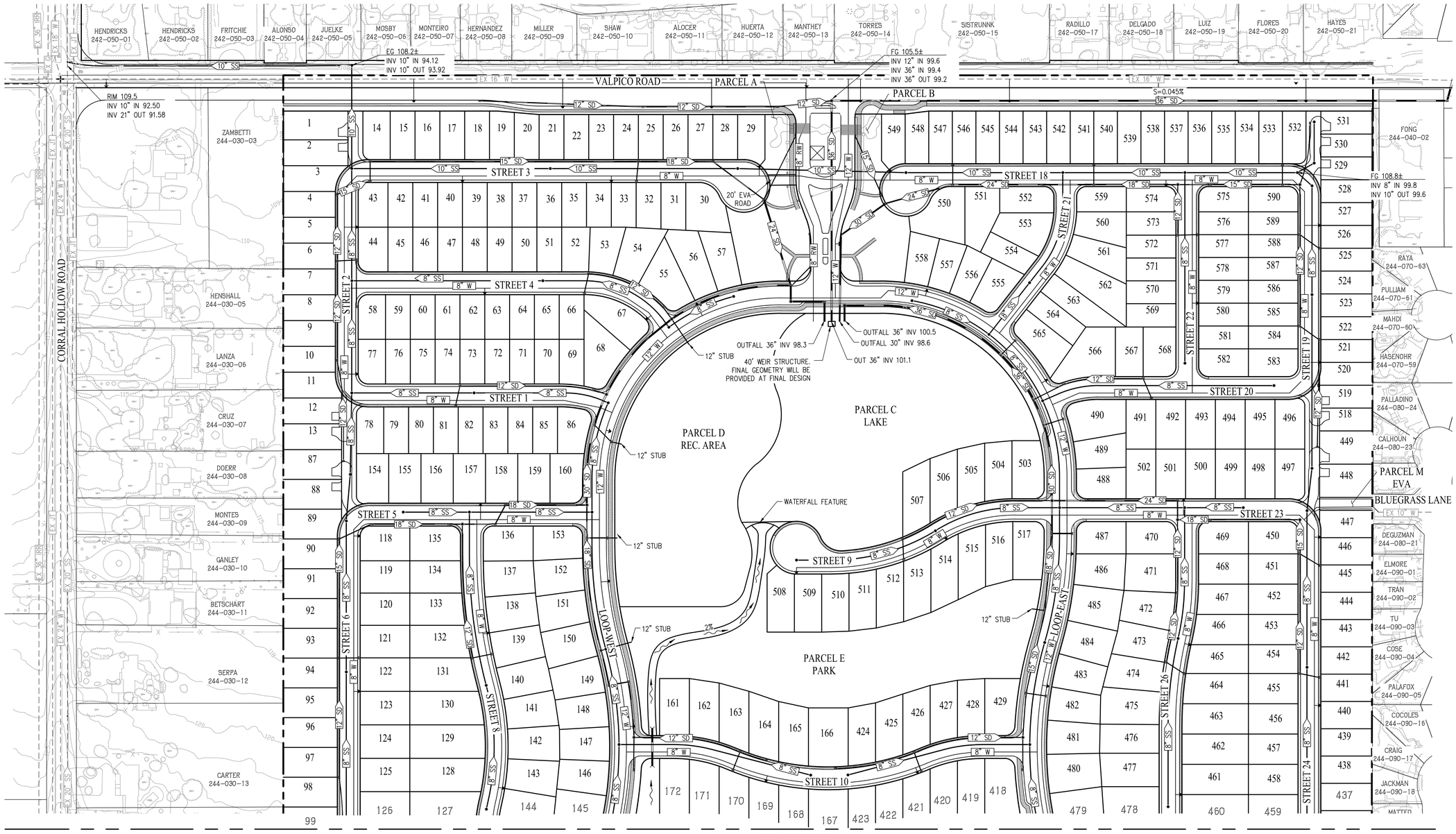
DESIGNED BY: AP
DRAWN BY: MSM
CHECKED BY: GDM
SCALE: AS SHOWN

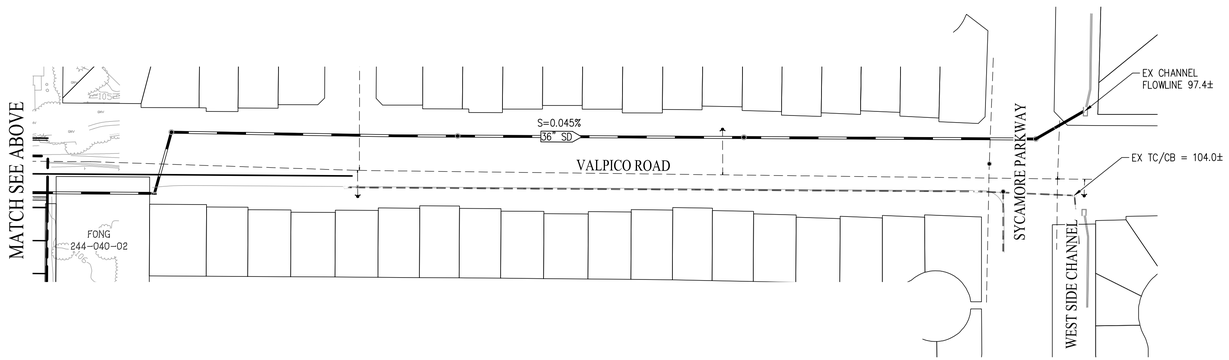
GRADING AND DRAINAGE PLAN

TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET TM06
OF 9 SHEETS

DOCUMENT RESTRICTED BY COPYRIGHT





0' 100' 300' 400'

SCALE: 1" = 100' DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

TRACY — Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL. (925) 866-0322
FAX (925) 866-8575

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

DESIGNED BY: AP
DRAWN BY: MSM
CHECKED BY: GDM
SCALE: AS SHOWN

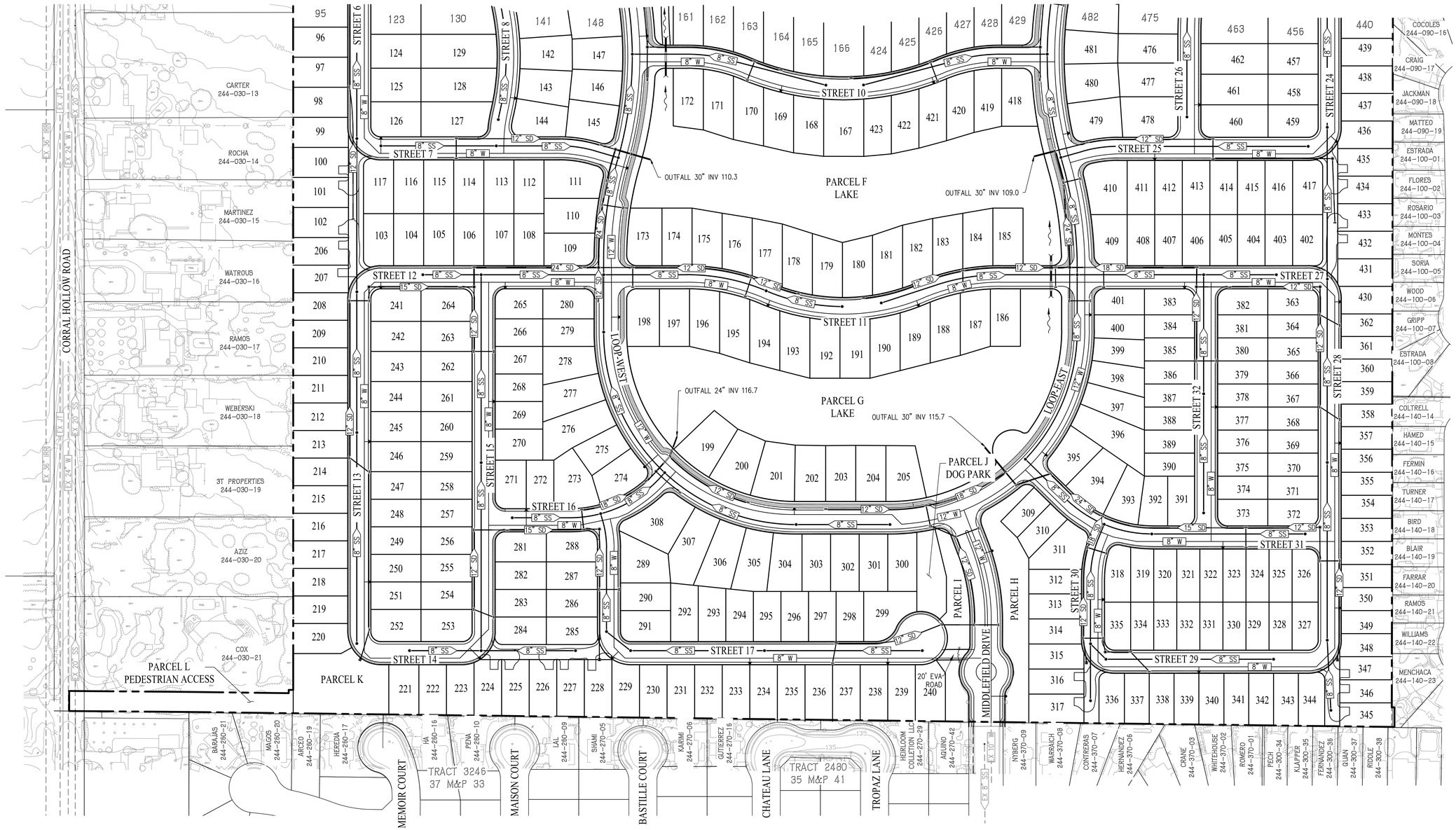
UTILITY PLAN

TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET
TM07
OF 9 SHEETS

G:\2018\218242\PM\

SEE SHEET TM07



CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL (925) 866-0322
FAX (925) 866-8575

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

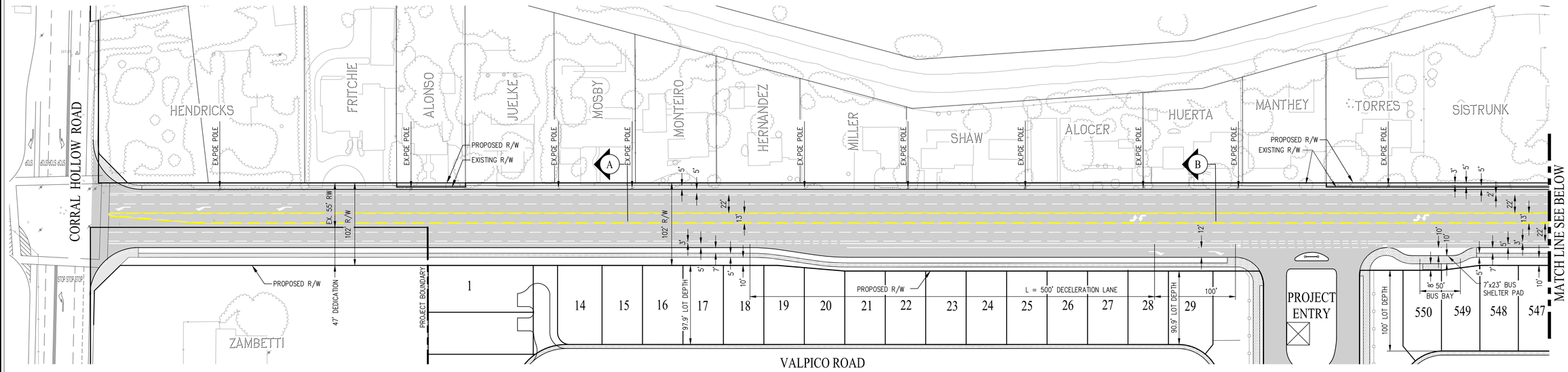
DESIGNED BY: AP
DRAWN BY: MSM
CHECKED BY: GDM
SCALE: AS SHOWN

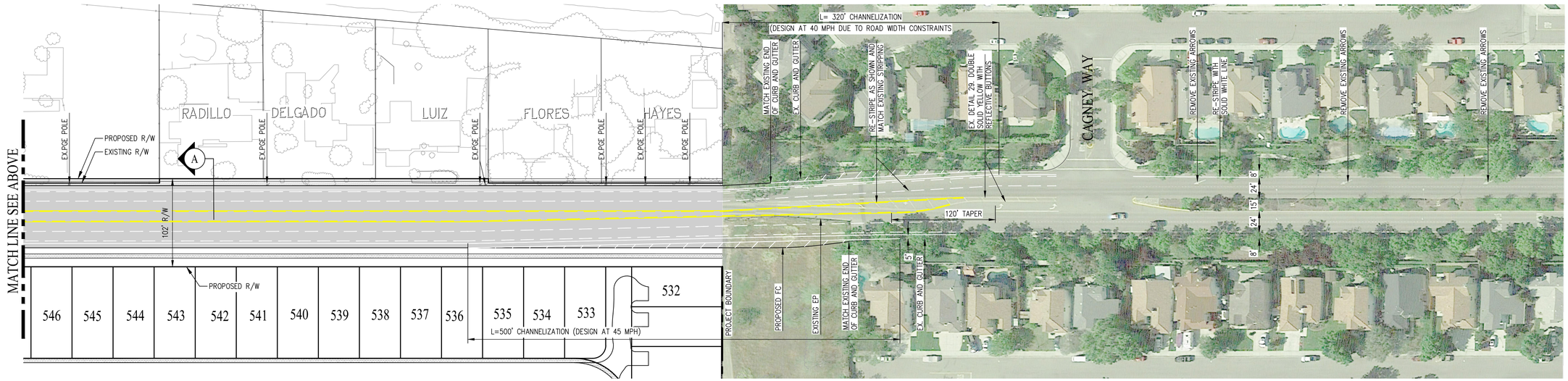
UTILITY PLAN

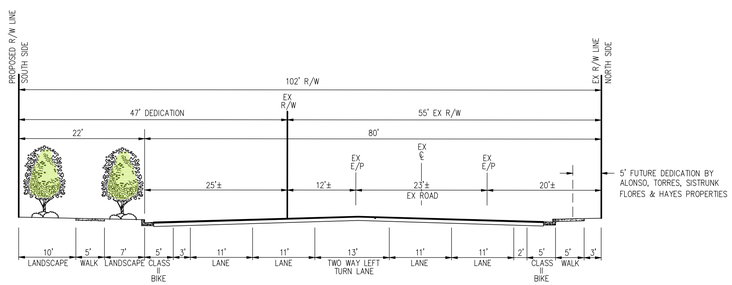
TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

0' 100' 300' 400'
SCALE: 1" = 100'
DATE: MARCH 21, 2018

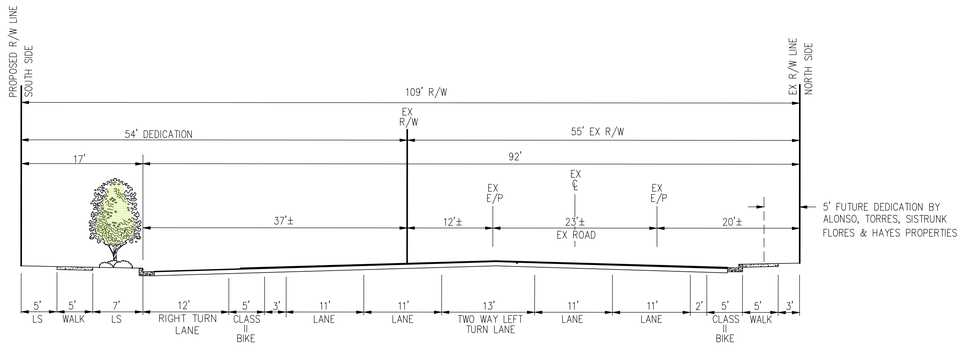
SHEET
TM08
OF 9 SHEETS







SECTION A-A
ULTIMATE VALPICO ROAD TYPICAL SECTION
NOT TO SCALE



SECTION B-B
ULTIMATE VALPICO ROAD WITH RIGHT TURN LANE TO TRACY VILLAGE
NOT TO SCALE

EXISTING POSTED SPEED LIMIT 35 MPH

REFERENCES:

CALTRANS DESIGN MANUAL

CHAPTER 400
–FIGURE 405.2B, CHANNELIZATION

CHAPTER 300
–TRAVELED WAY STANDARDS

0' 60' 180' 240'

SCALE: 1" = 60'

DATE: MARCH 21, 2018

CITY OF TRACY

APPROVED FOR CONSTRUCTION SUBJECT TO THE DATA SHOWN. CITY OF TRACY AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ERRORS AND/OR OMISSION THAT MAY BE PRESENT ON THESE PLANS.

ROBERT ARMIJO — CITY ENGINEER — DATE:

TRACY — Think Inside the Triangle

Carlson, Barbee & Gibson, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CALIFORNIA 94583
TEL (925) 866-0322
FAX (925) 866-8575

REVISIONS			
SYMBOL	DATE	DESCRIPTION	APPROVED

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:
AP	MSM	GDM	AS SHOWN

VALPICO ROAD IMPROVEMENTS

TRACT 3917
VESTING TENTATIVE MAP
TRACY VILLAGE
TRACY, CALIFORNIA

SHEET
TM09
OF 9 SHEETS

G:\2043\ACAD\TM\TM09.DWG

FIRSTCARBONSOLUTIONS™

DRAFT
Environmental Impact Report
Tracy Village Project EIR
City of Tracy, San Joaquin County, California

State Clearinghouse Number 2016112016

Prepared for:



City of Tracy
333 Civic Center Dr.
Tracy, CA 95376
209.831.6000

Contact: Victoria Lombardo, Senior Planner

Prepared by:

FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597
925.357.2562

Contact: Mary Bean, Project Director

Report Date: August 16, 2017

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

Acronyms and Abbreviations ix

Executive Summary ES-1
Purpose ES-1
Project Summary ES-1
Significant Unavoidable Adverse Impacts ES-3
Summary of Project Alternatives ES-3
Areas of Controversy ES-3
Public Review of the Draft EIR ES-4

Section 1: Introduction 1-1
1.1 - Overview of the CEQA Process 1-1
1.2 - Scope of the EIR 1-3
1.3 - Organization of the EIR 1-7
1.4 - Documents Incorporated by Reference 1-9
1.5 - Documents Prepared for the Project 1-9
1.6 - Review of the Draft EIR 1-9

Section 2: Project Description 2-1
2.1 - Tracy Village Development Project 2-1
2.2 - Residential Annexation Area 2-1
2.3 - Project Location and Setting 2-1
2.4 - Project Characteristics 2-11
2.5 - Project Objectives 2-21
2.6 - Intended Uses of This Draft EIR 2-22

Section 3: Environmental Impact Analysis 3-1
Organization of Issue Areas 3-1
Issues Addressed in this EIR 3-1
Level of Significance 3-1
Active Adult Land Use Assumptions for Analysis 3-1
Impact Analysis and Mitigation Measure Format 3-3
3.1 - Aesthetics 3.1-1
3.2 - Agriculture 3.2-1
3.3 - Air Quality 3.3-1
3.4 - Biological Resources 3.4-1
3.5 - Cultural Resources 3.5-1
3.6 - Geology and Soils 3.6-1
3.7 - Gas Emissions 3.7-1
3.8 - Hazards and Hazardous Materials 3.8-1
3.9 - Hydrology and Water Quality 3.9-1
3.10 - Land Use and Planning 3.10-1
3.11 - Mineral Resources 3.11-1
3.12 - Noise 3.12-1
3.13 - Population and Housing 3.13-1
3.14 - Public Services 3.14-1
3.15 - Recreation 3.15-1
3.16 - Transportation and Traffic 3.16-1
3.17 - Utilities and Service Systems 3.17-1

Section 4: Cumulative Impact Analysis 4-1
4.1 - Introduction 4-1
4.2 - Cumulative Impact Analysis 4-2

Section 5: Alternatives to the Proposed Project 5-1
5.1 - Introduction 5-1
5.2 - Project Objectives 5-3
5.3 - Alternative 1—No Project/No Build Alternative 5-4
5.4 - Alternative 2—Reduced Density Alternative 5-6
5.5 - Alternative 3—Tracy Village Development Project-Only Alternative 5-10
5.6 - Environmentally Superior Alternative 5-14
5.7 - Alternatives Rejected From Further Consideration 5-15

Section 6: Other CEQA Mandated Sections 6-1
6.1 - Effects Found not to be Significant 6-1
6.2 - Growth-Inducing Impacts 6-3
6.3 - Significant Unavoidable Adverse Impacts 6-4
6.4 - Energy Conservation 6-4

Section 7: Persons and Organizations Consulted 7-1
7.1 - Lead Agency 7-1

Section 8: List of Preparers 8-1
8.1 - Lead Agency 8-1
8.2 - Lead Consultant 8-1

Section 9: References 9-1

List of Appendices

Appendix A: Notice of Preparation and Responses
A.1 - Notice of Preparation
A.2 - Responses

Appendix B: Air Quality Calculations and Greenhouse Gas Calculations

Appendix C: Biological Resources
C.1 - Biological Resources Evaluation
C.2 - Biological Resources Evaluation Peer Review
C.3 - Biological Resources Assessment of Additional Annexation Properties

Appendix D: Cultural Resources Assessment

Appendix E: Geotechnical Report

Appendix F: Phase I Environmental Assessment

Appendix G: Noise Supporting Information

Appendix H: Traffic Study

Appendix I: Water Supply Assessment

Appendix J: Public Service Letters and Responses

Appendix K: City of Tracy Measure K

List of Tables

Table ES-1: Executive Summary Matrix ES-5
Table 1-1: IS-NOP Comment Letters 1-4
Table 1-2: IS-Summary of Comments at Scoping Session 1-4
Table 2-1: Development Regulations 2-11
Table 2-2: Lot Types 2-13
Table 3-1: Active Adult and Low Density Residential Land Use Assumptions for Analysis 3-2
Table 3.3-1: Air Quality Monitoring Summary 3.3-2
Table 3.3-2: Air Quality Index and Health Effects 3.3-3
Table 3.3-3: San Joaquin Valley Air Basin Attainment Status 3.3-5
Table 3.3-4: Description of Air Pollutants 3.3-7
Table 3.3-5: Construction Air Pollutant Emissions (2017–2028) 3.3-27
Table 3.3-6: Tracy Village Development Project's Operational Air Pollutant Emissions 3.3-29
Table 3.3-7: Maximum Daily Air Pollutant Emissions 3.3-31
Table 3.3-8: Screening Levels for Potential Odor Sources 3.3-41
Table 3.5-1: Known Cultural Resources located within ½ mile Radius of the Project Site 3.5-10
Table 3.5-2: Cultural Resources Reports within ½ mile Radius of the Project Site 3.5-10
Table 3.6-1: Tracy Village Development Project Faults 3.6-2
Table 3.6-2: Modified Mercalli and Richter Scales 3.6-4
Table 3.7-1: Description of Greenhouse Gases 3.7-2
Table 3.7-2: Construction Greenhouse Gas Emissions (2017–2028) 3.7-33
Table 3.7-3: Reductions from Greenhouse Gas Regulations 3.7-37
Table 3.7-4: Project Operational Greenhouse Gases 3.7-38
Table 3.7-5: Project Operational Greenhouse Gases 3.7-39
Table 3.7-6: Scoping Plan Reduction Measures Consistency Analysis 3.7-42
Table 3.8-1: Topographic Maps Summary 3.8-2
Table 3.8-2: Aerial Photograph Summary 3.8-3
Table 3.9-1: Meteorological Summary 3.9-1
Table 3.9-2: Current and Projected Contractual Water Supply Entitlements 3.9-4
Table 3.9-3: City of Tracy Projected Future Groundwater Production in Normal and Dry Years 3.9-20
Table 3.10-1: Land Use Compatibility Table 3.10-12
Table 3.11-1: Mineral Resources Zones and Scientific Zones 3.11-1

Table 3.12-1: Typical A-Weighted Noise Levels 3.12-1
Table 3.12-2: Typical Construction Equipment Maximum Noise Levels, L_{max} 3.12-3
Table 3.12-3: Vibration Levels of Construction Equipment 3.12-5
Table 3.12-4: Noise Measurement Results Summary 3.12-6
Table 3.12-5: Existing Traffic Noise Levels 3.12-9
Table 3.12-6: Summary of EPA Recommended Noise Levels to Protect Public Welfare 3.12-11
Table 3.12-7: Federal Transit Administration Construction Vibration Impact Criteria 3.12-11
Table 3.12-8: Existing and Future Modeled Roadway Noise Levels 3.12-20
Table 3.13-1: Population, Housing, and Employment Characteristics (2016) 3.13-1
Table 3.13-2: Historic Population Growth Trends in San Joaquin County 3.13-1
Table 3.13-3: Housing and Persons per Household 3.13-2
Table 3.13-4: Employment Profiles 3.13-3
Table 3.13-5: Total Housing Needs Allocation for Eight Local Jurisdictions (2014–2023) 3.13-4
Table 3.13-6: Tracy's Housing Needs Allocation (2014–2023) 3.13-4
Table 3.13-7: Project Population for Age-Qualified Residential 3.13-8
Table 3.13-8: Forecast Populations—City of Tracy and San Joaquin County 3.13-8
Table 3.14-1: Incoming Calls to the Communications Unit (2015 and 2016) 3.14-3
Table 3.15-1: Nearby Park and Open Space Facilities 3.15-2
Table 3.15-2: Open Space 3.15-8
Table 3.16-1: Intersection Level of Service Definitions 3.16-7
Table 3.16-2: Existing Peak Hour Intersection Level of Service 3.16-8
Table 3.16-3: Existing Conditions Roadway Segment Level of Service 3.16-13
Table 3.16-4: Parking Occupancy at ACE Tracy Station 3.16-15
Table 3.16-5: Project Trip Generation 3.16-20
Table 3.16-6: Project Trip Generation-Senior Adult Housing 3.16-21
Table 3.16-7: Existing Plus Project Conditions Intersection Level of Service 3.16-33
Table 3.16-8: Mitigated Existing Plus Project Conditions Intersection Level of Service 3.16-35
Table 3.16-9: Existing Plus Project Conditions Roadway Segment Level of Service 3.16-37
Table 3.16-10: Background Conditions Intersection Level of Service 3.16-46
Table 3.16-11: Background Plus Project Conditions Intersection Level of Service 3.16-47
Table 3.16-12: Mitigated Background Plus Project Conditions Intersection Level of Service 3.16-50
Table 3.16-13: Background Conditions Roadway Segment Level of Service 3.16-51
Table 3.16-14: Background Plus Project Conditions Roadway Segment Level of Service 3.16-53

Table 3.16-15: Mitigated Background Plus Project Conditions Roadway Segment Level of Service 3.16-56
Table 3.16-16: Cumulative Conditions Intersection Level of Service 3.16-60
Table 3.16-17: Cumulative Plus Project Intersection Level of Service 3.16-61
Table 3.16-18: Cumulative Conditions Roadway Segment Level of Service 3.16-62
Table 3.16-19: Cumulative Plus Project Conditions Roadway Segment Level of Service 3.16-64
Table 3.17-1: Water Use Factors 3.17-10
Table 3.17-2: Projected Water Demand for Buildout for Age-Qualified Residential 3.17-12
Table 3.17-3: Projected Water Demand for Proposed Project Area Based on Previous Land Use Assumptions (as included in the City's Water System Master Plan and 2015 UWMP) 3.17-14
Table 3.17-4: Comparison of Water Demands for the proposed project with those included in the City's 2015 UWMP 3.17-15
Table 3.17-5: Projected Age-Qualified Wastewater Demand 3.17-18
Table 3.17-6: Operational Energy Consumption Estimate 3.17-24
Table 4-1: Cumulative Projects 4-1
Table 5-1: Reduced Density Alternative Peak Hour Trip Generation Comparison 5-9
Table 5-2: Summary of Alternatives 5-14
Table 5-3: Project Population for Tracy Village Specific Plan 5-15
Table 5-4: Low Density Residential Trip Generation Comparison 5-16
Table 5-5: Mixed Use with Residential Trip Generation Comparison 5-16

List of Exhibits

Exhibit 2-1: Regional Location Map 2-3
Exhibit 2-2: Local Vicinity Map, Aerial Base 2-5
Exhibit 2-3: County General Plan and Zoning Designations 2-7
Exhibit 2-4: City of Tracy Proposed General Plan Designations 2-9
Exhibit 2-5: Proposed Site Plan 2-15
Exhibit 2-6: Proposed Zoning 2-17
Exhibit 2-7: Proposed Land Use 2-19
Exhibit 3.1-1: Surrounding Land Use 3.1-3
Exhibit 3.2-1: Important Farmland Map 3.2-3
Exhibit 3.2-2: USDA Soils Map 3.2-5
Exhibit 3.2-3: San Joaquin County Williamson Act Land 2015/2016 ..... 3.2-7
Exhibit 3.4-1: CNDDB-Recorded Occurrences 5-mile Radius 3.4-5

Exhibit 3.8-1: Tracy Municipal Airport Land Use Compatibility Zones 3.8-15
Exhibit 3.12-1: Noise Monitoring Locations 3.12-7
Exhibit 3.12-2: Land Use Compatibility for Community Noise Environment 3.12-15
Exhibit 3.16-1: Annexation Area 3.16-3
Exhibit 3.16-2: Study Intersections 3.16-9
Exhibit 3.16-3: Existing Conditions Turning Movements 3.16-11
Exhibit 3.16-4: Existing Conditions Lane Geometry 3.16-23
Exhibit 3.16-5: Project Trip Distribution: Existing and Background Conditions 3.16-25
Exhibit 3.16-6: Project Trip Assignment: Existing and Background Peak Hour Conditions 3.16-27
Exhibit 3.16-7: Project Trip Distribution: Cumulative Conditions 3.16-29
Exhibit 3.16-8: Project Trip Assignment: Cumulative Peak Hour Conditions 3.16-39
Exhibit 3.16-9: Existing Plus Project Conditions Lane Geometry and Traffic Control 3.16-41
Exhibit 3.16-10: Cumulative Plus Project Lane Geometry and Traffic Control 3.16-67
Exhibit 3.16-11: Cumulative Plus Project Intersection Volumes 3.16-69
Exhibit 3.16-12: Circulation Plan 3.16-73

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	average daily traffic
ALS	Advance Life Support
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
ARB	California Air Resources Board
ARRA	Active Adult Residential Allotments
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measures
BAT	best available technology economically achievable
BBID	Byron-Bethany Irrigation District
BCT	best conventional pollutant control technology
BMP	Best Management Practices
BVOC	biogenic volatile organic compound
C	Celsius
CAAQS	California Ambient Air Quality Standards
Cal OSHA	California Occupational Health and Safety Administration
Cal/EPA	California Environmental Protection Agency
CalFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CHL	California Historical Landmarks
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Code
CUPA	Certified Unified Program Agency
CVFPP	Central Valley Flood Protection Plan
CWA	Clean Water Act
dB	decibel
DGWTP	DeGroot Water Treatment Plant
DMC	Delta Menota Canal
DOT	United States Department of Transportation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EMT-1	Emergency Medical Technician-1
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
F	Fahrenheit
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FFMP	Farmland Mapping and Monitoring Program
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GMO	Growth Management Ordinance
GWh/y	gigawatt-hours per year
GWP	global warming potential
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HRF	Households Relations Factor
HRI	California Historic Resources Inventory
HVAC	heating, ventilation, and air conditioning
I	Interstate

ISO	Insurance Services Office
JJWTP	John Jones Water Treatment Plant
JRF	Jobs Relations Factor
LAFCo	Local Agency Formation Commission
L_{dn}	day/night average sound level
LED	light emitting diode
L_{eq}	equivalent sound level
L_{max}	maximum noise level
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MMI	Modified Mercalli Intensity
mph	miles per hour
MRF	Materials Recovery Facility
msl	mean sea level
MTS	Metropolitan Transportation System
MXD	mixed-use development
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
OES	California Office of Emergency Services
PCB	polychlorinated biphenyl
pCi/l	picocuries per liter
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment

PM_x	particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PUC	Public Utilities Code
PVC	polyvinyl chloride
PVWD	Plain View Water District
RCRA	Resource Conservation and Recovery Act
RGA	Residential Growth Allotment
RHNA	Regional Housing Needs Allocation
RMP	Risk Management Plan
rms	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	System Control and Data Acquisition
SCFA	South County Fire Authority
SCH	State Clearinghouse
SCWSP	South County Water Supply Project
SDMP	Storm Drainage Master Plan
SET	Special Enforcement Team
SF_6	sulfur hexafluoride
SJCOG	San Joaquin Council of Governments
SJEMSA	San Joaquin Emergency Medical Services Agency
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SOI	Sphere of Influence
SR	State Route
SSJID	South San Joaquin Irrigation District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCM	transportation control measures
TDM	Transportation Demand Management
TDS	total dissolved solids
TFD	Tracy Fire Department
Tg	teragram

therms/y	therms per year
TIS	Traffic Impact Study
TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TOC	total organic carbon
TOD	Transit Oriented Development
TVDP	Tracy Village Development Project
TVSP	Tracy Village Specific Plan
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
VdB	Velocity in decibels
WDR	Waste Discharge Requirements
WEP	Water Exchange Program
WSA	Water Supply Assessment
WWTP	Wastewater Treatment Plant

THIS PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Tracy Village Project EIR (State Clearinghouse No. 2016112016). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Project Summary

Project Location

The Tracy Village Specific Plan (TVSP), or the Project Area, contains two components: the Tracy Village Development Project (TVDP) and the Residential Annexation Area. The proposed Tracy Village Development Project is located on approximately 135.2 acres in unincorporated San Joaquin County, adjacent to the Tracy city limits and within the sphere of influence. The boundaries are located on the U.S. Geological Survey (USGS) Tracy 7.5-minute quadrangle in the northwest quadrant of Section 5, Township 3 South, Range 5 East of the Mt. Diablo Meridian (Assessor's Parcel Number 244-04-001). In addition to the development of single-family homes in the TVDP, the TVSP would include annexation of existing residences to the City of Tracy. The Residential Annexation Area consists of the lots located immediately west of the Tracy Village development along Corral Hollow Road (Assessor's Parcel Numbers 244-030-001 through 244-030-021) and immediately north of the TVSP site along the north side of Valpico Road (Assessor's Parcel Numbers 242-050-001 through 242-050-021).

Project Description

The Tracy Village Specific Plan (TVSP), or the Project Area, contains two components: the TVDP and the Residential Annexation Area. The Specific Plan provides zoning for both the new development (TVDP) and for the adjacent area (the Residential Annexation Area), which would be annexed and pre-zoned in order to create a logical pattern of development in the City of Tracy. The Tracy Village Development Project is proposed as an active adult, gated, and age-restricted community consisting of up to 600 single-family detached residential lots that would support single-family dwelling units ranging from 1,350 square feet to 3,000 square feet. The Tracy Village Development Project site is currently vacant. The Tracy Village Development Project would feature a man-made lake system to provide a focal aesthetic feature for the community, serve as the primary drainage conveyance and peak attenuation/storage facility, and provide water quality treatment for urban storm water runoff. The Tracy Village Development Project would include a full service community center and a walking

promenade along the circular main project roadway, which surrounds the lake system. Pedestrian and bicycle trails will connect to pedestrian and bicycle facilities on Valpico Road and Middlefield Drive.

The Residential Annexation Area is located along Corral Hollow and Valpico Roads. The 42 lots that make up the Residential Annexation Area include three vacant lots and 39 single-family detached residences on lot sizes ranging from approximately 0.35 acre to 2.2 acres. Annexation of the 42 properties is intended to provide a rational and cohesive boundary for the City following annexation of the Tracy Village Development Project. No development is proposed for the Residential Annexation Area. All residences are currently served by private wells and septic systems and connection to city water and sewer systems would be voluntary, unless new residential development (building permits) is proposed by a property owner.

Project Objectives

Applicant Objectives

The objectives of the project as proposed by the applicant for Tracy Village Specific Plan are to:

- Create a cohesive enclave through architectural and landscape design.
- Provide a desirable community where people will want to live.
- Create a secure environment for Tracy's active adults to live and recreate.
- Promote local residents supporting Tracy businesses and social programs.
- Design a quality community resulting in a distinctive identity and strong sense of place.
- Provide a mix of architectural styles, elements, and attributes that are compatible and reflect the heritage of the region.
- Encourage quality home design.
- Utilize technologies and solar roofs to achieve cost-effective energy use.
- Integrate resource-efficient design, climate-appropriate landscaping, stormwater quality treatment, and products that conserve resources and improve air quality.
- Reduce waste, reinvest back into the community, and minimize impacts on local services.
- Promote a sense of place in the community.
- Promote indoor/outdoor living as a central feature of the neighborhoods and homes.

City Objectives

The City of Tracy has the following objectives for the project:

- Provide housing opportunities responsive to the needs of the City of Tracy's active adults (age-qualified as defined in the California Civil Code).
- Allow for a cohesive development pattern in this area through the annexation of adjacent existing residential lots with a prezoning of Residential Estates, which would ensure orderly development of the annexation lands based on applicable city development standards and zoning.
- Ensure ability to provide necessary City services to the annexation lands.

Significant Unavoidable Adverse Impacts

The proposed project would result in a significant unavoidable impact at the intersection of Corral Hollow Road and Linne Road, where the addition of project traffic adds delay and causes the intersection to continue to deteriorate and operate at LOS F in both the AM and PM peak hours. Mitigation is available to address this, but because it is subject to approval by the UPRR and the California Public Utilities Commission, it cannot be required at a date certain. Until the improvement is installed, the impact will remain significant and unavoidable. All other impacts are less than significant with implementation of mitigation.

Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the Proposed Project.

No Project/No Build Alternative

The TVDP would not be constructed and the annexation of the Residential Annexation Area would not be pursued. The Residential Annexation Area would remain in unincorporated San Joaquin County, but within the City's Sphere of Influence with no changes in land use or land use designations.

Reduced Density Alternative

The TVDP would be designated residential low in accordance with the land use designation of surrounding properties. This designation allows densities from 0.1 to 2.0 dwelling units per gross acre. Assuming a density of 0.4 dwelling unit per acre, approximately 300 single-family homes would be built on the 135.2-acre site (with inclusion of 22.3 acres of open space and the three man-made lakes). The Residential Annexation Area would be annexed into the City of Tracy with a prezoning of Residential Estate.

Tracy Village Development Project-Only Alternative

The TVDP would be built as described in this EIR and the annexation of the Residential Annexation Area would not be pursued. The Residential Annexation Area would remain in unincorporated San Joaquin County, with no changes in land use or land use designations.

Areas of Controversy

- Agricultural Resources
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Hydrology and Water Quality
- Land Use, Population, and Housing
- Transportation and Traffic
- Utilities and Service Systems

Disagreement among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions,

although the City of Tracy is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts in the context of an EIR. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision-makers to make an informed judgment about the environmental consequences of the proposed project.

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision-makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision-makers are not obligated to select the most environmentally preferable viewpoint. Decision-makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts as long as the viewpoint is based on substantial evidence. In their proceedings, decision-makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. However, decision-makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft EIR, and can certify the Final EIR without needing to resolve disagreements among experts.

Public Review of the Draft EIR

The Draft EIR will be available for public review for the statutory 45-day review period beginning August 16, 2017. The document will be available for public review online at the City's website (www.ci.tracy.ca.us/) and at the following locations:

City of Tracy
Development and Engineering Services
333 Civic Center Plaza
Tracy, CA 95376
Hours: Monday–Thursday: 8:00 a.m. to 6:00 p.m.
Friday: 8:00 a.m. to 5:00 p.m.
(closed alternate Fridays)

Tracy Branch Library
20 E. Eaton Ave, CA 95376
Hours: Monday: 10:00 a.m. to 8:00 p.m.
Tuesday: 10 a.m. to 7:00 p.m.
Wednesday: 1:00 p.m. to 6:00 p.m.
Thursday: 10:00 a.m. to 8:00 p.m.
Friday and Saturday: 10 a.m. to 5:00 p.m.
Sunday 12:00 p.m. to 5:00 p.m.

Executive Summary Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1). Some impact area discussions address the TVDP separately from the Residential Annexation area, where impacts could potentially differ.

Table ES-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1—Aesthetics		
Impact AES-1: The project would not have a substantial adverse effect on a scenic vista.	No mitigation is necessary.	Less than significant impact.
Impact AES-2: The project may substantially degrade the existing visual character or quality of the site and its surroundings.	No mitigation is necessary.	Less than significant impact.
Impact AES-3: The project may create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	**MM AES-3:** Prior to issuance of the first building permit, the applicant shall prepare and submit an outdoor lighting plan (which includes a photometric analysis) to the City of Tracy that includes a footcandle map illustrating the amount of light from the project site at adjacent light sensitive receptors. The lighting map shall comply with the City of Tracy General Plan policies and shall include minimal levels of street; parking, building, site, and public area lighting to meet safety standards and provide direction; directional shielding for all exterior lighting; and automatic shutoff or motion sensors and/or additional standards as determined by the Community Services Department.	Less than significant impact.
Section 3.2—Agriculture		
Impact AG-1: The proposed project may result in the conversion of Important Farmland to non-agricultural use.	No mitigation is necessary.	Less than significant impact.
Impact AG-2: The proposed project will not conflict with existing zoning for agricultural use or an active Williamson Act contract.	No mitigation is necessary.	Less than significant impact.
Impact AG-3: The project would not involve other changes to the existing environment, which, because of their location or nature, could result in conversion of farmland to non-agricultural use.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.3—Air Quality		
Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact AIR-2: The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact AIR-3: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact AIR-4: The project would not expose sensitive receptors to substantial pollutant concentrations.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.4—Biological Resources		
Impact BIO-1: Development activities may have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species.	**MM BIO-1a: Migratory nesting bird surveys.** • If tree or vegetation removal, structure demolition or ground disturbance activities are scheduled to commence during the breeding season (February 1 through August 31), pre-construction nesting bird surveys will be conducted by a qualified biologist to identify possible nesting activity. (If trees are removed and structures demolished outside the breeding season [September 1st through January 31], then the following measures are not required.) • Pre-construction surveys shall be completed no more than 30 days prior to ground disturbance, structure demolition, or tree removal within the TVDP site and will include a 100-ft buffer area of the TVDP site to be surveyed. • A construction-free buffer of suitable dimensions must be established around any active raptor and migratory bird nests (up to 250 feet for raptors, depending on the location and species) for the duration of the TVDP construction or until it has been determined that the chicks have fledged and are independent of their parents. **MM BIO-1b: Bats** **BAT 1. Bat Habitat Assessment** • A bat habitat assessment by a qualified biologist shall be conducted for all mature trees and in all structures that will be removed as a result of the TVDP project to determine whether they provide suitable roosting or breeding habitat for bats and, to the extent possible, whether they are currently occupied. If the biologist determines that trees and structures on the site do not provide suitable habitat for bats, then no further mitigations would be required. However, if the biologist determines that bats are present or that trees and/or structures provide potentially suitable habitat for bats, and even if currently not occupied, they could be occupied in the future, the following additional mitigations will be implemented. **BAT 2. Tree Removal Monitoring** • Should the habitat assessment conclude that any trees proposed for removal provide potential roosting, hibernation and/or maternity habitat	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	for bats, tree removal shall only be conducted during seasonal periods of bat activity, i.e., September through mid-October and March through mid-April, under the supervision of a qualified biologist. Tree removals shall occur via a two-phased removal conducted over two consecutive days. In the afternoon of the first day, a tree cutter using chainsaws only shall remove limbs and branches. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree shall be removed. **BAT 3. Preconstruction Survey** • Should the habitat assessment survey confirm that structures to be demolished on the site provide potential roosting, hibernation and/or maternity habitat for bats, even if bats are not currently occupying them, then a preconstruction survey for bats will be conducted within 30 days prior to structure demolition. If no bats are found present, then structures may be demolished. If bats are found present, bats may be safely evicted during two seasonal periods of bat activity. In this area, generally bats can be evicted safely between approximately March 1st (or when evening temperatures are above 45°F and rainfall less than ½" in 24 hours occurs), and April 15th, prior to parturition of pups. The next acceptable period is after pups become self-sufficiently volant, generally accepted to be between September 1st through October 15th (or prior to evening temperatures dropping below 45°F and onset of rainfall greater than ½" in 24 hours). • There are two methods for evicting bats from occupied structures. The first, utilized mainly when the building is in good condition and the work is feasible, is "humane eviction," or "bat exclusion," which relies on the bats' own ability to fly out of the roost. In this method, all potential, but currently unused entry points into the structure are sealed. The active entry points are fitted with one-way exits, which are left in place 7-10 days to allow all bats to emerge normally during nightly feeding flights. The one-way exits are then removed and the remaining openings sealed until demolition if it will occur more than 30 days after demolition. If the interval between successful eviction and demolition will be short (less	

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	than 4 weeks), the one-way exits may often be left in place until demolition. This eviction work must be conducted by, or under direct supervision or instruction, of a qualified biologist. • In some cases, the physical condition of the structure is so poor that humane eviction as described above is not possible. If that occurs, the building must be carefully, and selectively dismantled in such a way that the internal environment is altered to a degree sufficient to cause bats to abandon the roost and not return. This must occur under the guidance bat biologist qualified in partial dismantling of structures for bat eviction.	
Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	No mitigation is necessary.	Less than significant impact.
Impact BIO-3: The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	No mitigation is necessary.	Less than significant impact.
Impact BIO-4: The project would not 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 wildlife nursery sites.	No mitigation is necessary.	Less than significant impact.
Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No mitigation is necessary.	Less than significant impact.
Section 3.5—Cultural Resources		
Impact CUL-1: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered historic resources.	**MM CUL-1:** If a potentially significant cultural resource is encountered during Tracy Village Development Plan (TVDP) construction, all construction activities within a 50-foot radius of the find shall cease until a qualified archaeologist determines whether the resource requires further study. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Cultural resources could consist of, but are not limited to, stone, wood, or shell artifacts, structural remains, privies, or historic dumpsites. Any previously undiscovered resources found during construction within the TVDP area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact CUL-2: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered archaeological resources.	Implement Mitigation Measure CUL-1.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact CUL-3: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered paleontological resources.	**MM CUL-3:** Paleontological monitoring is recommended for any major excavations for the TVDP project that impact undisturbed sediments exceeding 10 feet in depth. In the event that fossils or fossil-bearing deposits are discovered during construction of the TVDP project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The applicant shall	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.	
Impact CUL-4: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered human burial sites.	**MM CUL-4:** In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance: • The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission. • The descendant identified fails to make a recommendation. • The landowner or his authorized representative rejects the	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.	
Section 3.6—Geology and Soils		
Impact GEO-1: The proposed project may expose people or structures to potential substantial adverse effects involving seismic hazards.	**MM GEO-1:** Prior to the issuance of building permits, the project applicant shall submit a soil report/geotechnical investigation to the City of Tracy for review and approval. The investigation shall be prepared by a qualified engineer and identify grading and building practices necessary to achieve compliance with the latest adopted edition of the California Building Standards Code's geologic, soils, and seismic requirements. The recommendation from the approved soil report/geotechnical investigation shall be incorporated into the project plans to ensure compliance with city and state building code standards. The City of the Tracy shall review and approve the plans, and the project applicant shall adhere to these approved plans in developing the project. The types of mitigation that are anticipated for inclusion in the approval of the soil report/geotechnical investigation would include but are not limited to the following: • Remove all existing fill to competent native soil, as determined by the applicant's geologist. The geologist shall observe the fill removal to determining its extents during construction. • For grading in structural areas, perform subgrade compaction prior to fill placement, following cutting operations, and in areas left at grade as follows: - Scarify to a depth of at least 8 inches; - Moisture condition soil to at least 1 percentage point above the optimum moisture content for nonexpansive soils (PI less than 12) and 3 percentage points above the optimum moisture content for expansive soils (PI equal to or greater than 12); and - Compact the subgrade to at least 90 percent relative compaction. Compact the upper 6 inches of finish pavement subgrade to at least 95 percent relative compaction prior to aggregate base placement. • After the subgrade soil has been compacted, place and compact	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	acceptable fill as follows: 1. Scarify to a depth of at least 8 inches; 2. Moisture condition soil to at least 1 percentage point above the optimum moisture content for nonexpansive soils (PI less than 12) and 3 percentage points above the optimum moisture content for expansive soils (PI equal to or greater than 12); and 3. Compact fill to a minimum of 90 percent relative compaction. Compact the upper 6 inches of fill in pavement areas to 95 percent relative compaction prior to aggregate base placement.	
Impact GEO-2: The project may result in substantial soil erosion or the loss of topsoil.	Implement Mitigation Measures GEO-1, HYD-1a, and HYD-1b.	Less than significant impact.
Impact GEO-3: The project may 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.	Implement Mitigation Measure GEO-1.	Less than significant impact.
Impact GEO-4: The proposed project may create substantial risks to life or property as a result of expansive soil conditions on the project site.	Implement Mitigation Measure GEO-1.	Less than significant impact.
Section 3.7—Greenhouse Gas Emissions		
Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.8—Hazards and Hazardous Materials		
Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	No mitigation is necessary.	Less than significant impact.
Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.	No mitigation is necessary.	Less than significant impact.
Impact HAZ-3: The project may create aviation hazards for persons residing or working in the project area.	**MM HAZ-3:** The lake system shall be designed and managed to avoid attracting waterfowl. Design measures that may be used to discourage waterfowl include: • Avoiding large turf areas. • Managing aquatic vegetation to eliminate nesting places by cutting back foliage or using appropriate herbicides. • Prohibiting the feeding of waterfowl. • Constructing the lakes so that there are vertical edges. • Providing low fencing at the water's edge, or a narrow band of tall plants, such as cattails. • Signs posted prohibiting feeding of waterfowl in public areas of the lakefront. • HOA rules to include prohibition of feeding waterfowl in private yards, and information campaign to make residents aware of the prohibition and the safety reason for it, explaining that encouraging waterfowl to return to the site increases the potential for conflicts with aircraft using Tracy Airport. • The lake system shall be monitored and inspected by the HOA once a month to enforce and ensure the effectiveness of the methods implemented to mitigate this impact. Inspection records will be available for the City or County to inspect as needed.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact HAZ-4: The project would not impair or interfere with emergency access or evacuation.	No mitigation is necessary.	Less than significant impact.
Section 3.9—Hydrology and Water Quality		
Impact HYD-1: Development and land use activities contemplated by the Tracy Village Specific Plan may violate water quality standards or waste discharge requirements.	**MM HYD-1a:** Pursuant to the 2015 Multi-Agency Post-Construction Stormwater Standards Manual, prior to the issuance of a grading or building permit, the applicant shall submit a draft of the Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP). After City approval, the NOI and SWPPP shall be sent to the State Water Resources Control Board (SWRCB) for approval. Approval by the SWRCB is required to the issuance of a grading or building permit by the City of Tracy. **MM HYD-1b:** The City of Tracy shall verify that the applicant has filed an NOI with the SWRCB to obtain a Construction General Permit (CGP) and shall comply with all the requirements associated with the CGP to mitigate for impacts that would result from the development of the project. The SWPPP shall address stormwater management during each phase of construction. Best management practices (BMPs) shall be integrated into the SWPPP, which will be effective and result in the reduction or elimination of pollutants in stormwater discharges and the stabilization of BMPs to reduce or eliminate pollutants after construction is completed. The SWPPP shall be consistent with the applicable Regional Water Quality Control Board (RWQCB) standards and NPDES permit requirements to protect water quality over the period of construction.	Less than significant impact.
Impact HYD-2: The proposed project would not deplete groundwater supplies or interfere substantially with groundwater recharge.	No mitigation is necessary.	Less than significant impact.
Impact HYD-3: Development and land use activities contemplated by the Specific Plan would not substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact HYD-4: Development and land use activities contemplated by the Tracy Village Specific Plan would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site.	No mitigation is necessary.	Less than significant impact.
Impact HYD-5: Development and land use activities contemplated by the Tracy Village Specific Plan would 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.	**MM HYD-5:** The applicant is required to provide site-specific or project-specific storm drainage solutions that are consistent with the overall infrastructure approach presented in the City of Tracy's Citywide Storm Drainage Master Plan (SDMP). The City of Tracy is subject to the Phase II municipal program and has prepared a Storm Water Management Program (SWMP) to comply with the regulations (General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ). The City Department of Public Works will review the stormwater treatment plan within the TVSP to ensure compliance with the SDMP.	Less than significant impact.
Impact HYD-6: Development and land use activities contemplated by the Specific Plan may otherwise substantially degrade water quality.	Implement Mitigation Measures HYD-1a and HYD-1b.	Less than significant impact.
Section 3.10—Land Use and Planning		
Impact LUP-1: The project would not physically divide an established community.	No mitigation is necessary.	Less than significant impact.
Impact LUP-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	No mitigation is necessary.	Less than significant impact.
Impact LUP-3: The project may conflict with any applicable habitat conservation plan or natural communities conservation plan.	Implement Mitigation Measure BIO-1b.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.11—Mineral Resources		
Impact MIN-1: The project would not 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.	No mitigation is necessary.	Less than significant impact.
Impact MIN-2: The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan.	No mitigation is necessary.	Less than significant impact.
Section 3.12—Noise		
Impact NOI-1: The project could result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM NOI-1a:** To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project: • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. 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. • The construction contractor shall prohibit unnecessary idling of internal combustion engines. • The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. • The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site. • The construction contractor shall ensure that all construction activities shall be limited to the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays. **MM NOI-1b:** Assuming implementation of only a 6-foot-high soundwall along the project's northern property line bordering Valpico Road, all proposed residences located within 180 feet of the centerline of Valpico Road shall include an alternate form of ventilation, such as an air conditioning system, in order to ensure that windows can remain closed for a prolonged period of time. The building plans approved by the City shall reflect this requirement. Alternatively, if the project will implement construction of an 8-foot-high soundwall along the project's northern property line bordering Valpico Road, then no additional mitigation such as an alternate form of ventilation would be required.	
Impact NOI-2: The project would not result in expose persons to or generation of excessive groundborne vibration or groundborne noise levels.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact NOI-3: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact NOI-4: The project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Implement Mitigation Measure NOI-1.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-5: The project would not expose people residing or working in the project area to excessive noise levels due to its location within an airport land use plan.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact NOI-6: The project would not expose people residing or working in the project area to excessive noise levels because of its location within the vicinity of a private airstrip.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact NOI-7: The project would not contribute to cumulative noise impacts in the area.	No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Section 3.13—Population and Housing		
Impact POP-1: Development and land use activities contemplated by the project would not induce substantial population growth.	No mitigation is necessary.	Less than significant impact.
Impact POP-2: The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	No mitigation is necessary.	Less than significant impact.
Impact POP-3: The project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	No mitigation is necessary.	Less than significant impact.
Section 3.14—Public Services		
Impact PS-1: The project would not result in a need for new or expanded fire protection facilities.	**MM PS-1: Condition of Approval for the TVDP.** *Tracy Village Development Project* As part of the approval process for the TVDP, the project applicant shall be required to pay the applicable development impact fee as a Condition of Approval for the TVDP.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Residential Annexation Area No mitigation is necessary.	
Impact PS-2: The project would not result in a need for new or expanded police protection facilities.	No mitigation is necessary.	Less than significant impact.
Impact PS-3: The project would not result in a need for new or expanded park facilities.	No mitigation is necessary.	Less than significant impact.
Impact PS-4: The project would not result in a need for new or expanded public facilities such as libraries.	No mitigation is necessary.	Less than significant impact.
Section 3.15—Recreation		
Impact REC-1: The project would not 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.	*Tracy Village Development Project* No mitigation is necessary. *Residential Annexation Area* No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Impact REC-2: The project would not include recreational facilities or require the construction or expansion of recreational facilities which would have an adverse physical effect on the environment.	*Tracy Village Development Project* No mitigation is necessary. *Residential Annexation Area* No mitigation is necessary.	*Tracy Village Development Project* Less than significant impact. *Residential Annexation Area* Less than significant impact.
Section 3.16—Transportation and Traffic		
Impact TRANS-1: The project may conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system under Existing Plus Project Conditions.	**MM TRANS-1a:** Install a signal, optimize cycle lengths and splits, add a separate northbound left-turn pocket, add a separate right-turn pocket, and add a separate eastbound left-turn pocket at the Lammers Road/Old Schulte Road (Intersection #1). The City has recently approved the installation of this interim improvement at the intersection and the intersection would operate acceptable at LOS A in the AM peak hour and LOS A in the PM peak hour. Because this improvement was previously identified for other approved projects (Ellis and Cordes Ranch), this background improvement is already funded. As a result, the project would not contribute funding to this improvement. However, if any of the previously approved projects do not	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Project Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. Under this scenario, the TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed. **MM TRANS-1b:** The City has recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection. The improvements are identified in the City TMP. Prior to issuance of a building permit, the project would pay the City Traffic Impact Fees. With these improvements, the intersection would operate at an acceptable LOS A in the AM and in the PM peak hour.	
Impact TRANS-2: The project may conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system under Background Plus Approved Projects Plus Project Conditions.	**MM TRANS-2a:** The addition of project traffic causes the intersection of Lammers Road/Valpico Road (Intersection #2) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS C and D with the following improvement: Add a separate westbound right-turn lane, and a shared westbound left-turn and through lane. The westbound right-turn phase will be overlapped with the southbound left-turn phase. The TVDP Applicant shall install this improvement with prior to the issuance of the first building permit. Because this improvement is identified in the Tracy TMP, this improvement is eligible to receive fee credits via the City's TIF upon completion of construction and acceptance by the City. This project improvement will supplement background improvements previously identified for another approved project (Cordes Ranch) which includes installation of a signal and a southbound left turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will	Mitigation Measure TRANS-2a will reduce the potentially significant impact to less than significant. However, because the improvement associated with Mitigation Measure TRANS-2b may not occur before the project is constructed, impacts associated with this intersection will be significant and unavoidable until the improvement can be installed.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	be reimbursed for such improvements through a Business Improvement District once the project is constructed. **MM TRANS-2b:** The addition of project traffic causes the intersection of Corral Hollow Road/Linne Road (Intersection #7) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS B and D with the following improvements: Add a southbound through lane, and add a northbound through lane, and add a separate westbound right-turn lane. Improvements shall be constructed at the railroad crossing gates. This project improvement will supplement background improvements previously identified for other approved projects (Ellis and Tracy Hills) which includes installation of a signal, the addition of one northbound channelized right-turn lane, and the addition of one southbound left-turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed. This Project improvement is required by the Public Utilities Commission because vehicle queues will spill across the railroad tracks and will cause safety concerns for train traffic. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. Any costs related to non-TMP improvements are the responsibility of the applicant and other approved projects listed above. The TVDP Applicant shall, in collaboration with the City Engineer and UPRR/PUC, commence with an engineering design process to install the improvements identified. This design process shall commence immediately following approval of this Project Application by the City of Tracy. Because approval by UPRR/PUC is required before this improvement can be installed, the project impact will remain significant and unavoidable.	

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact TRANS-3: The project may conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system under Cumulative Conditions.	**MM TRANS-3:** Prior to the issuance of a building permit, the Applicant shall pay Traffic Impact Fees to the City of Tracy to account for the Cumulative Traffic Impacts.	Less than significant impact.
Impact TRANS-4: The project may conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	Implement MM TRANS-1a and 1b; MM TRANS-2a, 2b, and 2c; and MM TRANS-3.	Less than significant impact.
Impact TRANS-5: Development and land use activities contemplated by the project would not cause a change in air traffic patterns that results in substantial safety risks.	Implement MM HAZ-3.	Less than significant impact.
Impact TRANS-6: The project would not substantially increase hazards due to a design feature or incompatible uses.	No mitigation is necessary.	Less than significant impact.
Impact TRANS-7: The project would not result in inadequate emergency access.	No mitigation is necessary.	Less than significant impact.
Impact TRANS-8: The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	No mitigation is necessary.	Less than significant impact.
Section 3.17—Utilities and Service Systems		
Impact USS-1: Development and land use activities contemplated by the project would not result in a need for new or expanded potable water facilities that result in physical impacts on the environment.	**MM USS-1:** The developer will provide a proportional share of required funding to the City for the acquisition, treatment and delivery of treated potable and recycled water supplies to the proposed project area.	Less than significant impact.
Impact USS-2: Development and land use activities contemplated by the project would not require or result in the construction of recycled water facilities or	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
expansion of offsite recycled facilities beyond what has been planned for.		
Impact USS-3: Development and land use activities contemplated by the project would not require or result in the construction of wastewater treatment facilities or expansion of offsite existing facilities beyond what has been planned for.	No mitigation necessary.	Less than significant impact.
Impact USS-4: Development and land use activities contemplated by the project would not result in a need for new or expanded offsite storm drainage facilities.	No mitigation is necessary.	Less than significant impact.
Impact USS-5: Development and land use activities contemplated by the project would not generate substantial amounts of solid waste that may result in the unnecessary use of regional landfill capacity.	No mitigation is necessary.	Less than significant impact.
Impact USS-6: Development and land use activities contemplated by the project would not result in the unnecessary, wasteful, or inefficient use of energy.	No mitigation is necessary.	Less than significant impact.

SECTION 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Tracy Village Specific Plan (TVSP) (State Clearinghouse No. 2016112016). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project. This Draft EIR provides program-level analysis related to implementing the TVSP.

1.1.1 - Tiering from General Plan EIR

This Draft EIR tiers from the EIRs prepared for the 2010 San Joaquin County General Plan and the 2011 Tracy General Plan, where appropriate and as indicated in this Draft EIR. "Tiering" or "tier" means the coverage of general matters and environmental effects in an environmental impact report prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports which incorporate by reference the discussion in any prior environmental impact report and which concentrate on the environmental effects which (a) are capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior environmental impact report. (Cal. Pub. Res. Code § 20168.5; CEQA Guidelines § 15152).

Tiering of EIRs is encouraged to promote construction of needed housing and other development projects by (1) streamlining regulatory procedures, (2) avoiding repetitive discussions of the same issues in successive environmental impact reports, and (3) ensuring that environmental impact reports prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate upon environmental effects which may be mitigated or avoided in connection with the decision on each later project. Tiering is appropriate when it helps a public agency to focus upon the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous environmental impact reports. To achieve this purpose, the California Legislature has determined that EIR shall be tiered whenever feasible, as determined by the lead agency. (Cal. Pub. Res. Code § 20193).

Where a lead agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan such as the TVSP), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.

Where appropriate, the topical sections of this DEIR provide a summary of the applicable General Plan EIR's conclusions regarding that topic, including any applicable mitigation measures. Additional

mitigation measures are provided where necessary to discuss impacts unique to the implementation of the TVSP that were not addressed in the applicable General Plan EIR.

1.1.2 - Use of the EIR for Program-Level Analysis

This Draft EIR contains program-level analysis. A program-level analysis was selected for the EIR evaluation because this project is considered a program. To be considered a program by CEQA, a project must include a series of actions that are characterized as one large project. In this instance, the TVSP qualifies as codified in Section 15168 of the CEQA Guidelines, et. seq., as a series of actions that can be related either:

- Geographically;
- As logical parts in the chain of contemplated actions;
- In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

1.1.3 - Use of the EIR for Project-Level Analysis

This Draft EIR also contains project-level analysis with the expectation that no additional environmental review will be required after the City certifies the Final EIR and subsequently approves the project. Other State Responsible Agencies would be able to approve subsequent actions germane to their respective areas of statutory responsibility without additional environmental review and documentation.

1.1.4 - Overview

The proposed TVSP consists of annexing a total of approximately 176.6 acres into the City of Tracy. The annexation consists of two separate components: The Tracy Village Development Project (TVDP) and the Residential Annexation.

Tracy Village Development Project

The TVDP consists of annexation of land for and approval of a Specific Plan, General Plan amendment, pre-zoning, and a tentative subdivision map for a 600-unit active adult residential development on 134 acres currently located in San Joaquin County and within the City of Tracy sphere of influence. The single-family dwelling units are proposed to range from 1,350 square feet to 3,000 square feet. The project would feature three man-made lakes totaling approximately 10.5 acres and a community recreation center with pool, spa, bocce courts, open space, and a community building. The project also includes a 3.2-acre park, a 0.5-acre secondary recreation area (containing a pool, spa and open space), and a dog park.

Residential Annexation Area

In addition to the annexation of the TVDP site, the City also seeks annexation of 42 residential lots to the north and west, fronting Corral Hollow and Valpico Roads (Residential Annexation Area). Section 2, Project Description provides a complete description of the project.

1.1.5 - Purpose and Authority

This Draft EIR provides a project-level analysis of the environmental effects of the TVSP. The environmental impacts of the proposed project are analyzed in the EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with the planning, construction, or operation of the project. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found not to be Significant

1.1.6 - Lead Agency Determination

The City of Tracy is designated as the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as ". . . the public agency, which has the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by FirstCarbon Solutions, an environmental consultant. Prior to public review, it was extensively reviewed and evaluated by the City of Tracy. This Draft EIR reflects the independent judgment and analysis of the City of Tracy as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Sections 6 and 7 of this Draft EIR, respectively.

1.2 - Scope of the EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The City of Tracy issued a Notice of Preparation (NOP) for the proposed project on November 16, 2016, which

circulated between November 16, 2016 and December 16, 2016 for the statutory 30-day public review period. The scope of this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by agencies and the public in response to the NOP. The NOP is contained in Appendix A of this Draft EIR.

Three comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR.

Table 1-1: IS-NOP Comment Letters

Affiliation	Signatory	Date	Summary of Relevant Comments
Central Valley Regional Water Quality Control Board	Stephanie Tadlock Environmental Scientist	November 30, 2016	Discusses the need for a Basin Plan Amendment and Antidegradation Considerations and Analysis; discusses compliance with all permitting requirements of the NDPES including Construction Stormwater General Permit, Phase I and II MS4 Permits, Clean Water Act Sections 404 and 401 permits; Dewatering Permits, Regulatory compliance for Commercially Irrigated Agriculture, and NPDES General Permit.
State of California Native American Heritage Commission	Sharaya Souza Staff Services Analyst	December 02, 2016	Discusses compliance with AB 52 and SB 18 and NAHC recommendations for Cultural Resource Assessments.
San Joaquin Council of Governments	Travis Yokoyama Assistant Regional Planner	December 04, 2016	Discusses need for compliance with all Regional Transportation Planning Documents; and San Joaquin County ALUCP standards and FAA regulations; states that Congestion Management Agency will assist as needed.
Source: City of Tracy, 2016.			

Seventeen comments were made at a public scoping meeting held on November 16, 2016. They are listed in Table 1-2.

Table 1-2: IS-Summary of Comments at Scoping Session

Comment	EIR Section Where Comment Is Addressed
1. What are the effects of wind as they relate to landscaping choices since strong winds can make trees lean over?	Comment does not address a specific environmental issue.
2. Identify triggers for timing of implementation for improvements (Valpico/Corral Hallow) What is the effect of trips from the church? 3. The widening of Valpico should not be allowed to affect properties to the north.	Section 3.16, Transportation

Table 1-2 (cont.): IS-Summary of Comments at Scoping Session

Comment	EIR Section Where Comment Is Addressed
4. What are the tax impacts of annexations?	Comment does not address a specific environmental issue.
5. Is the project in compliance with the San Joaquin County Airport Land Use Compatibility Plan?	Section 3.8, Hazards and Hazardous Materials Section 3.10, Land Use
6. Provide notice so residents know when they can review and comment on the document.	Section 1, Introduction
7. The EIR should address job creation for those outside of Ponderosa.	Section 3.13, Population and Housing
8. Will the project really not have to pay school fees?	Section 3.14, Public Services
9. There is an almond farmer to the west of Project Area. What are the effects of dust and other farming operations? The Right to Farm Ordinance protects his operation, but perhaps this should be disclosed as part of a covenants, conditions and restrictions (CC&Rs).	Section 3.3, Air Quality and Greenhouse Gas Emissions
10. The resident on the east side of the property currently enjoys views across the project site. She has a 3-foot fence, and is concerned about the proposed 8 foot wall.	Section 3.1, Aesthetics
11. What are the noise impacts from train traffic in the early morning and night? Are there any noise implications from gravel pits?	Section 3.10, Noise
12. There is concern related to the potential for Valley Fever related to dust during construction.	Section 3.3, Air Quality and Greenhouse Gas Emissions
13. There should be a turn lane in and out of the project site on Valpico.	Section 3.14, Transportation
14. What percentage of home power usage would PV solar offset?	Comment does not address a specific environmental issue.
15. There should be a bike lane and sidewalks along Valpico.	Section 3.14, Transportation
16. How is the age restriction of 55 and older regulated?	Comment does not address a specific environmental issue.
17. Include a discussion of annexation criteria to determine how many homes should be annexed.	Section 2, Project description
18. The EIR should evaluate only project effects on the environment and not the effects of the environment on the project.	Comment does not address a specific environmental issue but applies to every issue in the EIR.

1.2.1 - Environmental Issues Determined not to be Significant

Subsequent to the release of the NOP, the Office of Planning and Research finalized the checklist language for the addition of Tribal Cultural Resources. However, this topical area was determined not to be significant. An explanation of why this area is determined not be significant is provided in Section 6.1, Effects Found not to be Significant. The topical area is as follows:

- Tribal Cultural Resources

Certain subjects with various topical areas were determined not to be significant. Other potentially significant issues are analyzed in these topical areas; however, the following issues are not analyzed:

- Scenic Resources (Section 3.1, Aesthetics)
- Forest Land Zoning (Section 3.2, Agriculture)
- Forest Lands (Section 3.2, Agriculture)
- Septic or Alternative Wastewater Disposal System (Section 3.6, Geology)
- Exposure of Schools to Hazardous Materials or Emissions (Section 3.8, Hazards and Hazardous Materials)
- Private Airstrips (Section 3.8, Hazards and Hazardous Materials)
- Wildland Fires (Section 3.8, Hazards and Hazardous Materials)
- 100-Year Flood Hazards (Section 3.9, Hydrology and Water Quality)
- Levee or Dam Failure (Section 3.9, Hydrology and Water Quality)
- Seiches, Tsunamis, or Mudflows (Section 3.9, Hydrology and Water Quality)
- Loss of Mineral Resources of Local Importance (Section 3.15, Mineral Resources)
- Private Airstrips Noise Levels (Section 3.12, Noise)

An explanation of why each issue is determined not to be significant is provided in Section 6.1, Effects Found not to be Significant.

1.2.2 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that required further analysis in the EIR. These sections are as follows:

- Aesthetics, Light, and Glare
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Transportation and Traffic
- Utilities and Service Systems

1.3 - Organization of the EIR

This Draft EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and Reporting Program, in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.
- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Section 2: Project Description.** This section includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Section 3 are as follows:
  - **Section 3.1—Aesthetics:** Addresses the potential visual impacts of development intensification and the overall increase in illumination produced by the project.
  - **Section 3.2—Agriculture:** Addresses the potential for conversion of Important Farmland to non-agricultural use and forest land to non-forest use.
  - **Section 3.3—Air Quality:** Addresses the potential air quality impacts associated with project implementation, as well as consistency with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts.
  - **Section 3.4—Biological Resources:** Addresses the project's potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
  - **Section 3.5—Cultural Resources:** Addresses potential impacts on historical resources, archaeological resources, paleontological resources, and burial sites.
  - **Section 3.6—Geology and Soils:** Addresses the potential impacts the project may have on soils and assesses the effects of project development in relation to geologic and seismic conditions.
  - **Section 3.7—Greenhouse Gas Emissions:** Addresses the potential impacts of the emissions of greenhouse gases associated with project implementation.

- **Section 3.8—Hazards and Hazardous Materials:** Addresses the potential for the presence of hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health.
- **Section 3.9—Hydrology and Water Quality:** Addresses the potential impacts of the project on local hydrological conditions, including drainage areas, and changes in the flow rates.
- **Section 3.10—Land Use and Planning:** Addresses the potential land use impacts associated with division of an established community and consistency with the City of Tracy General Plan and San Joaquin County General Plan; discusses potential impacts of the proposed annexation and relevant LAFCO policies.
- **Section 3.11—Mineral Resources:** Addresses the potential loss of mineral resources of statewide or regional importance.
- **Section 3.12—Noise:** Addresses the potential noise impacts during construction and at project buildout from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.
- **Section 3.13—Population and Housing:** Addresses the potential for growth inducement.
- **Section 3.14—Public Services:** Addresses the potential impacts upon public services, including fire protection, law enforcement, schools, parks, and recreational facilities.
- **Section 3.15—Recreation:** Addresses the potential for physical deterioration of recreation facilities.
- **Section 3.16—Transportation and Traffic:** Addresses the impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.
- **Section 3.17—Utilities and Services Systems:** Addresses the potential impacts upon service providers, including fire protection, law enforcement, water supply, wastewater, solid waste, and energy providers.

- **Section 4: Cumulative Impact Analysis.** This section discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects.

- **Section 5: Alternatives to the Proposed Project.** This section compares the impacts of the proposed project with three land-use project alternatives: the No Project/No Build, the Reduced Density Alternative, and the Tracy Village Development Project-Only Alternative. An environmentally superior alternative is identified.

- **Section 6: Other CEQA Mandated Sections:** This section contains analysis of the topical sections not addressed in Section 3. This section also provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. In addition, the proposed project's energy demand is discussed.

- **Section 7: Persons and Organizations Consulted.** This section also contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR.

- **Section 8: List of Preparers.** This section contains a full list of the authors who assisted in the preparation of the Draft EIR, by name and affiliation.

- **Section 9: References.** This section contains a full list of references that were used in the preparation of this Draft EIR.

- **Appendices.** This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which has been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include but are not limited to:

- City of Tracy General Plan and General Plan EIR
- San Joaquin County General Plan and General Plan EIR
- City of Tracy Municipal Code
- San Joaquin County Municipal Code
- City of Tracy 2015 Urban Water Management Plan
- 2009 San Joaquin County Airport Land Use Compatibility Plan

These documents are specifically identified in Section 8 References, of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), the City of Tracy and San Joaquin County General Plan, City of Tracy 2015 Urban Water Management Plan, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at the City of Tracy at the address shown in Section 1.6 below.

1.5 - Documents Prepared for the Project

The following technical studies and analyses were prepared for the proposed project:

- Land Evaluation and Site Assessment Model
- Air Quality/Greenhouse Gas Analysis
- Biological Resources Assessment
- Phase I Cultural Resources Assessment
- Noise Analysis
- Traffic Impact Study
- Review of Applicant-prepared Studies
  - Water Supply Assessment
  - Phase I Environmental Site Assessment
  - Preliminary Geotechnical Report

1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the City of Tracy filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section

21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the City of Tracy Development and Engineering Services and the Tracy Branch Library. The address for each location is provided below:

City of Tracy
Development and Engineering Services
333 Civic Center Plaza
Tracy, CA 95376
Hours: Monday–Thursday: 8:00 a.m. to 6:00 p.m.
Friday: 8:00 a.m. to 5:00 p.m. (closed alternate Fridays)

Tracy Branch Library
20 E Eaton Avenue
Tracy, CA 95376
Hours: Monday: 10:00 a.m. to 8:00 p.m.
Tuesday: 10 a.m. to 7:00 p.m.
Wednesday: 1:00 p.m. to 6:00 p.m.
Thursday: 10:00 a.m. to 8:00 p.m.
Friday and Saturday: 10 a.m. to 5:00 p.m.
Sunday 12:00 p.m. to 5:00 p.m.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Victoria Lombardo, Senior Planner
Development and Engineering Services
333 Civic Center Plaza
Tracy, CA 95376
Phone: 209.831.6428
Email: victoria.lombardo@ci.tracy.ca.us

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the City of Tracy Planning Commission on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

SECTION 2: PROJECT DESCRIPTION

This Environmental Impact Report serves as the environmental review for the entirety of the Tracy Village Specific Plan (TVSP), which consists of two separate components. The TVSP includes both the Tracy Village Development Project (TVDP) and the Residential Annexation in the Specific Plan Project Area (Project Area). The EIR distinguishes the impacts of these two project components, so that both the City and the San Joaquin Local Agency Formation Commission can consider the effects of—and, if deemed appropriate, take CEQA and related entitlement action on—each component separately. The names for the two parts of the Specific Plan are used as follows in this document:

- Tracy Village Development Project—up to 600 active adult residential homes on 134 acres
- Residential Annexation Area—the additional 42 lots being considered for annexation by the City of Tracy to rationalize the city limits
- Project Area—refers to both the Tracy Village Development Project and the Residential Annexation Area (the Specific Plan)

2.1 - Tracy Village Development Project

The TVDP consists of a 600-unit active adult residential development on approximately 134 acres, currently located in San Joaquin County and within the City of Tracy sphere of influence.

2.2 - Residential Annexation Area

In addition to the annexation of the TVDP site, the City also seeks annexation of 42 residential lots to the north and west, fronting Corral Hollow and Valpico Roads (Residential Annexation Area).

2.3 - Project Location and Setting

2.3.1 - Location

The proposed TVDP is located on approximately 134 acres in unincorporated San Joaquin County, adjacent to the Tracy city limits (Exhibit 2-1). The boundaries are located on the U.S. Geological Survey (USGS) Tracy 7.5-minute quadrangle in the northwest quadrant of Section 5, Township 3 South, Range 5 East of the Mt. Diablo Meridian (Assessor's Parcel Number 244-04-001). The TVDP site is located on the south side of West Valpico Road, just east of Corral Hollow Road. Corral Hollow Road is the main north-south collector on the west side of the City of Tracy, and Valpico Road is an important east-west collector in the southern portion of the City of Tracy.

As shown in Exhibit 2-2, the Residential Annexation Area is located along Corral Hollow and Valpico Roads (Assessor's Parcel Numbers 244-030-001 through -021 and Assessor's Parcel Numbers 242-050-001 through -021). The 42 lots that make up the Residential Annexation Area include three vacant lots and 39 single-family detached residences on lot sizes ranging from approximately 0.35 acre to 2.2 acres. All residences are currently served by private wells and septic systems, and all parcels have direct driveway access connections to either Corral Hollow Road or Valpico Road.

Surrounding Land Uses

North

The area north of the Project Area consists of open space. The western portion of the open space area is approved for development of homes along Corral Hollow Road.

East

Residential-low land uses form the eastern boundary of the Project Area. Small residential parks are scattered through the residential uses. Monticello Elementary School is also located east of the Project Area, behind the residential uses.

South

Residential-low land uses form the southern boundary of the Project Area. Small residential parks are scattered through the residential uses. Anthony Traina Elementary School and Jefferson Middle School are also located south of the Project Area, behind the residential uses.

West

Agricultural/vacant land and a church are located on the western edge of Corral Hollow Road. Land to the southwest of the Project Area is approved for residential development on Corral Hollow Road and West Linne Road.

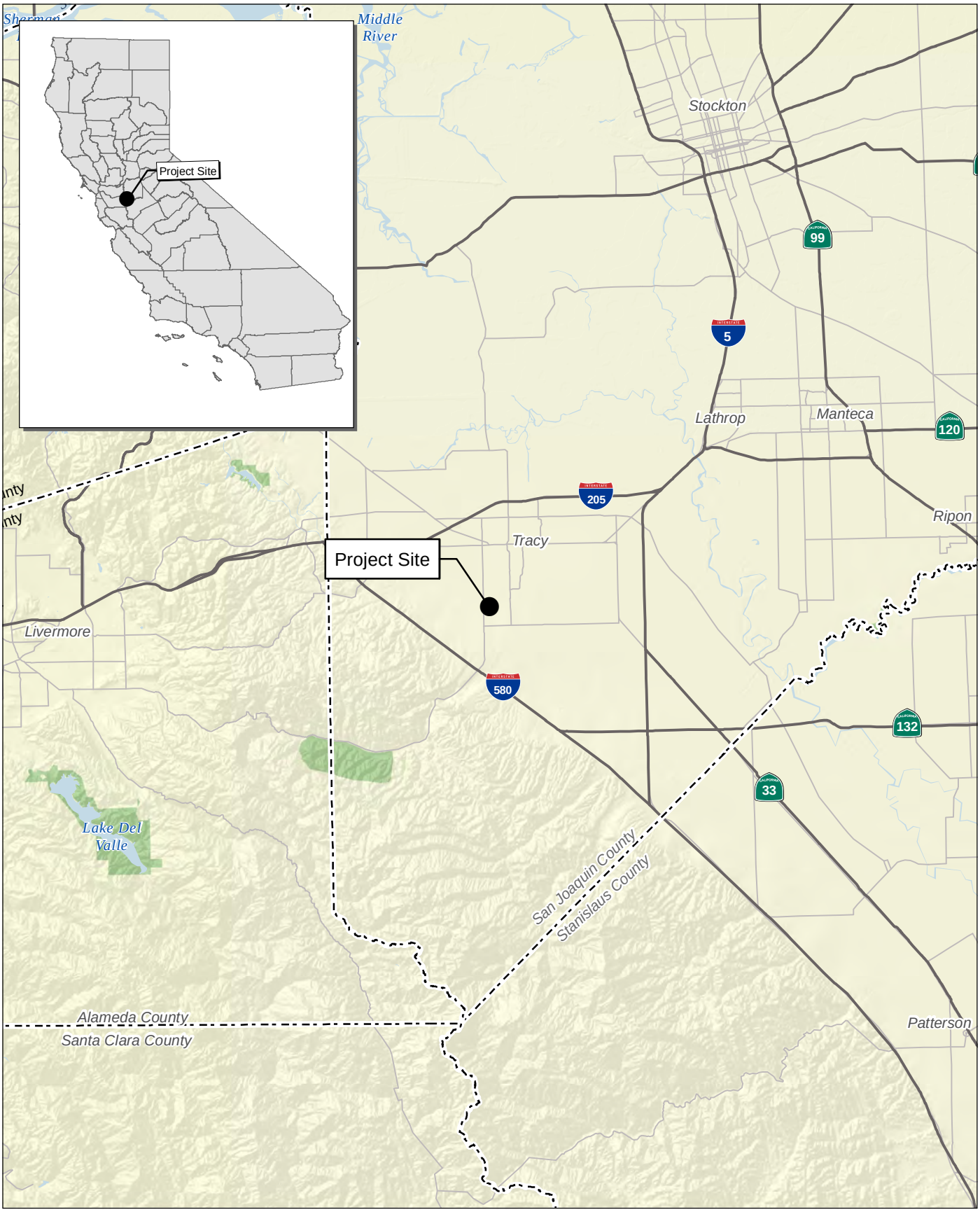
2.3.2 - Land Use Designations

Tracy Village Development Project

The TVDP site is designated "Resource Conservation (OS/RC)" by the County of San Joaquin General Plan and zoned "Agriculture-Urban Reserve (AU-20)" by the San Joaquin County Zoning Ordinance. The TVDP site is designated "Active Adult Residential" by the City of Tracy General Plan, a non-binding designation given that the land is currently only in the City's Sphere of Influence. This General Plan designation was enacted by initiative by Tracy voters on December 8, 2015, and provides an allotment of 600 Active Adult Residential Units for this location, excluding it from the provisions of the Tracy Growth Management ordinance. The full language of the initiative is contained In Appendix K of this EIR. Exhibit 2-3 and Exhibit 2-4 show the current land use and zoning for the TVDP as designated by the San Joaquin County General Plan and zoning code as well as the Land Use Designations as designated by the City of Tracy General Plan. The TVDP site is located within the Tracy Municipal Airport Influence Area, within which the southern portion of the site (within Zone 7) is the "Traffic Pattern" zone.

Residential Annexation Area

The Residential Annexation Area is located in San Joaquin County but within the City of Tracy Sphere of Influence. All 42 properties are designated Low Density Residential (R/L) by both the San Joaquin and City of Tracy General Plans, as well as the San Joaquin County zoning code. Exhibit 2-3 and Exhibit 2-4 show the current land use and zoning for the Residential Annexation Area and surrounding areas as designated by the San Joaquin County General Plan and zoning code, as well as the land use designations assigned by the City of Tracy General Plan and zoning code. The City's designations are non-binding until the annexation occurs.



Source: Census 2000 Data, The CaSIL, FCS GIS 2016.

FIRSTCARBON SOLUTIONS™

5 2.5 0 5 Miles

Exhibit 2-1
Regional Location Map

THIS PAGE INTENTIONALLY LEFT BLANK



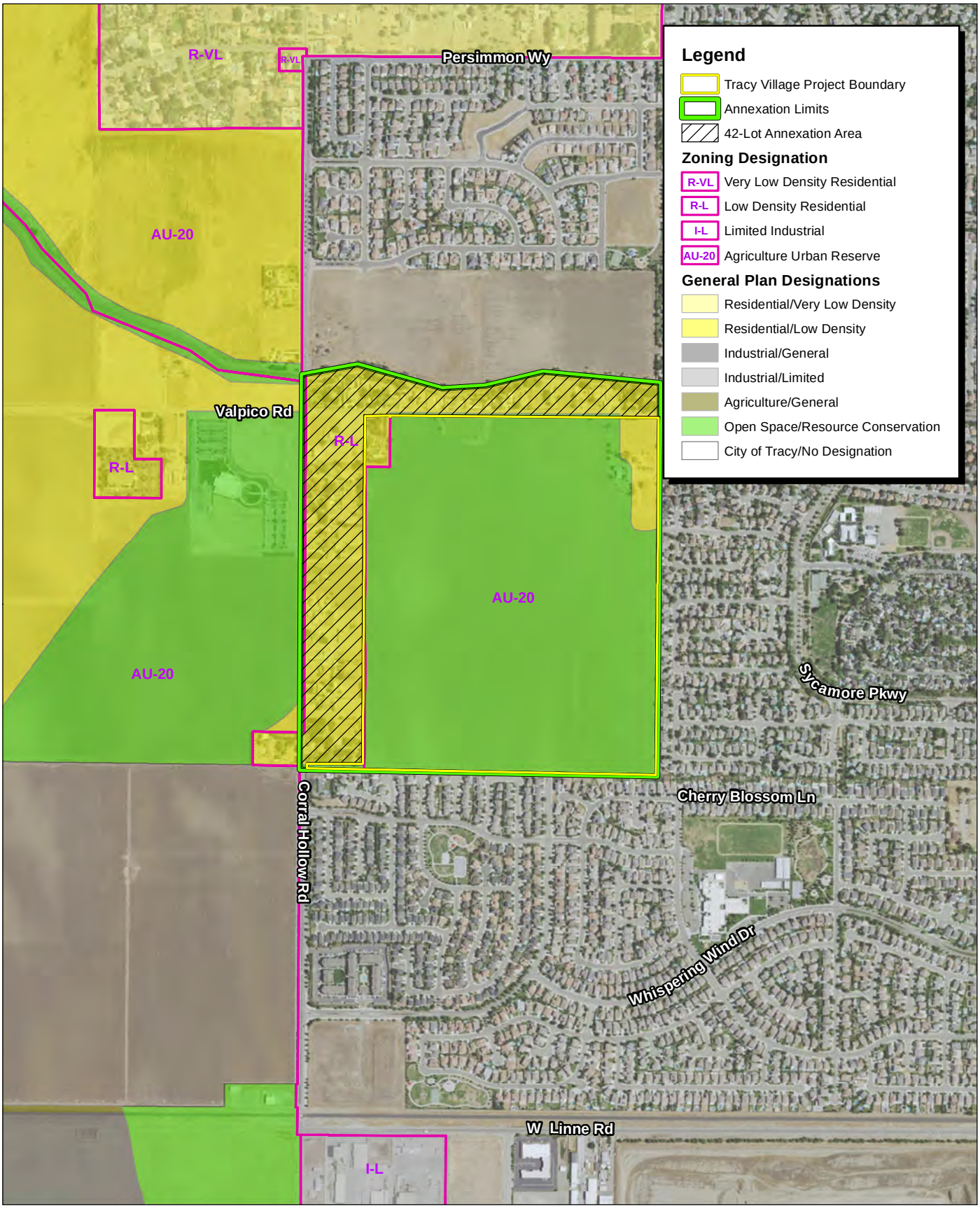
Source: ESRI Imagery, 2015

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 2-2
Local Vicinity Map
Aerial Base

THIS PAGE INTENTIONALLY LEFT BLANK



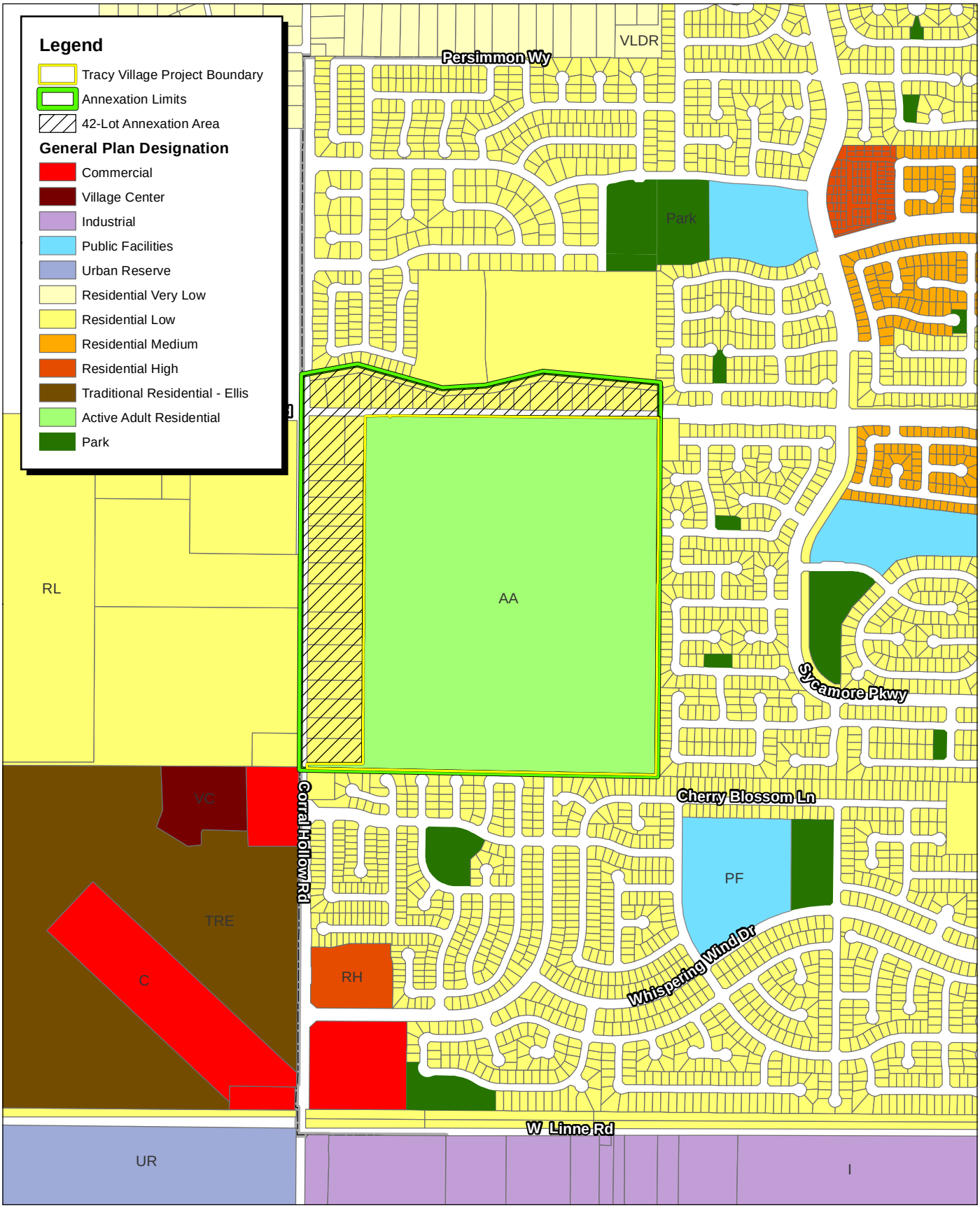
Source: San Joaquin County, 2016: ESRI Imagery, 2015

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 2-3
County General Plan and Zoning Designations

THIS PAGE INTENTIONALLY LEFT BLANK



Source: San Joaquin County, 2016: ESRI Imagery, 2015

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 2-4
City of Tracy
Proposed General Plan Designations

THIS PAGE INTENTIONALLY LEFT BLANK

2.4 - Project Characteristics

2.4.1 - Residential Annexation Area

The City of Tracy is the proponent for the Residential Annexation Area. The majority of the 42 lots are developed with detached single-family residences that are served by private wells and septic systems. Connection to city water and sewer systems would be voluntary, unless new residential development is proposed by the property owners.

The Residential Annexation Area would be pre-zoned as Residential Estate, which would most closely match the existing zoning and land use designation and reflect existing land uses and lot sizes. The intent is to annex the 42 properties to provide a rational boundary for the City following annexation of the TVDP. No development is proposed for the Residential Annexation Area, and connection to city water and sewer systems would be voluntary, unless new residential development is proposed by a property owner. There is no plan for redevelopment of this area, and any development proposal would be examined by the City at the time of application for development review and environmental review, if necessary.

2.4.2 - Tracy Village Development Project

The project proponent for the TVDP is Ponderosa Homes. The application to the City includes a Specific Plan, annexation, pre-zoning, and a tentative subdivision map. The TVDP is proposed as an active adult, gated, and age-restricted community consisting of up to 600 single-family detached residential lots that would support single-family dwelling units ranging from 1,350 square feet to 3,000 square feet (Exhibit 2-5). Measure K, approved by Tracy voters in December 2015, enacted changes to the Tracy Municipal code and General Plan which provided an allotment of 600 Active Adult Residential Units on the project site. The TVDP would reflect the City of Tracy General Plan land use designation of Active Adult Residential. The Specific Plan serves as pre-zoning to meet the requirements for future development (Exhibit 2-6). The TVDP would comply with all applicable development regulations (Table 2-1).

The project would feature three man-made lakes totaling approximately 10.5 acres and a community recreation center with pool, spa, bocce courts, open space, and a community building. The project also includes a 3.2-acre park; a 0.5-acre secondary recreation area containing a pool, spa, and open space; and a dog park.

Table 2-1: Development Regulations

Lot Sizes	4,370–4,600-Square-Foot Lots		≥ 5,000-Square-Foot Lots		
Min. Lot Size (square feet)	4,370	4,600	5,225	5,500	6,000
Min. Lot Width (feet)	46	46	55	55	60
Min. Lot Depth (feet)	95	100	95	100	100
Setbacks					
Min. Front—Porch	10 feet				

Table 2-1 (cont.): Development Regulations

Lot Sizes	4,370–4,600-Square-Foot Lots	≥ 5,000-Square-Foot Lots	
Min. Front—1st Floor Living	15 feet		
Min. Front—2nd Floor Living	20 feet		
Min. Front—Front Facing Garage	20 feet		
Minimum Front—Side Facing Garage	—	—	10 feet
Minimum Side—Internal	5 feet		
Minimum Side—Street	10 feet		
Minimum Rear	10 feet Minimum, Average 12 feet		
Heights			
Homes	35 feet		
Gate House	20 feet		
Walls and Fences			
Community Wall Height[1]	7 feet or consistent with acoustical requirements		
Good Neighbor Fence Height	6 feet		
Front Yard Height	3.5 feet		
Street Side; Side Yard	Fences shall be set back 5 feet from back of sidewalk		
Lot Coverage[2]			
—	60%	60%	
Recreation Center Requirements			
Minimum Setbacks	10 feet		
Maximum Height	35 feet		
Vehicular Parking	45 parking spaces on-site; additional parking spaces will be provided on-the street with dimensions of 9 feet wide by 18 feet 6 inches long		
Compact stalls	30% of parking may be compact with dimensions of 8 feet wide by 16 feet long		

Notes:
[1] Measured from top of wall to top of retaining wall, unless a sound report requires a higher fence.
[2] Shade structures/California rooms shall not be included when calculating maximum lot coverage or average setback.

2.4.3 - TVDP Components

Housing

Up to 600 single-family lots would be located in five distinct neighborhoods of varying lot sizes. All of the homes would be single-level to accommodate ease of access and aging-in-place, with an optional second floor living space. The proposed lot sizes and square footage ranges are shown in Table 2-2 and illustrated in Exhibit 2-7.

Table 2-2: Lot Types

Approximate Lot Size	Approximate Number of Units	Housing Square Footage (Approximations)
6,000 sf	104	2,400 to 3,000
5,500 sf	98	2,200 to 2,800
5,335 sf	110	1,800 to 2,350
4,600 sf	182	1,350 to 1,850
4,370 sf	106	1,450 to 1,850
Note: sf = square feet		

Lakes

The TVSP would feature a man-made lake system to provide a focal aesthetic feature for the community, serve as the primary drainage conveyance and peak attenuation/storage facility, and provides water quality treatment for urban stormwater runoff.

This lake system would consist of a series of three lakes with the incorporation of wetlands to serve as natural filtration systems. During periods of abundant precipitation, lake water levels would be reduced to accommodate stormwater flows. Reclaimed water, once available to the site, would supply the lake system and water would be pumped into the highest lake to then flow to the lowest lake. A solar- and natural gas-powered co-generation facility would supply power to this water pumping system and would simultaneously provide a continuous heat source for the community pool. The solar and natural gas-powered co-generation facility could also provide electrical power for common use areas.

Recreation/Open Space

The TVDP would include a full-service community center, which will serve the social and recreational needs of Tracy Village residences. The community center could include amenities such as a pool and spa, bocce courts, open space/park areas, a pet park, covered and open outdoor seating, a putting green, a community building, and other potential uses. The community building would be centralized at the heart of the community center and could include casual living areas, a kitchen for daily and event use, a coffee bar, a library, a multi-media room, meeting rooms for social groups, exercise facilities, and bathrooms. In addition to the community center, the TVDP may also provide smaller neighborhood recreational areas.

The TVDP would also include a walking promenade along the circular main project roadway, which surrounds the lake system. This walking path would consist of an 8-foot-wide concrete pathway, landscaping, and seating areas. Pedestrian and bicycle trails will connect to pedestrian and bicycle facilities on Valpico Road and Middlefield Drive.

Infrastructure

Sanitary Sewer

There is an existing 18-inch sanitary sewer main in Corral Hollow Road near the intersection of Parkside Drive that flows northerly in Corral Hollow Road increasing in size and eventually reaching the City of Tracy Wastewater Treatment Facility. The City's Wastewater Master Plan currently proposes to extend the existing sewer line down Corral Hollow Road, from Parkside Drive to West Linne Road. The TVDP's proposed internal sanitary sewer network would collect effluent from the tract into the main line to be constructed in Valpico Road. From there, the TVDP effluent would flow to the Master Plan proposed 21-inch Corral Hollow trunk line and then to the City of Tracy Wastewater Treatment Facility.

Water

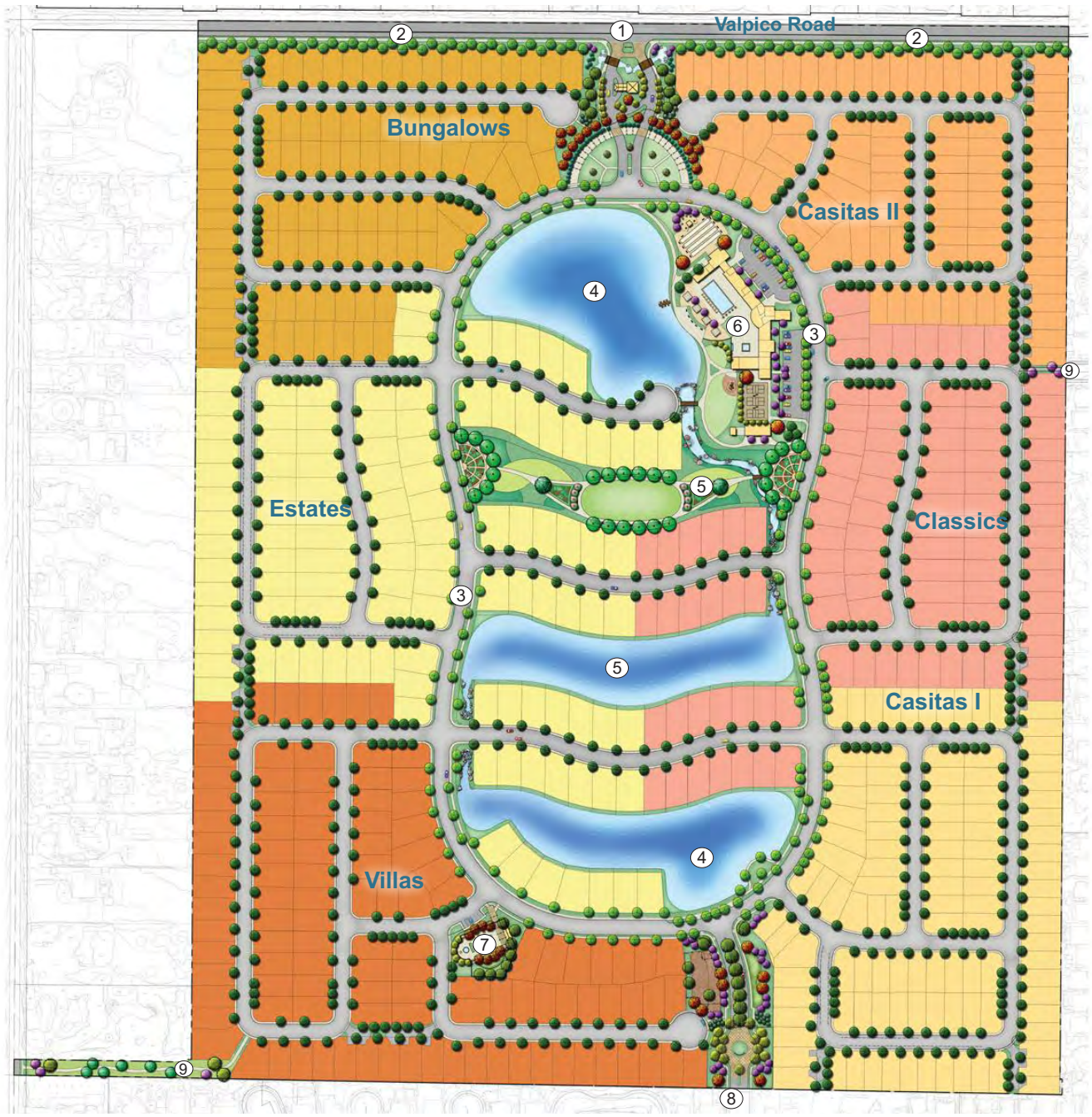
The TVDP is located in Pressure Zone Two of the Tracy municipal water system, which serves areas between 75- and 150-foot elevations. There is an existing 24-inch Zone 2 water main in Corral Hollow Road and an existing 16-inch water main in Valpico Road. There are also existing 12-inch water mains in Middlefield Drive and Bluegrass Lane on the south and east side of the TVDP that extend to the site.

The TVDP would extend the existing 12-inch water main at Middlefield Drive through Tracy Village with a connection to the existing 16-inch water main in Valpico Road. In addition, the water main would connect to the existing 12-inch water main in Bluegrass Lane. The City plans to develop a recycled water system, which, once completed, is expected to be made available to the project site. The Tracy Recycled Water Project Mitigated Negative Declaration was adopted by City Council on February 7, 2017 by Resolution Number 2017-020. There would be four Pipeline Branches, designated A-D. Pipeline Branch D would be located along Lammers Road. The exact line connection to the TVDP is unknown at this time. However, a probable line connection could be from Lammers Road to Valpico Road. There is an existing privately-owned groundwater well located near the northwest corner of the TVDP site.

Stormwater

The TVDP storm drain improvements include a 36-inch storm drain main in Valpico Road from Tracy Village to the Westside Channel as identified in the City-wide Storm Drain Master Plan. However, because of the flat terrain, existing improvements and the shallow depth (5 feet to 6 feet) of the Westside Channel, a storm drain pump station and force main may be required to convey stormwater runoff from Tracy Village to the Westside Channel. Because of the limited capacity of the Westside Channel, only controlled flows of stormwater runoff would be allowed into the Westside Channel.

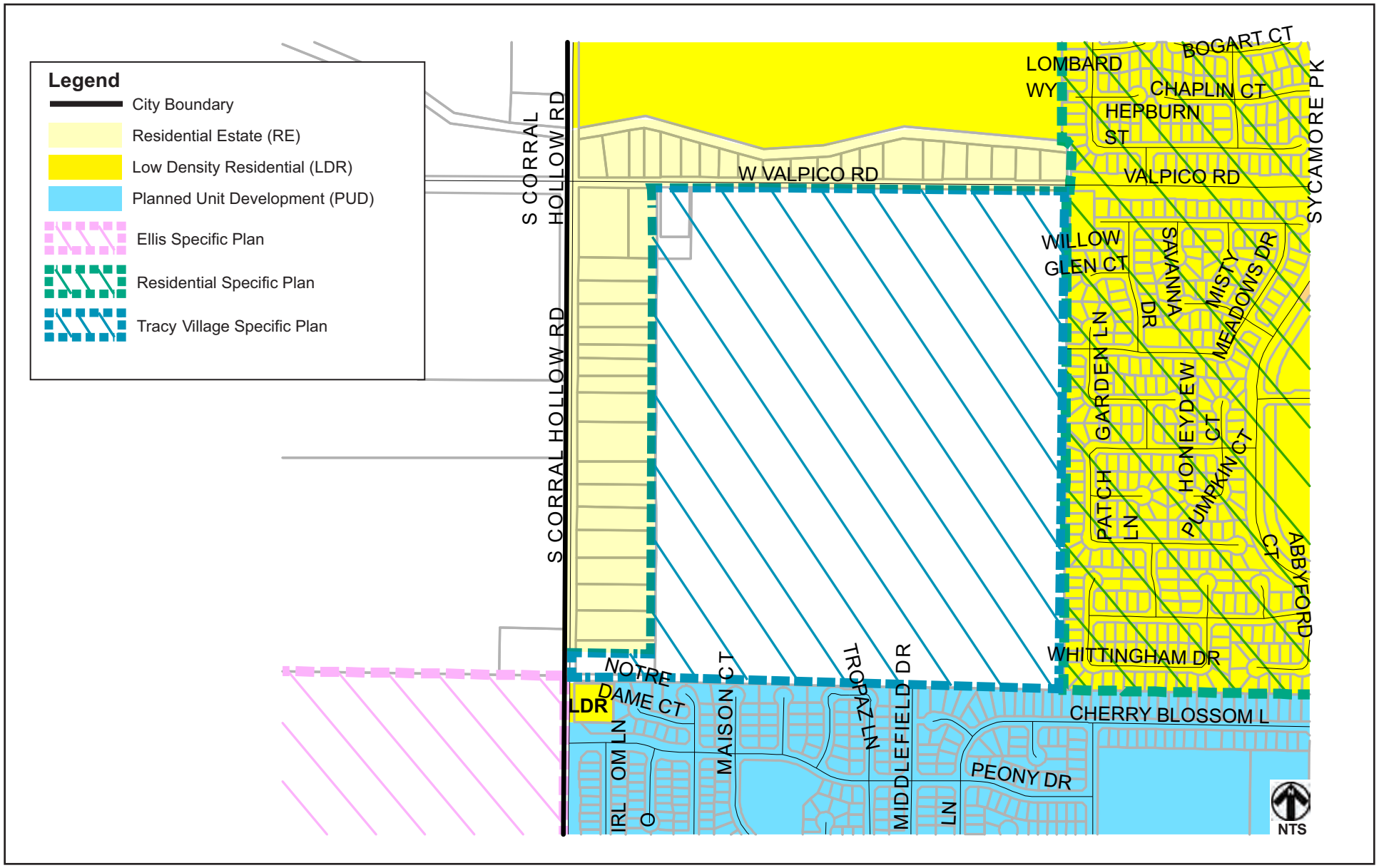
The primary stormwater treatment control measure for the TVDP would be the on-site lake system. All stormwater runoff from the project will drain to the lake system, where pumps would circulate it on a continuous basis. This system will include media filters to treat the water and remove pollutants as it is being circulated. In the case where the on-site lake system is not viable or is not developed as planned, alternative stormwater treatment control measures shall be required that are complaint with the 2015 Multi-Agency Post-Construction Stormwater Standards.



FIRSTCARBON SOLUTIONS™

Exhibit 2-5
Proposed Site Plan

THIS PAGE INTENTIONALLY LEFT BLANK

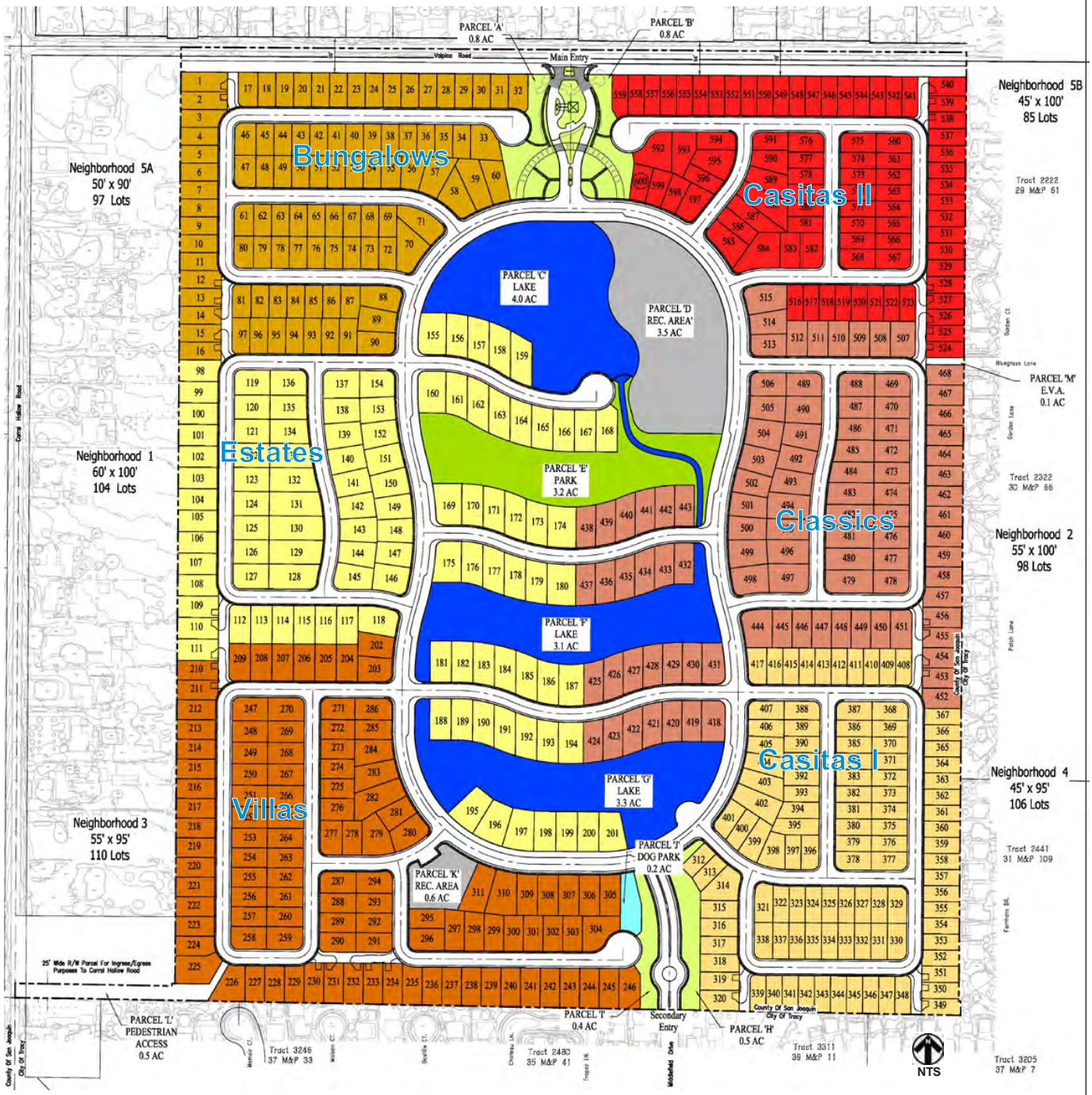


Source:

FIRSTCARBON SOLUTIONS™

Exhibit 2-6
Proposed Zoning

THIS PAGE INTENTIONALLY LEFT BLANK



FIRSTCARBON SOLUTIONS™

Exhibit 2-7
Proposed Land Use

THIS PAGE INTENTIONALLY LEFT BLANK

Solid Waste

Solid waste from the TVDP will be accommodated at the Tracy Materials Recovery Facility (MRF transfer facility), and would then be hauled to the County Foothill landfill east of Tracy. On a designated day, the City's solid waste franchisee (currently Tracy Delta Solid Waste Management, Inc.) will collect and transport solid waste to its disposal facilities.

Utilities

Pacific Gas and Electric Company (PG&E) provides electricity to the TVDP site. Transformers would be located above ground in accordance with PG&E requirements. This aboveground transformer would likely be placed in between the front yards of residential units and screened if possible. Where feasible, PG&E will locate the transformers within the common areas.

PG&E also provides natural gas service to the TVDP site. Although not yet designed, gas pressure regulators will be placed within common areas. However, individual gas meters will be placed in the side yards of each home.

AT&T would provide telephone service. Comcast provides television cable for Tracy and unincorporated areas. It is anticipated that electric, gas, telephone, and cable services to the proposed development will be provided through extension of existing facilities adjacent to the community. Overhead lines located on the north side of Valpico Road are anticipated to be placed underground.

Emergency Services

Fire protection is provided by the Tracy Fire Department, serviced by Fire Station No. 97 located at 595 West Central Avenue, approximately 2 miles from the site.

Police protection is provided by the Tracy Police Department, serviced from its headquarters at 1000 Civic Center Drive approximately 3.5 miles north of the site.

2.5 - Project Objectives

2.5.1 - Applicant Objectives

The objectives of the project as proposed by the applicant of TVSP are to:

- Create a cohesive enclave through architectural and landscape design.
- Provide a desirable community where people will want to live.
- Create a secure environment for Tracy's active adults to live and recreate.
- Promote local residents supporting Tracy businesses and social programs.
- Design a quality community resulting in a distinctive identity and strong sense of place.
- Provide a mix of architectural styles, elements, and attributes that are compatible and reflect the heritage of the region.
- Encourage quality home design.

- Utilize technologies and solar roofs to achieve cost-effective energy use.
- Integrate resource-efficient design, climate-appropriate landscaping, stormwater quality treatment, and products that conserve resources and improve air quality.
- Reduce waste, reinvest back into the community, and minimize impacts on local services.
- Promote a sense of place in the community.
- Promote indoor/outdoor living as a central feature of the neighborhoods and homes.

2.5.2 - City Objectives

- Provide housing opportunities responsive to the needs of the City of Tracy's active adults (age-qualified as defined in the California Civil Code).
- Allow for a cohesive development pattern in this area through the annexation of adjacent existing residential lots with a prezoning of Residential Estate, which would ensure orderly development of the annexation lands based on applicable City development standards and zoning.
- Ensure ability to provide necessary City services to the annexation lands.

2.6 - Intended Uses of This Draft EIR

This Draft EIR is being prepared by the City of Tracy to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed TVDP and Residential Annexation Area. Pursuant to CEQA Guidelines Section 15367, the City of Tracy is the lead agency for most components of the project and has discretionary authority over those components of the project and project approvals. The EIR is also anticipated to be utilized by San Joaquin Local Agency Formation Commission when considering the annexation actions. The Draft EIR is intended to address all public infrastructure improvements and all future development that is within the parameters of the TVDP and Residential Annexation Area.

2.6.1 - Discretionary and Ministerial Actions

Discretionary approvals and permits are required by the City of Tracy for implementation of the project. The project would require the following discretionary approvals and actions, including:

- Specific Plan Adoption
- Annexation and pre-zoning. Final approval action on the annexation would be required by San Joaquin Local Agency Formation Commission.
- Tentative subdivision map
- Final Subdivision Maps

Subsequent ministerial actions would be required for the implementation of the TVDP including issuance of grading and building permits.

2.6.2 - Responsible and Trustee Agencies

A number of other agencies in addition to the City of Tracy will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these agencies and other public agencies, which may be required to grant approvals or coordinate with other agencies, as part of project implementation. These agencies may include, but are not limited to, the following:

- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- California Department of Fish and Wildlife
- California Department of Transportation
- California Public Utilities Commission
- San Francisco Bay Area Regional Water Quality Control Board
- County of San Joaquin
- San Joaquin Local Agency Formation Commission (final action on the annexation)

Actions that are necessary to implement the project that must be taken by other agencies are:

- Annexation of Plan Area into the City of Tracy (San Joaquin Local Agency Formation Commission)
- Airport Land Use Consistency Determination (San Joaquin County)
- Obtain coverage under General Construction Stormwater Permit—State Water Resources Control Board/San Francisco Bay RWQCB.

Issuance of Encroachment Permits for roadway, trail, or utility improvements within facilities under the jurisdiction of the California Department of Transportation (Caltrans), or the County of San Joaquin may also be necessary.

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation, or through subsequent analysis that the proposed project would result in "potentially significant impacts." Sections 3.1 through 3.17 discuss the environmental impacts that may result with approval and implementation of the proposed project.

Issues Addressed in this EIR

The following environmental issues are addressed in Section 3:

- Aesthetics
- Agriculture
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and checklist; state, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

Active Adult Land Use Assumptions for Analysis

The Tracy Village Development Project (TVDP) component of the Tracy Village Specific Plan (TVSP) is a master-planned, age-qualified community that includes up to 600 single-family detached homes. A homeowner's association, which establishes separate, non-city requirements for ownership and

eligibility, would manage the community. All of the homes planned for the TVDP would provide single-level living for aging-in-place. As described in the General Plan Designation language adopted by Tracy residents in December 2015 in Measure K (Appendix K), an Active Adult residential use would result in1.75 persons per household, which is fewer persons per household and lower generation rates than typical low-density single-family housing. A typical household size of 2.0 persons per household was used for the proposed project for many of the environmental issues analyzed in this EIR, as a worst-case scenario. Table 3-1 provides a comparison between the land use assumptions for Active Adult and Low Density Residential land uses. The applicant and the City have agreed that the TVDP would remain an Active Adult residential community in perpetuity. This will be ensured by covenants in the deeds to the homes in the development. Therefore, the generation rates shown in Table 3-1 for Active Adult were used throughout this EIR. The land use assumptions for low density residential are provided for informational purposes. As explained below, where the impacts from the annexation of the Residential Annexation Area of the TVSP could potentially differ from the impacts of the TVDP, impacts are analyzed using typical single family residential use generation rates.

Table 3-1: Active Adult and Low Density Residential Land Use Assumptions for Analysis

Environmental Issue			Person Per Household		Generation Rate	
			Active Adult	Low Density Residential	Active Adult	Low Density Residential
Air Quality and Greenhouse Gas Emissions			2.0	—	2190 daily trips	—
Hydrology and Water Quality			—	—	200 gpd/du[1,2]	429 gpd/du[1,3]
Land Use and Planning			2.0	3.44[4]	—	—
Population and Housing			2.0	3.44[4]	—	—
Public Services			2.0	3.44[4]	—	—
Recreation			2.0	3.44[4]	—	—
Transportation and Traffic		AM Peak Hour	—	—	131	329
		PM Peak Hour			170	628
Utilities and Service Systems	Water Demand		—	—	200 gpd/du[1,2]	429 gpd/du[1,3]
	Wastewater Demand		—	—	160 gpd/capita[5]	264 gpd/capita[5]
	Energy Demand	Electricity	—	—	6,888 kWh/household	6,888 kWh/household
		Natural Gas	—	—	40,000 cubic feet/household	40,000 cubic feet/household

Notes:
1 gallons per day/dwelling unit
2 The proposed project would include an age-qualified community, which will have fewer residents per dwelling unit than conventional residential development and consequently have less demand for water. The Water Supply Assessment Study prepared by West Yost Associates in 2017 estimates 2.0 residents per dwelling unit.
3 Based on unit water demand factors established in the 2012 Citywide Water System Master Plan.
4 Based on the persons per household in the City of Tracy from the California Department of Finance.
5 The wastewater generation factor for age-qualified residential is based on a per capita flow rate of 80 gpd/capita x 2 residents per dwelling unit.

Impact Analysis and Mitigation Measure Format

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AES-1:	**An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement. In this document, if the impacts from the TVDP differ significantly from the impacts of the Residential Annexation Area, two separate impact discussions corresponding to the two portions of the TVSP are presented.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AES-1 Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact it is associated with (**AES-1** in this example); mitigation measures are numbered sequentially.

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AES	Aesthetics
AG	Agriculture
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LUP	Land Use and Planning
MIN	Mineral Resources
NOI	Noise
POP	Population and Housing
PS	Public Services
REC	Recreation
TRANS	Transportation and Traffic
USS	Utilities and Service Systems

3.1 - Aesthetics

3.1.1 - Introduction

This section describes the existing aesthetics, light, and glare setting and potential effects from implementation of the Tracy Village Development Project (TVDP) on visual resources. The Residential Annexation Area would be annexed into the City of Tracy and the annexation would not change any existing land use activities that would impact aesthetics. Therefore, the Residential Annexation Area is not analyzed in this section. Descriptions and analyses in this section are based on site reconnaissance by FirstCarbon Solutions (FCS) personnel as well as review of the City of Tracy General Plan and the San Joaquin County General Plan. Because this document describes both the proposed TVDP and the area proposed for annexation adjacent to the proposed project, descriptions of the existing setting are for the entire area unless stated otherwise.

3.1.2 - Environmental Setting

Visual Character

Regional Setting

The TVDP is located east of the Mount Diablo Meridian, adjacent to the Tracy city limits, in the unincorporated area of San Joaquin County. The area is surrounded by the Carnegie Hills to the east, residential uses to the north and east, and the Tracy Municipal Airport to the south. The Project Area is located in the Central Valley of California between the Sierra Nevada Mountains to the east and the Diablo Range to the west. Substantial portions of the valley floor are developed with residential, agricultural, and industrial facilities.

Tracy Village Development Project

The TVDP is relatively flat and comprises cultivated fields, with annual grassland and scattered native wild scrubs of different varieties along the margins. There are trees scattered around various portions of the northern and eastern limits of the TVDP. A small portion of the agricultural land, located in the northern section of the TVDP, is separated from the larger agricultural area by an old dirt service road and berm, forming a detention basin. An irrigation pump was noted at this location. The northwest corner of the site is developed with another residence and associated outbuildings, surrounded by trees.

Surrounding Land Uses

The following is a summary of the visual attributes of land uses surrounding both the TVDP and the Residential Annexation Area. Exhibit 3.1-1 illustrates the surrounding land uses.

North

The area north of the TVDP site consists of residences within the Residential Annexation Area along Valpico Road, bounded by an irrigation canal. Behind these houses and north of the irrigation canal is an open area, the western portion of which is under development for a housing tract along Corral Hollow Road. Tract housing and a public park extend north of the entire area.

East

Low-density, single-family housing tracts form the eastern boundary of the TVDP site, separated in most locations by rear yard fencing. Small parks are scattered through the residential uses. Monticello Elementary School is also located east of the TVDP behind the residential uses. A similar pattern of low-density tract housing continues east of the Residential Annexation Area, north of Valpico Road.

South

Low-density, single-family housing tracts form the southern boundary of the TVDP, separated in most locations by rear yard fencing. Small residential parks are scattered through the residential uses. Anthony Traina Elementary School and Jefferson Middle School are also located south of the project site behind the residential uses. The TVDP site, an open field recently under cultivation, is located south and east of the Residential Annexation Area.

West

Low-density, single-family houses on irregular lots within the Residential Annexation Area form the western boundary of the TVDP site. They are semi-rural in character, varied in design and age, with vestiges of agricultural uses such as small cultivated or open fields, outdoor equipment storage, and outbuildings intermixed with the houses. Agricultural/vacant land and a church are located on the western edge of Corral Hollow Road. Land to the southwest of the TVDP appears to be graded for development on Corral Hollow Road and West Linne Road.

Scenic Resources

The City of Tracy is divided into several distinct segments that give the City its "Hometown Feel." These segments include Downtown, I-205 Regional Commercial Area, Traditional Residential Neighborhoods, Contemporary Residential Subdivisions, Retail and Commercial Area, the Industrial Area, and the Agricultural and other undeveloped lands. A visual landmark or entryway, as defined by the Tracy General Plan, is an element by which people orient themselves and can help create a unique identity for an area. Tracy is at the crossroads of three Interstate highways. Examples of visual landmarks include statues, major works of public art, historic buildings, water towers, significant landscaping or land forms, and other easily identifiable features.

The Visual Quality section of the 2005 Tracy General Plan EIR identified the following views as part of the Tracy Planning Area:

- **Views of the Diablo Range**. Rising from the Southwest portion of the Tracy Planning Area, this range extends from near sea level to 1,652 feet and provides a visual barrier between the Central Valley and the San Francisco Bay Area. Generally, the eastern slopes visible from Tracy have not been developed and contain sporadic tree groupings.
- **Natural landscapes surrounding the Paradise Cut, Old River, and Tom Paine Sloughs**. Located on the North side of the Tracy Planning Area, these landscapes provide streamside vegetation that provide visual contrasts as they run through the relatively flat agricultural lands.



Legend

- City Boundary
- TVSP area
- Annexed area
- Single Family Residential
- Multi-Family Residential
- Schools and Churches
- Parks
- Retail
- Office
- Industrial
- ACE Transit Stop

FIRSTCARBON SOLUTIONS™

Exhibit 3.1-1
Surrounding Land Use

THIS PAGE INTENTIONALLY LEFT BLANK

- **Expansive Agricultural Lands**. The surrounding Sphere of Influence (SOI) and Planning Area contain agricultural lands that are used for row crops and grazing.
- **Hillside Areas**. Hillside areas, located on the southwestern side of the city to the west of I-580, including in the Tracy Hills Specific Plan area, are a visual amenity for residents of the City and travelers on I-580.
- **Electricity-generating Windfarms**. Located on the ridgetops, west of the City and close to the Altamont Pass, the windfarms are visible from Tracy on clear days.

Entry Corridors

The City of Tracy provides entrances to the City from major roadways called "entry corridors" or "gateways." These scenic corridors are important for providing both visitors and residents with their initial impression of Tracy and a transition from a rural to urban environment. Over the Altamont Pass, through rolling hills covered with windmills is Interstate 580 (I-580), a major entry corridor. I-580 offers the first views of Tracy's urban area, surrounded by expansive agricultural lands. Drivers heading west on I-205 are provided with views of the surrounding lands and coastal range beyond Tracy to the southwest. The City's existing gateways include exits from I-205 on MacArthur Drive, Tracy Boulevard, Grant Line Road and Eleventh Street, and exits from I-580 at Lammers Road and Corral Hollow Road.

Light and Glare

Some existing structures on the TVDP may include exterior nighttime lighting; however, such lighting is likely minimal or nonexistent. No other features on-site produce significant light or glare. Areas with outbuildings are expected to have night-time security lighting illuminating yards and surrounding areas.

3.1.3 - Regulatory Framework

State

California Scenic Highway Program

The California Scenic Highway Program is intended to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of highway lands. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. A scenic corridor is the land generally adjacent to and visible from the highway and is identified using a motorist's line of vision. The corridor protection program seeks to encourage quality development that does not degrade the scenic value of the corridor. Minimum requirements for scenic corridor protection include:

- Regulation of land use and density of development
- Detailed land and site planning
- Control of outdoor advertising (including a ban on billboards)
- Careful attention to and control of earthmoving and landscaping
- Careful attention to design and appearance of structures and equipment

Local

City of Tracy General Plan

The City of Tracy General Plan establishes the following goals and policies related to aesthetics, light, and glare that are applicable to the Project:

Land Use Element

- **Objective LU-1.1:** Establish a clearly defined urban form and city structure.
- **P1.** New development and redevelopment in existing areas shall be organized as a series of residential Neighborhoods, Employment Areas, Corridors, Village Centers, the Downtown and the I-205 Regional Commercial Area. Each is defined as follows:
  - Neighborhoods are residential areas of the city that are approximately ½ mile in diameter and centered on a focal point such as a park, school or public open space.
  - Employment areas are the job-centers of the city and include office districts, retail centers and industrial areas.
  - The Downtown provides a focal point of community life in the City and contains a mix of uses including commercial, residential, public facilities and community services.
  - Village Centers are retail areas that may contain a mix of uses, such as housing and office uses. These areas serve several neighborhoods and are designed to be walkable, main-streets.
  - Corridors refer to several arterial streets, each with a mix of uses.
  - The I-205 Regional Commercial Area is a special district north of I-205 that contains big-box retail, automobile sales establishments and a large, regional shopping mall.

Community Character Element

- **Objective CC-1.1:** Preserve and enhance Tracy's unique character and "hometown feel" through high-quality urban design.
- **P1.** Preserving and enhancing hometown feel shall be the overriding design principle for the City of Tracy.
- **P3.** All new development and redevelopment shall adhere to the basic principles of high-quality urban design, architecture and landscape architecture including, but not limited to, human-scale design, pedestrian-orientation, interconnectivity of street layout, siting buildings to hold corners, entryways, focal points and landmarks.
- **P4.** To the extent possible, site layout and building design should take into account Tracy's warm, dry climate, such as through the inclusion of trees and landscaping or other architectural elements to provide shade.
- **P5.** Lighting on private and public property should be designed to provide safe and adequate lighting, while minimizing light spillage to adjacent properties.
- **Objective CC-1.2:** Balance the need for growth with the preservation of Tracy's "hometown feel."
- **P1.** New development project shall be approved only if they meet the design principles set forth in the Community Character Element and in detailed design guidelines approved by the City Council.

- **P2.** New public projects shall adhere to the design principles presented in the Community Character Element.
- **Objective CC-1.5:** Provide underground utilities throughout Tracy.
- **P1.** New development shall allocate and construct utilities underground.
- **Objective CC-4.1:** Create appropriate edges to the urbanized area.
- **P1.** Strongly oppose the urbanization within the City of Tracy's Planning Area as defined by this General Plan or the San Joaquin County General Plan, whichever is more restrictive, particularly between the City of Tracy and the adjacent communities of Mountain House and Lathrop.
- **P2.** To the extent feasible, the City shall use land use designations and open space preservation techniques to create appropriate transitions. A variety of techniques can be used to create the soft or hard edges to the City including the following:
  - **Buffer Zone.** Soft edges can be created with buffer zones such as natural open space, large setbacks and landscaped areas, as a means to separate urban from rural uses. Buffer areas shall be planted and maintained by the property owner, tenants or homeowners association and may include passive and active recreation areas such as picnic areas, bridle, and walking trails. Golf course development may also be an option in areas where a soft edge is desired.
  - **Cluster Development.** Clustered development is a method of site planning in which structures are clustered on a given site in the interest of preserving open space or creating a buffer. Areas with clustered development typically have low gross residential densities and high minimum open space requirements to encourage the clustering of structures.
  - **Feathering of Density.** A gradual reduction in residential density can be used to establish a smooth transition between urban and rural uses.
- **P3.** The City shall encourage the location of new parks around the edge of the SOI to help create and support a soft edge to the city.
- **Objective CC-5.1:** Design Neighborhoods around a Focal Point.
- **P1.** Every Neighborhood should have at least one Focal Point, which should be a park, school, plaza, clubhouse, recreation center, retail, open space or combination thereof.
- **P2.** Focal Points shall have ample public spaces that are accessible to all citizens.
- **P3.** Focal Points should be within ¼ mile from any point in the Neighborhood.
- **Objective CC-6.1:** Enhance Neighborhoods through high quality design.
- **P1.** There shall be a variety of architectural styles in each neighborhood and within each block of a Neighborhood.
- **P5.** The exterior of residential buildings shall be varied and articulated to provide visual interest to the streetscape.
- **P6.** The exterior of residential buildings shall be of the highest architectural design and construction quality, with attention to detail in both design and construction.
- **Objective CC-6.3:** Preserve and enhance the character of existing residential neighborhoods.
- **P1.** The City shall encourage the on-going conservation, maintenance and upgrading of existing neighborhoods through enforcement of property maintenance codes, requirements of high quality infill development, programs for the rehabilitation of housing, and replacement of deteriorated infrastructure.
- **P4.** New development projects should not physically divide established neighborhoods.

3.1.4 - Methodology

FCS evaluated potential Project impacts on aesthetics, light, and glare through site reconnaissance and review of applicable plans and policies. FCS personnel visited the TVDP site and surrounding land uses in May 2015 and again in December 2016; documented the site conditions through photographs and notation; and reviewed aerial photographs, topographical maps, street maps, project plans, and elevations to identify surrounding land uses and evaluate potential impacts from project development. The City of Tracy General Plan and the San Joaquin County General Plan were reviewed to determine applicable policies and design requirements for the project. Project plans and Specific Plan design guidelines were reviewed to determine compliance with the requirements of the General Plan.

3.1.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, aesthetics impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Refer to Section 6.1, Effects Found not to be Significant.)

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

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

3.1.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Scenic Vistas

Impact AES-1:	**The project would not have a substantial adverse effect on a scenic vista.**

Impact Analysis

This impact evaluates potential impacts to scenic vistas. This impact will evaluate the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project: The Tracy 2011 General Plan does not identify any visual resources or scenic vistas in the vicinity of the project site.

The proposed TVDP would guide the development of 600 single-family houses on 133.2 acres of former agricultural land in the southwestern portion of the City of Tracy's sphere of influence, and annex that acreage into the City. The houses in the TVDP would be limited to a maximum height of 30 feet, and the clubhouse height limited to 35 feet. Lot coverage for the 4,275- to 4,500-square-

foot lots would be limited to 60 percent, and limited to 60 percent for the 5,000 square foot and larger lots.-The community wall around the development would be limited to a height of 7 feet. These heights and lot coverages would continue the pattern of low-density housing in the adjoining areas of Tracy.

Views of the Diablo Range, expansive agricultural lands, and wind turbines are available from the TVDP site and the surrounding area, looking south and west. For the developed residential uses to the north and east, the proposed project would not obstruct or alter the distant views of the Diablo Range, expansive agricultural lands, or wind turbines.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Visual Character

Impact AES-2:	**The project may substantially degrade the existing visual character or quality of the site and its surroundings.**

Impact Analysis

The TVDP occupies approximately 133.2 acres on relatively flat and vacant land, with the exception of existing residences: one on the northwestern portion on the TVDP and one on the northeastern portion of the TVDP.

The TVDP site is designated "Resource Conservation (OS/RC)" by the County of San Joaquin General Plan and zoned "Agriculture-Urban Reserve (AU-20)" by the San Joaquin County Zoning Ordinance. The Tracy Village Development Project site is designated "Active Adult Residential" by the City of Tracy General Plan.

The proposed planned development seeks to build a comprehensive development totaling a maximum of 600 units. The maximum height of the proposed residences would be 30 feet tall, with the height of the clubhouse limited to 35 feet. This height would be consistent with the surrounding residential uses to the south and east. Design standards are required for all development. Design guidelines are recommended measures that help ensure quality design. Together, the standards and guidelines address the placement and appearance of buildings, circulation, parking and loading, landscape design, fencing and screening, signage, exterior lighting, and sustainable design practices. The TVDP would be required to comply with all design guidelines provided by the City of Tracy to ensure consistency with the surrounding uses.

The area surrounding the project site is generally undergoing a transition from rural and agricultural open spaces to an urban environment. While over time the area would be fully developed with

urban land uses, the TVDP is currently in a transitional state and provides representative views of typical agricultural and urban environments. The development of the TVDP would change the existing visual character of the site. The soundwall along Valpico Road will be a maximum of 8-feet high and shall meet the City of Tracy Streetscape Design guidelines. The perimeter masonry walls adjacent to existing homes shall have the approved thematic design and be a maximum of 8 feet tall. Varied massing of houses is specified in order to avoid similar building silhouettes and similar ridge heights. The variation in roof styles visible from Valpico Road will minimize the visual impact of the new construction on the streetscape.

The proposed residential uses would change the TVDP site to become more consistent with the existing visual character of the surrounding area, which is single-family residential on all sides. The architectural styles specified in the Specific Plan are derived from typical styles used throughout the State of California. The styles are visually compatible with each other and possess general market appeal and community acceptance. The styles shall be selected from the following palette:[1]

- **European Cottage:** The European Cottage's roof pitches are steeper than American traditional homes and include gable, hip, and half-hip roof forms. The primary exterior material is stucco with stone and brick bases, veneers, and tower elements. Some of the most recognizable features of this style are accents in the gable ends and sculptural swooping roofs at the front elevation.
- **Hacienda:** The primary building materials were adobe, clay tile roofs, and wood detailing. In later years, the Hacienda was adapted to include wood shingles for roofs, board and batten siding, and other colonial features introduced in Monterey. Plans were typically organized around a courtyard, which became one of the primary living spaces. The houses were generally simple and straight forward with thick adobe walls.
- **Italian:** The shallow pitched hipped roof often with decorative brackets identifies this style. As it became a popular building material, cast iron expanded the Italian style vocabulary to include a variety of embellished designs for porches, balconies, railings, and fences. This style is derived from the classical Italian villa Renaissance style.
- **Spanish:** The Spanish style's most notable characteristics include the use of "S" or barrel tile roofs, stucco walls, feature entry doors, and porticos, highlighted ornamental iron work, and carefully proportioned windows appropriate to its wall mass.
- **Tuscan:** The style is characterized by a low-pitched irregular roofline, which may be punctuated by a tower or campanile. Shutters tend to be painted deep colors. The exterior walls tend to be stucco with warm and sometimes colorful earth tones and often have stone or adobe accents at the front entry. The Recreation Center will be in the Tuscan Style.

Other styles may be submitted to the Development Services Director for consideration.

The Tracy Village Specific Plan contains design guidelines that specify the range of materials and colors for use with the above list of architectural styles. Windows, doors, shutters, exterior lighting

[1] Tracy Village Specific Plan, pages 3-23 through 3-42.

fixtures, and exterior finishes are specified in the Design Guidelines. In addition, the TVDP would have to adhere to the City of Tracy's Citywide Design Goals and Standards. These design standards would ensure that the proposed TVDP would be built to high-quality design standards while adhering to the City's General Plan and Municipal Code. Thus, project impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Light and Glare

Impact AES-3:	**The project may create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**

Impact Analysis

The approximately 133.2-acre TVDP has been used for agricultural purposes and does not contain a significant amount of artificial lighting. Most of the lighting on the TVDP comes from the existing residences on the northwestern and northeastern portions of the development area. In addition, the TVDP site does not contribute any measurable amount of light or glare to the area. Existing land uses such as the residential structures on the TVDP site and surrounding residential development to the east and south contribute to ambient lighting. Other nearby sources of light include streetlights along Valpico Road. Vehicles traveling along Valpico Road and Corral Hollow Road are also nearby sources of light.

The TVDP would introduce new sources of light and glare that could affect day and nighttime views in the vicinity of the TVDP. The project would require lighting of roadways and homes for security. If lighting in the TVDP is not designed in such a way to reduce upward directed light, nighttime lighting associated with the TVDP could obscure views of the night sky that are currently visible.

The exterior finishes of the buildings would be anti-reflective and would not contribute to glare. Building windows do not typically produce substantial amounts of glare, and in most cases, glare would be tempered by surrounding trees. Residential uses in general are not anticipated to create significant light and glare. However, given the proximity of the TVDP to existing agricultural lands to the west, the addition of 600 dwelling units would add new sources of light and glare. Mitigation is recommended to ensure that light and glare impacts are reduced to less than significant levels.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AES-3 Prior to issuance of the first building permit, the applicant shall prepare and submit an outdoor lighting plan (which includes a photometric analysis) to the City of Tracy that includes a footcandle map illustrating the amount of light from the project site at adjacent light sensitive receptors. The lighting map shall comply with the City of Tracy General Plan policies and shall include minimal levels of street; parking, building, site, and public area lighting to meet safety standards and provide direction; directional shielding for all exterior lighting; and automatic shutoff or motion sensors and/or additional standards as determined by the Community Services Department.

Level of Significance After Mitigation

Less than significant impact.

3.2 - Agriculture

3.2.1 - Introduction

This section describes the existing agricultural resources and potential effects from project implementation on the Tracy Village Development Project (TVDP) site and its surrounding area. The Residential Annexation Area would be annexed into the City of Tracy and would not change any existing land use activities. Therefore, the Residential Annexation Area is not analyzed in this impact section. Descriptions and analysis in this section are based on information contained in the City of Tracy General Plan and the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) maps.

3.2.2 - Environmental Setting

Agricultural Economy

According to the Economic Development Element of the City of Tracy General Plan, between 1990 and 2000 Tracy's employment base nearly doubled, as it shifted from a strong agricultural and transportation driven economy to a services and retail economy. Agriculture remains a major activity within the undeveloped portions of the Tracy Planning Area. According to the General Plan, a total of approximately 7,458 acres of agricultural lands surround Tracy on four sides: 1,618 within the City limits and 5,839 in the City's Sphere of Influence (SOI), which is adjacent to the urbanized boundary.

Tracy Village Development Project Conditions

As detailed in the Phase I Environmental Site Assessment (ENGEO Incorporated 2013), a review of aerial photographs of the TVDP indicates that the TVDP was used for agricultural purposes from 1957, if not earlier, to approximately 2009. By this time, the basin in the north-central portion of the TVDP was no longer vegetated and irrigation canals no longer appeared. Land coverage on-site was once dominated by alfalfa hay, but a site visit conducted in 2013 confirmed that all of the alfalfa hay had been removed. Thus, the project site has not been in agricultural use since at least 2013. The TVDP is currently surrounded by residential uses and was tilled as recently as 2016.

Farmland Classifications

The California Department of Conservation Farmland Mapping and Monitoring Program classifies cultivated agricultural land into four categories, listed below:

- Prime Farmland: Land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields.
- Unique Farmland: Land of lesser-quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards, as found in some climactic zones in California.

- Farmland of Statewide Importance: Land similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.
- Farmland of Local Importance: Land of importance in the local agricultural economy, as determined by each county's Board of Supervisors and a local advisory committee.

Important Farmland

Exhibit 3.2-1 depicts the Important Farmland designations for the TVDP. As shown in the exhibit, the TVDP contains 126.4 acres of Farmland of Local Importance, 1.7 acres of Rural Residential Land, and 5.9 acres of Urban and Built-Up Land. A majority of the TVDP is designated Farmland of Local Importance.

Soils

Exhibit 3.2-2 provides the agricultural soil mapping for the project site. As shown in the exhibit, two different soil classifications are distributed on the project site: Zacharias gravelly clay loam (119.3 acres) and Zacharias clay loam (13.2 acres).

Williamson Act Contract

Exhibit 3.2-3 depicts the locations of active Williamson Act contracts within the vicinity of the TVDP. As shown in the exhibit, there are no Williamson Act contracts in effect on the TVDP site. Williamson Act contracts are described in more detailed in Section 3.2.3, Regulatory Framework.

Surrounding Land Uses

According to review of aerial photographs, none of the areas surrounding the project site are currently used for agriculture. Residential development and planned residential uses surround the TVDP site to the east, north, west, and south.

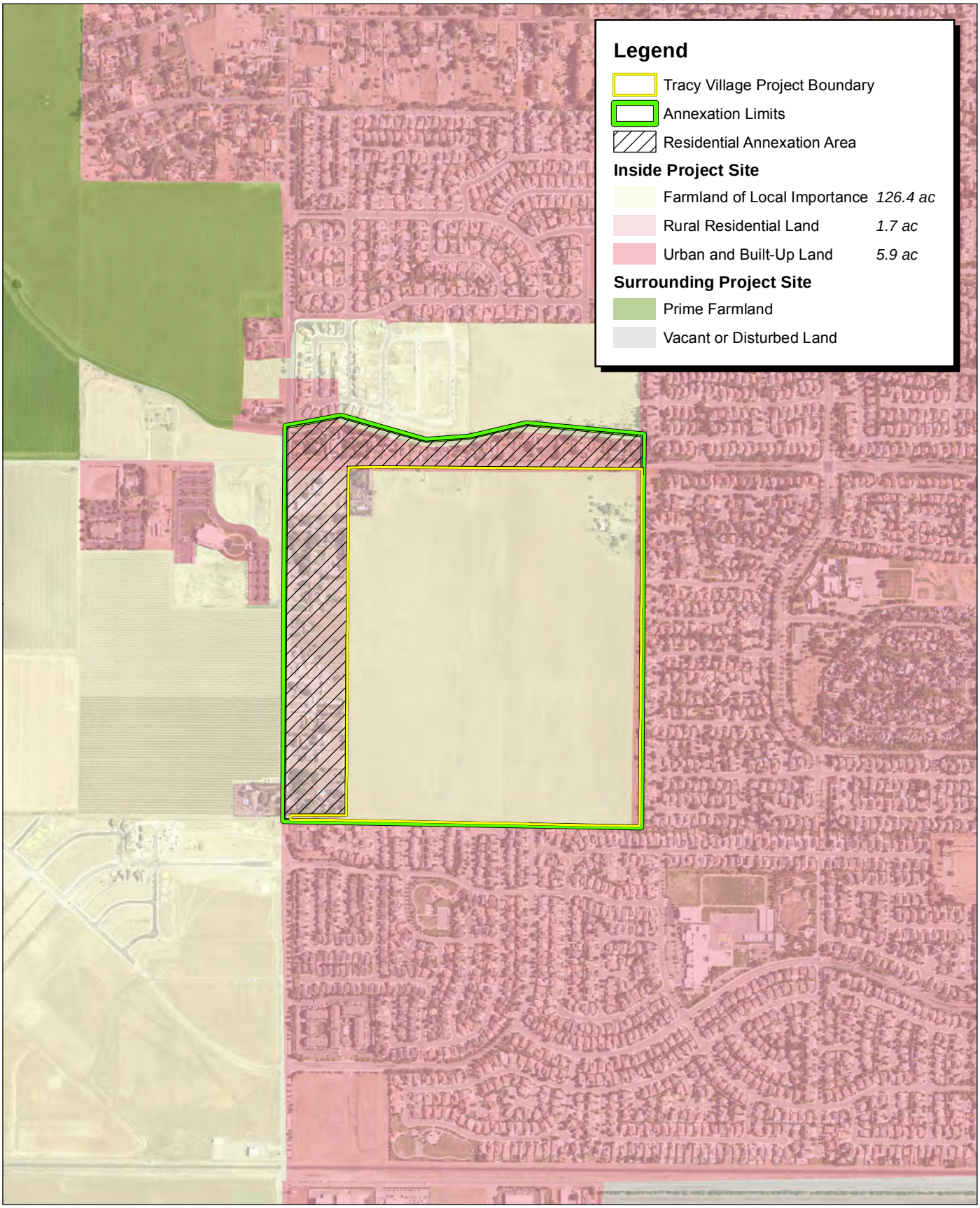
Areas to the north and south of the TVDP are zoned Planned Unit Development by the City of Tracy Zoning Ordinance, which allows flexibility and creativity in site planning for residential, commercial, or industrial uses to achieve greater efficiency in land use by maximizing open space, preserving natural amenities, and creating additional amenities. The area to the east of the TVDP is zoned Low Density Residential (LDR), which allows single-family residential, crop and tree farming, mobile homes on individual lots, and public parks, buildings, and schools. Areas immediately west of the project site are also zoned LDR. The County of San Joaquin zones areas farther to the west of the TVDP as Agriculture-Urban Reserve.

3.2.3 - Regulatory Framework

State Regulations

California Department of Conservation Classification

The California Department of Conservation (CDC), Division of Land Resource Protection developed the Farmland Mapping and Monitoring Program (FMMP) in 1984 to analyze impacts to California's agricultural resources. In the FMMP, land ratings are based on a land capability classification system, and land use.



Source: CA Dept of Conservation

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 3.2-1
Important Farmland Map

THIS PAGE INTENTIONALLY LEFT BLANK



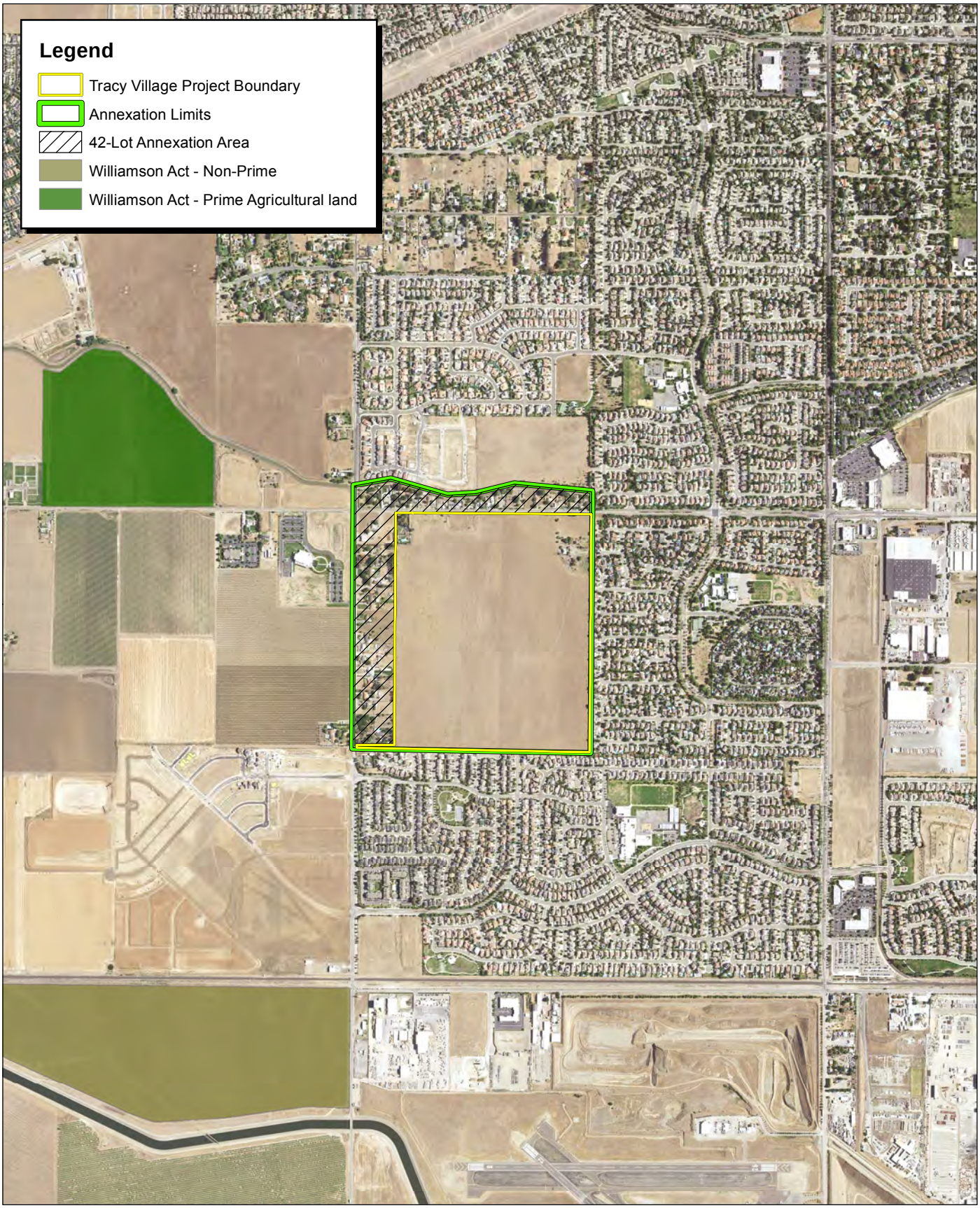
Source: USDA

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 3.2-2
USDA Soils Map

THIS PAGE INTENTIONALLY LEFT BLANK



Source: CA Dept of Conservation

FIRSTCARBON SOLUTIONS™

1,500 750 0 1,500 Feet

Exhibit 3.2-3
San Joaquin County Williamson Act Land 2015/2016

THIS PAGE INTENTIONALLY LEFT BLANK

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965 (Williamson Act) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to maintain agricultural or related open space use. As an incentive, landowners receive lower property tax assessments based on agricultural or open space land uses, as opposed to the real estate value of the land.

Public Resources Code

The California Public Resource Codes Section 4562 defines Forest Land and Timber Land as follows:

Forest Land

Land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Timber Land

Land, other than land owned by the federal government and land designated by the Board of Forestry and Fire Protection (Board) as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the Board on a District basis after consultation with the District committees and others.

Local Regulations

City of Tracy

The City of Tracy General Plan established the following goals and policies related to agricultural resources that are applicable to the TVDP:

- **Objective OSC-2.1:** Support San Joaquin County efforts to preserve existing agricultural lands in the Planning Area and outside of the Sphere of Influence.
- **P1.** The City shall support San Joaquin County's efforts to preserve agricultural uses in the Tracy Planning Area.
- **P2. T**he City shall support San Joaquin County policies and zoning actions that maintain agricultural lands in viable farming units for those areas not currently designated for urban uses.
- **P3.** The City shall support the preservation of Williamson Act lands and Farmland Security Zone lands within the Tracy Planning Area.
- **Objective OSC-2.2:** Minimize conflicts between agricultural and urban uses.
- **P1.** Development projects shall have buffer zones, such as roads, setbacks and other physical boundaries, between agricultural uses and urban development. These buffer zones shall be of sufficient size to protect the agriculture operations from the impacts of incompatible development and shall be established based on the proposed land use, site conditions and anticipated agricultural practices. Buffers shall be located on the land where the use is being changed, and shall not become the maintenance responsibility of the City.

- **P2.** Land uses allowed near agricultural operations should be limited to those not negatively impacted by dust, noise and odors.
- **P3.** The City shall review, maintain and update, as necessary, its Right-to-Farm Ordinance.

City of Tracy Right to Farm Ordinance

Chapter 10.24 of the City of Tracy Municipal Code is a "Right to Farm" Ordinance is intended to protect agricultural productivity in the City. The ordinance states:

a) No agricultural operation, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with the proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality. The above shall be the case provided that the agricultural operation has been in operation for more than three (3) years.
b) Subsection (a) of this section shall not apply whenever a nuisance results from the negligent or improper handling of any such agricultural operation by person(s) or entities responsible for such operations, and if the agricultural operation obstructs free passage or use in the customary manner of any navigable lake, river, bay, stream, canal, basin or any public park, square, street or highway. Nothing in this chapter shall prevent anyone from complaining to any appropriate agency, or taking any other available remedy, concerning any unlawful or improper agricultural practice.

City of Tracy Agriculture Mitigation Fee Program

On June 7, 2005, the City Council adopted Chapter 13.28 Agricultural Mitigation Fee to its Municipal Code. In addition, the City Council has adopted a resolution approving the Central Valley Farmland Trust as a qualifying agency to receive funds.[1]

This program requires the owner of farmland that is to be developed for private urban uses (such as residential, commercial, industrial, or other urban uses) to pay an agricultural mitigation fee for each acre of farmland developed. The city collects the fees at the time the building permits are issued and the fees are used to purchase conservation easements on agricultural lands.

3.2.4 - Methodology

FirstCarbon Solutions (FCS) evaluated potential impacts on agricultural resources through site reconnaissance and review of FMMP maps, Williamson Act maps, site plans, and applicable plans and policies.

3.2.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, agricultural impacts resulting from the implementation of the proposed project would be considered significant if the project would:

[1] City of Tracy Council Resolution No. 2008-204, adopted October 7, 2008.

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

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

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (Refer to Section 6.1, Effects Found not to be Significant.)

d) Result in the loss of forest land or conversion of forest land to non-forest use? (Refer to Section 6.1, Effects Found not to be Significant.)

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?

3.2.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Convert Farmland to Non-Agricultural Use

Impact AG-1:	**The proposed project may result in the conversion of Important Farmland to non-agricultural use.**

This impact will evaluate the potential for the proposed project to convert Important Farmland to non-agricultural use.

Impact Analysis

The City of Tracy designates the project site as "Active Adult Residential." The General Plan EIR evaluated the TVDP site, as it is within the City of Tracy SOI. Although the County of San Joaquin Zoning Ordinance designates the project site "Agriculture-Urban Reserve (AU-20)," the conversion and annexation of this property was anticipated in the City of Tracy's General Plan and General Plan EIR, and therefore, the City does not view the project area as a preferred location for permanent agricultural uses.

The General Plan DEIR found that conversion of prime agricultural land, including the TVDP, to urban uses to be a significant and unavoidable impact (pages 4.7-17 and 4.7-18). The development of the TVDP is consistent with the scope of development anticipated in the General Plan DEIR, and, therefore, there are no new significant impacts that were not already analyzed. This is further discussed in Section 4, Cumulative Impacts, of this EIR. As part of adopting the City General Plan, the Tracy City Council adopted findings of fact and a Statement of Overriding Consideration that indicated urban development was of greater benefit to the community than preserving agricultural land within city limits.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Agricultural Zoning or Williamson Act Contract

Impact AG-2: The proposed project will not conflict with existing zoning for agricultural use or an active Williamson Act contract.

This impact will evaluate the potential for the proposed project to conflict with existing agricultural zoning or Williamson Act contracts.

Impact Analysis

Agricultural Zoning

The TVDP is zoned Agricultural Urban Reserve by the San Joaquin Zoning Ordinance. The Ordinance states that "this zone is intended to retain in agriculture those areas planned for future urban development in order to facilitate compact, orderly growth and to assure the proper timing and economical provision of services and utilities." Because the existing zoning anticipated urbanization of this land, the change in zoning from Agricultural Urban Reserve to Tracy Village Specific Plan zoning would not pose a conflict. Impacts would be less than significant.

Williamson Act Contracts

According to the San Joaquin County Williamson Act FY 2015/2016 Map, the TVDP is not encumbered by an active Williamson Act contract. As such, the project would not conflict with any Williamson Act contract. Therefore, there would be no impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Pressures to Convert Farmland to Non-Agricultural Use

Impact AG-3: **The project would not involve other changes to the existing environment, which, because of their location or nature, could result in conversion of farmland to non-agricultural use.**

Impact Analysis

The TVDP is surrounded by residential uses on all sides. Land to the north of the TVDP across Valpico Road is currently undeveloped and is designated residential low by the City of Tracy; therefore, the City of Tracy General Plan contemplates residential development on the undeveloped land north of the TVDP. As such, the TVDP would be consistent with the General Plan's policies intended to avoid premature conversion of farmlands and minimize conflicts between agricultural and urban uses. Therefore, the TVDP would not create additional pressures to convert this land to non-agricultural uses. Impacts would be less than significant.

Premature Conversion of Agriculture

The proposed transition of the TVDP from prime agricultural land to residential is consistent with the City's long-term planning vision; the City's General Plan designates the TVDP as Active Adult. The City intends to protect other open space and agricultural lands by prioritizing development in Urban Reserves, which are expected to be less biologically sensitive or less agriculturally productive. Furthermore, the General Plan and LAFCO's recent amendment to the City's SOI identifies the TVDP (among other properties) where urban development is planned to occur.

There are several approved residential developments throughout the City of Tracy. Though the TVDP is also developing residential units, it has a unique market niche, as it is the only residential development project within the City of Tracy that would serve Active Adults. For these reasons, the TVDP does not present premature conversion of agriculture.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.3 - Air Quality

This section describes the existing air quality setting and potential effects from project implementation of the Tracy Village Development Project (TVDP) as a whole on the site and its surrounding area. The Residential Annexation Area would be annexed into the City of Tracy and would have the same land uses; thus, there would be no impacts to air quality. Therefore, the Tracy Village Development Project (TVDP) and the Residential Annexation Area are not analyzed separately in this impact section. FirstCarbon Solutions performed air quality analysis for the TVSP, which included gathering relevant data relating to the project's location from the California Air Resources Board (ARB). California Emission Estimator Model (CalEEMod) Version 2016.3.1 was used to quantify project-related emissions. The air quality analysis, including model output, is provided in Appendix B.

3.3.1 - Environmental Setting

The TVSP is located San Joaquin County, within the San Joaquin Valley Air Basin (Air Basin). Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The following section describes these conditions as they pertain to the Air Basin.

San Joaquin Valley Air Basin

The information in this section is primarily from the District's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) and the accompanying Technical Document (SJVAPCD 2015a).

Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The SJVAPCD covers the entirety of the Air Basin. The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Climate

The climate is important for air quality because of differences in the atmosphere's ability to trap pollutants close to the ground, creating adverse air quality or rapidly dispersing pollutants over a wide area, thus preventing high concentrations from accumulating under different climatic conditions. The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the Valley, through the Tehachapi Pass and into the Southeast Desert Air Basin portion of Kern County. As the wind moves through the

Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

Existing Air Quality Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 3.3-1 summarizes 2012 through 2015 published monitoring data, which is the most recent 4-year period available. The table displays data from the Tracy-Airport monitoring station (located approximately 1.46 miles south of the project site), the Stockton-Hazelton Street monitoring station (located approximately 19.18 miles northeast of the project site), and the Sacramento Del Paso Manor monitoring station (located approximately 62.43 miles northeast of the project site). The data shows that during the past few years, the project area has exceeded the state and national ozone standards. The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period.

Table 3.3-1: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2012	2013	2014	2015
Ozone[1]	1 Hour	Max 1 Hour (ppm)	**0.109**	**0.096**	**0.097**	**0.107**
		Days > State Standard (0.09 ppm)	**8**	**1**	**1**	**4**
	8 Hour	Max 8 Hour (ppm)	**0.098**	**0.083**	**0.084**	**0.091**
		Days > State Standard (0.07 ppm)	**36**	**5**	**17**	**21**
		Days > National Standard (0.075 ppm)	**16**	**2**	**8**	**5**
Carbon monoxide[2]	8 Hour	Max 8 Hour (ppm)	1.78	ID	ND	ND
		Days > State Standard (9.0 ppm)	0	0	ND	ND
		Days > National Standard (9 ppm)	0	0	ND	ND
Nitrogen dioxide[1]	Annual	Annual Average (ppm)	0.007	0.006	0.006	0.006
	1 Hour	Max 1 Hour (ppm)	0.040	0.034	0.036	0.035
		Days > State Standard (0.18 ppm)	0	0	0	0
Sulfur dioxide[3]	Annual	Annual Average (ppm)	ID	ID	ND	ND
	24 Hour	Max 24 Hour (ppm)	0.002	0.002	ND	ND
		Days > State Standard (0.04 ppm)	ID	ID	ND	ND
Inhalable coarse particles (PM_{10})[1]	Annual	Annual Average ($\mu g/m^3$)	ID	ID	ID	ID
	24 hour	24 Hour ($\mu g/m^3$)	ID	ID	ID	ID
		Days > State Standard (50 $\mu g/m^3$)	ID	ID	ID	ID
		Days > National Standard (150 $\mu g/m^3$)	ID	0	0	ID

Table 3.3-1 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2012	2013	2014	2015
Fine particulate matter ($PM_{2.5}$) [1]	Annual	Annual Average (µg/m^3)	ID	ID	7.7	ID
	24 Hour	24 Hour (µg/m^3)	26.8	56.3	36.8	39.0
		Days > National Standard (35 µg/m^3)	ID	ID	ID	ID

Notes:
> = exceed ppm = parts per million µg/m^3 = micrograms per cubic meter
ID = insufficient data ND = no data max = maximum
Bold = exceedance
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
[1] Tracy-Airport
[2] Stockton-Hazelton Street Station
[3] Sacramento-Del Paso Manor
Source: ARB 2016

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount the standard is exceeded. The United States Environmental Protection Agency (EPA) developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air. Table 3.3-2 provides a description of the health impacts ozone at different concentrations.

Table 3.3-2: Air Quality Index and Health Effects

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI—51–100 (Moderate)/ Concentration 75 ppb	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI—101–150 (Unhealthy for Sensitive Groups)/Concentration 95 ppb	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.

Table 3.3-2 (cont.): Air Quality Index and Health Effects

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI—151–200—(Unhealthy)/Concentration 115 ppb	**Sensitive Groups**: Children and people with asthma are the groups most at risk
	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion
AQI—210-300(Very Unhealthy)/Concentration 139 ppb	**Sensitive Groups**: Children and people with asthma are the groups most at risk
	Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Source: EPA, 2014.	

Based on the AQI scale for the 8-hour ozone standard, Tracy experienced no days in the last four years that would be categorized as unhealthful (AQI 200), and as many as 31 days that were unhealthful for sensitive groups (AQI 150) as measured at the Tracy Airport monitoring station. The highest reading was 109 parts per billion (ppb) in 2012 compared with the 95-ppb cutoff point for unhealthful for sensitive groups (AQI 150), but lower than the 115-ppb cutoff point for unhealthy (AQI 200).

Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$

standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the San Joaquin Valley Air Basin are shown in Table 3.3-3. The Air Basin is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Table 3.3-3: San Joaquin Valley Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone—One Hour	Nonattainment/Severe	No Standard
Ozone—Eight Hour	Nonattainment	Nonattainment/Extreme
Carbon monoxide	Attainment/Unclassified	Merced, Madera, and Kings Counties are unclassified; others are in Attainment
Nitrogen dioxide	Attainment	Attainment/Unclassified
Sulfur dioxide	Attainment	Attainment/Unclassified
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	No Designation/Classification
Source of State status: ARB 2013a. Source of National status: U.S. Environmental Protection Agency 2016.		

3.3.2 - Regulatory Framework

Air pollutants are regulated primarily to protect human health and for secondary effects such as visibility and property damage from pollutant deposition. The Clean Air Act of 1970 tasks the EPA with setting air quality standards. The State of California also sets air quality standards that are in some cases more stringent than federal standards, and address additional pollutants. The following section describes these federal and state standards and the health effects of the regulated pollutants.

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards (EPA 2014). The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2012a).

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation, and required additional actions beyond the federal mandates. The ARB administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than the federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

Air Pollutant Description and Health Effects

The federal and state ambient air quality standards, the most relevant effects, the properties, and sources of the pollutants are summarized in Table 3.3-4.

Table 3.3-4: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrous oxides (NO_x), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_x) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.070 ppm			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	0.100 ppm	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_x (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_x is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_x can react with compounds to form nitric acid and related small particles and result in PM related health effects.	NO_x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NO_x emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 3.3-4 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	- Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. - Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (one micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	12.0 µg/m^3			
Visibility reducing particles	8 Hour	See note below[d]				

Table 3.3-4 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO42−. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[e]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[e]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.

Table 3.3-4 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).
Volatile organic compounds (VOC)		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Benzene		There are no ambient air quality standards for benzene.		Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.	Benzene is a VOC. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a "Group A" carcinogen.	Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. Benzene occurs naturally in gasoline at one to two percent by volume. The primary route of human exposure is through inhalation.

Table 3.3-4 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	Diesel PM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Notes:
ppm = parts per million (concentration) $\mu g/m^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3-Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour nitrogen dioxide national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).

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

[d] Visibility reducing particles: In 1989, ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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

Source of effects, properties, and sources: South Coast Air Quality Management District 2007; California Environmental Protection Agency 2002; ARB 2009a; U.S. Environmental Protection Agency 2003, 2009, 2009b, 2010, 2011, and 2012a; National Toxicology Program 2011a and 2011b. Source of standards: ARB 2013a.

Several pollutants listed in Table 3.3-4 are not addressed in this analysis. Analysis of lead is not included in this report because no new sources of lead emissions are anticipated with the TVSP. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed as PM_{10} and $PM_{2.5}$. No components of the TVSP would result in vinyl chloride or hydrogen sulfide emissions in any substantial quantity.

Toxic Air Contaminants Health Effects

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data. The 10 TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Limited data on levels and health risks attributable to the top 10 TACs listed above is available from the ARB as part of its California Almanac of Emissions and Air Quality—2009 Edition (ARB 2009b). As shown therein for data collected at the First Street air monitoring station in Fresno, cancer risks attributable to all of the listed TACs above with the exception of DPM have declined about 70 percent from the mid-1990s to 2007. Risks associated with DPM emissions are only provided for the year 2000 and have not been updated in the Almanac. Although more recent editions of the Almanac do not provide estimated risk, they do provide emission inventories for DPM for later years. The 2013 Almanac provides emission inventory trends for DPM from 2000 through 2035. The ARB Almanac 2013 reports that DPM emissions were reduced in the SJVAB from 16 tons per day in 2000 to 11 tons

per day in 2010 for a 31 percent decrease. DPM emissions in the San Joaquin Valley are projected to decrease to 6 tons per day by 2015 for a 62 percent reduction from year 2000 levels. ARB predicts a reduction to 3 tons per day by 2035 for an 81 percent reduction from year 2000 levels. Continued implementation of the ARB's Diesel Risk Reduction Plan is expected to provide continued reductions in DPM through 2020 and beyond through regulations on this source (ARB 2013b).

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.

Federal

Air pollutants are regulated at the national, state, and air basin or county level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level. The ARB regulates at the state level. The SJVAPCD regulates at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as the federal standards described earlier.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan, which is sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. The most recent attainment plans for the SJVAPCD are the 2007 8-hour Ozone Attainment Plan and the 2012 $PM_{2.5}$ Plan for the 2006 $PM_{2.5}$ standard. The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The EPA Administrator signed the Final Rule revising the 8-hour ozone standard to 70 ppm on October 1, 2015. Adoption of a new standard requires an implementation process that includes making attainment designations and the development of new plans to attain the standard based on each area's designation. The District's

Governing Board approved the 2016 Plan for the 2008 8-Hour Ozone Standard on June 16, 2016. The comprehensive strategy in this plan will reduce oxides of nitrogen (NO_x) emissions by over 60 percent between 2012 and 2031, and will bring the San Joaquin Valley into attainment of EPA's 2008 8-hour ozone standard as expeditiously as practicable, no later than December 31, 2031.

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are described below.

California

Low-Emission Vehicle Program

The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, ARB adopted the LEV III amendments to California's Low-Emission Vehicle (LEV) regulations. These amendments, also known as the Advanced Clean Car Program include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and GHGs for new passenger vehicles (ARB 2012a).

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013b).

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and nitrous oxides (NO_x) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets

(over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks (ARB 2015b).

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos, but no demolition is associated with this project. However, asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or

naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the city of Tracy.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020 (ARB 2000).

San Joaquin Valley Air Pollution Control District

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the one-hour ozone standard, the District adopted an Extreme Ozone Attainment Demonstration Plan in 2004, with an attainment date of 2010. Although the EPA revoked the federal 1-hour ozone standard effective June 15, 2005 and replaced it with an 8-hour standard, the requirement to submit a plan for that standard remained in effect for the San Joaquin Valley.

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a $29-million Clean Air Act penalty. The penalty is being collected through an additional $12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards. On July 18, 2016, the EPA published in the Federal Register a final action determining that the San Joaquin Valley has attained the 1-hour ozone national ambient air quality standard. This determination is based on the most recent 3-year period (2012–2014) of sufficient, quality-assured, and certified data (EPA 2016b).

The EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and the EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

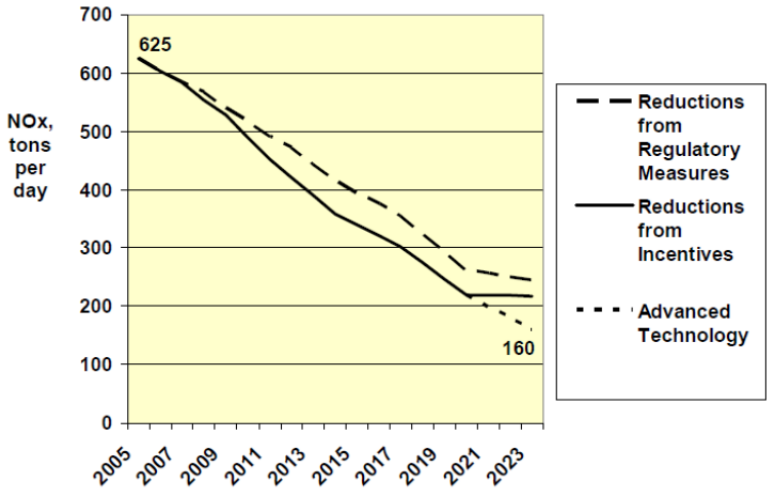
The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NO_x and a 25-percent reduction of reactive organic gases (ROG). Figure 1 displays the anticipated NO_x reductions attributed in the 2007 Ozone Plan (Source: 2007

Ozone Plan). The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Air Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021, in order to attain the standard at all monitoring stations in the Air Basin by 2024 as allowed for areas designated extreme nonattainment by the CAA.

The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The plan to address this standard was developed for the region to attain EPA's 2008 8-hour ozone standard by December 31, 2031.

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible. This is achieved through compliance with the federal deadlines and control measure requirements.

Figure 1: San Joaquin Valley NO_x Emissions Forecast



Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM_{10}. The Air Basin is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet Clean Air Act requirements for the PM_{10} standard, the District adopted a PM_{10} Attainment Demonstration Plan (Amended 2003 PM_{10} Plan and 2006 PM_{10} Plan), which has an attainment date of 2010. The District adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10} on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

The 2008 $PM_{2.5}$ Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Air Basin into attainment of the 1997 national standards for $PM_{2.5}$. The EPA has identified

NO_x and sulfur dioxide as precursors that must be addressed in air quality plans for the 1997 $PM_{2.5}$ standards. The 2008 $PM_{2.5}$ Plan is a continuation of the District's strategy to improve the air quality in the Air Basin. The EPA issued final approval of the 2008 $PM_{2.5}$ Plan on November 9, 2011, which became effective on January 9, 2012. The EPA approved the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling, and the transportation conformity motor vehicle emissions budgets. The EPA also granted California's request to extend the attainment deadline for the San Joaquin Valley to April 5, 2015 and approved commitments to measures and reductions by the District and the ARB. Finally, it disapproved the State Implementation Plan's contingency provisions and issued a protective finding for transportation conformity determinations.

In December 2012, the District adopted the 2012 $PM_{2.5}$ Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³. The ARB approved the District's 2012 $PM_{2.5}$ Plan for the 2006 standard at a public hearing on January 24, 2013 (SJVAPCD 2012). This plan seeks to bring the Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

The 2015 Plan for the 1997 $PM_{2.5}$ Standard, approved by the District Governing Board on April 16, 2015, will bring the Valley into attainment of EPA's 1997 $PM_{2.5}$ standard as expeditiously as practicable, but no later than December 31, 2020. The plan was required to request reclassification to Serious nonattainment and to extend the attainment date from 2018 to 2020 (SJVAPCD 2015b).

SJVAPCD Rules and Regulations

The SJVAPCD rules and regulations that may apply to projects that will occur during buildout of the project include, but are not limited to the following:

Rule 4102—Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

Rule 4601—Architectural Coatings. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling.

Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.

Rule 4901—Wood Burning Fireplaces and Wood Burning Heaters. The purposes of this rule are to limit emissions of carbon monoxide and particulate matter from wood burning fireplaces, wood burning heaters, and outdoor wood burning devices, and to establish a public education program to reduce wood burning emissions. All development that includes woodburning devices are subject to this rule.

Regulation VIII—Fugitive PM_{10} Prohibitions. Rules 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Rule 9510—Indirect Source Review. This rule reduces the impact of NO_x and PM_{10} emissions from growth within the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site District-administered projects, or a combination of the two. This project must comply with Rule 9510 because it would develop more than 50 residential dwelling units.

CEQA

The District has three roles under CEQA:

1. *Lead Agency*: Responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the District where the District has primary approval authority over the project.
2. *Responsible Agency*: The discretionary authority of a Responsible Agency is more limited than a Lead Agency; having responsibility for mitigating or avoiding only the environmental effects of those parts of the project which it decides to approve, carry out, or finance. The District defers to the Lead Agency for preparation of environmental documents for land use projects that also have discretionary air quality permits, unless no document is prepared by the Lead Agency and potentially significant impacts related to the permit are possible. The District regularly submits comments on documents prepared by Lead Agencies to ensure that District concerns are addressed.
3. *Commenting Agency*: The District reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The District also provides guidance and thresholds for CEQA air quality and GHG analyses. The result of this guidance, as well as state regulations to control air pollution, is an overall improvement in the Air Basin. In particular, the District's 2015 GAMAQI states the following:

1. The District's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. The general plan is the primary long range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions.

2. The Air Quality Guidelines for General Plans (AQGGP), adopted by the District in 1994 and amended in 2005, is a guidance document containing goals and policy examples that cities and counties may want to incorporate into their General Plans to satisfy Section 65302.1. When adopted in a general plan and implemented, the suggestions in the AQGGP can reduce vehicle trips and miles traveled and improve air quality. The specific suggestions in the AQGGP are voluntary. The District strongly encourages cities and counties to use their land use and transportation planning authority to help achieve air quality goals by adopting the suggested policies and programs.

City of Tracy

The City of Tracy adopted its 2011 General Plan on February 1, 2011. The City's applicable air quality and goals and policies from the Air Quality Element and Circulation Element are listed below.

City of Tracy Air Quality Goals and Policies

Air Quality Element

- **Goal AQ-1:** Improved air quality and reduced greenhouse gas emissions.
- **Objective AQ-1.1:** Improve air quality and reduce greenhouse gas emissions through land use planning decisions.
- **P1.** The City shall promote land use patterns that reduce the number and length of motor vehicle trips.
- **P2.** To the extent feasible, the City shall maintain a balance and match between jobs and housing.
- **P3.** Higher density residential and mixed-use development shall be encouraged adjacent to commercial centers and transit corridors.
- **P5.** Village Centers and other retail and office areas should be located within walking and biking distance of existing and proposed residential developments.
- **Objective AQ-1.2:** Promote development that minimizes air pollutant and greenhouse gas emissions and their impact on sensitive receptors as a result of indirect and stationary sources.
- **P3.** Developers shall implement best management practices to reduce air pollutant emissions associated with the construction and operation of development projects.
- **P4.** New development projects should incorporate energy efficient design features for HVAC, lighting systems and insulation that exceed Title 24.
- **P5.** Use of solar water and pool heaters is encouraged.
- **P6.** Installation of solar voltaic panels on new homes and businesses shall be encouraged.
- **P7.** Trees should be planted on the south- and west-facing sides of new buildings or building undergoing substantial renovation in order to reduce energy usage.
- **P8.** In accordance with San Joaquin Air Pollution Control District regulations, wood burning fireplaces shall not be installed in new and significantly renovated residential projects.
- **P 9.** New developments shall follow the current requirements of the SJVAPCD with respect to wood burning fireplaces and heaters.
- **Objective AQ-1.3:** Provide a diverse and efficient transportation system that minimizes air pollutant and greenhouse gas emissions.

- **P1.** The City shall continue to work with the San Joaquin Council of Governments on regional transportation solutions.
- **P2.** The City shall encourage Caltrans to implement High Occupancy Vehicle (HOV) lanes on regional freeways in and around the Tracy Planning Area.
- **P4.** The City shall support efforts to retain the railroad right-of-way for future public transit and bicycle facilities.
- **P5.** The City shall require direct pedestrian and bicycle linkages from residential areas to parks, schools, retail areas, high-frequency transit facilities and major employment areas.
- **P6.** The City shall coordinate with regional rideshare and transit incentive programs.
- **Objective AQ-1.4:** Support local and regional air quality improvement efforts.
- **P1.** The City shall continue to consult with other local, regional and State agencies on air quality planning efforts as well as encourage community participation in air quality planning.
- **P2.** The City shall be proactive in educating the public about the linkages between land use, transportation and air quality.

Circulation Element

- **Goal CIR-1:** A roadway system that provides access and mobility for all of Tracy's residents and businesses while maintaining the quality of life in the community.
- **Objective CIR-1.1:** Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.
- **P1.** The City should develop context-based street designs that allow for variations based on the expected function and location of the facility, and the surrounding land use context. These context-sensitive designs should have the following aims:
  - Create aesthetically attractive streetscapes.
  - Enhance multi-modal transportation by increasing mobility and improving safety for autos, trucks, transit, pedestrians and bicyclists.
- **P3.** The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.
- **P6.** The Roadway Master Plan update shall identify necessary improvements to various intersections on I-205 and I-580 based on land use designations and with particular attention to Terminal Access Routes in accordance with Surface Transportation Assistance Act of 1982 (STAA).
- **Objective CIR-1.2:** Provide a high level of street connectivity.
- **P1**. The City shall ensure that the street system results in a high level of connectivity, especially between residences and common local destinations, such as schools, Village Centers, retail areas and parks.
- **P2.** The City shall implement a connected street pattern with multiple route options for vehicles, bikes and pedestrians.
- **P3.** New development shall be designed to provide vehicular, bicycle and pedestrian connections with adjacent developments.
- **P4.** The City should develop residential street alignments and designs that provide connectivity while discouraging highspeed cut-through traffic.
- **P5.** New development shall be designed with a grid or modified grid pattern to facilitate traffic flows and to provide multiple connections to arterial streets.

- **Objective CIR-1.6:** Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.
- **P1**. The City shall design streets using context-sensitive design principles that enhance safety for all modes of travel.
- **Objective CIR-1.8:** Minimize transportation-related energy use and impacts on the environment.
- **P3**. The City shall encourage the use of non-motorized transportation and low-emission vehicles.
- **Goal CIR-3:** Safe and convenient bicycle and pedestrian travel as alternative modes of transportation in and around the city.
- **Objective CIR-3.1:** Achieve a comprehensive system of citywide bikeways and pedestrian facilities.
- **P1:** The City shall incorporate appropriate bicycle and pedestrian facilities on all roadways constructed by the City, Class I to the extent feasible.
- **P2.** To the extent possible, the City shall separate vehicular from bicycle and pedestrian traffic on higher-speed and higher-volume roadways through the use of off-street bicycle and pedestrian facilities.
- **P3.** The City may separate bicycle from pedestrian users on high usage bicycle and pedestrian paths.
- **P4.** The City's bicycle and pedestrian system shall have a high level of connectivity, especially between residences and common local destinations, such as schools, shopping and parks. A higher level of bicycle and pedestrian connectivity is defined as a shorter or similar distance to common destinations for bicycles and pedestrians compared to distances for vehicles.
- **P6.** New development shall include pedestrian and bicycle facilities internal to the development and that connect to city-wide facilities, such as parks, schools and recreational corridors, as well as adjacent development and other services.
- **P7.** New development sites for commercial, employment, educational, recreational and park-and-ride land uses shall provide bicycle parking and/or storage facilities.
- **Goal CIR-4:** A balanced transportation system that encourages the use of public transit and high occupancy vehicles.
- **Objective CIR-4.1:** Promote public transit as an alternative to the automobile.
- **P1.** The City shall promote efficient and affordable public transportation that serves all users.
- **P3.** The City shall continue to operate the Tracer fixed-route and paratransit transit service and expand service to new residential and non-residential areas if funding for additional service is available and is warranted by ridership demand.

Economic Development Element

- **Goal ED-1:** A diversified and sustainable local economy.
- **Objective ED-1.2:** Support and encourage a sustainable local economy.
- **P1.** The City shall encourage businesses that use green practices.
- **P2.** The City shall conduct public education and outreach to support employment opportunities that minimize the need for automobile trips, such as live/work, telecommuting, satellite work centers, and home occupations, in addition to mixed-use development strategies.

- **Objective ED-6.2:** Support infill development of commercial and industrial properties within the City limits.
- **P1.** The City shall promote the development and redevelopment of City infill areas.
- **P2.** A balanced mix of retail, restaurant, and other services should be encouraged throughout the city.

3.3.3 - Thresholds of Significance

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

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

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact statement below.

3.3.4 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the TVSP and provides mitigation measures where appropriate.

Consistency with Air Quality Management Plan

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis—Tracy Village Development Project

The CEQA Guidelines indicate that a significant impact would occur if the TVDP would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.
2. Will the project conform to the assumptions in the AQPs?
3. Will the project comply with applicable control measures in the AQPs?

The use of the criteria listed above is a standard approach for CEQA analysis of projects in the District's jurisdiction, as well as within other air districts, for the following reasons:

- Significant contribution to existing or new exceedances of the air quality standards would be inconsistent with the goal of attaining the air quality standards.
- Air Quality Plan (AQP) emissions inventories and attainment modeling are based on growth assumptions for the area within the air district's jurisdiction.
- AQPs rely on a set of air district-initiated control measures as well as implementation of federal and state measures to reduce emissions within their jurisdictions, with the goal of attaining the air quality standards.

AQPs are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards. In order to show attainment of the standards, the District analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and adopted emissions controls. The District then formulates a control strategy to reach attainment that includes both State and District regulations and other local programs and measures.

Contribution to Air Quality Violations

A measure of determining if the project is consistent with the air quality plans is if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Because of the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}, if project-generated emissions of either of the ozone precursor

pollutants (ROG and NO_x), PM_{10}, or $PM_{2.5}$ would exceed the District's significance thresholds, then the project would be considered to conflict with the attainment plans.

As discussed in Impact AIR-2 below, emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$ associated with the construction and operation of the TVDP would not exceed the District's significance thresholds. As shown in Impact AIR-2, the TVDP would not result in CO hotspots that would violate CO standards. Therefore, the TVDP would not contribute to air quality violations.

Consistency with Assumptions in AQPs

The primary way of determining consistency with the AQP's assumptions is determining consistency with the applicable General Plan to ensure that the project's population density and land use are consistent with the growth assumptions used in the AQPs for the Air Basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and designates locations for land uses to regulate growth. The San Joaquin Council of Government uses the growth projections and land use information in adopted general plans, among other sources, to estimate future average daily trips and then vehicle miles traveled (VMT), which are then provided to the District to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards based on these growth and emission estimates.

The applicable General Plan for the project is the City of Tracy General Plan, which was adopted in 2011, prior to the District's adoption of the applicable AQPs. The General Plan is amended up to four times per year to allow changes to the planned land use and other plan elements as needed to accommodate development proposals that are not currently consistent with the General Plan. The changes in land use are then incorporated into the modeling assumptions of the regional transportation model on a periodic basis. Therefore, if the TVDP's population growth and VMT are consistent with the General Plan, then the TVDP is automatically consistent with the growth assumptions used in the applicable AQPs because those are the same assumptions used in the General Plan, since the General Plan was adopted before SJVAPCD's adoption of the latest AQPs.

The TVDP site is designated "Active Adult Residential" by the City of Tracy General Plan. The City envisions that the site be used as predominantly residential with a mixture of neighborhood park uses. Because the proposed project involves primarily residential uses with a mixture of park and open spaces, the TVDP is consistent with the city's vision for the land use designation. The TVDP would be consistent with the permitted density from 0.1 to 9 units per gross acre for the individual neighborhoods, and would therefore be consistent with the General Plan and would not increase population or VMT above that anticipated under buildout of the General Plan. Therefore, the TVDP is consistent with the growth assumptions in the AQMP, and impacts would be less than significant.

Control Measures

The AQP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. A detailed description of rules and regulations that apply to this

project is provided in Section 2.2, Regulatory Setting. The project would comply with all applicable District rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

Impact Analysis—Residential Annexation Area

Residential Annexation Area: No development is proposed for the Residential Annexation Area. Therefore, implementation of the Residential Annexation Area component of the project would not conflict with or obstruct implementation of the applicable air quality plan.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Potential for Air Quality Standard Violation

Impact AIR-2:	**The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.**

Impact Analysis—Tracy Village Development Project

Regional Emissions

Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to SJVAPCD thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from TVDP construction and operation are also assessed using concentration-based thresholds that determine if the TVDP would result in a localized exceedance of any ambient air quality standards or would make a cumulatively considerable contribution to an existing exceedance.

The primary pollutants of concern during project construction and operation are ROG, NO_x, PM_{10}, and $PM_{2.5}$. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for CO, NO_x, ROG, SO_x, PM_{10}, and $PM_{2.5}$.

Ozone is a secondary pollutant that can be formed miles from the source of emissions, through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The Air Basin often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The Air Basin also exceeds air quality standards for PM_{10}, and $PM_{2.5}$; therefore, substantial project emissions may contribute to an exceedance for these pollutants. The District's annual emission significance thresholds used for the project define the substantial contribution for both operational and construction emissions as follows:

- 100 tons per year CO
- 10 tons per year NO_x
- 10 tons per year ROG
- 27 tons per year SO_x
- 15 tons per year PM_{10}
- 15 tons per year $PM_{2.5}$

The TVDP does not contain sources that would produce substantial quantities of SO_2 emissions during construction and operation. Modeling conducted for the project show that SO_2 emissions are well below the SJVAPCD GAMAQI thresholds, as shown in the modeling results contained in Appendix B. No further analysis of SO_2 is required.

Construction Emissions

Construction emissions associated with the TVDP are shown for the years 2017 through 2028 in Table 3.3-5. For assumptions in estimating the emissions, please refer to Appendix B. As shown in Table 3.3-5, the emissions are below the significance thresholds in each construction year. Therefore, the emissions would be less than significant on a project basis.

Table 3.3-5: Construction Air Pollutant Emissions (2017–2028)

Year	Emissions (tons per year)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
2017					
Site Preparation + Grading Neighborhoods 1+2	0.12	1.39	0.77	0.39	0.22
2017 Construction Subtotal	*0.12*	*1.39*	*0.77*	*0.39*	*0.22*
2018					
Site Preparation + Grading Neighborhoods 1+2	0.59	6.62	3.78	0.64	0.44
Paving/Underground Utilities Neighborhoods 1+2	0.14	1.08	1.04	0.08	0.06
2018 Subtotal	*0.73*	*7.70*	*4.82*	*0.72*	*0.51*
2019					
Paving/Underground Utilities Neighborhoods 1+2	0.07	0.52	0.56	0.04	0.03
Building Construction Neighborhoods 1+2	0.43	3.57	3.08	0.42	0.22

Table 3.3-5 (cont.): Construction Air Pollutant Emissions (2017–2028)

Year	Emissions (tons per year)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
2019 Construction Subtotal	*0.50*	*4.08*	*3.64*	*0.46*	*0.25*
2020					
Building Construction Neighborhoods 1+2	0.42	3.57	3.21	0.43	0.22
Paving/Underground Utilities Neighborhoods 3+4	0.14	1.35	1.50	0.09	0.07
2020 Construction Subtotal	*0.56*	*4.92*	*4.72*	*0.52*	*0.29*
2021					
Building Construction Neighborhoods 1+2	0.35	2.97	2.82	0.38	0.18
Architectural Coating Neighborhoods 1+2	1.77	0.05	0.10	0.01	0.01
Paving/Underground Utilities Neighborhoods 5+6	0.13	1.23	1.50	0.08	0.06
2021 Construction Subtotal	*2.25*	*4.25*	*4.42*	*0.47*	*0.25*
2022					
Architectural Coating Neighborhoods 1+2	0.19	0.01	0.01	0.00	0.00
Building Construction Neighborhoods 3+4	0.05	0.46	0.47	0.04	0.02
2022 Construction Subtotal	*0.24*	*0.46*	*0.48*	*0.04*	*0.03*
2023					
Building Construction Neighborhoods 3+4	0.24	2.10	2.36	0.18	0.11
2023 Construction Subtotal	*0.24*	*2.10*	*2.36*	*0.18*	*0.11*
2024					
Building Construction Neighborhoods 3+4	0.23	1.99	2.35	0.17	0.10
2024 Construction Subtotal	*0.23*	*1.99*	*2.35*	*0.17*	*0.10*
2025					
Building Construction Neighborhoods 3+4	0.11	0.97	1.20	0.08	0.05
Architectural Coating Neighborhoods 3+4	1.47	0.04	0.08	0.01	0.00
Building Construction Neighborhoods 5+6	0.10	0.89	1.11	0.08	0.04
2025 Construction Subtotal	*1.68*	*1.90*	*2.39*	*0.17*	*0.09*
2026					
Building Construction Neighborhoods 5+6	0.21	1.85	2.30	0.16	0.09
2026 Construction Subtotal	*0.21*	*1.85*	*2.30*	*0.16*	*0.09*
2027					
Building Construction Neighborhoods 5+6	0.21	1.85	2.29	0.16	0.09
Architectural Coating Neighborhoods 5+6	0.91	0.03	0.05	0.00	0.00

Table 3.3-5 (cont.): Construction Air Pollutant Emissions (2017–2028)

Year	Emissions (tons per year)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
2027 Construction Subtotal	*1.11*	*1.87*	*2.33*	*0.17*	*0.09*
2028					
Building Construction Neighborhoods 5+6	0.02	0.16	0.19	0.01	0.01
Architectural Coating Neighborhoods 5+6	0.56	0.02	0.03	0.00	0.00
2028 Construction Subtotal	*0.58*	*0.17*	*0.22*	*0.02*	*0.01*
Maximum Annual Emissions	**2.25**	**7.70**	**4.82**	**0.72**	**0.51**
Significance threshold (tons/year)	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with Regulation VIII—Fugitive PM_{10} Prohibitions.
ROG = reactive organic gases NO_x = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Totals calculated using unrounded numbers.
Source: CalEEMod Output (Appendix B).

Operational Emissions

Operational emissions occur over the lifetime of the TVDP and are from two main sources: area sources and motor vehicles, or mobile sources. Operational emissions are shown in Table 3.3-6. Construction is scheduled to be completed in 2028; some homes will become operational prior to full buildout. Therefore, in order to provide a conservative estimate, the TVDP's operational emissions were modeled in 2019. The SJVAPCD considers construction and operational emissions separately when making significance determinations.

For assumptions in estimating the emissions, please refer to Appendix B. The emissions output for project operation are summarized in Table 3.3-6. Please note that these results are the "mitigated" results in CalEEMod. The TVDP benefits from its location near existing pedestrian infrastructure, transit, and residential and commercial uses. The above measures are represented in CalEEMod as mitigation measures; however, they are not considered mitigation for CEQA, as they are required by regulation or a result of the project's location.

As shown in Table 3.3-6, the emissions are below the adopted and recommended District significance thresholds and, therefore, would result in a less than significant impact.

Table 3.3-6: Tracy Village Development Project's Operational Air Pollutant Emissions

Source	Emissions (tons per year)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	5.08	0.46	4.62	0.06	0.06

Table 3.3-6 (cont.): Tracy Village Development Project's Operational Air Pollutant Emissions

Source	Emissions (tons per year)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Energy	0.08	0.66	0.28	0.05	0.05
Mobile	2.38	8.79	27.59	5.91	1.64
Total	**7.53**	**9.90**	**32.49**	**6.02**	**1.75**
Significance threshold	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
ROG = reactive organic gases NO_x = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Area source emissions include emissions from natural gas, landscape, and painting.
Source: Appendix B.

Localized Pollutant Analysis

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

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with Rule 9510 and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern for localized impact in the SJVAB are PM_{10}, $PM_{2.5}$, NO_2, and CO.

An analysis of maximum daily emissions during construction and operation was conducted to determine if emissions would exceed 100 pounds per day for any pollutant of concern. The maximum daily emissions during construction would occur during the site grading phase in 2017 for NO_x, CO, PM_{10}, and $PM_{2.5}$. The maximum daily emissions during construction for ROG would occur during the overlapping of building construction and architectural coating in 2021. The maximum daily operational emissions would occur at project buildout, which was assumed to occur in 2019 as a conservative estimate. Operational emissions include emissions generated on-site by area sources such as natural gas combustion and landscape maintenance, and off-site by motor vehicles accessing the project. Most motor vehicle emissions would occur distant from the site; therefore, emissions that would occur within 0.1 mile from the TVDP site were used to provide an estimate of localized impacts from mobile sources for ROG, NO_x, PM_{10}, and $PM_{2.5}$. CO violations require extreme traffic congestion that would not occur at the project site; therefore, operational mobile CO emissions were not included. The results of the screening analysis are presented in Table 3.3-7.

Table 3.3-7: Maximum Daily Air Pollutant Emissions

Source	Emissions (pounds per day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Construction 2017	7.30	84.35	45.80	6.97	5.16
Construction 2018	6.52	74.71	41.80	6.45	4.68
Construction 2019	2.75	22.27	22.13	1.29	1.21
Construction 2020	4.14	39.87	39.33	2.25	2.09
Construction 2021	55.39	20.39	24.26	1.10	1.02
Construction 2022	53.47	15.62	16.36	0.81	0.76
Construction 2023	1.57	14.38	16.24	0.70	0.66
Construction 2024	1.47	13.44	16.17	0.61	0.58
Construction 2025	41.65	13.62	17.89	0.58	0.55
Construction 2026	1.37	12.47	16.08	0.53	0.50
Construction 2027	40.29	12.47	16.08	0.53	0.50
Construction 2028	40.29	12.47	16.08	0.53	0.50
Maximum Daily Construction Emissions	*55.39*	*84.35*	*45.80*	*6.97*	*5.16*
Maximum Daily Operational Emissions	*44.40*	*29.72*	*53.25*[*]	*1.11*	*1.07*
Screening threshold	100	100	100	100	100
Exceed screening threshold?	No	No	No	No	No

Notes:
Emissions are essentially the same for the summer and winter modeling runs.
Where construction phases overlap, emissions were combined.
[*]CO operational mobile emissions occur off-site and are addressed in the CO hot spot analysis.
CO = carbon monoxide NO_x = nitrogen oxides CO = carbon monoxide
PM_{10} and $PM_{2.5}$ = particulate matter N/A—Not applicable
Source: Modeling Results (Appendix B).

The TVDP would not exceed SJVAPCD screening thresholds for requiring additional ambient air quality modeling; therefore, the project's localized criteria pollutant impacts would be less than significant.

Carbon Monoxide Hot Spot Analysis

Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The SJVAPCD provides screening criteria to determine when to quantify local CO concentrations based on impacts to the level of service (LOS) of roadways in the project vicinity.

Construction of the TVDP would result in minor increases in traffic for the surrounding road network during the duration of construction. Motor vehicles accessing the site when the project becomes operational would result in an increase in daily trips. As discussed in Section 3.16—Transportation, the increased traffic volumes under existing plus project conditions and under cumulative with project conditions may cause transportation facilities to degrade below acceptable standard levels. However, after the incorporation of mitigation, Impacts TRANS-1, TRANS-2, and TRANS-3 would be reduced to less than significant. In addition, the highest background 8-hour average of carbon monoxide, as shown in Table 3.3-1, is 1.78 ppm, which is 80 percent lower than the state ambient air quality standard of 9.0 ppm. Therefore, the TVDP would not significantly contribute to an exceedance of state or federal CO standards.

Impact Analysis—Residential Annexation Area

No development is proposed for the Residential Annexation Area. It is not anticipated that the implementation of the Residential Annexation Area component of the project would result in a net increase of operational emissions; therefore, implementation of the Residential Annexation Area component would not violate or contribute substantially to an air quality violation.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Cumulative Impacts

Impact AIR-3:	**The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).**

Impact Analysis—Tracy Village Development Project

To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds. This is an approach recommended by the District in its GAMAQI.
2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Step 1: Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for NO_x or ROG, then it follows that the project would contribute to a cumulatively considerable impact for ozone.

Regional emissions include those generated from all on-site and off-site activities. Regional significance thresholds have been established by the District because emissions from projects in the Air Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the Air Basin region with regional emissions in excess of any of the thresholds presented previously are considered to have a significant regional air quality impact.

The criteria pollutant emissions analysis assessed whether the TVDP would exceed the District's thresholds of significance. As shown in Table 3.3-5 and Table 3.3-6, criteria pollutant emissions would not exceed any regional threshold of significance during project construction or operation. Therefore, the combination of unmitigated project emissions with the criteria pollutants from other sources within the Air Basin would not cumulatively contribute to a significant impact according to this criterion.

Step 2: Plan Approach

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior

environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. The District attainment plans are based on a summary of projections that accounts for projected growth throughout the Air Basin and the controls needed to achieve ambient air quality standards. The Air Basin is in nonattainment or maintenance status for ozone and particulate matter (PM_{10} and $PM_{2.5}$), which means that concentrations of those pollutants currently exceed the ambient air quality standards for those pollutants or that the standards have recently been attained in the case of pollutants with maintenance status. When concentrations of ozone, PM_{10}, or $PM_{2.5}$ exceed the ambient air quality standard, then those sensitive to air pollution (such as children, the elderly, and the infirm) could experience health effects such as decrease of pulmonary function and localized lung edema in humans and animals, increased mortality risk, and risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans. See Section 3.3.1-Existing Air Quality Conditions for additional correlation of the health impacts with the existing pollutant concentrations experienced in the Tracy area.

Under the CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The geographic scope for cumulative criteria pollution from air quality impacts is the Air Basin, because that is the area in which the air pollutants generated by the sources within the Air Basin circulate and are often trapped. The SJVAPCD is required to prepare and maintain air quality attainment plans and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SJVAPCD does not have authority over land use decisions, it is recognized that changes in land use and circulation planning would help the Air Basin achieve clean air mandates. The District evaluated emissions from land uses and transportation in the entire Air Basin when it developed its attainment plans. Emission inventories used to predict attainment of NAAQS must be based on the latest planning assumptions for mobile sources.

In accordance with CEQA Guidelines Section 15064, subdivision (h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously approved plan or mitigation program.

The history and development of the SJVAPCD's current Ozone Attainment Plan is described in Section 2.4, Air Quality Plans. The 2007 8-Hour Ozone Plan contains measures to achieve reductions in emissions of ozone precursors and sets plans towards attainment of ambient ozone standards by 2023. The 2012 $PM_{2.5}$ Plan and the 2015 $PM_{2.5}$ Plan for the 1997 $PM_{2.5}$ Standard require fewer NO_x reductions to attain the $PM_{2.5}$ standard than the Ozone Plan, so the Ozone Plan is considered the applicable plan for reductions of the ozone precursors NO_x and ROG. The 2012 $PM_{2.5}$ Plan requires reductions in directly emitted $PM_{2.5}$ from combustion sources such as diesel engines and fireplaces and from fugitive dust to attain the ambient standard and is the applicable plan for $PM_{2.5}$ emissions. $PM_{2.5}$ is also formed in secondary reactions in the atmosphere involving NO_x and ammonia to form nitrate particles. Reductions in NO_x required for ozone attainment are also sufficient for $PM_{2.5}$ attainment. As discussed in Impact AIR-1, the TVDP is consistent with all applicable control

measures in the air quality attainment plans. The TVDP would comply with any District rules and regulations that may pertain to implementation of the AQPs. Therefore, impacts would be less than significant with regard to compliance with applicable rules and regulations.

Step 3: Cumulative Health Impacts

The Air Basin is in nonattainment for ozone, PM_{10}, (State only) and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 3.3-4. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

Since the Basin is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is cumulatively considerable. The SJVAPCD regional thresholds for NO_x, VOC, PM_{10}, or $PM_{2.5}$ are applied as cumulative contribution thresholds. Projects that exceed the regional thresholds would have a cumulatively considerable health impact. As shown in Table 3.3-5 and Table 3.3-6, the regional analysis of construction and operational emissions indicates that the TVDP would not exceed the District's significance thresholds and would be consistent with the applicable Air Quality Attainment Plan. Therefore, the TVDP would not result in significant cumulative health impacts.

The SJVAPCD Air Quality Attainment Plans predict that nonattainment pollutant emissions will continue to decline each year as regulations adopted to reduce these emissions are implemented, accounting for growth projected for the region. Therefore, the cumulative health impact will also decline even with the project's emission contribution.

Impact Analysis—Residential Annexation Area

No development is proposed for the Residential Annexation Area. It is not anticipated that the implementation of the Residential Annexation Area component would result in a net increase of operational emissions; therefore, implementation of the Residential Annexation Area component would not result in a cumulatively considerable net increase of any criteria pollutant.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area:

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Sensitive Receptors

Impact AIR-4: The project would not expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis—Tracy Village Development Project

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. The District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The TVDP site is bordered by single-family residences. The closest sensitive receptors are residences located approximately 20 feet from the TVDP boundary.

Impacts to On-site Workers

The project is not a commercial or industrial operation that would have on-site workers. Therefore, a health risk assessment for on-site workers is not required or recommended.

Construction: ROG

ROG is emitted during the application of architectural coatings (painting). The amount emitted is dependent on the amount of ROG (or VOC) in the paint. ROG emissions are typically an indoor air quality health hazard concern rather than an outdoor air quality health hazard concern. Therefore, exposure to ROG during architectural coatings is a less than significant health impact.

Three types of asphalt are typically used in paving: asphalt cements, cutback asphalts, and emulsified asphalts. However, District Rule 4641 prohibits the use of the following types of asphalt: rapid cure cutback asphalt; medium cure cutback asphalt; slow cure asphalt that contains more than one-half (0.5) percent of organic compounds that evaporate at 500 degrees Fahrenheit (°F) or lower; and emulsified asphalt containing organic compounds, in excess of 3 percent by volume, that evaporate at 500°F or lower. An exception to this is medium cure asphalt when the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F.

The acute (short-term) health effects from worker direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. The studies were based on occupational exposure of fumes. Residents are not in the immediate vicinity of the fumes; therefore, they would not be subjected to concentrations high enough to evoke a negative response. In addition, the restrictions that are placed on asphalt in the San Joaquin Valley reduce ROG emissions from asphalt and exposure. The impact to nearby sensitive receptors from ROG during construction would be less than significant.

Operation: ROG

During operation, ROG would be emitted primarily from motor vehicles. Direct exposure to ROG from project motor vehicles would not result in health effects, because the ROG would be distributed across miles and miles of roadway and in the air. The concentrations would not be great enough to result in direct health effects.

Construction: NO_x, PM_{10}, $PM_{2.5}$

As discussed in Impact AIR-2, emissions during construction would not exceed the significance thresholds and would not be expected to result in concentrations that would exceed ambient standards or contribute substantially to an existing exceedance of an ambient air quality standard.

Operation: PM_{10}, $PM_{2.5}$, CO, NO_2

As discussed in Impact AIR-2, localized concentrations of PM_{10}, $PM_{2.5}$, CO, and NO_2 would not exceed the ambient air quality standards. Residential development is an insignificant source of these pollutants except for projects that allow woodburning devices that emit PM_{10}, $PM_{2.5}$ in wood smoke. The project would not include woodburning fireplaces and would include only natural gas-fueled fireplaces and inserts that are insignificant sources of $PM_{2.5}$ and PM_{10}. Therefore, the project would not expose sensitive receptors to substantial criteria air pollutant concentrations during operation.

Construction: Toxic Air Contaminants

TVDP construction would involve the use of diesel-fueled vehicles and equipment that emit DPM, which is considered a TAC. The SJVAPCD's latest threshold of significance for TAC emissions is an increase in cancer risk for the maximally exposed individual of 20 in a million (formerly 10 in a million). The SJVAPCD's 2015 GAMAQI does not currently recommend analysis of TAC emissions from project construction activities, but instead focuses on projects with operational emissions that would expose sensitive receptors over a typical lifetime of 70 years. Residential projects produce limited amounts of TAC emissions during operation and thus have not been subject to project TAC analysis. The highest emissions from construction activities occur during the grading and site preparation phase that occurs over the first year of construction and does not overlap with operations of the TVDP. Limited amounts of diesel equipment are used during ground-up construction of individual houses that occurs during the majority of the construction schedule when some units may be occupied. Construction equipment fleet operators are subject to ARB's In Use Offroad Equipment Fleet Regulation, which requires the use of increasing amounts of lower-emitting equipment that will help to ensure that risk would not exceed SJVAPCD thresholds.

Construction phase risks would be considered acute health risks as opposed to cancer risks, which are long-term. The Office of Environmental Health Hazard Assessment has yet to define acute risk

factors for diesel particulates that would allow the calculation of a hazards risk index; thus, evaluation of this impact would be speculative and no further discussion is necessary.

Operation: Toxic Air Contaminants

The ARB Air Quality and Land Use Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution" (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. These recommendations are assessed as follows.

- Heavily traveled roads. ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project is adjacent to Valpico Road and approximately 450 feet east of Corral Hollow Road. The segment of Valpico Road from Corral Hollow Road to Cagney is estimated to currently have 8,100 vehicles per day, the segment of Valpico Road from Cagney to Tracy Boulevard is estimated to currently have 8,370 vehicles per day, and the segment of Corral Hollow Road from Valpico Road to Peony Drive is estimated to currently have 7,600 vehicles per day (Kimley-Horn 2017).
- Distribution centers. ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The project is not located within 1,000 feet of a distribution center.
- Fueling stations. ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). ARB recommends a 50-foot separation is recommended for typical gas dispensing facilities. The nearest gas station is approximately 0.57 mile from the project site.
- Dry cleaning operations. ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The nearest dry cleaning operation is approximately 0.98 mile from the project site.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis (C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for Valley fever. By geographic region, hospitalizations for Valley fever in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to

285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley fever died (CDC 2009).

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
2) Old (prehistoric) Indian campsites near fire pits
3) Areas with sparse vegetation and alkaline soils
4) Areas with high salinity soils
5) Areas adjacent to arroyos (where residual moisture may be available)
6) Packrat middens
7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils
8) Sandy well aerated soil with relatively high water holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) Cultivated fields
2) Heavily vegetated areas (e.g. grassy lawns)
3) Higher elevations (above 7,000 feet)
4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
5) Areas that are continually wet
6) Paved (asphalt or concrete) or oiled areas
7) Soils containing abundant microorganisms
8) Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000).

The TVDP project site is currently undeveloped, surrounded on all sides by residential land uses, some of which are semi-rural in character. Because the majority of the TVDP project site and the immediately surrounding vicinity consists of urbanized development or cultivated fields, the TVDP project site is an area that would lead to a low probability of having *C. immitis* growth sites and exposure from disturbed soil.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The TVDP will minimize the generation of fugitive dust during construction activities by complying with the

District's Regulation VIII. Therefore, this regulation would reduce valley fever impacts during construction to less than significant.

During operations, dust emissions are anticipated to be negligible, because most of the project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the TVDP from generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

According to a map of areas where naturally occurring asbestos in California are likely to occur (U.S. Geological Survey 2011), there are no such areas in the project area. Therefore, development of the TVDP is not anticipated to expose receptors to naturally occurring asbestos. Impacts would be less than significant.

Impact Analysis—Residential Annexation Area

No development is proposed for the Residential Annexation Area. Implementation of the Residential Annexation Area component would not expose sensitive receptors to substantial pollutant concentrations.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Objectionable Odors

Impact AIR-5: **The project would not create objectionable odors affecting a substantial number of people.**

Impact Analysis—Tracy Village Development Project

Thresholds of Significance

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. Impacts to new receptors are generally outside the scope of CEQA review but are included in this analysis for disclosure purposes. The District has determined the common land use types that are known to produce odors in the Air Basin. These types are shown in Table 3.3-8.

Table 3.3-8: Screening Levels for Potential Odor Sources

Odor Generator	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: SJVAPCD 2015.	

According to the SJVAPCD GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- **Generators:** projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- **Receivers:** residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

If the TVDP were to result in sensitive receptors being located closer than the recommended distances to an odor generator in the list in Table 3.3-8, a more detailed analysis including a review of District odor complaint records is recommended. The detailed analysis would involve contacting the District's Compliance Division for information regarding odor complaints. For a project locating near an existing source of odors, the project should be identified as having a significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one *confirmed* complaint per year averaged over a three-year period, or
- Three *unconfirmed* complaints per year averaged over a three-year period.

Project Analysis

Tracy Village Development Project: Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roasters, asphalt batch plants, and rendering plants. The project would not engage in any of these activities. Therefore, the TVDP would not be considered to have the potential to expose persons to substantial sources of objectionable odors.

During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and would not likely be noticeable for extended periods of time beyond the project's site boundaries. The potential for diesel odor impacts is therefore less than significant.

As a residential project, the TVDP has the potential to place sensitive receptors near existing odor sources. The TVDP site is not located within 2 miles of a wastewater treatment facility. There are no solid waste facilities or other major odor generating sources (as listed in Table 3.3-8) within 1 mile of the TVDP site, and no petroleum refineries within 2 miles of the site. Therefore, the surrounding uses would not cause substantial odor impacts to the TVDP.

Impact Analysis—Residential Annexation Area

Implementation of the Residential Annexation Area component of the project would not create objectionable odors affecting a substantial number of people. There are no solid waste facilities or other major odor generating sources (as listed in Table 3.3-8) within 1 mile of the Residential Annexation Area, and no petroleum refineries within 2 miles of the Residential Annexation Area Project Area. Therefore, the surrounding uses would not cause substantial odor impacts to the Residential Annexation Area.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.4 - Biological Resources

3.4.1 - Introduction

This section describes the existing biological resources and potential effects from project implementation on the Tracy Village Specific Plan and its surrounding area and includes appropriate mitigation measures to reduce or avoid these impacts. The analysis of biological resources presented in this section is based on a review of the most current project description, data collected from maps, previous biological investigations, and reports. Reports included a Biological Resources Evaluation (BRE) completed by Live Oak Associates, Inc. (LOA), dated August 11, 2013, a Peer Review of LOA's BRE completed by FirstCarbon Solutions (FCS) dated May 27, 2015, and a Biological Resources Assessment completed by FCS dated March 30, 2017 for the proposed Tracy Village Development Project (TVDP) and the proposed Residential Annexation Area, all of which are included in Appendix C.

3.4.2 - Environmental Setting

The TVDP site is currently undeveloped and encompasses 133.2 acres in unincorporated San Joaquin County, adjacent to the Tracy city limits (Exhibit 2-2). In addition to the annexation of the 133.2-acre TVDP site, the City also seeks annexation of 42 residential lots to the north and west, fronting Corral Hollow and Valpico Roads (referred to as the Residential Annexation Area). The Tracy Village Specific Plan (TVSP) includes both the TVDP and the Residential Annexation Area.

Biological Communities

The three biological communities found on the TVDP and Residential Annexation Area are urban (residential)/developed, agriculture, and ruderal. The TVDP site is primarily characterized as Agricultural land, with some Urban/developed land surrounding the two former homesites in the northeast and northwest portions of the site. The Residential Annexation Area is characterized as predominately Urban/Developed land.

There are no biological communities found on or near the TVDP that would be considered sensitive under California Environmental Quality Act (CEQA). The following is a description of these communities and characteristic vegetation.

Urban/Developed Land

Urban habitat is distinguished by the presence of both native and exotic species maintained in a relatively static composition within a downtown, residential, or suburbia setting. Species richness in these areas depends greatly upon community design (i.e., open space considerations) and proximity to the natural environment.

Vegetation in these areas consists primarily of introduced ornamental trees and shrubs with manicured lawns. Invasive weeds are also found in disturbed areas. Urban developed land is found throughout the residential annexation area. Vegetation in the annexation area was dominated by ruderal grasses and forbs, and by ornamental trees and shrubs such as cypress, redwood, and eucalyptus trees.

Urban/developed lands are generally not of high value for wildlife. Birds and mammals that occur in these areas typically include introduced species adapted to human habitation, including rock dove (*Columba livia*), starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*). Some native species persist in commercial development lands, including western toad (*Bufo boreas*), western fence lizard (*Sceloporus occidentalis*), Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Carpodacus mexicanus*), western scrub jay (*Aphelocoma californica*), and American crow (*Corvus brachyrhynchos*).

Wildlife species observed during the survey included the American crow, house sparrow, mourning dove (*Zenaida macroura*), and western fence lizard.

Ruderal (Disturbed)

Ruderal (roadside) communities occur in areas of disturbance, such as along roadsides, trails, parking lots, etc. These communities are subjected to ongoing or past disturbances (e.g., vehicle activities, mountain bikes, mowing). Several areas surrounding the Residential Annexation Area can be classified as ruderal, including the outer edges of the TVDP.

Ruderal habitat in these disturbed areas supports a diverse weedy flora. Vascular plant species associated with these areas typically include Johnson grass, Canadian horseweed (*Conyza canadensis*), milk thistle (*Silybum marianum*), yellow star thistle (*Centaurea solstitialis*), and field bindweed (*Convolvulus arvensis*). Fallow fields support field bindweed (*Convolvulus arvensis*), turkey mullein (*Eremocarpus setigerus*), wild lettuce (*Lactuca serriola*), prickly sow thistle (*Sonchus arvensis*), and common mallow (*Malva neglecta*). Mediterranean hoary-mustard (*Hirschfeldia incana*) and curly dock (*Rumex crispus*) are also typical of this area. Species observed in the ruderal/disturbed areas included wild oats (*Avena* sp.), Italian rye grass (*Festuca perennis*), black mustard (*Brassica nigra*), black walnut (*Juglans* sp.), and olive (*Olea europaea*).

Agricultural Land

Agricultural lands generally occur in areas that once supported productive and diverse biological communities. The conversion of native vegetation to agricultural lands has greatly reduced the wildlife species diversity and habitat value. However, some common and agricultural "pest" species forage in these habitats, and cultivated vegetation can provide benefits such as cover, shade, and moisture for these and other species during hot summer months. Species observed included wild oats (*Avena fatua*), and Bermuda grass (*Cynodon dactylon*).

Typical wildlife species found in agricultural lands include red-tailed hawk (*Buteo jamaicensis*), barn owl (*Tyto alba*), American crow, Brewer's blackbird, house finch, California ground squirrel (*Spermophilus beecheyi*), and western harvest mouse (*Reithrodontomys megalotis*). Wildlife species observed in the agricultural land included California ground squirrels and red-tailed hawk.

Wildlife

The vegetation communities and land cover types discussed above provide habitat for a number of local common wildlife species as discussed above. Other common mammals that might be expected to occur in these habitats include black-tailed jackrabbit (*Lepus californicus*), striped skunk (*Mephitis*

mephitis), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*) and mice (*Peromyscus* spp.). Several bat species could also use structures and/or trees within the developed areas of the site for roosting. Reptiles such as the gopher snake (*Pituophis catenifer catenifer*), and terrestrial garter snake (*Thamnophis elegans*), may also be present.

Trees

The Project Area contains trees and shrubs such as cypress, redwood, and eucalyptus trees. Other trees observed included silktree (*Albizia julibrissin*), black walnut (*Juglans* sp.), olive (*Olea europaea*), almond (*Prunus dulcis*), elm (*Ulmus* sp.), and Peruvian pepper (*Schinus molle*).

Soils

The Project Area consists mainly of Zacharias series and two soil types Zacharias clay loam and Zacharias gravelly clay loam with a small portion in the southeastern corner of the annexation area consisting of the Stomar series with one soil type Stomar clay loam (Exhibit 3.2-3)

- The Zacharias Series are very deep and well drained soils that formed in alluvium from mixed rock sources. These soils are on alluvial fans and low stream terraces. Slope ranges from 0 to 8 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 60 degrees F. Used for pastureland, livestock grazing, field crops, irrigated cropland, nut, row crops and fruit. (USDA 2017)
- The Stomar Series are very deep well drained soils that formed in alluvium from sedimentary rocks. They are found on dissected alluvial fans and terraces. Slopes range from 0 to 2 percent. The annual precipitation is about 9 inches and the annual temperature is about 62 degrees F. These soils are used for irrigated cropland including field crops, row crops and orchards. It is also used for dryland cropland. Some areas are used for urban land with smaller areas used for livestock grazing. (USDA 2017).

Sensitive Biological Resources

The following section discusses potential for special-status biological resources to occur within the Project Area. Exhibit 3.4-1 depicts the sensitive biological resources previously documented within the vicinity of the Project Area.

Special Status Plant Communities

Table 1 of the Biological Resources Assessment (BRA [Appendix C]) identifies 37 special-status plant species and CNPS sensitive species that have been recorded to occur within the region and Tracy topographic quadrangle (USGS 1986), as recorded by the CNDDB, IPAC and CNPSEI (CDFW 2017; USFWS 2017; CNPS 2017). The table also includes the species' status, required habitat, and potential to occur within the Project Area.

All special-status plant species have been determined unlikely to occur on the TVDP site and Residential Annexation Area, primarily based on the absence of suitable habitat, including but not limited to serpentine soils, chenopod scrub, vernal pools, montane coniferous forest, and intertidal

mudflats to support individuals and/or populations. No special-status species were found during the surveys conducted for the BRE or the surveys conducted by FCS in April 2015, and November 21, 2016.

Because of the highly disturbed nature of the Project Area and lack of suitable habitat, as described in the BRA (Appendix C), no special-status plant species have the potential to occur; therefore, no special-status plant species would be impacted by the TVSP.

Special Status Wildlife Species

Table 2 of the BRA (Appendix C) identifies 53 federal and state listed threatened and/or endangered wildlife species, and state Species of Special Concern that have been recorded in the CNDDB (CDFW 2017) and IPAC (USFWS 2017) as occurring within the region and Tracy, California topographic quadrangle (USGS, 1986). The table also includes the species' status, required habitat, and potential to occur within the TVSP.

Four special-status birds were determined to have potential to occur on the TVDP site. The tricolored blackbird (*Agelaius tricolor*), has potential to occur in a foraging capacity only, while the burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and loggerhead shrike (*Lanius ludovicianus*), were determined to have potential to occur in a foraging and nesting capacity. The Project Area contains marginal habitat for several bat species, including three special-status bat species: the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*) and the western mastiff bat (*Eumops perotis californicus*), all three are California species of special concern.

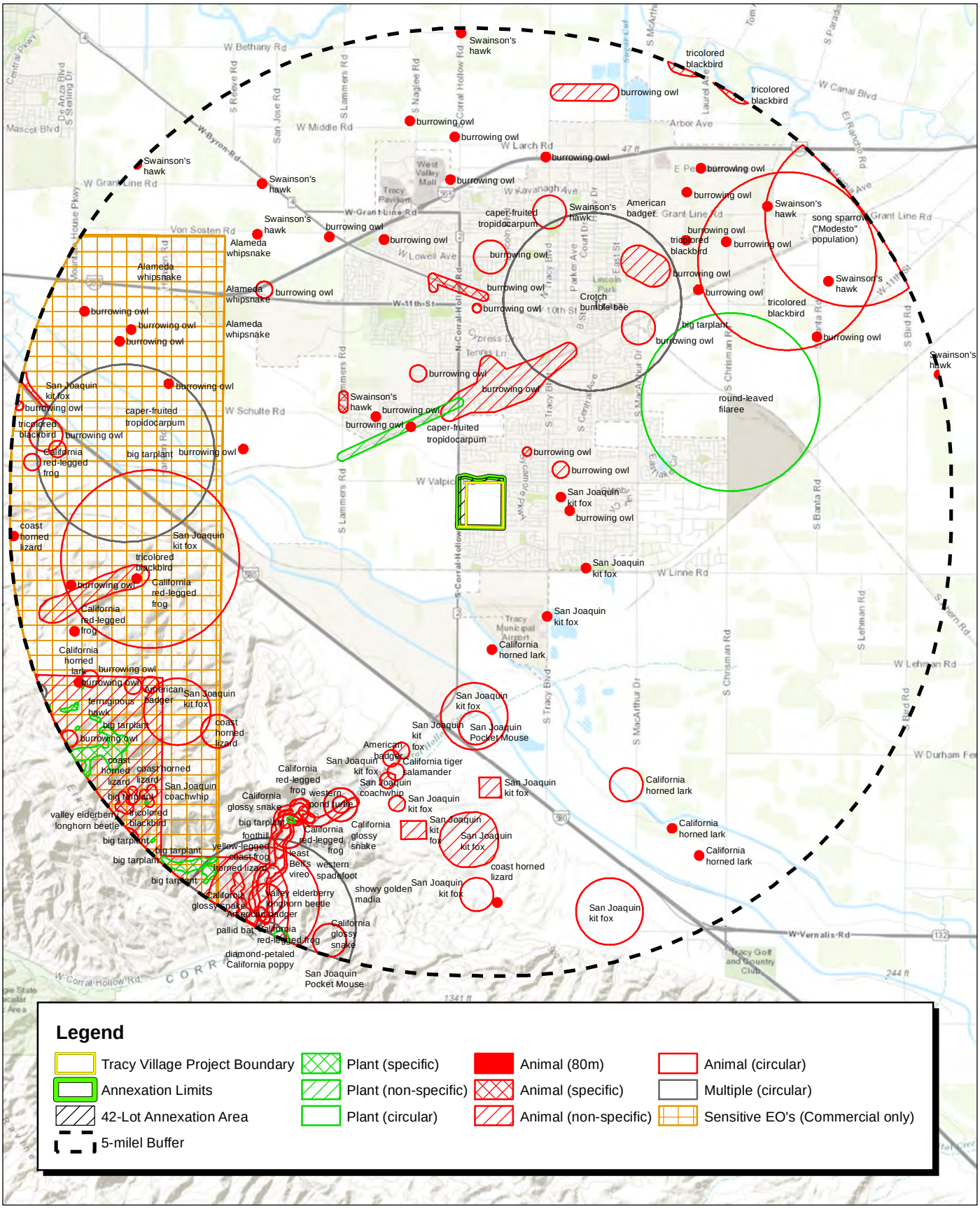
Suitable habitat for raptors and other birds protected by the Migratory Bird Treaty Act (MBTA) also occurs within and adjacent to the Project Area. Most native, breeding birds are protected under Section 3503 of the California Fish and Game Code (FGC), and raptors specifically are protected under Section 3503.5 of the FGC. Additionally, both Section 3513 of the FGC and the federal MBTA prohibit the killing, possession, or trading of migratory birds. Section 3800 of the FGC prohibits the taking of nongame birds and state Fully Protected species.

Wildlife Movement Corridors

The Project Area was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey, and do not appear to be a significant corridor for wildlife movement. The TVDP is situated within a relatively developed landscape, residential developments, agricultural lands and major roads are in the immediate surroundings, which act as significant barriers to wildlife movement.

Critical Habitat

When the USFWS lists a species as threatened or endangered under Federal Endangered Species Act (FESA), areas of habitat considered essential to its conservation and survival may be designated as critical habitat. These areas may require special consideration and/or protection because of their ecological importance. Potential critical habitat designations within the general vicinity of the Project Area were checked and reviewed using the USFWS Critical Habitat Portal (USFWS 2017b) and the USFWS Information Site For planning and Conservation (USFWS IPAC 2017). The review indicated that the Residential Annexation Area along Valpico Road borders designated critical habitat for the Delta smelt (*Hypomesus transpacificus*); however, no development is proposed and thus, no impacts are expected to occur to critical habitat.



Source: ESRI Imagery, 2015

FIRSTCARBON SOLUTIONS™

1.5 0.75 0 1.5 Miles

Exhibit 3.4-1
CNDDB - Recorded Occurrences 5-mile Radius

THIS PAGE INTENTIONALLY LEFT BLANK

The Project Area is located 2.7 miles northeast of an area designated as critical habitat for California red-legged frog (*Rana draytonii*) (USFWS 2017b), but this distance precludes the likelihood of an adverse effect to this habitat.

3.4.3 - Regulatory Framework

Federal Endangered Species Act

The purposes of this Act are to provide a means to conserve the ecosystems that endangered and threatened species depend on and to provide a program for conservation and recovery of these species. The FESA defines species as "endangered" and "threatened" and provides regulatory protection for any species so designated. Section 9 of the FESA prohibits the take of species listed by the U.S. Fish and Wildlife Service (USFWS) as threatened or endangered. As defined in the FESA, take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." Harm is defined by the USFWS to encompass "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 Code of Federal Regulations Section 17.3). Thus, some instances of habitat modification can constitute prohibited "take" if it can be shown that such modification can be expected to result in injury or death to one or more individuals of a listed species.

In recognition that take cannot always be avoided, Section 10(a) of the FESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10 (a)(1)(B) permits (incidental take permits) may be issued if taking is incidental and will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

Section 7(a)(2) of the FESA requires any federal agency taking an action, including the USFWS, to evaluate a proposed project with respect to any species proposed for listing or already listed as endangered or threatened and their critical habitat, if any is proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species, and are prohibited from authorizing, funding, or carrying out any action that will jeopardize a listed species or destroy or modify its "critical habitat." As defined in the FESA, "individuals, organizations, states, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding."

The term critical habitat for a threatened or endangered species means either (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of FESA Section 1533 on which are found those physical or biological features (Constituent elements) that are (a) essential to the conservation of the species and (b) which may require special management considerations or protections; or (2) habitat outside the geographical area occupied by the species at the time it is listed, which has been determined to be essential for the conservation of the species.

Migratory Bird Treaty Act

The MBTA makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union. As with the FESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take.

Federal Clean Water Act: Sections 404 and 401

Section 404 of the Federal Clean Water Act, which is administered by the United States Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States (U.S.). The definition of "Waters of the U.S." is set forth in the Title 33 Code of Federal Regulations (CFR) 328.3. The term "waters of the United States" means (1) navigable waters, (2) interstate waters, (3) intrastate waters with an interstate commerce nexus, (4) impoundments of the these waters, (5) non-navigable tributaries, including non-relatively permanent waters (intermittent, ephemeral streams) that exhibit a significant chemical, physical or biological nexus to downstream jurisdictional waters, (6) territorial seas, and (7) wetlands adjacent to otherwise jurisdictional waters.

With respect to adjacent wetlands, the USACE defines "adjacent" to mean "bordering, contiguous or neighboring." Typically, wetlands within the floodplain of jurisdictional features (lakes, rivers, tributaries, etc.) will be considered "adjacent." According to the USACE, wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions (33 CFR 328.3(b)). Wetlands generally include swamps, marshes, bogs, and similar areas.

Any project impacting jurisdictional waters/wetlands must obtain a dredge/fill (404) permit from the USACE prior to commencement of activities affecting those resources.

In connection with notification to the USACE under Section 404 of the Clean Water Act (CWA), pursuant to 33 CFR Part 330, a written request for Section 401 water quality certification must be submitted to the RWQCB to ensure that no degradation of water quality will result from the proposed project. Subject to CWA section 401(a)(1), the USACE cannot issue a section 404 dredge/fill permit until such time as a CWA section 401 Water Quality Certification has been approved by the applicable RWQCB. In the nationwide permitting program, compliance with the Section 401 is set forth in general condition (GC 21).

In order to meet the requirements of the RWQCB for issuance of a 401-water quality certification, the project proponent must provide assurances that the project will not adversely affect the water quality of receiving water bodies. A written request for 401 water quality certification must be prepared and submitted to the RWQCB for review. The request will include a detailed project description, a description of proposed impacts, identification and discussion of beneficial uses of affected receiving waters (as described within the appropriate Basin Plan), a water quality plan identifying project-specific Best Management practices (BMPs), discussion of other approvals and certifications being obtained, a conceptual restoration plan, and a completed notification form.

State

California Endangered Species Act (CESA)

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. The State considers a threatened species as one present in such small numbers throughout its range that it is considered likely to become an endangered species in the near future in the absence of special protection or management. A rare species is considered as present in such small numbers throughout its range that it may become endangered if its present environment worsens. The designation "rare species" applies only to California native plants. State threatened and endangered species include both plants and wildlife (not including invertebrates) and are legally protected against "take" as this term is defined in the CESA (California Fish & Game Code Section 2050, et seq.). "Species of Special Concern" is an informal designation used by the CDFG for some declining wildlife species that are not officially listed as endangered, threatened, or rare. This designation does not provide legal protection, but it signifies that these species are recognized as vulnerable by CDFG.

Sections 1600–1603 of the State Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the California Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife and has jurisdiction over dry washes that carry water ephemerally during storm events.

Sections 2080 and 2081 of the State Fish and Game Code

Section 2080 of the State Fish and Game Code states that no person shall import into this state (California), export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act, or the California Desert Native Plants Act. Under Section 2081 of the Code, the CDFG may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if (1) the take is incidental to an otherwise lawful activity, (2) impacts of the authorized take are minimized and fully mitigated, (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) the applicant ensures adequate funding to implement the measures required by CDFG. CDFG shall make this determination based on the best scientific and other information that is reasonably available and shall include consideration of the species' capability to survive and reproduce.

Section 3503 of the State Fish and Game Code

Section 3503 of the State Fish and Game Code states, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this Code or any regulation made pursuant thereto."

Natural Community Conservation Planning Program

The Natural Community Conservation Planning Program, managed by CDFG, is designed to conserve multiple species and their habitats, while also providing for the compatible use of private land. Through local planning, the Natural Community Conservation Planning Program process protects wildlife and habitat before the landscape becomes so fragmented or degraded by development that listings are required under the FESA. Instead of saving small, disconnected units of habitat for just one species at a time, agencies, local jurisdictions, and other interested parties have an opportunity, through the Natural Community Conservation Planning Program, to work cooperatively to develop plans that consider broad landscapes, or "ecosystems," and the needs of many species. Partners enroll in the programs and, by mutual consent, habitat areas with high conservation values are set aside and may not be developed. Partners also agree to study, monitor, and develop management plans for these reserve areas. The program provides a process for fostering economic growth by allowing approved development in enrolled areas with lower conservation values.

Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The definition of "rare and endangered" differs from those contained in CESA. However, the list of native plants afforded protection pursuant to this act includes those listed as rare and endangered under the CESA. The Native Plant Protection Act provides limitations on take as follows: "No person shall import into this state, or take, possess, or sell within this state" any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFG at least 10 days in advance of changing land uses to allow the CDFG to salvage any rare or endangered native plant material.

California Native Plant Society

The CNPS is a statewide resource conservation organization that has developed an inventory of California's special-status plant species. This inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory consists of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as rare, threatened, or endangered throughout their range. List 2 plant species are considered rare, threatened, or endangered in California, but more common in other states. Plant species on lists 1A, 1B, and 2 meet CDFG criteria for endangered, threatened, or rare listing. Plant species for which CNPS requires additional information in order to properly evaluate their status are included on List 3. List 4 plant species are those of limited distribution in California whose susceptibility to threat is considered low at the current time.

Local

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which encompasses all of San Joaquin County, provides a strategy for balancing habitat and open space conservation with the needs of economic development. The City of Tracy is a signatory to the SJMSCP. The SJMSCP objectives include 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 FESA or CESA; providing and maintaining multiple-use open spaces that 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.

3.4.4 - Methodology

Literature Review

Existing information, including maps, aerial photographs, documents, and correspondence relative to the TVDP and Residential Annexation Area and adjacent properties were reviewed and analyzed. Data reviewed includes but is not limited to:

- Existing documentation and studies of the biological resources within the immediate vicinity of the site;
- The Federal Register listing package for each federally listed endangered or threatened species potentially occurring on-site;
- Literature pertaining to the habitat requirements of special-status species potentially occurring on the site, including California Wildlife Habitat Relationships (CWHR);
- The California Department of Fish and Wildlife (CDFW) Annual Report on the status of California's listed threatened and endangered plants and animals;
- California Natural Diversity Data Base (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) information regarding special-status species potentially occurring on-site;
- United States Geological Service (USGS) topographic maps and current aerial photos, which will be reviewed for evidence of United States Army Corps of Engineers (USACE) or CDFW jurisdictional areas pursuant to Section 404 of the Clean Water Act and Section 1602 of the California Fish and Game Code; and
- SJMSCP.

Reconnaissance-level Field Surveys

LOA Senior Ecologists Anna Kopitov and Davinna Ohlson conducted a reconnaissance-level field survey of the TVDP on May 20, 2013. The TVDP site was again surveyed on April 22, 2015, by FCS

biologist Cory Phillips. On November 21, 2016, the TVDP and Residential Annexation Area were surveyed by FCS biologist Ashley Laor.

The purpose of the survey was to ascertain general site conditions and identify potentially suitable habitat areas for various special-status plant and wildlife species. Special-status or unusual biological resources identified during the literature review were ground-truthed during the reconnaissance-level survey for mapping accuracy. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

3.4.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

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

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

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

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

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

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

3.4.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the TVDP and provides mitigation measures where appropriate. The Residential Annexation Area does not include any development, and no impacts to species or habitats would result from this component of the project. The following analysis focuses on potential impacts associated with the development of the TVDP.

Special Status Species

Impact BIO-1: Development activities may have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species.

Impact Analysis

Because of the highly disturbed nature of the TVDP and lack of suitable habitat, as described in Table 1 of the BRA (Appendix C), no special-status plant species have the potential to occur within the TVDP site; therefore, no special-status plant species would be adversely affected by the development of the TVDP.

Special Status Wildlife Species

As discussed in the sensitive biological resources section above, four special-status birds were determined to have potential to occur on the TVDP site. The tricolored blackbird (*Agelaius tricolor*), has potential to occur in a foraging capacity only, while the burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and loggerhead shrike (*Lanius ludovicianus*) were determined to have potential to occur in a foraging and nesting capacity. The Project Area contains marginal habitat for several bat species, including three special-status bat species: pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*) and western mastiff bat (*Eumops perotis californicus*); all three are California species of special concern. Several ornamental shrubs and trees adjacent to the TVDP site or in the vicinity could also provide nesting habitat for other birds and raptors protected by the MBTA.

LOA's BRE and FCS found that no burrowing owls were observed during the site surveys, however they could potentially nest or forage at a later date. Suitable nesting and foraging habitat is present within the undeveloped parcels including ground squirrel burrows and perching sites. Proposed grading and construction activities on the TVDP site may result in the removal of habitat that can serve as nesting or foraging habitat for burrowing owl. If this species were found to be present, impacts to these species would be significant.

All of the special-status wildlife species determined to potentially occur on the TVDP are covered under the take and compensatory mitigation provisions of the SJMSCP. The project applicant will participate in the SJMSCP and comply with all provisions and required Incidental Take Minimization Measures. Measures include but are not limited to pre-construction surveys and relocation measures for covered species. The measures are designed to avoid and minimize harm, injury, death, or nest abandonment. Therefore, these measures would ensure that burrowing owls and Swainson's hawks are not harmed, injured or killed, and that legal activities would not cause nest abandonment of a nearby nest tree or nest burrow. As a result, no other mitigation measures for SJMSCP-covered species would be necessary.

Potential impacts could occur to resident and migratory species during TVDP construction, which would render the site temporarily unsuitable for birds because of the noise, vibrations, and increased activity levels associated with various construction activities. These activities could potentially subject birds to risk of death or injury, and they are likely to avoid using the area until such construction activities have dissipated or ceased. Relocation, in turn, could cause hunger or

stress among individual birds by displacing them into adjacent territories belonging to other individuals. Construction activities that occur during the nesting season (generally March 1 to August 31) would disturb nesting sites for birds protected by the MBTA and FGC. If these species were found to be present, impacts to these species would be significant. Mitigation Measure BIO-1a would reduce impacts to migratory and nesting birds and raptors including the Swainson's hawk, protected under the MBTA to less than significant.

In addition, project construction could potentially result in the mortality of special status and non-special status bats if they were breeding or roosting within the TVDP site's structures or trees. Additionally if bats use any building on the TVDP site or trees for winter torpor or breeding, the demolition of structures or removal of trees during those seasonal periods could result in harm or mortality to these individuals and their young and would be considered a significant impact. Implementation of Mitigation Measure BIO-1b would reduce impacts to special status bat species to less than significant.

The species-specific minimization measures discussed below conform to and implement the provisions of the MBTA and/or the California Fish and Wildlife Code. The measures are designed to avoid and minimize harm, injury, death, or nest abandonment to protected wildlife species.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-1a Migratory nesting bird surveys.

- If tree or vegetation removal, structure demolition or ground disturbance activities are scheduled to commence during the breeding season (February 1 through August 31), pre-construction nesting bird surveys will be conducted by a qualified biologist to identify possible nesting activity. (If trees are removed and structures demolished *outside* the breeding season [September 1st through January 31], then the following measures are not required.)
- Pre-construction surveys shall be completed no more than 30 days prior to ground disturbance, structure demolition, or tree removal within the TVDP site and will include a 100-ft buffer area of the TVDP site to be surveyed.
- A construction-free buffer of suitable dimensions must be established around any active raptor and migratory bird nests (up to 250 feet for raptors, depending on the location and species) for the duration of the TVDP construction or until it has been determined that the chicks have fledged and are independent of their parents.

MM BIO-1b Bats

BAT 1. Bat Habitat Assessment

- A bat habitat assessment by a qualified biologist shall be conducted for all mature trees and in all structures that will be removed as a result of the TVDP project to

determine whether they provide suitable roosting or breeding habitat for bats and, to the extent possible, whether they are currently occupied. If the biologist determines that trees and structures on the site do not provide suitable habitat for bats, then no further mitigations would be required. However, if the biologist determines that bats are present or that trees and/or structures provide potentially suitable habitat for bats, and even if currently not occupied, they could be occupied in the future, the following additional mitigations will be implemented.

BAT 2. Tree Removal Monitoring

- Should the habitat assessment conclude that any trees proposed for removal provide potential roosting, hibernation and/or maternity habitat for bats, tree removal shall only be conducted during seasonal periods of bat activity, i.e., September through mid-October and March through mid-April, under the supervision of a qualified biologist. Tree removals shall occur via a two-phased removal conducted over two consecutive days. In the afternoon of the first day, a tree cutter using chainsaws only shall remove limbs and branches. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree shall be removed.

BAT 3. Preconstruction Survey

- Should the habitat assessment survey confirm that structures to be demolished on the site provide potential roosting, hibernation and/or maternity habitat for bats, even if bats are not currently occupying them, then a preconstruction survey for bats will be conducted within 30 days prior to structure demolition. If no bats are found present, then structures may be demolished. If bats are found present, bats may be safely evicted during two seasonal periods of bat activity. In this area, generally bats can be evicted safely between approximately March 1st (or when evening temperatures are above 45°F and rainfall less than ½" in 24 hours occurs), and April 15th, prior to parturition of pups. The next acceptable period is after pups become self-sufficiently volant, generally accepted to be between September 1st through October 15th (or prior to evening temperatures dropping below 45°F and onset of rainfall greater than ½" in 24 hours).
- There are two methods for evicting bats from occupied structures. The first, utilized mainly when the building is in good condition and the work is feasible, is "humane eviction," or "bat exclusion," which relies on the bats' own ability to fly out of the roost. In this method, all potential, but currently unused entry points into the structure are sealed. The active entry points are fitted with one-way exits, which are left in place 7-10 days to allow all bats to emerge normally during nightly feeding flights. The one-way exits are then removed and the remaining openings sealed until demolition if it will occur more than 30 days after demolition. If the interval between successful eviction and demolition will be short (less than 4 weeks), the one-way exits may often be left in place until

demolition. This eviction work must be conducted by, or under direct supervision or instruction, of a qualified biologist.

- In some cases, the physical condition of the structure is so poor that humane eviction as described above is not possible. If that occurs, the building must be carefully, and selectively dismantled in such a way that the internal environment is altered to a degree sufficient to cause bats to abandon the roost and not return. This must occur under the guidance bat biologist qualified in partial dismantling of structures for bat eviction.

Level of Significance After Mitigation

Less than significant impact.

Riparian Habitat

Impact BIO-2:	**The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Impact Analysis

The BRE, dated August 11, 2013, prepared by LOA concludes that riparian habitat and/or other sensitive natural communities are absent from the TVDP site. FCS peer-reviewed the BRE (May 27, 2015) and also prepared an independent BRA, dated March 30, 2017, and agrees with the conclusions that riparian habitat or other sensitive natural communities are absent from the project site. There are no biological communities found on-site that would be considered sensitive under California Environmental Quality Act (CEQA).

Furthermore, compliance with the Construction General Permit and implementation of the SWPPP and BMPs would effectively control erosion and immobilize other pollutants during construction of the Specific Plan facilities and the TVDP would not violate water quality standards discussed further in section 3.9—Hydrology and Water Quality. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Federally Protected Wetlands

Impact BIO-3: **The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Impact Analysis

An assessment of potentially jurisdictional features was conducted as part of the literature review and reconnaissance-level survey dated November 21, 2016 for the TVDP site. In addition, FCS reviewed the discussion of jurisdictional features provided in the BRE and compared it with the results from the literature review, as well as observations made in the field on April 22, 2015. FCS confirms that the feature on the northern portion of the site was in fact completely dry, dominated by upland ruderal species, and undifferentiated from the surrounding ruderal areas of the site. The site does not contain vernal pools, seasonal wetlands, marshes, ponds, lakes, or riparian wetlands of any type. No aquatic features with potential to be subject to USACE, RWQCB, or CDFW jurisdiction were observed within the TVDP site.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Wildlife Corridors and Nursery Sites

Impact BIO-4: **The project would not 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 wildlife nursery sites.**

Impact Analysis

The TVDP site and Residential Annexation Area was evaluated for evidence of a wildlife movement corridor during LOA's and FCS's reconnaissance-level surveys, and do not appear to be a significant corridor for wildlife movement. The TVDP and Residential Annexation Area are situated within a relatively developed landscape; residential developments, agricultural lands, and major roads are in the immediate surroundings, which create significant barriers to wildlife movement. Native wildlife species may potentially move within it and through the sites; however, development of the TVDP will have little effect on home range and dispersal movements on native wildlife that may currently use these areas.

Neo-tropical migratory birds that now pass through the study area would likely continue to use the site or fly over the site after it is developed. A considerable amount of open space lands in the vicinity of the site will continue to be used by native species for home range and dispersal

movements. As discussed in Impact BIO-1, birds are protected by the MBTA. Construction-related activities—including but not limited to grading, materials laydown, facilities construction, vegetation removal, and construction traffic—may result in the disturbance of nesting species protected by the MBTA. Potential impacts to MBTA-protected breeding birds are considered significant under CEQA. However, implementation of Mitigation Measure BIO-1a would reduce impacts to less than significant.

Additionally, bats may use any existing buildings on the TVDP site or trees for winter torpor or breeding, and the demolition of structures or removal of trees during seasonal periods could result in harm or mortality to these individuals and their young, which would be considered a significant impact, Implementation of Mitigation Measure BIO-1b would reduce impacts to special status bat species to less than significant.

Therefore, the construction of the TVDP will not interfere with 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 wildlife nursery sites.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Local Policies or Ordinances Protecting Biological Resources

Impact BIO-5:	**The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Impact Analysis

Development of the TVDP would not conflict with San Joaquin County's or the City of Tracy's tree ordinance. There are several trees present on the TVDP and annexation area; however, no native oak trees, heritage trees or historical trees were identified during the field survey.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Conservation Plans

Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis

As stated above the project applicant will participate in the SJMSCP; thus, in accordance with the SJMSCP, mitigation for potential impacts to covered species must be implemented prior to initiation of construction activities. Impacts may be mitigated as follows:

1. Payment of the appropriate fee as indicated in Sections 7.4.1 and 7.4.1.3 of the SJMSCP; or
2. Dedication as conservation easement or fee title habitat lands as specified in Sections 5.3.2.1 and 5.3.2.2 of the SJMSCP; or
3. Purchase of approved mitigation bank credits as specified in Section 5.3.2.1 of the SJMSCP; or
4. Propose an alternative mitigation plan, consistent with the goals of the SJMSCP and equipment in biological values to options 1–3 above, subject to approval by the Joint Powers Authority and the concurrence of the County's representatives on the Technical Advisory Committee

The project will be assessed a land cover fee and will implement a series of species-specific minimization measures. Thus, a project that complies with the Plan can be considered to result in less than significant impacts on biological resources under CEQA. However, participation is generally optional: projects may use the SJMSCP to reach compliance with the various statutes and regulations that apply to biological resource protections, or it may comply with those requirements independently, without the benefit of the Plan

Because coverage is sought under the SJMSCP, no take is permitted for Swainson's hawk and burrowing owl. Avoidance and minimization measures would be implemented as noted above. Mitigation for loss of open space (agricultural field) is met via habitat fees or endowment fees with in-lieu lands (conservation easements). The fees are required prior to ground-disturbance and must be paid prior to permit release, in accordance with SJMSCP timing obligations. The 2017 fee for Agricultural lands is $17,808 per acre. Private individuals receiving Incidental Take coverage pursuant to the SJMSCP may, in-lieu of fee payments, offer suitable land for dedication. The 2017 Endowment fees with in-lieu land is approximately $4,196.86.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.5 - Cultural Resources

3.5.1 - Introduction

This section describes the existing cultural resources setting and potential effects from project implementation of the Tracy Village Specific Plan. Descriptions and analysis in this section are based on the Phase I Cultural Resources Assessment (PI CRA) and paleontological assessment prepared by FirstCarbon Solutions (FCS). A copy of the PI CRA, including all supporting documentation may be found in Appendix D.

Tracy Village Development Plan

The Tracy Village Development Plan (TVDP) consists of a 600-unit active adult residential development on approximately 133.2 acres located in San Joaquin County and within the City of Tracy sphere of influence. The single-family dwelling units are proposed to range from 1,350 square feet to 3,000 square feet. The project would feature three man-made lakes totaling approximately 10.5 acres and a community recreation center with pool, spa, bocce courts, open space, and a community building. The project also includes a 3.2-acre park, a 0.5-acre secondary recreation area (containing a pool, spa and open space), and a dog park.

Residential Annexation Area

The Residential Annexation Area consists of 42 contiguous residential properties along the northern side of Valpico Road and the eastern side of Corral Hollow Road, adjacent to the TVDP. The intent is to annex the 42 properties to provide a rational boundary for the City in coordination with the annexation of the TVDP. The majority of these lots are developed with detached single-family residence. No development is proposed for the Residential Annexation Area.

3.5.2 - Environmental Setting

Overview

The term "cultural resources" encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

The Northern San Joaquin Valley remains one of the least known ethnographic areas of California. Although little record of their culture has survived, research indicates Native Americans occupied portions of northern San Joaquin County for over 10,000 years.

Early archaeological investigations in central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area (Schenck and Dawson 1929). The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in the recognition of archaeological site patterns based on variations of inter-site assemblages. Research during the 1930s identified temporal periods in central California prehistory and provided an initial chronological sequence (Lillard and Purves 1936; Lillard et al. 1939). In 1939, Lillard noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in central California (Lillard, et al. 1939). In the late 1940s and early 1950s, Beardsley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession (Beardsley 1948 and 1954). The CCTS system was challenged by Gerow, whose work looked at radiocarbon dating to show that Early and Middle Horizon sites were not subsequent developments but, at least partially, contemporaneous (1954; 1974; Gerow with Force 1968).

To address some of the flaws in the CCTS system, Fredrickson (1973) introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (10000 to 6000 B.C.); Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower, A.D. 500 to 1800). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence (Moratto 1984). In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmiller Pattern or Early Horizon (3000 to 1000 B.C.)
- Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)
- Augustine Pattern or Late Horizon (A.D. 500 to historic period)

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmiller Pattern or Early Horizon (3000 to 1000 B.C.)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous

types of terrestrial and aquatic species (Bennyhoff 1950; Ragir 1972). Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicates an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular *Haliotis* and *Olivella* shell beads, and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson (1973) suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time (Lillard, et al. 1939). Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual (Hughes 1994). During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. According to Fredrickson (1973), the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (A.D. 500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation (Moratto 1984). Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson (1976) suggests that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using

osteological data to determine the health of prehistoric populations (Dickel et al. 1984). Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Native American Background

Prior to European-American contact, the Tracy area was inhabited by the Northern Valley Yokuts, whose range extended from the Calaveras River to the southern extent of the San Joaquin River. The Northern Valley Yokuts were one of three major subgroups that occupied much of the San Joaquin Valley: the Northern Valley, the Foothill, and the Southern Valley Yokuts. Each ethnolinguistic group was composed of autonomous, culturally and linguistically related tribes or tribelets. Ethnographic evidence suggests the project area was part of the Northern Valley Yokuts territory.

The Northern Valley Yokuts, who lived along the San Joaquin River and its tributaries and within the vicinity of the project area, are one of the least known of the California Indian groups. This is due to the almost complete destruction of their tribal life in the early 19th century. What can be gleaned from the diaries and reports of Spanish soldiers and priests is that fish, waterfowl, and acorns were important food resources for the Northern Valley Yokuts. The local rivers and their tule marshes contained salmon, sturgeon, perch, suckers, and pike, which were caught using nets, weighted with stone sinkers and bone harpoons. Waterfowl, such as geese, ducks, and other aquatic birds, were abundant in the marshes and probably played a major role in the Northern Valley Yokuts subsistence base (Wallace 1978). Dogs were domesticated and may have been raised for food, a taboo to some tribes but not the Yokuts (Wallace 1978; Kroeber 1925). Wild plant resources, especially acorns, were of prime importance and in a good year a valley oak could produce 300 to 500 pounds of acorns, which were then ground into meal and cooked into porridge. Tule reed roots were likewise gathered and ground into meal that was traditionally served as porridge (Wallace 1978).

Stone mortars and pestles, milling stones, hammers, choppers, and projectile points were manufactured from local rock sources. Notably, although obsidian was imported into the area, it was used infrequently for tools or weapons. Bone tools, particularly awls, were used in basket manufacture (Wallace 1978).Most villages were built near rivers on elevated land to avoid flooding during heavy rains or spring runoff from the Sierras. Archaeological excavations in Merced and Fresno counties indicate that houses were single-family dwellings, probably made with an oval framework of lightweight poles covered by mats of tule reeds. Hard-packed earthen floors 25 to 40 feet in diameter were constructed several feet below ground level. Communities typically contained a sweathouse and sometimes a large ceremonial structure. The size of the Yokuts communities is uncertain, but estimates indicate that the principal settlements contained 200-250 inhabitants (Wallace 1978).

Several northern Yokut tribelets lived near what is now Tracy: including the Chulamni to the north, and the Hoyima to the southeast. The Chulamni tribelet built their villages near Tracy, along the banks of the Old River and San Joaquin River and along creeks in the Diablo Range. The largest Chulamni village site near Tracy was named “Pescadero” by the Spanish during one of their first expeditions in 1810 and 1811.

Contact with Europeans was particularly devastating for the Northern Valley Yokuts. This group was adversely impacted by missionization in the early 1800s, European diseases, and the influx of miners and settlers as a result of the 1849 Gold Rush (Wallace 1978). Kroeber observed that their habitat in the open river valley left them especially vulnerable, compared to mountain dwellers, to "the full brunt of civilization" (Kroeber 1925).

Contact with the Spanish commenced early in the 19th century and normally consisted of sporadic visits by small exploration parties. However, between 1805 and the 1820s, Franciscan priests from the coastal missions began recruiting converts from further inland, and a large portion of the Yokuts population was taken to various missions in San Jose, Santa Clara, Soledad, San Juan Bautista, and San Antonio. Many neophytes deserted and returned to their homes, but were sought and brought back by Spanish soldiers. A decade after the Mexican government claimed independence from Spain in 1822, the missions were converted into parish churches, and many Native Americans were released and returned to their former territory, though not necessarily to the specific location from which they came.

After the American conquest of California in 1846, the remaining Northern Valley Yokuts were driven off their land by miners heading south, farmers pursuing the locally rich soil, and the construction of various railroads. By the time scholars were interested in gathering information on California native groups, there were few people left to provide descriptions of native life before European contact (Wallace 1978).

Historic Background

The history of the southern San Joaquin Valley can be divided into several periods of influence; pertinent historic periods are briefly summarized below.

Spanish Period

In 1772, Captain Pedro Fages, a Spanish soldier, entered the San Joaquin Valley area searching for military deserters. His diary was one among many that documented the environmental landscape and the cultural setting of the San Joaquin Valley. Fages entered the area from the south, and as he emerged from the lower portion of Tejon Pass, he saw the beautiful lakes, rivers, and plains and named the most prominent lake Buena Vista (beautiful view). In 1776, Padre Francisco Garces traveled through the San Joaquin Valley in hopes of discovering a more direct route to Monterey.

The most drastic and permanent change to the local Northern Valley Yokuts' way of life was the establishment of the Spanish Mission system. By the early 1800s, the mission fathers began a process of cultural change that brought the majority of the local Native Americans into the missions. At the expense of traditional skills, the Native Americans were taught the pastoral and horticultural skills of the Hispanic tradition. Spanish missionaries traveled into the San Joaquin Valley to recapture escaped neophytes and recruit inland Native Americans for the coastal missions. In 1834, the Mission system was officially secularized, and the majority of the mission Native American population dispersed to local ranches, villages, or nearby pueblos. Following the collapse of the mission system, many of the local Native Americans returned to the San Joaquin Valley bringing with them language and agricultural practices learned from the Spanish. During the second half of the

19th century, the size of all Yokuts populations dwindled dramatically due to the spread of European settlements and the diseases the Europeans brought with them (Kroeber 1925; Wallace 1978).

Mexican Period

With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change actually occurred. Political change did not take place until mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Shoup and Milliken (1999) state that mission secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the Native American population continued to decline. Euro-American settlers began to arrive in California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of California was 8,000 non-natives and 10,000 Native Americans. However, these estimates have been debated. Cook (1976) suggests the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,385.

American Expansion

In 1826, Jedediah Smith was among the first trappers to explore the San Joaquin Valley, but other fur-trapping expeditions soon followed. In 1848, as a result of the Treaty of Guadalupe Hidalgo, California became a United States territory. Also in 1848, John Marshall found gold at Sutter's Mill, which marked the start of the Gold Rush. The influx of miners and entrepreneurs increased the population of California, not including Native Californians, from 14,000 to 224,000 in just four years. This, in turn, stimulated commercial growth in the San Joaquin Valley as eager entrepreneurs set up business to support the miners and mining operations. When the Gold Rush was over, many of the miners settled in the San Joaquin Valley and established farms, ranches, and lumber mills.

The City of Tracy

Permanent settlement within what is now the city limits of Tracy began with the construction of the Central Pacific Railroad through the Altamont Pass in 1869. Southern Pacific laid a second rail line to the north in 1878, connecting San Joaquin County with Martinez. In 1887, a third line was extended south from the junction of these two railways, connecting the San Francisco Bay Area with Los Angeles. This strategic location led to early prosperity in the area as a commercial and service center. The "Town of Tracy" was incorporated in 1910, and was named after Lathrop J. Tracy, an Ohio railroad man and grain merchant.

The original Plan for Tracy possesses historic interest and is eligible for recognition on the National Register of Historic Places (NR). The City was unique because it was planned along symmetrical arc-shaped streets located on either side of the railroad junction. There are several buildings within the City of Tracy which have local historical significance and many are on the NR.

Since incorporation, Tracy has continued to grow, particularly over the past 50 years. The establishment of the Tracy Defense Depot during World War II created thousands of jobs and

brought new residents to the area. Following the war, the City continued to be a hub for major agricultural industries as well as large shipping and distribution facilities thanks to its proximity to several major interstates and relatively inexpensive land. Indeed, Tracy is bordered by Interstate 205, Interstate 5, and Interstate 580 giving rise to Tracy's business-oriented motto, "Think Inside the Triangle."

Today, Tracy is the second most populated city in San Joaquin County, with a population of over 83,000. High home values in the San Francisco Bay Area continue to draw new residents who are attracted by the City's affordable housing, historic agricultural setting and many public amenities.

3.5.3 - Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the NR, which contains an inventory of the nation's significant prehistoric and historic properties. The Code of Federal Regulations (CFR), Title 36, sets forth policies related to Parks, Forests, and Public Property. Under 36 CFR 60, a property is recommended for possible inclusion on the NR if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NR, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

State

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CR). The CR and many local preservation ordinances have employed the criteria for eligibility to the NR as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets the NR criteria is clearly significant. In addition, a resource that does not meet the NR standards may still be considered historically significant at a local or state level.

California Environmental Quality Act

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the CR. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the CR, potential adverse impacts to it must be considered. If an archaeological site is not considered a historical resource, but meets the definition of a "unique archeological resource" as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

Local

City of Tracy General Plan

The Tracy General Plan includes the following goals, policies, and actions related to the protection of cultural resources applicable to the proposed project.

Goal CC-3: Preserve and Enhance Historic Resources

- **Objective CC-3.1:** Identify and preserve cultural and historic resources.
- **P2.** Identified cultural and historic landmarks and buildings shall be preserved
- **P3.** New development, redevelopment, alterations, and remodeling projects should be sensitive to surrounding historic context.
- **P4.** As part of the development review process, there shall be a standard condition of approval that if any resources are found during construction, all operations within the project area shall halt until an assessment can be made by appropriate professionals regarding the presence of archaeological and paleontological resources and the potential for adverse impacts on these resources.
- **P5.** Any archaeological or paleontological resources on private property shall be either preserved on their sites or adequately documented and conserved as a condition of removal. If any resources are found unexpectedly during development, then construction must cease immediately until accurate study and conservation measures are implemented.
- **P6.** If Native American artifacts are discovered on a site, the City shall consult representatives of the Native American community to ensure the respectful treatment of Native American sacred places.
- **Action AI**: Update, expand, and maintain inventories of Tracy's historic resources, using criteria and methods that are consistent with State and federal guidelines.

City of Tracy Resolutions

The City of Tracy Resolution 3232, which was signed in 1978, designated 50 structures and sites to be historical landmarks in Tracy. The resolution followed a survey of architecturally and historically significant resources in the City. Resolution 2001-076 added two more buildings to the list of designated properties. The Tracy Historic Landmarks designation encourages public recognition and protection of resources of architectural, cultural, or historical significance for local planning purposes. However, the City has not adopted a historic preservation ordinance or other protective or restrictive regulation. Accordingly, a local Landmarks designation does not equate with permanent protection for a structure from demolition or alteration.

City of Tracy Municipal Code

Title 9 of the Tracy Municipal Ordinance addresses building regulations. Chapter 9.48 adopts the California Historical Building Code. The purpose of the chapter is to "provide regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of buildings or structures designated as qualified historical buildings or properties; provide alternative solutions for the preservation of qualified historical buildings or properties, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of occupants or users."

3.5.4 - Methodology

This section describes the existing cultural resources setting and potential effects from the proposed Tracy Village Development Project and Residential Annexation Area on the project site and its surrounding area. Analysis is based on information collected from record searches at the Central California Information Center (CCIC), the Native American Heritage Commission (NAHC), The University of California Museum of Paleontology Database, as well as additional archival research, pedestrian surveys and architectural assessments of historic properties located within the project boundaries.

Record Searches

Central California Information Center Records Search

On April 13, 2015, staff at the CCIC in Turlock, California conducted a record search that included the project area and a 0.50-mile radius beyond the TVSP boundaries. To identify any historic properties or resources, the current inventories of the NR, the CR, the California Historical Landmarks (CHL) list, the California Points of Historical Interest (CPHI) list, and the California State Historic Resources Inventory (HRI) for San Joaquin County were reviewed to determine the existence of previously documented local historical resources. On March 25, 2017, these results were reviewed by FCS Senior Archaeologist Dana DePietro, PhD, RPA with respect to the proposed Residential Annexation Area and were determined to be current as of the time of writing.

The results of the records search indicated that two known cultural resources (see Table 3.5-1) have been recorded within the 0.50-mile search radius surrounding the TVDP and Residential Annexation Area. Neither resource is located within the TVSP. In addition, five area-specific survey reports (see Table 3.5-2) are on file with the CCIC for the project site and its 0.50-mile search radius. Of the five reports, only one assessed the location, and was limited to Valpico Road running along the site's northern boundary. This survey was extremely limited and the vast majority of the TVSP has not been surveyed for cultural resources. The records search did not reveal any historic structures within a 0.5-mile radius of the TVSP for the San Joaquin County HRI, NR, CR, CHL, and/or CHPI inventories that may be eligible for or listed in the NR.

Table 3.5-1: Known Cultural Resources located within ½ mile Radius of the Project Site

Site Number	Resource Description
P-39-000001	Isolated chert core
P-39-000104	Point segment, Upper Main Canal

Table 3.5-2: Cultural Resources Reports within ½ mile Radius of the Project Site

Report Number	Additional Details
SJ-01562	Napton; 1992—Did not address project site
SJ-02190	Foster and Foster; 1993 Did not address project site
SJ-02759	Hatoff et al.; 1995—Did not address project site
SJ-02930	Jensen; 1996—Did not address project site
SJ-06625	**ASI Archaeology and Cultural Resource Management; 1998—Addressed the northern edge of the project site along Valpico Road.**

Native American Heritage Commission Record Search

On April 22, 2015, FCS sent a letter to the NAHC in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. A second request was sent on July 29, 2015. A response was received on August 4, 2015 indicating that the Sacred Lands File failed to identify the presence of Native American cultural resources in the immediate project area. The NAHC list included a single tribal representative who is available for consultation. To ensure that all Native American knowledge and potential prehistoric concerns about the project are addressed, a letter containing project information and requesting any additional information was sent to the tribal representative on August 4, 2015. No response was received.

FCS sent a supplementary request to the NAHC on February 25, 2017 in order to determine whether any sacred sites are listed on its Sacred Lands File for the Residential Annexation Area. A response was received on March 8, 2017 indicating that the Sacred Lands File failed to identify any Native American cultural resources in the immediate project area. The NAHC included a list of six tribal representatives available for consultation. To ensure that all Native American knowledge and potential prehistoric concerns about the project are addressed, a letter containing project information and requesting any additional information was sent to the six tribal representatives on March 20, 2017. No responses have been received to date.

Pedestrian Surveys

On May 12, 2015, FCS senior archaeologist Dana DePietro, PhD, RPA, completed a pedestrian survey of the TVDP site. The TVDP site consists of approximately 133.2 acres bordered by West Valpico Road in the north, and by suburban developments along its eastern, southern, and western boundaries. At the time of the survey, a farm complex, dating to approximately 1916 and some 3.3 acres in area, lay in the far northeast corner of the project site at 11150 W. Valpico Road. This

complex consisted of approximately nine buildings including a main residence, workshop, twin garages, three barns, an animal enclosure and a unique double pumping house. As these buildings had not been surveyed and did not appear on any federal, state, or county register of historic places, each of the buildings and associated features were photographed and documented in detail. The buildings were subsequently demolished.

After completing a careful analysis of the farm complex in the northeast corner of the project site, the survey turned south, following the sites eastern border and using standard 15-meter transects to insure adequate coverage. The site appeared recently plowed, and soil visibility was good, ranging from 80 to 90 percent across the entire site. Soils consisted of medium-brown loam interspersed with a great many stones, some river worn, ranging from 10 to 25 centimeters in diameter. The stones appeared to be primarily composed of Schist and Franciscan chert, and decreased in concentration as the north-south transects moved westward across the site. The frequency and smoothness may indicate that an ancient waterway once ran close to the eastern edge of the project site.

No prehistoric or historic material culture was observed at any point during the survey outside of the aforementioned farm complex aside from a large earthwork water reservoir on the northern edge of the site. Historic aerial photos indicate this feature is contemporary with the construction and use of the farming complex, but in and of itself, the feature does not qualify as a significant cultural resource under CEQA. The survey terminated in the far southwest corner of the project site with no additional developments or observations.

Dr. DePietro returned to the site on March 14, 2017 to conduct a programmatic level pedestrian survey of the proposed Residential Annexation Area for additional cultural resources. Survey conditions were documented using digital photographs and field notes. While many of the individual properties that form the Residential Annexation Area were inaccessible, Dr. DePietro examined all surrounding areas of the exposed ground surface for prehistoric artifacts (e.g., fire-affected rock, milling tools, flaked stone tools, tool-making debris, ceramics), soil discoloration and depressions that might indicate the presence of a cultural midden, faunal and human osteological remains, and features indicative of the former presence of structures or buildings (e.g., postholes, standing exterior walls, foundations) or historic debris (e.g., glass, metal, ceramics). No additional prehistoric cultural resources or raw materials commonly used in the manufacture of tools were found within the Residential Annexation Area.

In addition to the previously mentioned farm complex, eleven residential buildings located at 11241, 11299, 11423, 11461, 11505, 11818, 11851, 11846, 11899, 11929, and 11941 W. Valpico Road, and three residential buildings located at 27310, 27350, and 27510 Coral Hollow Road were found to have been built prior to 1967 and are thus over 50 years old. Of the buildings, only the Linne Farm complex at 11150 W. Valpico Road and one residential building at 11846 W. Valpico Road were slated for demolition by the development project at the time of the surveys. As such, the two properties required evaluation as potential historic properties eligible for inclusion in the CR and NR as detailed above. They have since been demolished.

Historic Resources Evaluation

To be potentially eligible for individual listing on the CR, a structure must usually be more than 50 years old, must have historic significance, and must retain its physical integrity. The Linne Farm complex, located at 11150 W. Valpico Road was constructed in 1907 and the residence at 11846 W. Valpico Road was built prior to 1967. Both properties therefore meet the age requirement, and were evaluated for historic significance by FCS architectural historians Trish Fernandez MA, RPA and Sonia Miller, MA.

The residence at 11846 W. Valpico Road currently does not appear to meet any of the criteria for historic and/or architectural significance required for listing on the CR. As such, it should not be considered a historical resource under CEQA. Moreover, it does not appear to possess sufficient artistic merit or historical association to meet a local standard or historical importance. The residence does not contribute to the general character of the neighborhood through a unified historical period or architectural theme and thus cannot be considered a contributing structure to a potential historic district. No analysis of integrity is required where the property fails to meet all four criteria.

The Linne Farm complex, located at 11150 W. Valpico Road, was found to display the level of significance necessary for listing on the CR under Criterion 2, association with individuals whose activities are demonstrably important within a local, state, or national historic context or persons. An initial evaluation of the buildings conducted in May of 2015 concluded that the farm complex and its surrounding acreage retained all seven criteria for historic integrity: integrity of location, design, setting, materials, workmanship, feeling and association. A subsequent visit to the site on March 14, 2017, however, revealed that all buildings and structures associated with the site had been demolished at some point during the intervening period. The site therefore no longer exhibits a level of historic integrity required for listing on the CR. As such, it should not be considered a historical resource under CEQA.

Details of the evaluations and the resulting Department of Parks and Recreation (DPR) recordation forms may be found as part of the PI CRA in Appendix D.

University of California Museum of Paleontology (UCMP) Records Search

On June 13, 2015, Dr. Ken Finger conducted a search of the University of California Museum of Paleontology (UCMP) database for the Tracy Village Specific Plan site. The project is located on the geologic map of Dibblee (2006) and is mapped as Quaternary alluvium (Qa), which Dibblee did not differentiate as being Pleistocene or Holocene. The UCMP database lists no paleontological localities in the vicinity of the project site. The nearest Quaternary locality (V66150, Tracy Gravel Pit), is about 2 miles to the southeast and east of the airport. It yielded the rostrum of the giant ground sloth (*Megalonyx jeffersoni*), which belongs to the late Pleistocene Rancholabrean fauna. Another 44 localities are clustered 2 miles to the south of the site, but all are in the Miocene.

3.5.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, cultural resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

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

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

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

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

3.5.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Historic Resources

Impact CUL-1:	**Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered historic resources.**

Impact Analysis

This impact will evaluate the Tracy Village Development Project and the Residential Annexation Area separately.

Tracy Village Development Project

Two historic resources have been previously recorded within a 0.50-mile radius of the TVSP, neither of which is located within the boundaries of the TVSP. The resources are an isolated prehistoric chert core (P-39-00001) located south of the TVSP, and the historic upper canal running west-east 200 feet north of the TVSP (P-07-000104). No historic resources were encountered during the pedestrian field survey. As mentioned above, two properties of historic age are located within the TVDP, but neither qualifies as historic resources under CEQA.

Development resulting from the TVDP would include up to 600 single-family homes arranged around an interconnected lake system. Total grading disturbance area would be approximately 133.2 acres. Because no known historical resources are recorded within the TVDP, no impacts to known historical resources would occur during TVDP development. While unlikely, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic and prehistoric resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramic, and other refuse. Accordingly, implementation of Mitigation Measure (MM) CUL-1 will be required to reduce potential impacts to

historic resources that may be discovered during TVDP construction. With the incorporation of mitigation, impacts associated with historic resources would be less than significant.

Residential Annexation Area

The majority of the lots to be annexed are already developed with single-family residences, and no development is proposed for the Residential Annexation Area. Eleven properties located within the Residential Annexation Area at 11241, 11299, 11423, 11461, 11505, 11818, 11851, 11846, 11899, 11929, and 11941 W. Valpico Road, and three properties located at 27310, 27350, and 27510 Coral Hollow Road were found to have been built prior to 1967 and are thus over 50 years old. In the event future development applications would affect these structures, they should be evaluated for potential historic significance and eligibility for inclusion in the CR and NR. No such impacts or construction activities are currently planned as part of the proposed annexation; therefore, there would be no potential to damage or destroy previously undiscovered historic and prehistoric resources. Impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

MM CUL-1 If a potentially significant cultural resource is encountered during Tracy Village Development Plan (TVDP) construction, all construction activities within a 50-foot radius of the find shall cease until a qualified archaeologist determines whether the resource requires further study. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Cultural resources could consist of, but are not limited to, stone, wood, or shell artifacts, structural remains, privies, or historic dumpsites. Any previously undiscovered resources found during construction within the TVDP area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Archaeological Resources

Impact CUL-2: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered archaeological resources.

Impact Analysis

This impact will evaluate the Tracy Village Development Project and the Residential Annexation separately.

Tracy Village Development Project

Two prehistoric resources have been recorded within a 0.50-mile radius of the TVDP site, neither of which is located within the TVDP boundaries. The resources include an isolated prehistoric chert core (P-39-000001), and the historic upper canal running west-east 200 feet north of the TVDP site (P-07-000104). No historic resources were encountered during the pedestrian field surveys, and outreach to the NAHC and tribal representatives failed to identify any additional archaeological resources in the project area.

There is always the possibility, however, that ground-disturbing activities during TVDP development could impact prehistoric or archaeological resources. Such resources include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, or quartzite tool-making debris; culturally darkened soil (such as midden soil containing heat-affected rock, ash, and charcoal, shellfish remains, and animal bones); and stone milling equipment (e.g., mortars, pestles, handstones). Accordingly, this is a potentially significant impact. With the implementation of mitigation, the impact would be less than significant.

Residential Annexation

The majority of the lots to be annexed are already developed with single-family residences, and no development is proposed for the Residential Annexation Area. A subsequent survey of sections of the Residential Annexation Area did not result in the discovery of additional archaeological resources. What is more, no subsurface construction activities would take place, therefore there would be no potential to damage or destroy previously undiscovered archaeological resources. Impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

Implement Mitigation Measure CUL-1.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Paleontological Resources

Impact CUL-3: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered paleontological resources.

Impact Analysis

This impact will evaluate the Tracy Village Development Project and the Residential Annexation separately.

Tracy Village Development Project

The proposed project is not located in an area that is likely to have paleontological resources. The UCMP Database lists no paleontological localities in the vicinity of the TVDP site. The nearest Quaternary locality (V66150, Tracy Gravel Pit), is about 2 miles to the southeast and east of the airport. It yielded the rostrum of the giant ground sloth (*Megalonyx jeffersoni*), which belongs to the late Pleistocene Rancholabrean fauna. Another 44 localities are clustered 2 miles to the south of the site, but all are in the Miocene. Those beds likely dip below the alluvium and exist in the subsurface of the site, but valley fill alluvium is typically very thick, so those beds would well below the deepest excavations for this project.

A paleontological walkover survey of the site prior to construction is not warranted because the site is relatively flat without rock outcrops, and it appears to have been disturbed by its agricultural use. Most Pleistocene vertebrate localities are in alluvium, including one about 2 miles from the site, which indicates the Quaternary alluvium is not Holocene. Fossil deposits in alluvium are generally unpredictable due to the ever-changing course of streams and the intermittent places along where animal remains tend to accumulate as they are transported downstream.

The possibility therefore exists that subsurface construction activities may encounter previously undiscovered paleontological resources. Resources may include but are not limited to fossils from mammoths, saber-toothed cats, rodents, reptiles, plants and birds. Therefore, this would be a potentially significant impact. In the event subsurface paleontological resources are encountered during construction, Mitigation Measure CUL-3 would require standard inadvertent discovery procedures be implemented. With the implementation of mitigation, impacts would less than significant.

Residential Annexation Area

The majority of the lots to be annexed are already developed with single-family residences, and no development is proposed for the Residential Annexation Area. No subsurface construction activities

would take place, therefore there would be no potential to damage or destroy previously undiscovered paleontological resources. Impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

MM CUL-3 Paleontological monitoring is recommended for any major excavations for the TVDP project that impact undisturbed sediments exceeding 10 feet in depth. In the event that fossils or fossil-bearing deposits are discovered during construction of the TVDP project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Burial Sites

Impact CUL-4: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered human burial sites.

Impact Analysis

This impact will evaluate the Tracy Village Development Project and the Residential Annexation separately.

Tracy Village Development Project

There are no known burial sites or human remains within the TVDP boundaries. The pedestrian field survey did not find any evidence of human remains or burial goods within the TVDP site. In addition, none of the previous surveys within a 0.50-mile radius reported finding any human remains or burial sites. Nonetheless, the possibility exists that subsurface construction activities may encounter undiscovered human remains. Accordingly, this is a potentially significant impact. Mitigation Measure CUL-4 is proposed to reduce this potentially significant impact to less than significant.

Residential Annexation Area

The majority of the lots to be annexed are already developed with single-family residences, and no development is proposed for the Residential Annexation Area. There are no known burial sites or human remains within the Residential Annexation Area, and no subsurface construction activities would take place; therefore, there would be no potential to uncover burial sites. Impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

MM CUL-4 In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.
2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
   - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
   - The descendant identified fails to make a recommendation.
   - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.6 - Geology and Soils

This section describes the existing geology and soils setting and the potential effects from project implementation on the Tracy Village Development Project (TVDP) and Residential Annexation Area (collectively, Project Area). The descriptions and analysis in this section are based on information provided by ENGEO's April 2013 Preliminary Geotechnical Report, the City of Tracy General Plan (adopted February 2011), and the City of Tracy General Plan EIR (February 2011). The Preliminary Geotechnical Investigation is included in this Draft EIR as Appendix E.

3.6.1 - Existing Conditions

Regional and Local Geology

The San Francisco Bay Area is one of the most seismically active areas in the United States. The Tracy Project Area is located on the western margin of the Great Valley geologic province of California, adjacent to the Coast Range Province. The Great Valley is an elongate structural trough that has been filled with a sequence of sedimentary deposits from Jurassic to recent geologic age. Older sediments are mostly marine in origin with younger sediments of continental origin. Most of the continental sediments were derived from erosion of the Sierra Nevada Mountains to the east and, to a lesser extent, from the Coast Ranges to the west. The overall thickness of sediments tends to be greater along the western margin of the valley. The geology of the site was mapped as Holocene to Pleistocene-age alluvial fan and terrace deposits. These sediments are described as unconsolidated silts, clays, and gravels derived from the Coast Ranges to the southwest. The Pleistocene deposits are similar to the Holocene, but with fewer fine-grained soils. As is expected on an alluvial fan, sediments become more fine-grained with increasing distance downslope.[1]

Seismicity

The term *seismicity* refers to the location, frequency, magnitude, and describes the effects of seismic waves that are radiated from an earthquake as it ruptures. While most of the energy released during an earthquake results in the permanent displacement of the ground, as much as 10 percent of the energy may dissipate immediately in the form of seismic waves. The City of Tracy is susceptible to seismic disturbances from regional seismic activity. However, no active faults are found within the Project Area, and it is not located within an Alquist-Priolo Earthquake Fault Zone. Historically, earthquakes with magnitudes measuring seven or higher have occurred in both the greater Bay Area and in the vicinity of the Project Area.

Faulting

Faults form in rocks when stresses overcome the internal strength of the rock, resulting in a fracture. Large faults develop in response to large, regional stresses operating over a long period of time, such as those stresses caused by the relative displacement between tectonic plates. According to the elastic rebound theory, these stresses cause strain to build up in the earth's crust until enough strain has built up to exceed the strength along a fault resulting in a brittle failure. The slip between the two stuck plates or coherent blocks generates an earthquake. Following an earthquake, strain will

[1] Geotechnical Report Ponderosa Homes, ENGEO Inc., 2013

rebuild again until the occurrence of another earthquake. The magnitude of slip is related to the maximum allowable strain that can be built up along a particular fault segment. The largest earthquakes are generally produced because of a great buildup in strain caused by the largest relative motion between tectonic plates or fault blocks over the longest period of time.

Faults are mapped to determine earthquake hazards, since they occur where earthquakes tend to recur. A historic plane of weakness is more likely to fail under stress and strain than a previously unbroken block of crust. Faults are a prime indicator of past seismic activity, and faults with recent activity are presumed to be the best candidates for future earthquakes. However, since slip is not always accommodated by faults that intersect the surface along traces, and since the orientation of stress and strain in the crust can shift, predicting the location of future earthquakes is difficult. Earthquakes sometimes occur in areas with previously undetected faults or along faults previously thought inactive. The four faults closest to the TVDP are summarized in Table 3.6-1.

Table 3.6-1: Tracy Village Development Project Faults

Fault Name	Distance from TVDP (miles)	Direction From Site	Maximum Moment Magnitude
Great Valley-7	0.8	Southwest	6.7
Great Valley-6	3.5	West	6.7
Southern Greenville	10.2	Southwest	6.9
Central Greenville	11.3	West	6.7
Source: ENGEO, 2013.			

Seismic Hazards

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking, ground lurching, soil liquefaction, and lateral spreading. There are four Seismic Zones in the United States, which are ranked according to their seismic hazard potential. Zone 1 has the least seismic potential and Zone 4 has the highest seismic potential. The entire State of California is located in Seismic Zones 3 or 4. The City of Tracy lies primarily within a Seismic Zone 3.

Seismic hazards pose a substantial danger to property and human safety and are present because of the risk of naturally occurring geologic events and processes impacting human development. Therefore, the hazard is influenced as much by the conditions of human development as by the frequency and distribution of major geologic events. Seismic hazards present in California include ground rupture along faults: fault rupture, ground shaking, ground failure, liquefaction, lateral spreading, ground lurching, and landsliding. Based on the available topographic and lithographic data analyzed in the Preliminary Geotechnical Report (ENGEO 2013), the risk of regional subsidence or uplift, soil liquefaction, lateral spreading, landslides, tsunamis, flooding, or seiches is considered

low to negligible. To understand the implications of seismic events, these hazards are discussed individually, and the TVDP and the 42-lot annexation area are discussed separately.

Tracy Village Development Project

Fault Rupture

Fault rupture is a seismic hazard that affects structures sited above an active fault. The hazard from fault rupture is the movement of the ground surface along a fault during an earthquake. Typically, this movement takes place during the short time of an earthquake, but it also can occur slowly over many years in a process known as creep. Most structures and underground utilities cannot accommodate the surface displacements of several inches to several feet commonly associated with fault rupture or creep.

Since there are no known active faults that cross the site, and the site is not within an Alquist-Priolo Earthquake Fault Zone, ground rupture is unlikely at the TVDP.

Ground Shaking

The severity of ground shaking depends on several variables such as earthquake magnitude, epicenter distance, local geology, and seismic wave-propagation properties of unconsolidated materials, groundwater conditions, and topographic setting. Ground shaking hazards are most pronounced in areas near faults or with unconsolidated alluvium.

Based on observations of damage from recent earthquakes in California (e.g., San Fernando 1971, Whittier-Narrows 1987, Landers 1992, Northridge 1994), ground shaking is responsible for 70 to 100 percent of all earthquake damage. The most common type of damage from ground shaking is structural damage to buildings, which can range from cosmetic stucco cracks to total collapse. The overall level of structural damage from a nearby large earthquake would likely be moderate to heavy, depending on the characteristics of the earthquake, the type of ground, and the condition of the building. Besides damage to buildings, strong ground shaking can cause severe damage from falling objects or broken utility lines. Fire and explosions are also hazards associated with strong ground shaking.

While Richter magnitude provides a useful measure of comparison between earthquakes, the moment magnitude is more widely used for scientific comparison, as it accounts for the actual energy released by the earthquake. Damage results from the propagation of seismic or ground waves from the earthquake, and the intensity of shaking is related to the earthquake's magnitude and distance as well as to the condition of underlying materials. Loose and soft materials tend to amplify long period vibrations, while hard rock can quickly attenuate them, causing little damage to overlying structures. For this reason, the Modified Mercalli Intensity (MMI) Scale provides a useful qualitative assessment of ground shaking. Table 3.6-2 describes the effects of earthquakes and a comparison of the Modified Mercalli scale to the Richter scale.

Table 3.6-2: Modified Mercalli and Richter Scales

Richter Magnitude Scale	Modified Mercalli Scale	Effects of Intensity
0.1–0.9	I	Earthquake shaking not felt.
1.0–2.9	II	Shaking felt by those at rest.
3.0–3.9	III	Felt by most people indoors; some can estimate duration of shaking.
4.0–4.5	IV	Felt by most people indoors. Hanging objects rattle, wooden walls and frames creak.
4.6–4.9	V	Felt by everyone indoors; many estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle, and glasses clink. Doors open, close, and swing.
5.0–5.5	VI	Felt by all who estimate duration of shaking and direction. Sleepers awaken, liquids spill, objects displaced, weak materials crack.
5.6–6.4	VII	People frightened and walls unsteady. Pictures and books thrown, dishes/glass are broken. Weak chimneys break. Plasters, loose bricks, and parapets fall.
6.5–6.9	VIII	Difficult to stand, waves on ponds, cohesionless soils slump. Stucco and masonry walls fall. Chimneys, stacks, towers, and elevated tanks twist and fall.
7.0–7.4	IX	General fright as people throw down. Hard to drive, trees broken, damage to foundations and frames. Reservoirs damaged, underground pipes broken.
7.5–7.9	X	General panic, ground cracks, masonry and frame buildings destroyed. Bridges destroyed, dams, dikes, and embankments damaged. Railroads bent slightly.
8.0–8.4	XI	Large landslides, water thrown, general destruction of buildings, pipelines destroyed, railroads bent.
8.5+	XII	Complete destruction. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown upward in air.

Source: ABAG (http://www.abag.ca.gov/bayarea/eqmaps/doc/mmi.html; accessed on February 1, 2017.

An earthquake of moderate to high magnitude generated within the San Francisco Bay Area and Central Valley regions could cause considerable ground shaking at the site, similar to that which has occurred in the past. To address shaking effects, all structures should be designed using sound engineering judgement and the 2016 California Building Code (CBC) requirements, which are part of the regulatory requirement for any building. Conformance to the current building code recommendations does not constitute a guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake.

Ground Failure

Ground failure includes liquefaction and the liquefaction-induced phenomena of lateral spreading, and lurching.

Liquefaction is a process by which sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. Liquefaction is restricted to certain geologic and hydrologic environments, primarily recently deposited sand and silt in areas with high groundwater levels. The process of liquefaction involves seismic waves passing through saturated granular layers, distorting the granular structure, and causing the particles to collapse. This causes the granular layer to behave temporarily as a viscous liquid, resulting in liquefaction.

Liquefaction can cause the soil beneath a structure to lose strength, which may result in the loss of foundation-bearing capacity. This loss of strength commonly causes the structure to settle or tip. Liquefaction can also result in the settlement of large areas because of the densification of the liquefied deposit. Where structures are located within liquefied deposits, the liquefaction can result in the structure to rise as a result of buoyancy.

The 2013 Preliminary Geotechnical Report concluded that the sands encountered in the borings were generally medium to very dense and contained a significant amount of fine-grained material. In addition, no groundwater was encountered to the terminal depth of the borings. Based on existing subsurface information and history on the site, the potential for liquefaction for the entire TVDP is likely to be low during seismic shaking.

Lateral spreading is lateral ground movement, with some vertical component, caused by liquefaction. Lateral spreading can occur on relatively flat sites with slopes less than 2 percent, under certain circumstances, and can cause ground cracking and settlement. As the potential for liquefaction is low at the TVDP, the potential for lateral spreading is also low.

Lurching is the movement of the ground surface toward an open face when the soil liquefies. An open face could be a graded slope, stream bank, canal face, gully, or other similar feature.

Geologic Units and Soils

Surface Conditions

At the time of the site reconnaissance performed by ENGEO, the site was an agricultural field that gently slopes to the north. Elevations at the site range from 128 to 134 feet above mean sea level (msl) along the southern site boundary and range from 102 to 106 feet msl along the northern boundary of West Valpico Road. A residential dwelling is located in the northwest corner of the property and a basin (approximately 272 feet long by 172 feet long, by approximately 6 feet deep) is located along the northern boundary of the property, adjacent to W. Valpico Road. Based on tests performed for the Geotechnical Exploration, the existing basin in the north of the property is currently dry and has been constructed by placing earthen berms above grade.

Subsurface Soil Conditions

Based on tests performed for the Geotechnical Exploration, the parent materials on the TVDP site typically consist of variable layers of silty sand, sandy clay, and clayey sand. These layers contain 13.2 ac of Zacharias clay loam and 119.3 ac of Zacharias gravelly clay loam. One shallow clay boring sample showed high expansion potential on the plasticity index test. Gravel was also encountered at depth, which is typical for the soils in this region.

Expansive soils shrink and swell as a result of seasonal fluctuation in moisture content, which can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to volume changes associated with expansive soils can be reduced through proper design, which is discussed in greater detail in the impact analysis below.

Residential Annexation Area

The Residential Annexation Area consists of 42 residential properties along the northern and eastern portions of the TVDP site. The intent is to annex the 42 properties to provide a rational boundary for the city following annexation of the TVDP. These residences are located to the east, adjacent to Corral Hollow Road, and to the north, adjacent to Valpico Road. The majority of these lots are developed with detached single-family residences, and are served by private wells and septic systems. The soils in the Residential Annexation Area predominately contain Zacharias clay loam and Zacharias gravelly clay loam, which is the same soil makeup as the TVDP. No development is proposed for the Residential Annexation Area.

3.6.2 - Regulatory Setting

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the National Earthquake Hazards Reduction Program, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques to reduce earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Several Key federal agencies contribute to earthquake mitigation efforts. There are four primary National Earthquake Hazards Reduction Program agencies:

- National Institute of Standards and Technology of the Department of Commerce
- National Science Foundation
- United States Geological Survey (USGS) of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of National Earthquake Hazards Reduction Program priorities is accomplished primarily through original research, publications, and recommendations to assist and guide state,

regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State Regulations

California Building Code

The 2012 International Building Code is published by the International Conference of Building Officials, and is the widely adopted model building code in the United States. The 2013 California Building Code is another name for the body of regulations known as the California Code of Regulations, Title 24, Part 2, which is a portion of the California Building Standards Code. The California Building Code incorporates by reference the International Building Code requirements with necessary California amendments. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.

Compliance with the 2013 California Building Code requires that structures for human occupancy be designed and constructed to resist the effects of earthquake motions. The Seismic Design Category for a structure is determined in accordance with either; California Building Code Section 1613–Earthquake Loads: or, American Society of Civil Engineers Standard No. 7-05, Minimum Design Loads for Buildings and Other Structures. Based on the engineering properties and soil-type of soils at a proposed site, the site is assigned a Site Class ranging from A to F. The Site Class is then combined with Spectral Response (ground acceleration induced by earthquake) information for the location to arrive at a Seismic Design Category ranging from A to D, of which D represents the most severe conditions. The classification of a specific site and related calculations must be determined by a qualified person and are site-specific.

Alquist-Priolo Earthquake Fault Zoning Act

In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act requires the State Geologist to delineate Earthquake Fault Zones along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being "sufficiently active" and "well-defined" for inclusion as an Earthquake Fault Zones. The Earthquake Fault Zones are revised periodically, and they extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

Seismic Hazards Mapping Act

In 1990, following the 1989 Loma Prieta earthquake, the California Legislature enacted the Seismic Hazards Mapping Act to protect the public from the effects of strong ground shaking, liquefaction, landslides and other seismic hazards. The Seismic Hazards Mapping Act established a statewide mapping program to identify areas subject to violent shaking and ground failure; the program is intended to assist cities and counties in protecting public health and safety. The Seismic Hazards

Mapping Act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. As a result, the CGS is mapping Seismic Hazards Mapping Act Zones and has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, ground shaking, and landslides, primarily the San Francisco Bay area and Los Angeles basin.

Local Regulations

City of Tracy

General Plan

The City of Tracy General Plan establishes the following guiding and implementing policies associated with geology, soils, and seismicity that are relevant to the proposed project:

- **Goal 1:** A reduction in risks to the community from earthquakes and other geologic hazards.
  - **Objective SA-1.1:** Minimize the impacts of geologic hazards on land development
  - **Policy 1:** Underground utilities, particularly water and natural gas mains, shall be designed to withstand seismic forces.
  - **Policy 2:** 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.
  - **Objective SA-1.2:** Implement measures related to site preparation and building construction that protect life and property from seismic hazards.
  - **Policy 1:** All construction in Tracy shall conform to the California Building Code and the Tracy Municipal Code including provisions addressing unreinforced masonry buildings.

Chapter 12.04, Adoption of Codes

Pursuant to Title 9, Chapter 9.04, Section 9.04.030 of the City of Tracy Municipal Code, the City has adopted the CBC, Volumes One and Two. As mentioned above, the CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition.

3.6.3 - Methodology for Analysis

FCS relied upon the information contained in the Preliminary Geotechnical Report prepared by ENGEO dated April 24, 2013, which is provided in Appendix E, as the basis for evaluating geologic, soil, and seismicity impacts related to development proposed on the TVDP site. The goal of the Preliminary Geotechnical Report was to assess the potential geotechnical concerns associated with the proposed development on the TVDP.

ENGEO conducted a Preliminary Geotechnical Report, which included subsurface field exploration with five drilled borings and three percolation test holes, soil laboratory testing, and data analysis. Soil samples were laboratory tested to determine engineering properties. ENGEO also reviewed published geologic literature and previous ENGEO geotechnical reports regarding the geological and geotechnical characteristics of the TVDP.

FCS obtained additional information from sources including the City of Tracy General Plan, the California Department of Conservation, and the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey.

3.6.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to geology and soils are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking?
   iii. Seismic-related ground failure, including liquefaction?
   iv. Landslides?

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

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

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (Refer to Section 6.1, Effects Found not to be Significant.)

3.6.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Seismic Hazards

Impact GEO-1:	**The proposed project may expose people or structures to potential substantial adverse effects involving seismic hazards.**

Impact Analysis

This impact evaluates potential exposure to seismic hazards, including fault rupture, strong ground shaking, ground failure and liquefaction, and landslides. Each issue is discussed separately, and this impact will evaluate the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

Fault Rupture

No known active faults have been mapped on the site. The 2013 Preliminary Geotechnical Report concluded that the site is not located within an Earthquake Fault Special Study Zone, and, therefore, fault-related ground rupture is unlikely at the TVDP site. The potential for fault rupture is considered low for the entire City of Tracy (General Plan EIR 2006), as well as the TVDP. Impacts would be less than significant.

Strong Ground Shaking

The area is considered seismically active. Small earthquakes occur within the region every year, and large earthquakes have occurred and are expected to occur in the future. Based on the proximity of the site to known active seismic sources, it should be expected that the site will experience moderately strong to strong seismic ground shaking during the project's lifetime.

To mitigate the ground shaking effects, Mitigation Measure (MM) GEO-1 is proposed; all structures shall be designed using sound engineering judgment and the latest California Building Code (CBC) requirements as a minimum. 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 substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should be able to:

- Resist minor earthquakes without damage.
- Resist moderate earthquakes without structural damage but with some nonstructural damage.
- Resist major earthquakes without collapse but with some structural as well as nonstructural damage.

Conformance to the CBC recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake (SEAOC 1996). Impacts would be less than significant.

Ground Failure and Liquefaction

The 2013 Preliminary Geotechnical Report prepared for the TVDP concluded that the sands encountered in their borings were generally medium to very dense and contained a significant amount of fine-grained material. Typically, soils most susceptible to liquefaction are clean, loose, saturated, and uniformly graded, fine-grained sands. In addition, no groundwater was encountered to the terminal depth of the borings. Based on existing subsurface information and experience in the TVDP, the potential for liquefaction for the entire TVDP is likely to be low during seismic shaking. Impacts would be less than significant.

Ground Lurching

The 2013 Preliminary Geotechnical Report prepared for the TVDP concluded that there is a potential for ground lurching at the site as in other locations in the San Francisco Bay Area and Central Valley regions. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. However, based on the site location, the offset for potential ground lurching is considered very minor. The 2013 Preliminary Geotechnical Report provides foundation and pavement design recommendations that can help reduce the potential for adverse impacts from lurch cracking. Impacts would be less than significant.

Residential Annexation Area

According to the Tracy 2011 General Plan, portions of Tracy are subject to geologic hazards including a moderate potential for liquefaction and a moderate to high potential for expansive soils (General Plan 8-2). The majority of the lots to be annexed are already developed with single-family residences and no development is proposed for the Residential Annexation Area at this time. Extension of city services as a result of annexation could encourage upgrades or additions to current structures. Although no new buildings are proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. Pursuant to the Tracy Municipal Code Section 9, the City of Tracy has adopted the 2016 CBC and incorporated it into the Municipal Code. The Municipal Code also contains numerous other provisions intended to promote geotechnical and seismic safety). Any upgrades to existing buildings or construction of new buildings would be subject to a design-level geotechnical investigation, which would be submitted to the City of Tracy for review and approval. In addition, they would need to achieve compliance with the latest adopted edition of the CBC. With the implementation of Mitigation Measure GEO-1, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 Prior to the issuance of building permits, the project applicant shall submit a soil report/geotechnical investigation to the City of Tracy for review and approval. The investigation shall be prepared by a qualified engineer and identify grading and building practices necessary to achieve compliance with the latest adopted edition of the California Building Standards Code's geologic, soils, and seismic requirements. The recommendation from the approved soil report/geotechnical investigation shall be incorporated into the project plans to ensure compliance with city and state building code standards. The City of the Tracy shall review and approve the plans, and the project applicant shall adhere to these approved plans in developing the project.

The types of mitigation that are anticipated for inclusion in the approval of the soil report/geotechnical investigation would include but are not limited to the following:

- Remove all existing fill to competent native soil, as determined by the applicant's geologist. The geologist shall observe the fill removal to determining its extents during construction.
- For grading in structural areas, perform subgrade compaction prior to fill placement, following cutting operations, and in areas left at grade as follows:
  - Scarify to a depth of at least 8 inches;
  - Moisture condition soil to at least 1 percentage point above the optimum moisture content for nonexpansive soils (PI less than 12) and 3 percentage points above the optimum moisture content for expansive soils (PI equal to or greater than 12); and
  - Compact the subgrade to at least 90 percent relative compaction. Compact the upper 6 inches of finish pavement subgrade to at least 95 percent relative compaction prior to aggregate base placement.
- After the subgrade soil has been compacted, place and compact acceptable fill as follows:
  1. Scarify to a depth of at least 8 inches;
  2. Moisture condition soil to at least 1 percentage point above the optimum moisture content for nonexpansive soils (PI less than 12) and 3 percentage points above the optimum moisture content for expansive soils (PI equal to or greater than 12); and
  3. Compact fill to a minimum of 90 percent relative compaction. Compact the upper 6 inches of fill in pavement areas to 95 percent relative compaction prior to aggregate base placement.

Level of Significance After Mitigation

Less than significant impact.

Soil Erosion or Topsoil Loss

Impact GEO-2: The project may result in substantial soil erosion or the loss of topsoil.

Impact Analysis

This impact will evaluate the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The TVDP is located on generally flat land and would involve grading, building construction, and paving activities. The 2013 Preliminary Geotechnical Report prepared for the TVDP concluded that the potential for soil erosion or the loss of substantial topsoil is considered low to negligible. Section 3.2, Agriculture provides a discussion of the value of the cultivated top soil as agricultural land. Based on the research and site observations, ENGEO concluded that the soil type, color, consistency, and visual classification are within general accordance with the Unified Soil Classification System. The 2013 Report provides recommendations to assure stable soils on-site. Such procedures would be outlined in the design-level geotechnical investigation and implemented as required by Mitigation Measure GEO-1.

Construction activities associated with the proposed TVDP would involve vegetation removal, grading, and excavation activities that could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the TVDP. National Pollutant Discharge Elimination System (NPDES) stormwater permitting programs regulate stormwater quality from construction sites, which includes erosion and sedimentation. Under the NPDES permitting program, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) is required for construction activities that would disturb an area of 1 acre or more. The SWPPP must identify potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement best management practices (BMPs) that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies.

These requirements have been incorporated into the TVDP as Mitigation Measures HYD-1a and HYD-1b. The implementation of a SWPPP and its associated BMPs would reduce potential erosion impacts to a level of less than significant. Refer to Section 3.9 and Impact HYD-1 for further discussion of water quality.

Residential Annexation Area

The majority of the lots are already developed with single-family residences and no development is proposed for the Residential Annexation Area at this time. Extension of city services as a result of annexation could encourage upgrades or additions to current structures. Although there no new buildings proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. Under the NPDES permitting program, the preparation and implementation of a SWPPP is required for construction activities that would disturb an area of 1 acre or more. The SWPPP must identify potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement BMPs that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies.

These requirements have been incorporated into the TVDP as Mitigation Measures HYD-1a and HYD-1b. The implementation of a SWPPP and its associated BMPs would reduce potential erosion impacts to a level of less than significant.

Refer to Section 3.9 and Impact HYD-1 for further discussion of water quality.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures GEO-1, HYD-1a, and HYD-1b.

Level of Significance After Mitigation

Less than significant impact.

Unstable Geologic Location

Impact GEO-3: **The project may 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.**

Impact Analysis

This impact will evaluate the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The Safety Element of the Tracy General Plan includes Objective SA-1.1, Policy 1, which requires that a geotechnical engineering study be conducted for any development in areas where potentially serious geologic risks exist. The 2013 Preliminary Geotechnical Report concluded that soils encountered in the borings at the TVDP were generally medium to very dense and contained a significant amount of fine-grained material. In addition, no groundwater was encountered to the terminal depth of the borings. Based on existing subsurface information and history in the TVDP, the potential for ground failure, liquefaction, or liquefaction-related collapse for the entire TVDP is likely to be low during seismic shaking. Impacts would be less than significant.

Residential Annexation Area

The majority of the lots are already developed with single-family residences and no development is proposed for the Residential Annexation Area at this time. Extension of city services as a result of annexation could encourage upgrades or additions to current structures. Though there are no new buildings proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. Pursuant to the Tracy Municipal Code Section 9, the City of Tracy has adopted the 2016 CBC and incorporated it into the Municipal Code. The Municipal Code also contains numerous other provisions intended to promote geotechnical and seismic safety. Any upgrades to existing buildings or construction of new buildings would be subject to a design-level geotechnical Investigation, which would be submitted to the City of Tracy for review and approval. In addition, they would need to achieve compliance with the latest adopted edition of the CBC. With the implementation of Mitigation Measure GEO-1, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure GEO-1.

Level of Significance After Mitigation

Less than significant impact.

Expansive Soil

Impact GEO-4: **The proposed project may create substantial risks to life or property as a result of expansive soil conditions on the project site.**

Impact Analysis

This impact will evaluate the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The native soils that underlie the TVDP mostly consist of silty sand, sandy clay, and clayey sand.

The 2013 Preliminary Geotechnical Report prepared for the TVDP observed potentially expansive clay soil near the surface of the site in Boring 1-B1. The preliminary laboratory testing indicates that these soils exhibit high shrink and swell potential with variations in moisture content.

The 2013 Preliminary Geotechnical Report provides specific preliminary grading recommendations related to expansive soils presented on the TVDP.

Expansive soils change in volume with changes in moisture. They can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations.

Building damage due to volume changes associated with expansive soils can be reduced by (1) using a rigid mat foundation that is designed to resist the settlement and heave of expansive soil, (2) deepening the foundations to below the zone of moisture fluctuation, i.e. by using deep footings or drilled piers, and/or (3) using footings at normal shallow depths but bottomed on a layer of select fill having a low expansion potential.

Post-tensioned mat foundations are the preferred preliminary foundation system for the residential structures. Preliminary recommendations for this foundation type are presented in a subsequent section of his report.

Successful performance of structures on expansive soils requires special attention during construction. It is imperative that exposed soils be kept moist prior to placement of concrete for foundation construction. It is extremely difficult to remoisturize clayey soils without excavation, moisture conditioning, and recompaction.

The 2013 Preliminary Geotechnical Report (Appendix E) provides specific preliminary grading recommendations for compaction of clay soil and expansive soils mitigation at the site. The purpose of these recommendations is to reduce the swell potential of the clay by compacting the soil at a high moisture content and controlling the amount of compaction.

Residential Annexation Area

The native soils that underlie the Residential Annexation Area mostly consist of silty sand, sandy clay, and clayey sand. The majority of the lots are already developed with single-family residences and no development is proposed for the Residential Annexation Area at this time. Extension of city services as a result of annexation could encourage upgrades or additions to current structures. Although

there no new buildings proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. Pursuant to the Tracy Municipal Code Section 9, the City of Tracy has adopted the 2016 CBC and incorporated it into the Municipal Code. The Municipal Code also contains numerous other provisions intended to promote geotechnical and seismic safety). Any upgrades to existing buildings or construction of new buildings would be subject to a design-level geotechnical investigation, which would be submitted to the City of Tracy for review and approval. In addition, they would need to achieve compliance with the latest adopted edition of the California Building Standards Code. With the implementation of Mitigation Measure GEO-1, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure GEO-1.

Level of Significance After Mitigation

Less than significant impact.

3.7 - Greenhouse Gas Emissions

This section describes the science and regulatory framework associated with global climate change and considers the potential cumulative greenhouse gas (GHG) emissions that could occur from the TVSP. The GHG Analysis is included in this Draft EIR as Appendix B.

3.7.1 - Existing Conditions

Global Climate Change

Global climate change is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. Global climate change is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not global climate change is occurring naturally or as a result of human activity. Some data suggests that global climate change has occurred in the past over the course of thousands or millions of years. These historical changes to the Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate-shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that global climate change is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project such as the TVDP cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the TVDP may participate in the potential for global climate change by its incremental contribution of greenhouse gases combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on global climate change.

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, NO_x, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit GHGs. The presence of GHGs in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or

aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO_2.

Individual GHG compounds have varying global warming potential and atmospheric lifetimes. CO_2, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. To describe how much global warming a given type and amount of GHG may cause, the carbon dioxide equivalent is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 21 indicates that CH_4 has 21 times greater warming effect than CO_2 on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. GHGs defined by Assembly Bill (AB) 32 (see the Climate Change Regulatory Environment section for a description) include CO_2, CH_4, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 3.7-1. A seventh GHG, nitrogen trifluoride (NF_3), was added to Health and Safety Code section 38505(g)(7) as a GHG of concern.

Table 3.7-1: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless GHG. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydrofluorocarbons	Hydrofluorocarbons are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Table 3.7-1 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. It has a high global warming potential of 17,200.	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

The State has begun the process of addressing pollutants referred to as short-lived climate pollutants. Senate Bill (SB) 605, approved by the Governor on September 14, 2014 required the ARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. The ARB released the Proposed Short-Lived Climate Pollutant Reduction Strategy in April 2016. ARB has completed an emission inventory of these pollutants, identified research needs, identified existing and potential new control measures that offer co-benefits, and coordinated with other state agencies and districts to develop measures (ARB 2016c).

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in Table 3.7-1 and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, ARB will include it in its comprehensive strategy (ARB 2015c).

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted, so its precursor emissions, volatile organic compounds (VOC) and oxides of nitrogen (NO_x) on a regional scale and CH_4 on a hemispheric scale will be subject of the strategy (ARB 2015c).

Black carbon is a component of fine particulate matter. Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—

particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, whereas other GHGs can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

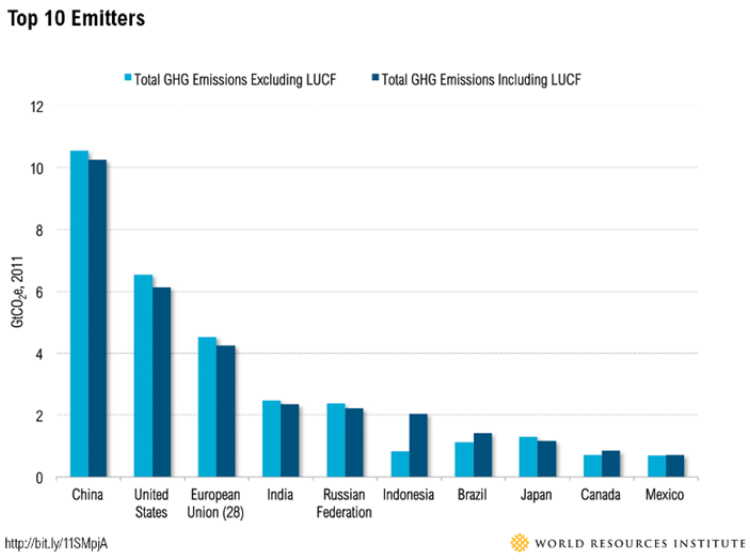
Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The ARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources (ARB 2015c). Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Water vapor is also considered a GHG. Water vapor is an important component of our climate system and is not regulated. Increasing water vapor leads to warmer temperatures, which causes more water vapor to be absorbed into the air. Warming and water absorption increase in a spiraling cycle. Water vapor feedback can also amplify the warming effect of other GHGs, such that the warming brought about by increased carbon dioxide allows more water vapor to enter the atmosphere (NASA 2015).

Greenhouse Gas Emissions Inventories

An emissions inventory is a database that lists, by source, the amount of air pollutants discharged into the atmosphere of a geographic area during a given time period. Emissions worldwide were approximately 43,286 million metric tons of carbon dioxide equivalents (MMT CO_2e) in 2012. As shown in Figure 1, China was the largest GHG emitter with over 10 billion metric tons of CO_2e, and the United States was the second largest GHG emitter with over 6 billion metric tons of CO_2e (WRI 2014).

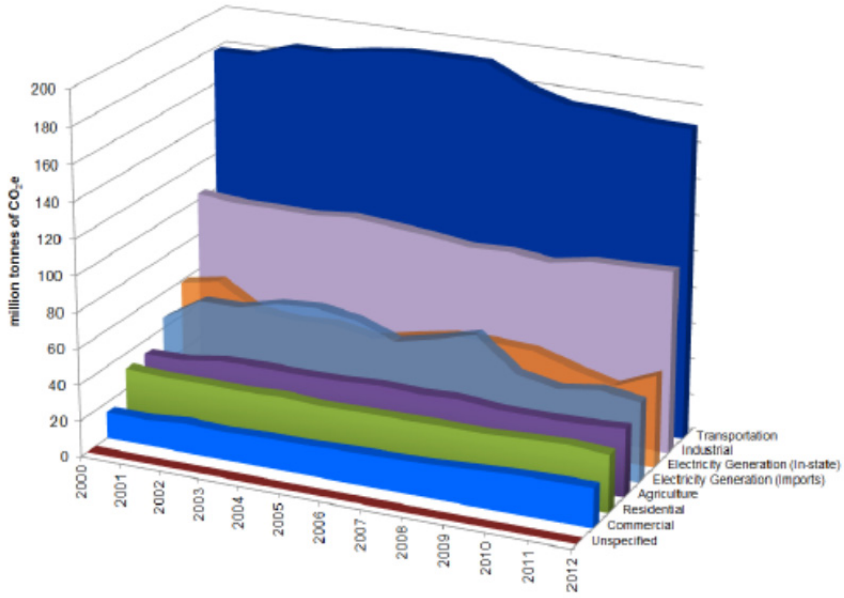
Figure 1: Greenhouse Gas Emissions Trends



Source: WRI 2014.

Figure 2 shows the contributors of GHG emissions in California between years 2000 and 2012 by economic sector. The main contributor was transportation. The second highest sector was industrial, which includes sources from refineries, general fuel use, oil and gas extraction, cement plants, and cogeneration heat output. ARB reported that California's GHG emissions inventory was 459 MMT CO_2e in 2012 (ARB 2014a).

Figure 2: Greenhouse Gas Emission Trends by Sector in California



Source: ARB 2014a.

Environmental Effects of Climate Change in California

In California, climate change may result in consequences such as the following (from CCCC 2006 and Moser et al. 2009).

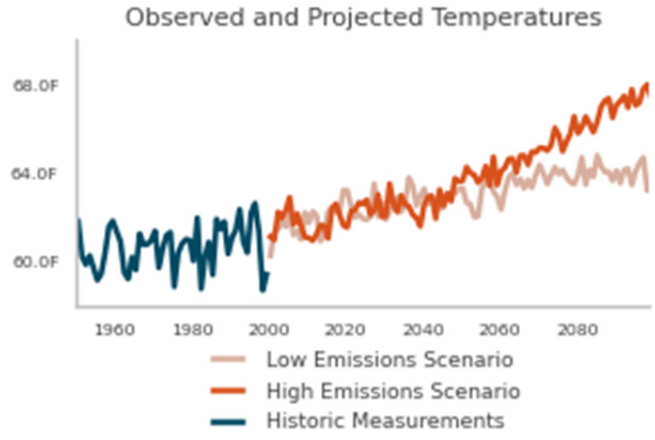
- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.

- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Consequences of Climate Change in the Tracy Area

Figure 3 displays a chart of measured historical and projected annual average temperatures in the Tracy area. As shown in the figure, temperatures are expected to rise in the low and high GHG emissions scenarios. The results indicate that temperatures are predicted to increase by 3.4 degrees Fahrenheit (°F) under the low emission scenario and 5.9°F under the high emissions scenario (CalAdapt 2016).

Figure 3: Observed and Projected Temperatures for Climate Change in the City of Tracy Area



Source: CalAdapt 2016

Human Health Effects of GHG Emissions

GHG emissions from development projects would not result in concentrations that would directly impact public health. However, the cumulative effects of GHG emissions on climate change have the potential to cause adverse effects to human health.

The U.S. Global Change Research Program, in its report, Global Climate Change Impacts in the U.S. (2009), has analyzed the degree to which impacts on human health are expected to impact the United States.

Potential effects of climate change on public health include:

- Direct Temperature Effects: Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heat waves and hot extremes.
- Extreme Events: Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- Climate-Sensitive Diseases: Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- Air Quality: Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution (EPA 2009a).

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen (CDC 2010 and OSHA 2003).

3.7.2 - Regulatory Setting

International Regulations

International organizations such as the ones discussed below have made substantial efforts to reduce GHGs. Preventing human-induced climate change will require the participation of all nations in solutions to address the issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention). On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at average of five percent against 1990 levels over the five-year period from 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 heads of state and government, and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts, and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or COP 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a).

Federal Regulations

The following are actions taken at the federal level relating to greenhouse gases.

Greenhouse Gas Endangerment. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the United States Environmental Protection Agency (EPA) regulate four GHGs, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling upholding that upheld the EPA Administrator findings (EPA 2009b).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012b). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20-percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles, and a 15-percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10-percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On

September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatt would be required to meet an output based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology.

Cap and Trade. Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.

Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the cap and trade program (C2ES 2015b).

State Regulations

The regulations enacted at the state level that indirectly reduce greenhouse gases are listed below.

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The ARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a Business as Usual (BAU) scenario were estimated to be 596 MMT CO_2e, which do not account for reductions from AB 32 regulations (ARB 2008). At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted

regulation is now estimated at 545 MMT CO_2e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010).

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by ARB for 2000 through 2012 to show progress achieved to date (ARB 2014a). The State has also achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target. Also shown are the average reductions needed from all statewide sources (including all existing sources) to reduce GHG emissions back to 1990 levels.

- 1990: 427 million MT CO_2e (AB 32 2020 Target)
- 2000: 463 million MT CO_2e (an average 8-percent reduction needed to achieve 1990 base)
- 2010: 450 million MT CO_2e (an average 5-percent reduction needed to achieve 1990 base)
- 2020: 545 million MT CO_2e BAU (an average 21.7-percent reduction from BAU needed to achieve 1990 base)

ARB Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020

emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions (ARB 2008).

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The Update does not set new targets for the State, but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.

The ARB has no legislative mandate to set a target beyond the 2020 target from AB 32 or to adopt additional regulations to achieve a post-2020 target. The Update estimates that reductions averaging 5.2 percent per year would be required after 2020 to achieve the 2050 goal. With no estimate of future reduction commitments from the State, identifying a feasible strategy including plans and measures to be adopted by local agencies is not currently possible (ARB 2014b).

Cap and Trade Program. The Cap and Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec's cap and trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015 (ARB 2015d).

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by ARB in the First Update:

> The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG

> emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (ARB 2014b).

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures (ARB 2014b).

SB 375—the Sustainable Communities and Climate Protection Act of 2008. SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;

2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and

3. Incorporates the mitigation measures required by an applicable prior environmental document.

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011 (ARB 2013d).

The standards are to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22-percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant (ARB 2013e).

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California (ARB 2011).

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29,

2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs CO_2 per megawatt-hour (MWh).

SB 1078—Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

SB 350—Clean Energy and Pollution Reduction Act of 2015. The legislature recently approved and the Governor signed SB 350 which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

SBX 7-7—The Water Conservation Act of 2009. The legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

Executive Orders Related to GHG Emissions

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

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

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

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order S-01-07—Low Carbon Fuel Standard. The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that ARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for Low Carbon Fuel Standards. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two executive orders of ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-

carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The second public hearing for the new LCFS regulation was held on September 24, 2015 and September 25, 2015, where the LCFS Regulation was adopted. The Final Rulemaking Package adopting the regulation was filed with the Office of Administrative Law (OAL) on October 2, 2015. The OAL approved the regulation on November 16, 2015 (ARB 2015e).

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

Title 24 Energy Efficiency Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The newest version of Title 24 was adopted by the California Energy Commission (CEC) on May 31, 2012. The standards became effective on July 1, 2014. Updated 2016 Building Energy Efficiency Standards went into effect on January 1, 2017 (CEC 2016).

Title 24 California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. The 2013 Building Energy Efficiency Standards (which are updated on an approximately

three-year cycle) went into effect on July 1, 2014. The Energy Commission then developed 2016 Standards, which continue to improve upon the 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2016 Standards went into effect on January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

For each year of construction, in both newly constructed buildings and alterations to existing buildings, the 2013 Standards (for residential and nonresidential buildings) were expected to reduce the growth in electricity use by 555.5 gigawatt-hours per year and to reduce the growth in peak electrical demand by 148.4 megawatts. The 2013 Standards were also expected to reduce the growth in natural gas use by 7.04 million therms per year beyond the prior 2008 Standards. Overall, the 2013 Standards use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards. For comparison purposes, single-family homes built to the 2016 standards will use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards. In 30 years, California will have saved enough energy to power 2.2 million homes, reducing the need to build 12 additional power plants.

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The Code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process and the Amendments became effective on March 18, 2010.

The 2010 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The CEQA Guidelines amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable; however, it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include GHG questions.

CEQA emphasizes that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines Section 15130(f)).

California Supreme Court GHG Ruling

In a November 30, 2015 ruling, the California Supreme Court in *Center for Biological Diversity v. California Department of Fish and Wildlife* Case No. S217763 ("Newhall Ranch Case") concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25-27 of the ruling to address this issue summarized below:

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].) To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions'." (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions']) (p. 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or

greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (p. 26).

- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (p. 27).

Therefore, consistent with CEQA Guidelines Appendix G, the three factors identified in CEQA Guidelines Section 15064.4 and the recently issued Newhall Ranch opinion, the GHG impacts would be considered significant if the project would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed the SJVAPCD GHG Reduction Threshold; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs.

San Joaquin Air Pollution Control District Regulations

Climate Change Action Plan

On August 21, 2008, the SJVAPCD Governing Board approved a proposal called the Climate Change Action Plan (CCAP). The CCAP began with a public process bringing together stakeholders, land use agencies, environmental groups, and business groups to conduct public workshops to develop comprehensive policies for CEQA guidelines, a carbon exchange bank, and voluntary GHG emissions mitigation agreements for the Governing Board's consideration. The CCAP contains the following goals and actions:

- Develop GHG significance thresholds to address CEQA projects with GHG emission increases.
- Develop the San Joaquin Valley Carbon Exchange for banking and trading GHG reductions.
- Authorize use of the SJVAPCD's existing inventory reporting system to allow use for GHG reporting required by AB 32 regulations.
- Develop and administer GHG reduction agreements to mitigate proposed emission increases from new projects.
- Support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

On December 17, 2009, the SJVAPCD Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered

cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

The SJVAPCD's approach is intended to streamline the process of determining if project-specific GHG emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources, and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is no applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as a Best Performance Standard, to reduce GHG emissions. The Best Performance Standards (BPS) have not yet fully been established, though they must be designed to effect a 29-percent reduction when compared with the BAU projections identified in ARB's AB 32 Scoping Plan.

BAU represents the emissions that would occur in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control. These standards thus would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating BPS would not require specific quantification of GHG emissions, and automatically would be determined to have a less than significant cumulative impact for GHG emissions.

For stationary source permitting projects, BPS means, "The most stringent of the identified alternatives for control of GHG emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The SJVAPCD has identified BPS for the following sources: boilers; dryers and dehydrators; oil and gas extraction, storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, BPS means, "Any combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating BPS would require quantification of GHG emissions and demonstration that BAU GHG emissions have been reduced or mitigated by 29 percent. As stated earlier, ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. According to SJVAPCD guidance, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an environmental impact report is required, regardless of whether the project incorporates BPS.

San Joaquin Valley Carbon Exchange

The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley. However, the SJVAPCD has pursued an alternative strategy that incorporates the GHG emissions into its existing Rule 2301—Emission Reduction Credit Offset Banking that formerly only addressed criteria pollutants. The SJVAPCD is also participating with the California Air Pollution Control Officers Association (CAPCOA), of which it is a member, in the CAPCOA Greenhouse Gas Reduction Exchange (GHG Rx). The GHG Rx is operated cooperatively by air districts that have elected to participate. Participating districts have signed a Memorandum of Understanding (MOU) with CAPCOA and agree to post only those credits that meet the Rx standards for quality. The objective is to provide a secure, low-cost, high-quality, GHG exchange for credits created in California. The GHG Rx is intended to help fulfill compliance obligations, or mitigation needs of local projects subject to environmental review, reducing the uncertainty of using credits generated in distant locations.

Rule 2301

While the Climate Change Action Plan indicated that the GHG emission reduction program would be called the San Joaquin Valley Carbon Exchange, the District incorporated a method to register voluntary GHG emission reductions into its existing Rule 2301-Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

Local Regulations

The City of Tracy does not currently have formal GHG emissions reduction plans or recommended emissions thresholds for determining significance associated with GHG emissions from development projects.

City of Tracy Sustainability Action Plan

The City of Tracy adopted its sustainability action plan in 2011. The City's plan outlines the sustainability targets for the year 2020. Those targets relating to greenhouse gas emissions and their corresponding sustainability measures are presented below.

Greenhouse Gas Emissions

- **Target #1:** 15 percent reduction in per capita emissions from the 2006 baseline of 11.6 metric tons of carbon dioxide equivalent.

- **Sustainability Measure E-1:** Green Building Ordinance
  - Develop an incentives-based Green Building Ordinance that promotes energy efficient design for new buildings. As part of this Ordinance:
    - Adopt the 2010 California Green Building Standards Code (Title 24, Part 11, CCR).
    - Encourage energy efficiency measures for new warehouses and warehousing in association with other commercial and industrial uses, including the use of reflective pavement and natural gas or electricity use for yard equipment.
    - Encourage the use of cement substitutes and recycled building materials for new construction.
    - Encourage the use of energy-efficient appliances that meet Energy Star standards when higher than Title 24 and the use of energy efficient lighting technologies that meet or exceed Title 24 standards.
    - Encourage all new buildings to be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (i.e. south facing roof area sloped at 20° to 55° from the horizontal); clear access on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.
    - Encourage any roof to have a Solar Reflectance Index (SRI) of at least 29.
    - Encourage that residential projects of 6 units or more participate in the California Energy Commission's New Solar Homes Partnership, which provides rebates to developers of 6 units or more who offer solar power in 50 percent of new units and is a component of the California Solar Initiative or a similar program with solar power requirements equal to or greater than those of the California Energy Commission's New Solar Homes Partnership.
    - Partner with Pacific Gas and Electric or other appropriate energy providers and the California Public Utilities Commission to develop an incentive program for solar installation on new and retrofitted warehouses. Consider a mandatory minimum solar requirement for new warehouse space.
    - Encourage that new or major rehabilitations of commercial, office, or industrial development greater than or equal to 25,000 square feet in size incorporate solar or other renewable energy generation to provide 15 percent or more of the project's energy needs. Major rehabilitations are defined as additions of 25,000 square feet of office/retail commercial or 100,000 square feet of industrial floor area.
    - In partnership with Pacific Gas and Electric and other appropriate energy providers, develop a program that provides incentives that meet or exceed those of AB 1470. AB 1470, the Solar Hot Water Energy Efficiency Act of 2007, directs the California Energy Commission to establish a ten-year, statewide incentive program to encourage the installation of 200,000 solar water heating systems to offset natural gas usage for water and space heating. The incentives would be funded by a utility company surcharge on certain natural gas customers up to $250 million over ten years.
    - Develop a public-private partnership to provide incentives for co-generation projects for commercial and industrial facilities using outside funds.
    - Encourage the development of alternative energy projects and conduct a review of City policies and ordinances to address alternative energy production. Develop protocols for

alternative energy storage, such as biodiesel, hydrogen, and/or compressed air. Continue to research the location needs for alternative energy producers and send direct, targeted marketing pieces to alternative energy producers that are appropriate for Tracy. Identify possible City-owned sites for production of local renewable energy sources such as solar, wind, small hydro, and biogas.

- Encourage the inclusion of alternative energy facilities that are a secondary use to another project. Identify the best means to avoid noise, aesthetic, and other potential land use compatibility conflicts for alternative energy facilities (e.g. installing tracking solar PV or angling fixed solar PV in a manner that reduces glare to surrounding land uses). Identify and remove regulatory or procedural barriers to producing renewable energy as a secondary use to another project, such as updating codes, guidelines, and zoning.
- Encourage the use of locally-sourced, sustainable, salvaged and recycled-content materials and other materials that have low production energy costs for building materials, hard surfaces, and non-plant landscaping.

- **Sustainability Measure E-2:** 15 percent reduction in community energy consumption from 2006 baseline levels.

Energy

- **Target #4a:** 15 percent reduction in community energy consumption from 2006 baseline levels.
- **Target #4b:** 10 percent reduction in the municipal peak electrical load from 2006 baseline levels.

Transportation and Land Use

- **Target #6a:** 20 percent reduction in the community VMT per capita from current (2006) levels.
- **Target #6b:** 20 percent reduction in the municipal VMT from 2006 baseline levels.

Economic Development

- **Target #18:** 10,000 square feet of neighborhood-serving retail within ¼ mile of 75 percent of all residents.
- **Target #20:** 10% of jobs are "green" by practice or product.

City of Tracy General Plan

In February of 2011, The City of Tracy adopted its current General Plan. The City's General Plan applicable goals and policies relating to the reduction of greenhouse gas emissions are listed below.

Air Quality Element

- **Goal AQ-1:** Improved air quality and reduced greenhouse gas emissions.
- **Objective AQ-1.1:** Improve air quality and reduce greenhouse gas emissions through land use planning decisions.
- **P1.** The City shall promote land use patterns that reduce the number and length of motor vehicle trips.
- **Objective AQ-1.2:** Promote development that minimizes air pollutant and greenhouse gas emissions and their impact on sensitive receptors as a result of indirect and stationary sources.

- **P3.** Developers shall implement best management practices to reduce air pollutant emissions associated with the construction and operation of development projects.
- **P4.** New development projects should incorporate energy efficient design features for HVAC, lighting systems and insulation that exceed Title 24.
- **P5.** Use of solar water and pool heaters is encouraged.
- **P6.** Installation of solar voltaic panels on new homes and businesses shall be encouraged.
- **P7.** Trees should be planted on the south- and west-facing sides of new buildings or building undergoing substantial renovation in order to reduce energy usage.
- **P8.** In accordance with San Joaquin Air Pollution Control District regulations, wood burning fireplaces shall not be installed in new and significantly renovated residential projects.
- **P9.** New developments shall follow the current requirements of the SJVAPCD with respect to wood burning fireplaces and heaters.
- **Objective AQ-1.3:** Provide a diverse and efficient transportation system that minimizes air pollutant and greenhouse gas emissions.
- **P1.** The City shall continue to work with the San Joaquin Council of Governments on regional transportation solutions.
- **P2.** The City shall encourage Caltrans to implement High Occupancy Vehicle (HOV) lanes on regional freeways in and around the Tracy Planning Area.
- **P4.** The City shall support efforts to retain the railroad right-of-way for future public transit and bicycle facilities.
- **P5.** The City shall require direct pedestrian and bicycle linkages from residential areas to parks, schools, retail areas, high-frequency transit facilities and major employment areas.
- **P6.** The City shall coordinate with regional rideshare and transit incentive programs.
- **Objective AQ-1.4:** Support local and regional air quality improvement efforts.
- **P1.** The City shall continue to consult with other local, regional and State agencies on air quality planning efforts as well as encourage community participation in air quality planning.
- **P2.** The City shall be proactive in educating the public about the linkages between land use, transportation and air quality.

Circulation Element

- **Goal CIR-1:** A roadway system that provides access and mobility for all of Tracy's residents and businesses while maintaining the quality of life in the community.
- **Objective CIR-1.2:** Provide a high level of street connectivity.
- **P1.** The City shall ensure that the street system results in a high level of connectivity, especially between residences and common local destinations, such as schools, Village Centers, retail areas and parks.
- **P2.** The City shall implement a connected street pattern with multiple route options for vehicles, bikes and pedestrians.
- **P3.** New development shall be designed to provide vehicular, bicycle and pedestrian connections with adjacent developments.
- **Objective CIR-1.6:** Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.
- **P1**. The City shall design streets using context-sensitive design principles that enhance safety for all modes of travel.

- **Objective CIR-1.8:** Minimize transportation-related energy use and impacts on the environment.
- **P3**. The City shall encourage the use of non-motorized transportation and low-emission vehicles.
- **Goal CIR-3:** Safe and convenient bicycle and pedestrian travel as alternative modes of transportation in and around the city.
- **Objective CIR-3.1:** Achieve a comprehensive system of citywide bikeways and pedestrian facilities.
- **P4.** The City's bicycle and pedestrian system shall have a high level of connectivity, especially between residences and common local destinations, such as schools, shopping and parks. A higher level of bicycle and pedestrian connectivity is defined as a shorter or similar distance to common destinations for bicycles and pedestrians compared to distances for vehicles.
- **Objective CIR-4.1:** Promote public transit as an alternative to the automobile.
- **P1.** The City shall promote efficient and affordable public transportation that serves all users.

Economic Development Element

- **P1.** The City shall encourage businesses that use green practices.
- **P2.** The City shall conduct public education and outreach to support employment opportunities that minimize the need for automobile trips, such as live/work, telecommuting, satellite work centers, and home occupations, in addition to mixed-use development strategies.

3.7.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether greenhouse emissions impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (See Impact GHG-1 below.)

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? (See Impact GHG-2 below.)

3.7.4 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Greenhouse Gas Emissions

Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment.

Impact Analysis—Tracy Village Development Project

Threshold of Significance

Section 15064.4(b) of the CEQA Guidelines' amendments for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The City of Tracy has not adopted its own GHG thresholds or prepared a Climate Action Plan that can be used as a basis for determining project significance, although it has a Sustainability Action Plan, which is a non-qualifying GHG reduction plan. The SJVAPCD's Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA includes thresholds based on whether the project will reduce or mitigate GHG levels by 29 percent from BAU levels compared with 2005 levels (SJVAPCD 2009b). This level of GHG reduction is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008.

The 2010 Cap and Trade Inventory Update provided revised inventory projections to reflect slower growth in emissions during the recession and lower future year projections. The State's 2020 BAU inventory was reduced from 596 MMT CO_2e to 545 MMT CO_2e (ARB 2014b). The new GHG reduction level for the State to reach 1990 emission levels by 2020 is 21.7 percent from BAU in 2020. The First Update to the Climate Change Scoping Plan confirmed that the State is on track to achieve the 2020 target and to maintain and continue reductions beyond 2020 as required by AB 32 (ARB 2014b).

Although a lower percentage reduction (21.7 percent) is required to achieve AB 32 targets, this analysis uses the 29 percent reduction from BAU to reflect that development related sources are called upon to provide more than average reductions to offset source categories like agriculture that are not able to provide as many reductions. The analysis prepared for the project also includes a qualitative assessment of compliance with Scoping Plan and General Plan measures to support GHG

significance findings under Impact GHG-2. The SJVAPCD defines BAU as the total baseline emissions for all emissions sources within the development type, projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period.

Newhall Ranch

On November 30, 2015, the California Supreme Court issued its decision in *Newhall Ranch* invalidating the GHG analysis for a large master planned residential development in Los Angeles County consisting of over 20,000 residential dwelling units and other uses. In particular, the Court upheld: (1) use of the statewide emissions reduction goal in AB 32 as a significance criterion (pp. 15–19), (2) use of the Scoping Plan's BAU model "as a comparative tool for evaluating efficiency and conservation efforts" of the Project (pp. 18–19), and (3) a comparison of the project's expected emissions to a BAU model rather than a baseline of pre-project conditions (pp. 15–19). The Court invalidated the GHG analysis on the grounds that the "administrative record discloses no substantial evidence that the Newhall Ranch's project-level reduction of 31 percent in comparison to [BAU] is consistent with achieving AB 32's statewide goal of a 29 percent reduction from [BAU]." The Court indicated that a lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25). "Second, a lead agency might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities."

The substantial evidence needed to support a project BAU threshold can be derived from data used to develop the Scoping Plan inventory and control strategy and from analysis conducted by the ARB to track progress in achieving the AB 32 2020 target. The critical factor in determining the appropriate project threshold is whether the State requires additional reductions beyond that achieved by regulations to achieve its target. If no additional reductions are required from individual projects, no nexus exists to require a project to mitigate its emissions. In that case the percentage reductions achieved by projects is the amount needed to reach the AB 32 target.

The State's regulatory program implementing the 2008 Scoping Plan is now fully mature. All regulations envisioned in the Scoping Plan have been adopted, and the effectiveness of those regulations has been estimated by the agencies during the adoption process and then tracked to verify their effectiveness after implementation. The combined effect of this successful effort is that the State now projects that it will meet the 2020 target and achieve continued progress toward meeting post-2020 targets. Governor Brown in the introduction to Executive Order B-30-15 states "California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32)."

The Supreme Court was concerned that new development may need to do more than existing development to reduce GHGs to demonstrate that it is doing its fair share of reductions. As will be shown below, new development does do more than existing development and, due to the nature of the sources of GHG emissions related to development, existing development is equally responsible

for reducing emissions from the most important sources of emissions. It is important to note that most of the State's regulatory program applies to new and existing development.

The Scoping Plan reduction from BAU accounts for growth projected in the State and assumes that existing development would continue to emit GHGs at the same rate that occurred in the base year (2002–2004 average). The California Department of Finance Report E-5 predicts that population growth in California from 2005 to 2020 will be 13.2 percent. This means that development that existed in 2005 will produce nearly 87 percent of the State's emissions in 2020. Conversely, new development is only responsible for about 13 percent of the emissions generated during this timeframe. If measures to reduce emissions from existing development were not available, new development could not provide sufficient reductions to reach the 2020 target even if their emissions were reduced to net zero.

The State's regulatory program is able to target both new and existing development because the two most important strategies, motor vehicle fuel efficiency, and emissions from electricity generation obtain reductions equally from existing sources and new sources. This is because all vehicle operators use cleaner low carbon fuels and buy vehicles subject to the fuel efficiency regulations and all building owners or operators purchase cleaner energy from the grid that is produced by increasing percentages of renewable fuels. This includes regulations on mobile sources such as the Pavley standards that apply to all vehicles purchased in California, the Low Carbon Fuel Standard (LCFS) that applies to all fuel used in California, and the Renewable Portfolio Standard and Renewable Energy Standard that apply to utilities providing electricity to all California homes and businesses. The reduction strategy where new development is required to do more than existing development is building energy efficiency and energy use related to water conservation regulations. For example, new projects are subject to Title 24 Energy Efficiency standards and CalGreen Code and MWELO water conservation requirements. Buildings constructed to the 2013 Title 24 standards use 30 percent less energy than buildings complying with the 2008 standards, with continued improvement expected under the new 2016 standards. New buildings and landscapes are much more energy efficient and water efficient than the development that has been built over the past decades and will require much less energy.

As described above, the State requires an average reduction from all sources of the emission inventory of about 22 percent. The Scoping Plan strategy will achieve more than average reductions from energy and mobile source sectors that are the primary sources related to development projects and lower than average reductions from other sources such as agriculture. The amount of reduction estimated for each sector was based on technical feasibility and cost effectiveness. Review of the Scoping Plan inventory and strategy by FCS shows that the reduction from all development related sources is approximately 29 percent from BAU in order to make up for the below-average sectors and achieve the required 22 percent average reduction.

As suggested by the Court, a project BAU analysis was prepared for this project that assesses "consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities." The analysis shows the extent to which the project complies with adopted regulations and the additional amount that will be achieved through project design features. At this point in time, no additional reductions are required from new development beyond regulations for the State to achieve its target. Therefore, this analysis meets the consistency test described by the Supreme Court.

The analysis prepared for the TVSP also includes a qualitative assessment of compliance with Scoping Plan and General Plan measures to support GHG significance findings under Impact GHG-2. There are no measures that identify specific requirements on development projects, but the analysis shows how the applicable measures affect project emission sources.

To determine significance, the analysis first quantifies project-related GHG emissions under a BAU scenario, and then compares these emissions with those emissions that would occur when all project-related design features are accounted for, and when compliance with applicable regulatory measures is assumed. The standard and methodology is explained in further detail, below.

Impact Analysis

TVDP Construction

Total GHG emissions generated during all phases of construction were estimated using CalEEMod 2016.3.1 and are presented in Table 3.7-2. If the construction dates move out to later years, emissions are expected to decrease because of turnover for newer, cleaner, off-road construction equipment changes in emission factors used to calculate emissions of off-road equipment. The SJVAPCD does not recommend assessing the significance of construction-related emissions. Any construction-related emissions would be temporary. However, other jurisdictions such as the South Coast Air Quality Management District (SCAQMD) and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. The SMAQMD adopted threshold of 1,100 MT CO_2e per year was used to evaluate the emissions associated with the construction of the TVDP. As shown in Table 3.7-2, the GHG emissions are below 1,100 MT CO_2e in each construction year. Therefore, construction-related GHG emissions would be less than significant on a project basis.

Table 3.7-2: Construction Greenhouse Gas Emissions (2017–2028)

Construction Phase	On-site	Off-site	Total MT CO_2e
2017			
Site Preparation + Grading Neighborhoods 1+2	113.68	3.19	116.88
2017 Construction Subtotal	*113.68*	*3.19*	*116.88*
2018			
Site Preparation + Grading Neighborhoods 1+2	600.14	16.62	616.76
Paving/Underground Utilities Neighborhoods 1+2	129.57	21.77	151.33
2018 Subtotal	*729.71*	*38.39*	*768.09*
2019			
Paving/Underground Utilities Neighborhoods 1+2	69.81	11.57	81.38

Table 3.7-2 (cont.): Construction Greenhouse Gas Emissions (2017–2028)

Construction Phase	On-site	Off-site	Total MT CO_2e
Building Construction Neighborhoods 1+2	281.48	390.80	672.28
2019 Construction Subtotal	*351.29*	*402.37*	*753.66*
2020			
Building Construction Neighborhoods 1+2	305.26	422.04	727.30
Paving/Underground Utilities Neighborhoods 3+4	196.73	10.57	207.29
2020 Construction Subtotal	*501.99*	*432.61*	*934.59*
2021			
Building Construction Neighborhoods 1+2	279.64	377.78	657.42
Architectural Coating Neighborhoods 1+2	8.44	9.43	17.87
Paving/Underground Utilities Neighborhoods 5+6	196.72	10.17	206.88
2021 Construction Subtotal	*484.8*	*397.38*	*882.17*
2022			
Architectural Coating Neighborhoods 1+2	0.90	0.96	1.86
Building Construction Neighborhoods 3+4	59.44	26.18	85.62
2022 Construction Subtotal	*60.34*	*27.14*	*87.48*
2023			
Building Construction Neighborhoods 3+4	303.14	129.41	432.55
2023 Construction Subtotal	*303.14*	*129.41*	*432.55*
2024			
Building Construction Neighborhoods 3+4	305.52	127.32	432.84
2024 Construction Subtotal	*305.52*	*127.32*	*432.84*
2025			
Building Construction Neighborhoods 3+4	158.63	64.66	223.30
Architectural Coating Neighborhoods 3+4	9.33	2.97	12.30

Table 3.7-2 (cont.): Construction Greenhouse Gas Emissions (2017–2028)

Construction Phase	On-site	Off-site	Total MT CO_2e
Building Construction Neighborhoods 5+6	145.80	59.43	205.23
2025 Construction Subtotal	*313.76*	*127.06*	*440.83*
2026			
Building Construction Neighborhoods 5+6	304.43	121.65	426.08
2026 Construction Subtotal	*304.43*	*121.65*	*426.08*
2027			
Building Construction Neighborhoods 5+6	304.43	119.47	423.91
Architectural Coating Neighborhoods 5+6	5.75	1.70	7.45
2027 Construction Subtotal	*310.18*	*121.17*	*431.36*
2028			
Building Construction Neighborhoods 5+6	25.66	9.91	35.57
Architectural Coating Neighborhoods 5+6	3.58	1.03	4.60
2028 Construction Subtotal	*29.24*	*10.94*	*40.18*
Maximum Annual Construction Emissions			**934.59**
SMAQMD Thresholds of Significance			**1,100**
Does project exceed threshold?			**No**

Notes:
Due to rounding, total MT CO_2e may be marginally different from CalEEMod output.
MT CO_2e = metric tons of carbon dioxide equivalents
Source: CalEEMod output (Appendix B).

TVDP Operation

Operational or long-term emissions occur over the life of the TVDP. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities and residential wood burning. Operational GHG emissions associated with the TVDP were estimated using CalEEMod 2016.3.1

Business-as-Usual Operational Emissions

Operational emissions under the BAU scenario were modeled using CalEEMod 2016.3.1. Modeling assumptions for the year 2005 were used to represent 2020 BAU conditions (without the benefit of regulations adopted to reduce GHG emissions). The SJVAPCD guidance recommends using emissions in 2002-2004 in the baseline scenario to represent conditions as if regulations had not been adopted

to allow the effect of projected growth on achieving reduction targets to be clearly defined. CalEEMod defaults were used for TVDP energy usage, water usage, waste generation, and area sources (architectural coating, consumer products, and landscaping). The vehicle fleet mix was revised to reflect the residential fleet mix approved by SJVAPCD for year 2020. The year 2020 was chosen because it is the AB 32 target year. Buildout is not expected until 2028, but it is common for dwelling units to become operational as they are completed. Since emissions are expected to decrease due to improvements in technology and more stringent regulatory requirements, the more conservative approach is to model emissions in the earliest year the project could become operational. In addition, most currently adopted GHG thresholds are based on the AB 32 target year. Full assumptions and CalEEMod model outputs are provided in Appendix B. Results of this analysis are presented below in Table 3.7-4.

2020 Operational Emissions

Operational emissions for the year 2020 were modeled using CalEEMod. CalEEMod assumes compliance with some, but not all, applicable rules and regulations regarding energy efficiency, vehicle fuel efficiency, renewable energy usage, and other GHG reduction policies. The reductions obtained from each regulation and the source of the reduction amount used in the analysis are described below.

Emissions Accounting for Applicable Regulations

The following regulations are incorporated into the CalEEMod emission factors:

- Pavley I motor vehicle emission standards
- Low Carbon Fuel Standard (LCFS)
- 2013 Title 24 Energy Efficiency Standards
- Pavley II (LEV III) Advanced Clean Cars Program

The following regulations have not been incorporated into the CalEEMod emission factors and require alternative methods to account for emission reductions provided by the regulations:

- 2016 Title 24 Energy Efficiency Standards
- Renewable Portfolio Standards (RPS)
- Green Building Code Standards (indoor water use)
- California Model Water Efficient Landscape Ordinance (Outdoor Water)
- CalRecycle Waste Diversion and Recycling Mandate (75 percent)

Title 24 reductions for 2016 are not accounted for in the CalEEMod Version 2016.3.1. The California Energy Commission (CEC) estimates that 2016 Title 24 standards would result in an increase in energy efficiency of 28 percent in residential buildings compared to 2013 Title 24 (CEC 2015). The benefits of 2013 Title 24 are applied in the CalEEMod mitigation component to correctly allocate the reductions only to building components subject to the regulation.

RPS is not accounted for in the current version of CalEEMod. Reductions from RPS are addressed by revising the electricity emission intensity factor in CalEEMod to account for the utility complying with the 33 percent renewable mandate by 2020 (ARB 2010 and CPUC 2011).

Energy savings from water conservation resulting from the Green Building Code Standards for indoor water use and California Model Water Efficient Landscape Ordinance for outdoor water use are not included in CalEEMod. The Water Conservation Act of 2009 mandates a 20 percent reduction in urban water use that is implemented with these regulations (CDWR 2013). Benefits of the water conservation regulations are applied in the CalEEMod mitigation component.

Regulations applicable to project sources and the percent reduction anticipated from each source are shown in Table 3.7-3. The percentage reductions are only applied to the specific sources subject to the regulations. For example, the Pavley Low Emission Vehicle Standards apply only to light duty cars and trucks.

Table 3.7-3: Reductions from Greenhouse Gas Regulations

Regulation	Project Applicability	Reduction Source	Percent Reduction in 2020
Pavley Low Emission Vehicle Standards	Light duty cars and trucks accessing the site are subject to the regulation	CalEEMod defaults (Pavley I)I	25.1[1]
		CalEEMod defaults (Pavley II/LEV III)	3%[2]
Low Carbon Fuel Standard (LCFS)	Vehicles accessing the site will use fuel subject to the LCFS	CalEEMod defaults	10%[1]
Title 24 Energy Efficiency Standards	Project buildings will be constructed to meet the latest version of Title 24 (currently 2016). Reduction applies only to energy consumption subject to the regulation.	CalEEMod defaults (2013 Title 24) and CalEEMod mitigation component (2016 Title 24)	28%[3]
Green Building Code Standards	The project will include water conservation features required by the standard	CalEEMod mitigation component	20%[4]
Water Efficient Land Use Ordinance	The project landscaping will comply with the regulation	CalEEMod mitigation component	20%[5]
Renewable Portfolio Standard (RPS)	Electricity purchased for use at the project site is subject to the 33% RPS mandate	CalEEMod adjusted energy intensity factors from PG&E with RPS	23.3%[6]
Solid waste	The solid waste service provider will need to provide programs to increase diversion and recycling to meet the mandate.	CalEEMod mitigation component	75%[7]

Notes:
Regulations are described in Section 2.3 Regulatory Environment. The source of the percentage reductions from each measure are from the following sources:

1 Pavley 1 + Low Carbon Fuel Standard Postprocessor Version 1.0 User's Guide (ARB 2010)
2 ARB Staff Report for LEV III Amendments (ARB 2013e)
3 California Energy Commission Adoption Hearing Presentation: 2016 Buildings Energy Efficiency Standards (CEC 2015)
4 2013 California Green Building Standards Code Section 5.303.2
5 California Water Plan Update 2013 (CDWR 2013)
6 Based on CalEEMod default PG&E rate for 2005 reduced to meet the 33% RPS requirement
7 CalRecycle 75 Percent Initiative: Defining the Future (2016b)

In addition to rules and regulations, the TVDP would incorporate design features and would obtain benefits from its location and infrastructure that would reduce project vehicle miles traveled compared to default values. The TVDP would construct pedestrian infrastructure connecting to adjacent land uses. The TVDP is located 0.1 mile from the nearest bus station and 2.8 miles from downtown Tracy. In addition, the TVDP would provide electrical outlets for landscaping equipment that would be used in accordance with statewide usage rates for this type of equipment. All homes within the TVDP shall have photovoltaics on their roofs. All community buildings within the TVDP shall include photovoltaics and/or solar water heaters. To account for use of photovoltaics and solar water heaters, the CalEEMod mitigation component was used to indicate 25% of electricity use would be generated through on-site renewable energy.

Note that CalEEMod nominally treats these design elements and conditions as "mitigation measures," despite their inclusion in the project description. Therefore, reported operational emissions are considered to represent unmitigated project conditions. Full assumptions and model outputs are provided in Appendix B. Results of this analysis are presented in Table 3.7-4.

Table 3.7-4: Project Operational Greenhouse Gases

Source	Emissions (MT CO_2e per year)	
	Business as Usual	2020 Unmitigated (with Regulation and Design Features)
Area	482.97	482.79
Energy	2,668.84	1,294.74
Mobile	2,706.86	2,135.97
Waste	106.70	88.92
Water	161.68	77.11
Amortized Construction Emissions	191.56	191.56
Total	6,318.61	4,271.08
Reduction from BAU		2,047.53
Percent Reduction		32%
Significance Threshold		29%*
Are emissions potentially significant?		No

Notes:
MT CO_2e = metric tons of carbon dioxide equivalents
* ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. Although a lower percentage reduction (21.7 percent) would demonstrate consistency with AB 32, this analysis uses the 29 percent reduction from BAU as the basis of the threshold to demonstrate compliance with the Newhall Ranch decision described below, which indicated that new development may need to provide more reductions than existing development to show consistency with state targets.
The project achieves the SJVAPCD 29 percent reduction from BAU threshold and the 21.7 percent required to show consistency with AB 32 targets.
Source of BAU emissions: CalEEMod output using 2005 modeling year to represent emissions in 2020 without regulations (Appendix B).
Source of 2020 emissions: CalEEMod output for the year 2020 (Appendix B).

As shown in Table 3.7-4, the TVDP would achieve a 32 percent reduction from BAU to the year 2020 with Regulations and Design features incorporated. This would exceed the 29 percent reduction required by SJVAPCD threshold and the 21.7 percent average reduction now required to achieve AB 32 targets. Therefore, the impact would be less than significant.

The Supreme Court in the Newhall Ranch case indicated that as 2020 gets closer, selection of a new post-2020 threshold will be necessary. ARB is currently preparing the new Scoping Plan Update to address SB 32. The public comment period for the ARB's Proposed Scoping Plan and Draft EA began on January 20, 2017 and ended on April 10, 2017. The Scoping Plan Update is expected to be adopted by the ARB in 2017. Without a new Scoping Plan that identifies the State's strategy for achieving a post-2020 target, a new project threshold is premature since the amount of reduction needed from new development is not known and would be speculative. Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; however, it can be anticipated that operation of the project would comply with whatever measures are enacted that state lawmakers decide would lead to an 80-percent reduction below 1990 levels by 2050.

Quantitative ThresholdsThe operational emissions associated with the TVDP were also been compared with the mass emission thresholds of significance developed by SMAQMD and the BAAQMD.

The mass emission thresholds suggested by BAAQMD for project-level operational greenhouse gas generation are as follows:

- 1,100 MT CO_2e/year, or
- 4.6 metric tons of CO_2 equivalent per service population (employees plus residents).

The mass emission thresholds suggested by SMAQMD for project-level operational greenhouse gas generation are as follows:

- Operational phase of a land development project—1,100 MT CO_2e/year.

Both BAAQMD and SMAQMD recommend a bright-line threshold of 1,100 MT CO_2e/year for project-level operational GHG generation. Therefore, the estimated annual emissions for the year 2020 were compared with the 1,100 MT CO_2e/year bright-line threshold and the BAAQMD's service population threshold to determine potential significance for this criterion. TVDP's operational GHG emissions would be potentially significant if both thresholds are exceeded.

Table 3.7-5: Project Operational Greenhouse Gases

Emission Source	Emissions (MT CO_2e per year)
Area	482.79
Energy	1,294.74
Mobile (Vehicles)	2,135.97
Waste	88.92

Table 3.7-5 (cont.): Project Operational Greenhouse Gases

Emission Source	Emissions (MT CO_2e per year)
Water	77.11
Total Emissions	4,079.52
Construction Emissions (Amortized over 30 Years)	191.56
Total Project Emissions	4,271.08
BAAQMD Bright-line Threshold	1,100
SMAQMD Bright-line Threshold	1,100
Service Population (Residents)	1,200
Project Emission Generation	3.6 MT CO_2e/SP
BAAQMD Efficiency Threshold	4.6 MT CO_2e/SP
Does project exceed all thresholds?	No
Notes: MT CO_2e = metric tons of carbon dioxide equivalent. Unrounded results used to calculate totals. Source of Emissions: CalEEMod Output (Appendix B) Source of BAAQMD Bright-line Threshold: BAAQMD 2017 Source of SMAQMD Bright-line Threshold: SMAQMD 2016 Source of BAAQMD Service Population Threshold: BAAQMD 2017	

Total operational emissions from the TVDP were estimated at 4,079.52 MT CO_2e. As a conservative assumption, the analysis includes construction emissions amortized over the TVDP's life (30 years for residential projects). TVDP construction emissions were calculated as 5,746.71 MT CO_2e. If annualized over 30 years, construction emissions equal 191.56 MT CO_2e. The TVDP would generate approximately 4,271.08 MT CO_2e per year with addition of construction emissions. Therefore, the project would exceed the BAAQMD's and SMAQMD's thresholds of 1,100 MTCO_2e/year.

As shown in Table 3.7-5, the TVDP would generate approximately 4,271.08 MT CO_2e per year. There are several options available to mitigate TVDP operational emissions. With an average of 2.00 persons per dwelling unit as an Active Adult development, as indicated by the project description, the project is estimated to accommodate 1,200 residents. The project would generate approximately 3.6 MT CO_2e per service person at year 2020. Therefore, the project would not exceed the BAAQMD's 2017 Air Quality Threshold of 4.6 MT CO_2e for greenhouse gases, and would not have a significant generation of greenhouse gases.

Impact Analysis—Residential Annexation Area

Implementation of the Residential Annexation Area component of the project does not include construction of additional dwelling units. It is not anticipated that implementation of the Residential Annexation Area would result in a net increase of greenhouse gas emissions. Motor vehicle emissions associated with the Residential Annexation Area would be reduced through compliance with state

regulations on fuel efficiency and fuel carbon content. The regulations include the Pavley fuel efficiency standards that require manufacturers to meet increasing stringent fuel mileage rates for vehicles sold in California and the Low Carbon Fuel Standard that requires reductions in the average carbon content of motor vehicle fuels. Emissions related to electricity consumption by the existing homes would be reduced as the electric utility complies with the Renewable Portfolio Standard, which requires utilities to increase its mix of renewable energy sources to 33 percent by 2020. Although implementation of the Residential Annexation Area component of the project does not include construction of additional dwelling units, vacant parcels could be developed at a future date. Any new homes that would be constructed on the vacant parcels would be subject to the latest energy efficiency standards and would incorporate applicable energy efficiency features designed to reduce project energy consumption. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. Homes built at a future date would also comply with the California Green Building Standards Code, which includes requirements to increase recycling, reduce waste, reduce water use, increase bicycle use, and other measures that will reduce greenhouse gas emissions. The impact would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-2:	**The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.**

Impact Analysis—Tracy Village Development Project

The City of Tracy has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, and goal-setting process required to identify a reduction target and to take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to development projects. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the

project is assessed for its consistency with ARB's adopted Scoping Plan. This would be achieved with an assessment of the project's compliance with Scoping Plan measures.

Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30 percent from BAU emission levels projected for 2020, or about 10 percent from 2008 levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020. As stated earlier, the ARB has updated its emission inventory forecasts and now estimates a reduction of 21.7 percent is required from BAU in 2020 to achieve AB 32 targets.

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown Table 3.7-6, the project is consistent with most of the strategies, while others are not applicable to the project.

Table 3.7-6: Scoping Plan Reduction Measures Consistency Analysis

Scoping Plan Reduction Measure	Consistency/Applicability Determination
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not applicable.** Although the cap-and-trade system has begun, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standards would be applicable to the light-duty vehicles that would access the project site.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** This is a measure for the State to increase its energy efficiency standards in new buildings. The project is required to build to the new standards and would increase its energy efficiency through compliance. In addition, the TVDP would generate on-site renewable energy through the use of photovoltaics and solar water heaters.

Table 3.7-6 (cont.): Scoping Plan Reduction Measures Consistency Analysis

Scoping Plan Reduction Measure	Consistency/Applicability Determination
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. PG&E obtains 19 percent of its power supply from renewable sources such as solar and geothermal. It is required to increase this percentage to 33 percent by the year 2020 pursuant to various regulations. The owners of residences within the project would purchase power that is composed of a greater amount of renewable sources. In addition, the TVDP would assist the utility in achieving the mandate by including photovoltaics on the roofs of all homes and including photovoltaics and/or solar water heaters for all community buildings.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standard would be applicable to the fuel used by vehicles that would access the project site.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	**Consistent.** SB 375 has no requirements that apply directly to development projects; however, the project includes design features that would improve walkability and would contribute to achieving SB 375 regional targets.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**Consistent.** When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The project would comply with Title 24, which requires new buildings to be "solar ready." The project would not preclude the implementation of this strategy. Furthermore, the design features of the TVDP include photovoltaics on the roofs of all homes and photovoltaics and/or solar water heaters for all community buildings.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**Not applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. The standards phase-in over model years 2014 through 2018. Vehicles that access the project site are subject to the regulation.

Table 3.7-6 (cont.): Scoping Plan Reduction Measures Consistency Analysis

Scoping Plan Reduction Measure	Consistency/Applicability Determination
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	**Not applicable.** This measure would apply to the direct GHG emissions at major industrial facilities emitting more than 25,000 MT CO_2e per year. Furthermore, the project is not an industrial land use.
12. High Speed Rail. Support implementation of a high-speed rail system.	**Not applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The project would comply with the California Energy Code, and thus incorporate applicable energy efficiency features designed to reduce project energy consumption.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**Not applicable.** This measure is applicable to the high global warming potential gases that would be used by sources with large equipment (such as in air conditioning and commercial refrigerators) that are not part of this residential project.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**Consistent**. The project would utilize City of Tracy recycling services.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Not applicable.** The project site is not forested; therefore, this measure is not applicable.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The project would comply with Green Building Code regulations and would implement required water conservation features.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	**Not applicable.** The project site is not designated for agriculture purposes. No dairy or feedlot that would generate manure is proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: California Air Resources Board 2008. Source of Project Consistency or Applicability: FirstCarbon Solutions.	

In summary, the TVDP incorporates a number of features that would minimize GHG emissions. These features are consistent with project-level strategies identified by the ARB's Scoping Plan and the City of Tracy General Plan. As demonstrated in the impact analysis shown in Table 3.7-4 above, the TVDP would achieve a 32 percent reduction from the BAU inventory and, therefore, would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or

conflict with implementation of the Scoping Plan. The TVDP promotes the goals of the Scoping Plan through implementation of design measures that reduce energy consumption, water consumption, and reduction in vehicle miles traveled. Therefore, the TVDP would not conflict with any plans to reduce GHG emissions. The impact would be less than significant.

Impact Analysis—Residential Annexation Area

Implementation of the Residential Annexation Area component of the project does not include construction of additional dwelling units. It is not anticipated that implementation of the Residential Annexation Area would result in a net increase of greenhouse gas emissions. Therefore, it would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases. The impact would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.8 - Hazards and Hazardous Materials

3.8.1 - Introduction

This section describes the existing hazards and hazardous materials setting and potential effects from project implementation on the TVDP site and Residential Annexation Area. Descriptions and analysis in this section are based on the City of Tracy General Plan, Phase I Environmental Site Assessment (Phase I ESA) conducted by ENGEO Inc., dated April 4, 2013, and a database search performed by FCS, included in this EIR as Appendix F.

3.8.2 - Environmental Setting

Hazardous Materials

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when handled, disposed, or otherwise managed improperly. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic—causes human health effects
- Ignitable—has the ability to burn
- Corrosive—causes severe burns or damage to materials
- Reactive—causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If handled, disposed, or otherwise handled improperly, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contain technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Phase I Environmental Site Assessment

A Phase I ESA dated April 4, 2013 was prepared by ENGEO Incorporated to determine the presence or absence of hazardous materials on the TVDP site. The findings are summarized as follows:

Existing Conditions

The Phase I ESA characterized the TVDP site as undeveloped agricultural land with one residential dwelling unit and several outbuildings near the northeast section of the property. The project site ranges from approximately 135 feet above mean sea level (msl) in the southwestern portion of the property to approximately 102 feet in the northcentral basin. Review of the Geologic Map of the San Francisco-San Jose Quadrangle (Wagner et al. 1991) indicated that the TVDP property is underlain by alluvial deposits (Qf). This Quaternary-age alluvium consists of alluvial fan and basin deposits of

gravel, sand, silt, and clay. The site-specific depth to groundwater and direction of groundwater flow was not determined as a part of the Phase I ESA.

Records Search

At the request of Ponderosa Homes, ENGEO Incorporated performed a search of federal, state, and local databases listing contaminated sites, brownfield sites (a development site having the presence or potential presence of hazardous substance, pollutant, or contaminate), underground storage tank sites, waste storage sites, toxic chemical sites, contaminated well sites, clandestine drug lab sites, and other sites containing hazardous materials. The TVDP site and adjacent sites were not listed on any databases.

The records search did not find documentation or physical evidence of soil or groundwater impairments associated with the use of the TVDP property. A review of regulatory databases maintained by county, state, and federal agencies found no documentation of hazardous materials violations or discharge on the TVDP property.

Topographic Maps

Historical United States Geological Survey topographical maps for the San Francisco-San Jose Quadrangles dating back to 1916 were obtained as part of the Phase I analysis. The changes that have occurred to the TVDP site and surrounding areas indicate that the adjacent parcels have consisted of rural residential and agricultural improvements to open space. A summary of the topographical map findings can be found on Table 3.8-1.

Table 3.8-1: Topographic Maps Summary

Year	Scale (inches: feet)	Summary
1916	1” = 31,680’	The 1916 topographical map shows that the property slopes to the north, with a total elevation change of about 50 feet. A drainage appears in the western portion of the property. A structure appears in the approximate northeast corner of the property. Unpaved and unnamed roads appear in the approximate location of what are currently Valpico Road, Coral Hollow Road, and South Tracy Boulevard. A paved road and railroad line in the approximate location of what is currently West Linne Road is labeled *Western*. The town of Tracy is mapped northeast of the property, and several railroad lines are mapped throughout the quadrangle.
1922	1” = 62,500’	The 1922 topographical map shows similar land use of the property and the surrounding properties.
1947	1” = 50,000’	The 1947 topographical map depicts a group of five structures in the approximate northeast corner of the property. A canal appears to the immediate north of the property.
1954	1” = 24,000’	The 1954 topographical map shows two residential structures in the approximate northeast corner of the property. Valpico Road and Corral Hollow Road are named and appear to be paved. A road in the approximate location of South Tracy Boulevard is mapped as Jefferson Road.

Table 3.8-1 (cont.): Topographic Maps Summary

Year	Scale (inches: feet)	Summary
		A road named Canal Road is now mapped immediately north of the property. Linne Road is also identified. Surrounding properties appear to be used as orchards. The properties immediately to the west of the property appear to have several residential structures.
1968	1" = 24,000'	The 1968 topographical map shows five residential structures in the northeast corner of the property. A drainage basin appears in the northern portion of the property, along Valpico Road.
1981	1" = 24,000'	The 1981 topographical map shows similar land use of the property. The properties to the immediate west of the property appear to be used as orchards.
Source: ENGEO Incorporated, 2013.		

Aerial Photographs

Aerial photographs of the TVDP site and vicinity, dating back to 1957, were obtained as part of the Phase I ESA investigations. These photographs were provided by EDR and show information regarding past conditions and land uses that have occurred to the TVDP site and surroundings. These findings are presented in the Phase I ESA, and summarized in Table 3.8-2.

Table 3.8-2: Aerial Photograph Summary

Year	Scale (inches: feet)	Summary
1957	1" = 500'	The 1957 photograph shows that the property is primarily used for dry crop agriculture. Several irrigation canals extend east to west throughout the property. Residential and barn structures appear in the northeast corner of the property. An orchard appears adjacent to the residential structures. A basin appears in the north central portion of the property. The surrounding properties appear to be used primarily for dry crop agriculture, with isolated plots of row crops. Several residential structures appear along the northern and western borders of the property. An irrigation canal is located north of the property.
1967	1" = 500'	Land use conditions on the property and surrounding properties appear similar to the 1957 photograph; however, the number of plots along the western border of the property increased and appear to be used for row crops.
1974	1" = 500'	The 1974 photograph shows that the property is still used primarily for dry crops. The orchard in the northeast corner of the property and irrigation canals in the western area are no longer present. The irrigation canals in the eastern portion of the property appear to change configuration.

Table 3.8-2 (cont.): Aerial Photograph Summary

Year	Scale (inches: feet)	Summary
1982	1” = 500’	The 1982 photograph shows similar land use of the property and surrounding properties.
1993	1” = 500’	The 1993 photograph shows that the property is still used primarily for dry crops. One of the barn structures in the northeastern corner of the property is no longer present. The basin in the north-central portion of the property appears to have increased vegetation. The property adjacent to the site along the northeastern border now appears to be residential development. The properties adjacent to the site along the western border no longer appear to be used for row crops.
2005	1” = 500’	The 2005 photograph shows that another residential structure in the northeastern corner of the property has been demolished. The basin in the north-central portion of the property is no longer vegetated. The irrigation canals no longer appear on the property. The properties adjacent to the site along the southeastern and southern borders now appear to be residential development. A portion of the southern residential development is undergoing construction.
2006	1” = 500’	The 2006 photograph shows similar land use of the property and surrounding properties. The residential development south of the property has been completed.
2009	1” = 500’	The 2009 photograph shows that the property has recently been tilled. A paved parking lot and recreational facility appear to the west of the property.
Source: ENGEO Incorporated, 2013.		

Site Reconnaissance

ENGEO Incorporated personnel performed site reconnaissance in March 2013. The TVDP site was visually inspected for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The TVDP site was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or pre-existing underground storage tanks. The reconnaissance results are described below.

Site Reconnaissance Observations

Structures

Several structures were observed within the TVDP property during the site reconnaissance. These structures include one single-story residential dwelling, two single-story detached garages, one two-story tank house, two barns, three sheds, and one well house.

Hazardous Substances and Petroleum Products in Connection with Identified Uses

No hazardous substances or petroleum products were observed within the TVDP property during the reconnaissance.

Storage Tanks

Other than an on-site propane tank and an empty rectangular storage tank at the north side of the residential dwelling, no other storage tanks were observed within the TVDP property during the reconnaissance (Appendix H, Photograph 3B). A Phase II proposal dated May 22, 1996 mentioned a "former underground storage tank" located adjacent to the northernmost detached garage. No evidence of the former tank was observed adjacent to the aforementioned detached garage.

Odors

No odors indicative of hazardous materials or petroleum material impacts were noted at the time of the reconnaissance.

Pools of Potentially Hazardous Liquid

No pools of potentially hazardous liquid were observed within the TVDP property at the time of the reconnaissance.

Drums

At least eight 55-gallon drums were observed on the TVDP property at the time of the reconnaissance. The metal drums, which were nearly all empty, appeared severely rusted and used as waste bins. Two empty 55-gallon blue polyurethane drums were observed in the basin. A red 55-gallon polyurethane drum was observed adjacent to the tank house. The drum did not have any secondary containment. It was partially filled with an unknown liquid. No stains were observed beneath or near the container.

Hazardous Substance and Petroleum Product Containers

Several hazardous or hazardous substance or petroleum product containers were observed on the TVDP property at the time of the reconnaissance. The containers were generally located adjacent to the storage sheds and appeared to be empty. No obvious impacts associated with the containers were noted.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are mixtures of synthetic chemicals with similar chemical structures. PCBs can range from oily liquids to waxy solids. Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other applications. More than 1.5 billion pounds of PCBs were manufactured in the United States prior to cessation of production in 1977.

Pacific Gas and Electric Company (PG&E) provides electricity to the Plan Area. As the owner of any transformers present on utility poles, PG&E would be responsible for any inspections, testing, reporting, and release response related to PCBs.

Before the United States Environmental Protection Agency (EPA) banned the manufacture of PCBs in 1978, PCBs were commonly incorporated in the manufacture of fluorescent light ballasts. Based on the age of the buildings on the project site, there may be fluorescent light ballasts in the existing

structures that may have PCB-containing capacitors. Proper disposal of fluorescent light ballasts would be required prior to demolition. Arrangements may be made with various PCB transporters or commercial companies that store PCBs for shipment of ballast, PCB-soiled items, or fluorescent fixtures containing PCBs to an EPA-approved chemical waste processing site. Alternatively, household hazardous waste collection centers can accommodate fluorescent light ballasts containing PCBs.

Pits, Ponds, and Lagoons

No pools of potentially hazardous liquid were observed within the TVDP property at the time of the reconnaissance.

Stained Soil/Pavement

No stained soil or pavement was observed within the TVDP property at the time of the reconnaissance.

Stressed Vegetation

The vegetation in the vicinity of some of the barns appeared stressed, consistent with vegetation that has been exposed to herbicides.

Solid Waste/Debris

Sporadic solid waste/debris were observed on the TVDP at the time of the reconnaissance. The debris consisted of, but was not necessarily limited to, concrete piping, old vehicle parts and tires, old metal and plastic cans, bricks, metal and plastic fencing material, cinder blocks, farm implements (not appearing to be in recent use), vegetation, tin sheets, ceramic pipe sections, wood debris, broken concrete, trailer parts, a camper shell, and general household-type refuse.

Wastewater

No wastewater conveyance systems were observed at the TVDP property during the reconnaissance.

Wells

One well was observed adjacent to the tank house during the site reconnaissance. No other wells were observed in the open.

Septic Systems

No septic systems were observed at the TVDP property during the site reconnaissance; however, it is believed that the TVDP property contains a septic tank and leach line.

Potentially Hazardous Materials

Asbestos-containing Materials

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties, such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is commonly used as an acoustic insulator, thermal insulation, fireproofing, and in other building materials. Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials are damaged or disturbed. When these fibers get into the air, they may be inhaled into the lungs, where they can cause significant health problems. The

California Occupational Health and Safety Administration (CalOSHA) defines asbestos-containing construction materials as any material that contains more than 0.1 percent asbestos by weight.

An asbestos survey was not conducted as part of this assessment; however, given the age of the farmhouse and some of the barns/sheds, it is conceivable that asbestos building materials may be present on the TVDP property.

Lead-based Paint

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably in paint. Lead may cause a range of health effects, from behavior problems and learning disabilities to seizures and death. Primary sources of lead exposure are deteriorating lead-based paint, lead contaminated dust, and lead contaminated soil. Both of the EPA and the California Department of Health Services define lead-based paint as containing a minimum of 0.5 percent lead by weight. Lead-containing waste materials with a concentration greater than 0.1 percent are considered hazardous waste by California law. Both the federal and California OSHA maintain regulations regarding the disturbance of paints that contain any amount of lead.

A lead-based paint survey was not conducted as part of this assessment; however, given the age of the farmhouse and some of the barns/sheds, it is conceivable that lead-based paint may be present on the TVDP property.

3.8.3 - Regulatory Framework

Federal

United States Environmental Protection Agency

The EPA leads the nation's environmental science, research, education, and assessment efforts. The EPA's mission is to protect human health and to safeguard the natural environment, related to air, water, and land. The EPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. The EPA is primarily responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance. When national standards are not met, the EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality. The EPA also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

EPA Region 9 has jurisdiction over Tracy and the southwestern United States (Arizona, California, Nevada, and Hawaii). EPA programs related to hazardous materials include the following:

- Community Right-to-Know Information
- Pesticide Management
- Toxic Release Inventory
- Brownfields (CalSites Database)
- Cleanup Technologies
- Compliance Assistance

- Emergency Response
- Hazardous Waste
- Oil Spills

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

Comprehensive Environmental Response, Compensation, and Liability Act

Discovery of environmental health damage from disposal sites prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act relates primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for planning. Chemical inventory data is made available to the community at large under the "right-to-know" provision of the law. In addition, the Superfund Amendments and Reauthorization Act also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines. It includes provisions for material classification, packaging, marking, labeling, placecarding, and shipping documentation.

State

California State Aeronautics Act

The State Aeronautics Act, Public Utilities Code (PUC) Section 21001, et seq. is the foundation for the California Department of Transportation's Division of Aeronautics aviation policies. The Division issues permits for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within 2 miles of an airport runway, and authorizes helicopter-landing sites at/near schools. Aviation system planning provides for the integration of aviation into transportation system planning on a regional, statewide, and national basis. The Division of Aeronautics administers noise regulation and land use planning laws that foster compatible land use around airports and encourages environmental mitigation measures to

lessen noise, air pollution, and other impacts caused by aviation. The Division of Aeronautics also provides grants and loans for safety, maintenance, and capital improvement projects at airports.

California Hazardous Waste Control Law

The Hazardous Waste Control Law is the primary hazardous waste statute in the State of California. The Hazardous Waste Control Law implements the RCRA as a "cradle-to-grave" waste management system in the State of California. The law specifies that generators have the primary duty to determine whether their waste is hazardous and to ensure their proper management. The Hazardous Waste Control Law also establishes criteria for the reuse and recycling of hazardous waste used or reused as raw materials. The law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of waste and waste management activities that are not covered by federal law with the RCRA.

Local

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Tracy, and unincorporated areas, and deals with pollutants, including hazardous air pollutants such as asbestos. Information on the SJVAPCD and air quality is provided in Section 3.3, Air Quality of this EIR.

San Joaquin County

San Joaquin County's Aviation System Airport Land Use Compatibility Plan

The State Aeronautics Act requires the preparation and implementation of Airport Land Use Compatibility Plans (ALUCP) for nearly all public airports in the State. ALUCPs are intended to ensure that incompatible development does not occur on land surrounding airports. To accomplish this, the Act established Airport Land Use Commissions in counties having public use airports. The commissions are charged with developing, updating and implementing ALUCPs.

The San Joaquin Council of Governments (SJCOG) adopted the San Joaquin County ALUCP in 1983 and updated it in 2009. The most recent update ALUCP for the Tracy Airport was part of that update.

San Joaquin County Department of Environmental Health Certified Unified Program Agency

The San Joaquin County Department of Environmental Health Certified Unified Program Agency (CUPA) is the administrative agency that coordinates and enforces numerous local, state, and federal hazardous materials management and environmental protection programs in the County. The programs include Aboveground Petroleum Storage Program, CUPA, Food and Restaurants Program, Hazardous Waste Generator Program, Housing Abatement Program, Land Use Program, Liquid Waste Program, Milk & Dairy Program, Recreational Health Program, Small Public Water Systems Program, Underground Storage Tank Program, and California Accidental Release Program.

City of Tracy General Plan

The City of Tracy General Plan establishes the following goals and policies related to hazards and hazardous materials that are relevant to this analysis.

Safety Element

- **Goal SA-4:** Protection from the harmful effects of hazardous materials and waste.
- **Objective SA-4.1:** Minimize exposure to harmful hazardous materials and waste by Tracy residents.
- **P1:** Adequate separation shall be provided between areas where hazardous materials are present and sensitive uses such as schools, residences and public facilities.
- **P2:** When reviewing applications for new development and redevelopment in areas historically used for commercial or industrial uses, developers shall conduct the necessary level of environmental investigation to ensure that soils groundwater and buildings affected by hazardous material releases from prior land uses and lead or asbestos potentially present in building materials, will not have a negative impact on the natural environment or health and safety of future property owners or users.
- **P3:** The safe transport of hazardous materials through Tracy shall be performed by implementing the following measures:
  - Maintain formally-designated hazardous material carrier routes to direct hazardous materials away from populated and other sensitive areas.
  - Prohibit the parking of vehicles transporting hazardous materials on City streets.
  - Require that new pipelines and other channels carrying hazardous materials avoid residential areas and other immobile populations to the extent possible.
- **P4:** Emergency response plans shall be submitted as part of use applications for all large generators of hazardous waste.
- **P5:** The City shall continue to encourage the reduction of solid and hazardous wastes generated within the City, in accordance with countywide plans.
- **P6:** The City shall partner with San Joaquin County to implement the Hazardous Materials Area Plan.

3.8.4 - Methodology

FCS evaluated potential impacts from hazards and hazardous materials through review of the City of Tracy General Plan, the 2013 Phase I Environmental Site Assessment, included in this EIR as Appendix F, and a database search performed by FCS in January 2017.

3.8.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

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

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

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Refer to Section 6.1 Effects Found not to be Significant)

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? (Refer to Section 6.1, Effects Found not to be Significant.)

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

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Refer to Section 6.1, Effects Found not to be Significant.)

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

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (Refer to Section 6.1, Effects Found not to be Significant.)

3.8.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the TVDP project and provides mitigation measures where appropriate.

This analysis evaluates impacts associated with both components of the project, the TVDP as well as the Residential Annexation Area. As such, hazards impacts are analyzed in consideration of implementation of the Tracy Village Specific Plan, and not separately for each component. The Residential Annexation Area would not add or construct any units directly. However, it should be noted that in general, as the following impact analysis shows, the Residential Annexation Area component of the Tracy Village Specific Plan (TVSP) would not result in any new impacts to hazards and hazardous materials: it would not result in the routine transport or use or disposal of hazardous materials, it would not cause a risk of upset, it would not create aviation hazards for persons residing or working in the Residential Annexation Area, and it would not impair or interfere with emergency access or evacuation.

Routine Transport, Use or Disposal of Hazardous Materials

Impact HAZ-1:	**The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

Impact Analysis

Tracy Village Development Project

Hazard and hazardous materials impacts associated with the proposed TVDP are analyzed as follows.

The TVDP is surrounded by residential uses, vacant land, and three elementary schools. The TVDP generally consists of undeveloped agricultural land with a multi-structure farm compound, which has been present since at least 1916, according to the Phase I ESA prepared for the project. The routine transport, use, or disposal of hazardous materials is separated into two sets of impacts: short-term construction impacts and long-term operational impacts.

Short-term Impacts

Projects constructed as a result of the TVDP may involve the routine use and transport of hazardous materials including fuel, oils, mechanical fluids, and other chemicals used during construction and demolition activities. 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. No structures remain on the site. No significant impacts would occur during construction or demolition activities.

Long-term Impacts

The proposed land uses envisioned by the TVDP would not be large-quantity generators or users of hazardous materials. The anticipated uses of the TVDP are residential uses with recreation facilities incorporated into the communities. Small quantities of hazardous materials would likely be used within many of these households, including cleaning solvents (e.g., degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil-based), acids and bases (such as many household cleaners), disinfectants, and fertilizers. The use of such substances would comply with applicable storage, handling, usage, and disposal requirements. The potential risks posed by the usage and storage of these hazardous materials are primarily limited to the immediate vicinity of the materials. Transport of these materials would be performed by commercial vendors that would be required to comply with federal and state laws regarding hazardous materials and transportation. As such, hazardous materials associated with the operation of the TVDP are not expected to expose human health or the environment to undue risks associated with their use. Thus, impacts would be less than significant.

Residential Annexation Area: Implementation of the Residential Annexation Area component of the project would not add or construct any units directly. Therefore, it would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Risk of Upset

Impact HAZ-2: **The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.**

Impact Analysis

Tracy Village Development Project

Impacts related to risk of upset associated with the proposed TVDP are analyzed as follows.

The TVDP is surrounded by residential uses, vacant land, and three elementary schools. The TVDP generally consists of undeveloped agricultural land with a multi-structure farm compound, which has been present since at least 1916, according to the Phase I ESA prepared for the project.

During construction phases of the planned uses, there is a possibility that hazardous materials could be released. To ensure that these hazards are reduced to less than significant levels, the TVDP would be required to comply with all applicable federal, state, and local regulations related to hazardous materials being released to the public. Compliance with these laws and regulations would ensure that impacts would be less than significant.

As mentioned above in Impact HAZ-1, small quantities of hazardous materials would likely be used within many of these households, including cleaning solvents (e.g., degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil-based), acids and bases (such as many household cleaners), disinfectants, and fertilizers. These small quantities of hazardous materials would be limited to the immediate area of use and would not pose a significant threat to the surrounding community or environment. As such, they are not expected to create a significant threat to the public or environment through foreseeable upset and accident conditions. Thus, impacts would be less than significant.

Residential Annexation Area: Implementation of the Residential Annexation Area component of the project would not add or construct any units directly. Therefore, it would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Aviation Safety

Impact HAZ-3: The project may create aviation hazards for persons residing or working in the project area.

Impact Analysis

Tracy Village Development Project

Impacts related to aviation safety associated with the proposed TVDP are analyzed as follows.

The San Joaquin Council of Governments (SJCOG), which serves as the Airport Land Use Commission (ALUC) for San Joaquin County, adopted an update to its 1993 Airport Land Use Compatibility Plan, the 2009 Airport Land Use Compatibility Plan (2009 ALUCP). The intention of the 2009 ALUCP is to protect and promote the safety and welfare of residents and airport users near the public use airports in San Joaquin County, while promoting the continued operation of those airports. Specifically, the plan seeks to protect the public from the adverse effects of airport, noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

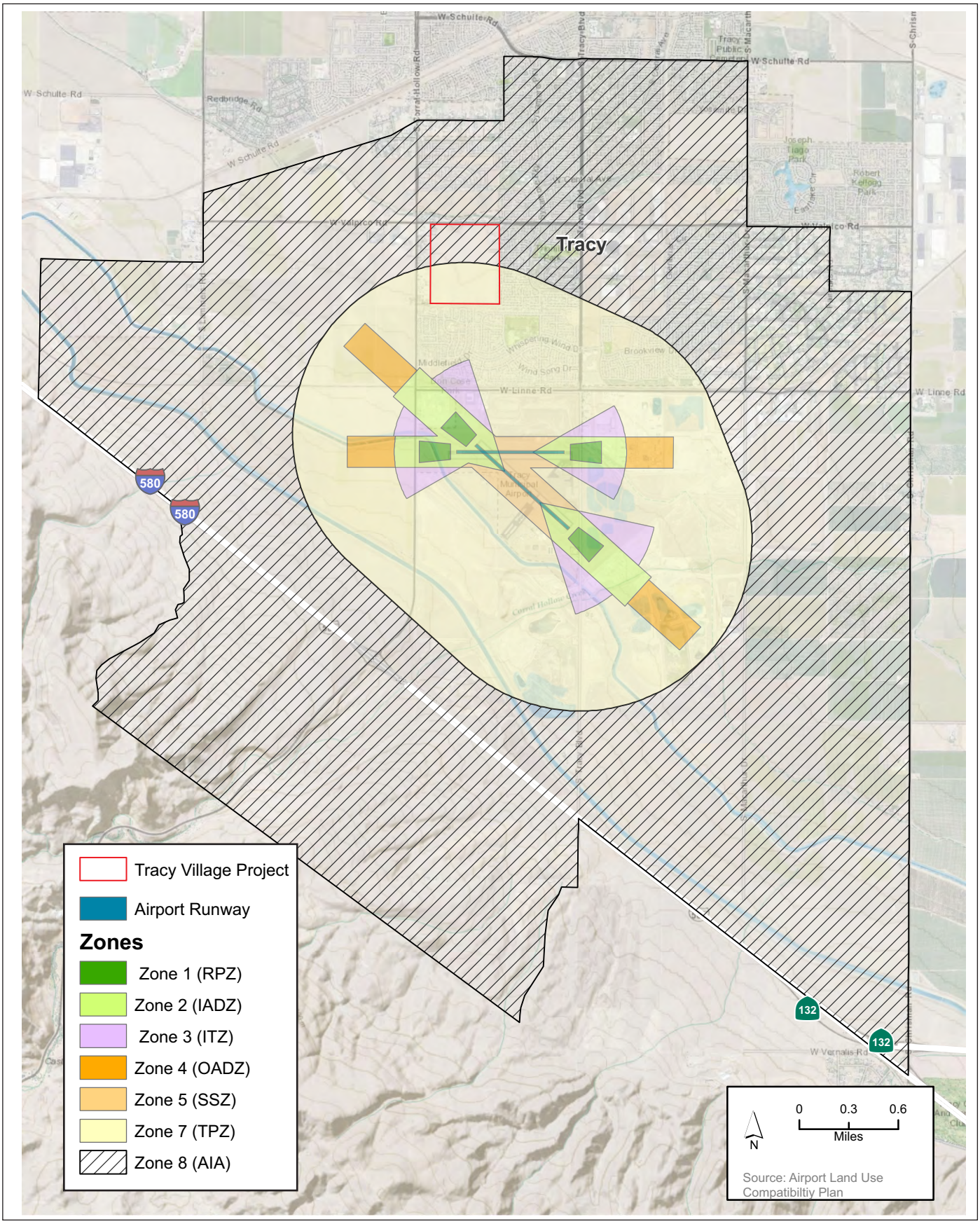
The southern portion of the TVDP lies within the Tracy Municipal Airport Zone 7 Traffic Pattern Zone shown in Exhibit 3.8-1. Zone 7 land use restrictions are included in Appendix H. Flight hazards include physical, visual, and electronic forms of interference with the safety of aircraft operations. Land use developments that may cause increased attraction to birds are also prohibited. Because the TVDP includes the creation of three man-made lakes totaling approximately 10.5 acres, there is a potential impact from flocks of birds attracted to the lakes. The Tracy Municipal Airport is authorized to implement wildlife management procedures within the land use impact area for the airport, if necessary. If large flocks of birds were attracted to the TVDP's lake features, a wildlife management plan could be authorized by the Federal Airport Administration to prevent aircraft safety impacts such as collisions with birds. After implementation of Mitigation Measure HAZ-3, the impact would be less than significant.

Residential Annexation Area

The southern portion of the Residential Annexation Area component of the project lies within the Tracy Municipal Airport Zone 7. Implementation of the Residential Annexation Area component of the project would not add or construct any units directly. Therefore, it would not create aviation hazards for persons residing or working in the residential annexation area.

Level of Significance Before Mitigation

Potentially significant impact.



FIRSTCARBON SOLUTIONS™

Exhibit 3.8-1
Tracy Municipal Airport Land Use Compatibility Zones

THIS PAGE INTENTIONALLY LEFT BLANK

Mitigation Measures

MM HAZ-3 The lake system shall be designed and managed to avoid attracting waterfowl. Design measures that may be used to discourage waterfowl include:

- Avoiding large turf areas.
- Managing aquatic vegetation to eliminate nesting places by cutting back foliage or using appropriate herbicides.
- Prohibiting the feeding of waterfowl.
- Constructing the lakes so that there are vertical edges.
- Providing low fencing at the water's edge, or a narrow band of tall plants, such as cattails.
- Signs posted prohibiting feeding of waterfowl in public areas of the lakefront.
- Deed restrictions to include prohibition of feeding waterfowl in private yards, and an information campaign to make residents aware of the prohibition and the safety reason for it, explaining that encouraging waterfowl to return to the site increases the potential for conflicts with aircraft using Tracy Airport.
- The lake system shall be monitored and inspected by the HOA once a month to enforce and ensure the effectiveness of the methods implemented to mitigate this impact. Inspection records will be available for the City or County to inspect as needed.

Level of Significance After Mitigation

Less than significant impact.

Emergency Response and Evacuation

Impact HAZ-4: The project would not impair or interfere with emergency access or evacuation.

Impact Analysis

Tracy Village Development Project

The City of Tracy has adopted a Comprehensive Emergency Management Plan. There are no specific routes identified in the Comprehensive Emergency Management Plan; however, the TVDP would not impede access to any public route that might be needed as an evacuation route. The TVDP would be required to comply with all federal, state, and local policies related to emergency access and evacuation. Therefore, impacts would be less than significant.

Residential Annexation Area

The City of Tracy has adopted a Comprehensive Emergency Management Plan. There are no specific routes identified in the Comprehensive Emergency Management Plan; however, the Residential Annexation Area would not impede access to any public route that might be needed as an evacuation route. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.9 - Hydrology and Water Quality

3.9.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the Tracy Village Specific Plan site, which includes the Tracy Village Development Project and the Residential Annexation Area and its surrounding area. Descriptions and analysis in this section are based on the City of Tracy General Plan, Tracy Municipal Code, the Water Supply Assessment (WSA) for the Tracy Village Specific Plan prepared by West Yost Associates in February 2017, the 2015 Urban Water Management Plan (UWMP) for the City of Tracy, and the Regional Water Quality Control Board documents, which are on file with the City Clerk.

3.9.2 - Environmental Setting

Climate

The City of Tracy is characterized by a Mediterranean climate with wet winters and relatively dry summers. Rainfall totals can vary widely over a short distance. The normal mean annual precipitation in the windward mountain areas west of Tracy average 24 inches per year. Shadow areas, including the City proper, average 10 inches of rainfall per year. During winter months, winds are more common. The winds are caused by the colder air from surrounding mountains flowing down into the valley floor and out towards the Delta. Tracy has an average annual high temperature of 75 degrees Fahrenheit (°F) and an average low of 47°F.

Table 3.9-1 summarizes local meteorology, as measured at the Tracy Carbona weather station, and reported by the Western Regional Climate Center.

Table 3.9-1: Meteorological Summary[1]

Month	Temperature (°F)		Total Rainfall (inches)
	Average Minimum	Average Maximum	
January	36.7	54.1	1.9
February	40.0	61.0	1.7
March	42.6	66.7	1.4
April	45.5	73.1	0.8
May	50.4	80.7	0.5
June	55.2	88.0	0.1
July	57.1	93.6	0.0
August	55.7	92.1	0.1
September	53.9	87.9	0.2

[1] Western Regional Climate Center Recorded Monthly Climate Summary. Website: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?catrac+nca. Accessed March 15, 2017.

Table 3.9-1 (cont.): Meteorological Summary

Month	Temperature (°F)		Total Rainfall (inches)
	Average Minimum	Average Maximum	
October	48.7	78.5	0.5
November	42.1	64.9	1.1
December	36.6	54.7	1.6
Annual Average	**47.0**	**74.6**	**9.9**

Notes:
Temperature and precipitation data from Western Regional Climate Center Tracy Carbona Station (D48999) for the period March 1 1906 through December 31 2014.
Totals may not add exactly due to rounding
Source: California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Efficient Landscape Ordinance, September 18, 2015.

Watershed

Currently, the majority of storm drainage generated by existing developed areas within the City's Sphere of Influence discharges to one of five outfalls that eventually discharge to Old River to the north. The Project Area is located within the Westside Channel Watershed. Other watersheds located within the City include the Eastside Channel, Lammers, Mountain House, and Tracy Hills Watersheds.

Westside Channel Watershed

The Westside Channel Watershed is roughly 12.9 square miles and generally encompasses the western half of the developed area for within the City plus additional undeveloped areas. The Watershed extends south beyond Linne Road, west to Lammers Road (and the alignment of San Jose Road in the northwest portion), and north beyond Middle Road.[2]

Storm Drainage

Existing surface water drainage within the City's Sphere of Influence (SOI) are characteristically different between developed and undeveloped areas.

Existing developed areas within the City generally drain from south to north toward Old River. Drainage facilities serving these areas include surface drainage via streets, underground storm drains, open channels and channel parkways, irrigation tailwater facilities that accept urban runoff, detention basins, pumping facilities, and temporary retention basins.

Existing undeveloped areas within the City predominantly consist of agricultural lands that drain south to north and from southwest to northwest toward Old River. These areas typically drain to tailwater ponds, tailwater ditches, and tailwater ponds, which then drain to tailwater ditches. The

[2] City of Tracy Storm Drainage Master Plan, 2012, page 2.2

larger tailwater ditches are owned and operated by Westside Irrigation District (WSID), Naglee Burk Irrigation District (NBID), and other Irrigation Districts.

Storm Drain Master Plan Improvements

The City of Tracy completed the Citywide Storm Drainage Master Plan in November 2012. The Master Plan identified new storm drainage infrastructure needed to serve new development included in the City's General Plan as well as to correct existing deficiencies. The Tracy Village Specific Plan was included in the Master Plan as a future service area.

Groundwater

The City overlies a portion of the San Joaquin Valley Groundwater Basin-Tracy Sub-basin (Tracy sub-basin). The City currently operates nine groundwater wells, with a total extraction capacity of about 18,300 gallons per minute or 26 million gallons per day (mgd) (WSA 29). Four wells (Production Wells 1, 2, 3, and 4) are located near the City's John Jones Water Treatment Plant (JJWTP) and pump directly into the JJWTP clearwells, where the groundwater is blended with treated surface water. The other wells (Lincoln Well, Lewis Manor Well (Well 5), Park and Ride Well (Well 6), Ball Park Well (Well 7) and Well 8) are located throughout the City and pump water directly into the distribution system after disinfection.

Within the City of Tracy, groundwater is generally present below the ground surface at depths of 100 feet or more. Depths to groundwater become very shallow towards the central and northern portions where the topography becomes flatter. In the Project Area, groundwater depths are often as shallow as 4 to 8 feet below ground surface. The depth of groundwater in these lower-lying areas are often influenced by existing underground tile drains installed years ago to support agricultural practices.

Groundwater Level Trends

Based on record from several monitoring wells located in south-central Tracy near the City's MW-4 well cluster, water levels within the semi-confined aquifer above the Corcoran Clay are approximately 20 and 60 feet mean sea level and have been generally stable over the last 15 years with no long-term trend or significant seasonal fluctuations. Groundwater flow directions in the unconfined aquifer are generally from the southeast to the north. Within the lower confined zone of the Tulare Formation, where the City's groundwater production wells are screened, water levels are monitored by six City-owned monitoring wells constructed between 2001 and 2003. Water levels in those wells have ranged between approximately 0 and negative 60 feet mean sea level, show seasonal fluctuations of up to 20 feet, and have shown an increasing trend since 2005 due to decreased pumping from City wells. After reaching recent highs in 2012 and 2013, water levels declined in 2014. This decline may be caused by reduced recharge due to drought conditions and possibly by increased pumping.

Groundwater Storage

There are no published groundwater storage values for the entire sub-basin. However, Hotchkiss and Balding estimated the groundwater storage capacity for the Tracy-Patterson Storage Unit at 4,040,000 acre-feet (af). The Tracy-Patterson Storage Unit includes the southern portion of the

currently-defined Tracy Sub-basin, from approximately 1 mile north of Tracy to the San Joaquin-Stanislaus County line. Since the Tracy Sub-basin comprises roughly one-third of the Tracy-Patterson Storage Unit, it can be inferred that the approximate storage capacity of the Tracy sub-basin is approximately 1,300,000 af.

Water Supply

The City obtains water from both surface and groundwater sources. The amount used from either source as a percentage of the total water supply used by Tracy varies from year to year, based on contractual agreements, annual precipitation, and city policy about how to expend water resources. For the last decade, surface water makes up between 96 and 98 percent of the total water supply. The City of Tracy receives the majority of its surface water supply from the South San Joaquin Irrigation District (SSJID).

Tracy's groundwater supply is pumped from groundwater resources beneath the City, which is a portion of the larger San Joaquin Valley groundwater basin. In 2016, approximately 5.5 percent of the City's total water supply was comprised of groundwater. However, the supply of groundwater sources is dependent on the capacity of the Tracy Aquifer. Since this is a heavily mineralized source of water, the City has reduced daily use and reserved its use for emergencies and droughts. Current water sources are presented in Table 3.9-2.

Table 3.9-2: Current and Projected Contractual Water Supply Entitlements

Potable Water Source	Water Right Contract	2015	2020	2025 Projected Available
DMC/CVP	USBR Tracy Contract	20,000 af[a]	20,000 af	20,000 af
SSJID	SSJID Contract	11,120 af	11,120 af	11,120 af
BBID	Contract	0 af	700 af	1,400 af
Groundwater	—	2,500 af	2,500 af	2,500
Total	—	33,620 af	34,320 af	35,020 af

Notes:
[a] af = acre-feet
Source: City of Tracy Urban Water Management Plan 2015.

Water Facilities

The City of Tracy's existing water system facilities include a water treatment plant, pump stations, wells, water mains and storage reservoirs. The JJWTP, which is near the Tracy Municipal Airport, processes the water from the Delta Mendota Canal (DMC) and distributes it to the City. The JJWTP has the capacity to treat 30 mgd.

The City of Tracy also operates nine groundwater wells that pump from the groundwater aquifer, which have a total reliable capacity of 26 mgd (18,300 gpm); refer to page 3.9-3. The City of Tracy water service is provided over an area with significant changes in elevation, so the City has

established three pressure zones for its treated water distribution system. The three zones total over 420 miles of water mains (City of Tracy UWMP 2015), and the pipes vary in diameter up to 36 inches. The age of the pipes also varies, dating from 1910 to the present.

Five storage reservoirs are located in Tracy, three of which are adjacent to the JJWTP. They have a total storage capacity of approximately 6 million gallons (mg). An additional reservoir is located at the Northeast Industrial Reservoir with a capacity of 2.2 mg. Construction of Linne Reservoir, located on Linne Road, was finished in 2004 located on Linne Road and has a capacity of 7.2 mg.

South San Joaquin Irrigation District

The SSJID is the wholesale supplier for the South County Water Supply Project (SCWP). The SCWSP is a partnership between the City of Tracy, SSJID, and the cities of Manteca, Lathrop, and Escalon. This water supply is based on SSJID's senior pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the USBR to store water in New Melones Reservoir. As part of the SCWSP, the City was allocated up to 10,000 afy of water based upon SSJID's senior water rights. In August 2013, SSJID and the cities of Tracy and Lathrop approved a Lathrop-Tracy Purchase, Sale and Amendment Agreement for the sale of a portion of the City of Lathrop's SCWSP supply and capacity to the City of Tracy. The agreement provides the City of Tracy with an additional 1,120 afy of SCWSP supply and 2 mgd of SCWSP capacity. This additional SCWSP supply has the same reliability as the City's original SCWSP supplies. Currently, the City has access to 11,120 afy of Stanislaus River water provided for by the SCWSP.[3]

Water Recycling

Water recycling is the reuse of treated wastewater for non-potable (non-drinking) purposes, including industrial uses and landscaping irrigation, such as on medians, parks, and golf courses. Using recycled water can increase the availability of potable water supplies. The City does not currently have any water recycling facilities. The City plans to develop a recycled water system, which, once completed, is expected to be made available to the project site.[4] It is anticipated that the Recycled Water Project would construct a recycled water main from the Wastewater Treatment Plant terminating near the intersection of Old Schulte Road and Lammers Road (depending upon the construction bid amount and the available funds). In the event the bids are higher, the scope of the project may be further reduced. The Recycled Water Project is tentatively scheduled for completion in early 2019. The connection from the termination point to the TVDP site along with a booster pump station would be needed to be constructed by the developer since sufficient program funds may not be available to extend the recycled water line to the TVDP. Recycled Water Fees would be credited to TVDP for this mainline extension.

Flood Mapping

Flood zones are determined by the Federal Emergency Management Agency (FEMA) and used to create Flood Insurance Rate Maps (FIRMs) that designate these zones. The most recent FIRMs for the City of Tracy were updated in October 16, 2009. A majority of the land within the City limit is

[3] Water Supply Assessment for Tracy Village Specific Plan, "Stanislaus River Water," February 2017.
[4] The Tracy Recycled Water Project Mitigated Negative Declaration was adopted by City Council on February 7, 2017 by resolution number 2017-020.

included in Zone X, which is the designation for lands outside of the 100-year floodplain. There are no areas within or surrounding the Project Area that are within a Federal Emergency Management Agency (FEMA) 100-year flood hazard area.[5]

Dam Inundation

There are 14 major dams within San Joaquin County that could cause serious flooding should they incur a partial or complete failure. However, the Project Area is not located in an area that would be inundated by flooding caused by dam failures. The Project is not within the dam inundation risk areas of New Melones, San Luis, Lake McClure, Pine Flat, Camanche, Camanche South Dikes, Camanche North Dikes Pardee, Jackson Creek Spillway, Jackson Creek, Folsom, New Hogan, Farmington, Tulloch, or Salt Springs.[6]

Seiche, Tsunami, or Mudflow

A seiche is a wave generated in a bay or lake, which is analogous to the back-and-forth sloshing of water in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, or landslides into the water. Tsunamis are large sea waves generated by earthquakes. These waves travel across the ocean at hundreds of miles an hour and are capable of causing waves cresting tens of feet high. The Project Area is not located adjacent to a large body of water, so seiches and tsunamis are not likely to occur. There are no steep slopes that would be susceptible to a mudflow near the Project Area, nor are there any volcanically active features that could produce a mudflow in the City of Tracy.

3.9.3 - Regulatory Framework

Federal

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) oversees the National Flood Insurance Program, which provides subsidized flood insurance to areas that comply with FEMA regulations limiting development in floodplains. FEMA issues Flood Insurance Rate Maps (FIRMs) in order to identify land areas which are prone to flooding. FIRMs provide flood information and classify flood hazards zones in a specific area. FEMA has established a design standard for flood protection; the minimum level of flood protection for new development is set as the 100-year flood event.

Clean Water Act

Section 303 of the 1972 Federal Clean Water Act (CWA) requires states to adopt water quality standards for all surface waters of the United States. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. (See a description of State Porter-Cologne Water Quality Control Act, below.) Standards are based on the designated beneficial use(s) of the water body. Where multiple uses exist, water quality standards must protect the most sensitive use.

[5] City of Tracy Storm Drainage Master Plan, 2012.
[6] San Joaquin County Office of Emergency Services, Dam Failure Plan, 2003. Website: http://www.sjgov.org/Oes/getplan /Dam_Emergency_PLAN.pdf. Accessed November 29, 2016.

Section 402 of the CWA mandates that certain types of construction activity comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase II Rule, issued in 1999, states that construction activities that disturb land equal to or greater than 1 acre require permitting under the NPDES program. Currently, more stringent requirements apply, as outlined in the Stormwater Municipal Regional Permit issued by the Regional Water Quality Control Board. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB) and implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs). The Project Area is within the boundaries of the Central Valley RWQCB.

This General Permit requires all dischargers, where construction activity disturbs one (1) or more acres, or as amended by the RWQCB, to take the following measures:

1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off-site into receiving waters.
2. Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
3. Perform inspections of all BMPs.

To obtain coverage, the landowner must file a Notice of Intent (NOI) with the SWRCB. The NOI is required to include the requirements listed above. When project construction is completed, the landowner must file a notice of termination.

The law requires that a permit (Section 404) be obtained from the United States Army Corps of Engineers (USACE) for any dredge or fill materials into wetlands or waters of the United States.

National Pollution Discharge Elimination System

Point source discharges to surface waters are generally controlled through waste discharge requirements issued under the NPDES permits. Although the NPDES program was established by the CWA, the United States Environmental Protection Agency (EPA) has delegated management of California's NPDES permit program to the State Water Resources Control Board and the nine regional RWQCB offices. Issued in 5-year terms, an NPDES permit usually contains components such as discharge prohibitions, effluent limitations, and necessary specifications and provisions to ensure proper treatment, storage, and disposal of the waste. The permit often contains a monitoring program that establishes monitoring stations at effluent outfall and receiving waters (California Regional Water Quality Control Board, San Francisco Bay Region 2007). The 1987 amendments to the Clean Water Act (Section 402(p)) provided for the EPA regulation of non-point pollution sources from municipal, construction, and industrial activities.

Construction

In 1990, the EPA published regulations for construction sites that disturbed 5 acres or more of soil. In 1999, the EPA lowered the permitting threshold from 5 acres to 1 acre, or less than 1 acre for sites that are part of a larger common plan of development that in total disturbs 1 or more acres. These construction sites must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a SWPPP. The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography (both before and after construction), and drainage patterns across the project. The SWPPP must list BMPs that the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the Clean Water Act Section 303, indicating that water quality standards have to be set for certain waters by adopting water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans for areas in the region, identifying water quality objectives, and issuing NPDES permits and Waste Discharge Requirements (WDRs). Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits.

Section 303(d) of the CWA requires that the SWRCB identify surface water bodies within California that do not meet established water quality standards. Once identified, the affected water body is included in the SWRCB's "303(d) Listing of Impaired Water Bodies," and a comprehensive program must then be developed to limit the amount of pollutant discharges into that water body. This program includes the establishment of "total maximum daily loads" (TMDL) for pollutant discharges into the designated water body. The most recent 303(d) listing for California was approved by the EPA in 2010.

California Water Code Section 10910 (b)

According to California Water Code Section 10910(b), any city or county that determines a new development project is subject to the California Environmental Quality Act (CEQA) must prepare a water supply assessment (WSA) if the development qualifies as a "project" pursuant to Water Code Section 10912. A WSA applies to certain projects including projects with more than 500 residential

units. If there is a "public water system" for the project, the water supplier shall prepare the water supply assessment. A public water system is defined as a system that has 3,000 or more service connections and provides piped water to the public for public consumption. Under this definition, the City is a "public water system" as it provides piped water to the public for consumption and has more than 24,500 service connections (City of Tracy UWMP 2015). The proposed project meets the definition of a "project" per California Water Code sections 10910 through 10915, as established by SB 610 in 2001, thus requiring the preparation of a WSA (Appendix I). The proposed project also meets the definition of a residential subdivision and therefore must also meet the requirements of California Government Code section 66473.7 (a)(1), as established by SB 221 in 2001.

The WSA evaluates the adequacy of the City's total projected water supplies, including existing water supplies and future panned water supplies, to meet the City's existing and projected future water demands, including those future water demands associated with the proposed project, under all hydrological conditions (normal years, single dry years, and multiple dry years).

California Dam Safety Act

The State of California Dam Safety Act requires submittal of inundation maps to the California Office of Emergency Services for any dams whose total failure would result in loss of life or personal injury. This law also requires local jurisdictions to adopt emergency procedures for the evacuation and control of populated areas below such dams.

California Government Code Sections 65302.9 and 65860.1

According to California Government Code Sections 65302.9 and 65860.1, every jurisdiction located within the Sacramento-San Joaquin Valley is required to update its General Plan in a manner consistent with the Central Valley Flood Protection Plan (CVFPP) within 24 months after the CVFPP's adoption, which is currently anticipated by July 1, 2012. In addition, the locations of state and local flood management facilities, locations of flood hazard zones, and properties located in these areas must be mapped and consistent with the CVFPP.

Regional

On February 5, 2013, the State Water Board adopted order No. 2013-0001-DWQ, which replaced Order No. 2005-005-DWQ and required that the Agencies regulate post-construction development (Provision E.12) through a number of different program elements. In response to this order, five cities—including Tracy—and San Joaquin County collaborated together to develop this "Multi Agency Post-Construction Stormwater Standards Manual," dated June 2015.

BMPs used for stormwater treatment are classified as treatment and source control. Treatment measures may include biofilters, wetlands, drain inserts, entry strips, infiltration basins, or media filters and are designed to remove pollutants from the stormwater; however, the 2013 Board Order and 2015 Multi Agency Manual identify bioretention as the standard, or baseline, stormwater quality treatment measure, but allow for alternative treatment measures provided that they treat the required design volume/flow and are as effective as bioretention. Source control measures include things such as street sweeping, public education, or hazardous substance/recycling centers and are preventative measures intended to control the source of pollutants.

Local

Municipal

In 1990, the RWQCB adopted the Phase 1 NPDES permits for urban runoff discharges from municipalities of over 100,000 people. In 2003, the RWQCB issued Phase 2 NPDES permits to cities of 50,000 to 100,000. The City of Tracy has a population of less than 100,000, so it is subject to Phase II stormwater under NPDES General Permit No. CAS00004. It has been issued a Phase II National Pollutant Discharge Permit (NPDES) under the Clean Water Act for discharge of stormwater runoff.

City of Tracy

General Plan

The Tracy General Plan sets forth the following goals, objectives, policies, and actions that are relevant to hydrology and water quality:

- **Goal-PF-6:** Adequate supplies of water for all types of users
- **Objective PF-6.1:** Ensure that reliable water supply can be provided within the City's service area, even during drought conditions, while protecting the natural environment.
- **P1.** The City shall promote water conservation by implementing the Best Management Practices contained in the Urban Water Management Plan.
- **P2.** The City shall continue to acquire additional sources of water supplies to meet the City's future demands.
- **P3.** The extent feasible, the City shall use surface water supplies to meet daily water needs and reduce reliance on groundwater supplies.
- **P4.** The City shall establish water demand reduction standards for new development and redevelopment to reduce per capita and total demand for water.
- **A1.** Update the Water Master Plan upon adoption of the General Plan and on a regular basis.
- **A2.** Revise the water use projections in the Urban Water Management Plan based on development projections contained in the General Plan and the Growth Management Ordinance (GMO).
- **A3.** Implement an Aquifer Storage and Recovery Program to improve water quality for customers.
- **Objective PF-6.2:** Provide adequate water infrastructure facilities to meet current and future populations.
- **P1.** The City shall maintain water storage, conveyance and treatment infrastructure in good working condition in order to supply domestic water to all users with adequate quantities, flows and pressures.
- **P2.** Storage reservoirs should be buried or partially buried depending on local groundwater conditions to allow for joint use of the site with parks or recreational facilities, unless reservoirs are elevated to provide a gravity flow system, in which case the reservoirs shall be screened by landscaping and/or earthen berms.
- **A1.** Review the current water system maintenance program and coordinate planned water main replacements with the Urban Water Management Plan.

- **A2.** Update the existing System Control and Data Acquisition (SCADA) system to optimize operational efficiency and ensure coordination of existing and proposed water systems facilities.
- **Objective PF-6.3:** Promote coordination between land use planning and water facilities and service.
- **P1.** Structures with plumbing that are located within the City limits shall connect to the City water supply system.
- **P2.** New developments shall dedicate land for utility infrastructure such as treatment facilities, tanks, pump stations and wells as needed to support the development of their project.
- **P3.** The City shall be responsible for constructing new transmission water lines, as needed to meet future needs. Individual development projects shall be responsible for the construction of all water transmission means.
- **P4.** All new water facilities shall be designed to accommodate expected capacity for buildout of areas served by these facilities but may be constructed in phases to reduce initial and overall costs.
- **P5.** The availability of sufficient, reliable water shall be taken into account when considering the approval of new development.
- **P6.** Costs for water service expansion shall be distributed among new water users fairly and equitably.
- **Objective PF-6.4:** Design and manage water system facilities for reliability during catastrophic events such as fires, power outages, droughts and earthquakes.
- **P1.** Groundwater supplies should be reserved for emergency use during water treatment shutdowns, short-term shortages of surface water supplies or during droughts.
- **P2:** Backup emergency power systems shall be provided at all essential water facilities that rely on electric power.
- **P3.** Storage reservoir facilities should be located at naturally high topographic locations to capitalize on gravity flow, whenever possible.
- **P4.** Future water systems and facilities shall be designed to minimize the likelihood of damage from vandalism or terrorist activity.
- **Objective PF-6.5:** Use recycled water to reduce non-potable water demands whenever practicable and feasible.
- **P1.** The City shall provide recycled water systems, including pipelines, pump stations and storage facilities, to serve primarily City-owned facilities, schools and parks as funding becomes available.
- **P2.** Recycled water piping systems (“purple pipe”) shall be constructed as appropriate in all new development projects to facilitate the distribution and use of recycled water. The specific location and size of the recycled water systems shall be determined during the development review process.
- **P3.** Recycled water shall be used for all public properties and large private open spaces or common areas to the extent feasible.
- **P4.** The City shall plan for recycled water infrastructure in the City’s Infrastructure Master Plans and, to the extent feasible, recycled water should be utilized for nonpotable uses, such

as landscape irrigation, dust control, industrial uses, cooling water and irrigation of agricultural lands.

- **A1.** Explore incentives for businesses and industries to use recycled water for irrigation.
- **A2.** Develop a program to supply recycled water to all new parks and schools.
- **A3.** Update the Water Master Plan to include a recycled water plan.
- **A4.** Develop a plan to irrigate agricultural lands with recycled water, both inside and outside of the City's service area, where feasible.
- **Goal PF-7:** Meet all wastewater treatment demands and federal and State regulations
- **Objective PF-7.1:** Collect, transmit, treat and dispose of wastewater in ways that are safe, sanitary and environmentally acceptable.
- **P1.** The City shall maintain wastewater conveyance, treatment and disposal infrastructure in good working condition in order to supply municipal sewer service to the City's residents and businesses.
- **P2.** The City shall expand the existing wastewater treatment plant to the extent possible or pursue a single new west side facility instead of building new facilities at multiple locations to meet future needs.
- **P3.** New habitable structures located within the City limits shall connect to the public wastewater collection system.
- **A1.** Prepare a comprehensive update to the Wastewater Master Plan upon adoption of the General Plan and update on a regular basis. The Wastewater Master Plan shall identify the expected number of additional wastewater facilities, potential locations for those facilities and locations for the land application of treated effluent.
- **Objective PF-7.2:** Pursue safe, environmentally-responsible and affordable methods of disposing of treated effluent.
- **P1.** Areas used for the land application of treated effluent may also be used for agriculture.
- **Objective PF-7.3:** Promote coordination between land use planning and wastewater conveyance, treatment and disposal.
- **P1.** Wastewater collection and treatment facilities shall be designed to serve expected buildout of the areas served by these facilities but constructed in phases to reduce initial and overall costs.
- **P2.** The City shall construct new wastewater trunk lines as needed. Individual development projects shall be responsible for construction of all collection lines other than trunk lines.
- **P3.** The approval of new development shall be conditioned on the availability of sufficient capacity in the wastewater collection and treatment system to serve the project.
- **P4.** "Package" treatment plants shall not be allowed in the City.
- **P5:** New development shall fully fund the cost of new wastewater treatment and disposal facilities.
- **P6.** Prior to any development approvals within an Urban Reserve, the City shall complete new wastewater master planning and wastewater and disposal studies, particularly for the west side of the city. These studies are to be funded by proponents of new development and must show how adequate wastewater treatment will be provided to the Urban Reserve in question.
- **Objective PF-7.4:** Pursue innovative solutions for wastewater treatment and disposal that are compatible with the environment.

- **P1.** New wastewater treatment plants should be located to allow for distribution of recycled water to application areas by gravity flow where feasible.
- **P2.** The City shall integrate public facilities and wastewater reclamation sites with agricultural and open space preservation programs where feasible.
- **P3.** Biosolid disposal shall be managed so as to minimize impacts to the environment and public health.
- **P4.** The City shall establish wastewater treatment demand reduction standards for new development and redevelopment to reduce per capita and total demand for wastewater treatment.
- **Goal PF-8:** Protect property from flooding
- **Objective PF-8.1:** Collect, convey, store and dispose of stormwater in ways that provide an appropriate level of protection against flooding, account for future development and address applicable environmental concerns.
- **P1.** Stormwater infrastructure shall be maintained in good condition.
- **P2.** Stormwater infrastructure shall minimize local flooding by attaining capacity that conforms with the Storm Drainage Master Plan and City Design Standards.
- **P3.** New permanent stormwater infrastructure shall be designed to serve dual purposes to the extent possible. This includes the following:
  - Drainage facilities integrated into recreation corridors with bike paths, sidewalks and landscaping.
  - Drainage channels integrated with transportation and environmental corridors.
  - Storm water detention basins shall incorporate active and passive recreation areas where feasible. These areas shall not count towards parks dedication requirements.
- **P4.** When temporary retention or detention facilities are no longer needed after an outfall system is constructed, the sites shall be backfilled and disconnected from the storm drainage system.
- **P5.** The City shall ensure a fair and equitable distribution of costs for stormwater system upgrades, expansion and maintenance.
- **P6.** Design of storm drainage facilities shall be consistent with State and federal requirements, including NPDES requirements.
- **P7.** Planning for stormwater facilities should consider possible future retrofitting needs associated with changing regulations pertaining to storm water quality, including NPDES requirements.
- **A1.** Prepare a comprehensive update to the Storm Drainage Master Plan upon adoption of the General Plan.
- **A2.** Update the Storm Drainage Master Plan on a periodic basis and at least every five years.
- **Objective PF-8.2:** Provide effective storm drainage facilities for development projects.
- **P1.** To the extent feasible, new development projects shall incorporate methods of reducing storm runoff within the project to reduce the requirements for downstream storm drainage infrastructure and improve stormwater quality.
- **P2.** New storm drainage facilities shall meet adopted City standards, including the standards and policies contained in the Storm Water Management Plan, the Storm Drainage Master Plan and the Parkways Design Manual.

- **P3.** New development projects shall only be approved if necessary stormwater infrastructure is planned and is in compliance with environmental regulations.
- **P4.** If sufficient downstream stormwater infrastructure has not yet been constructed, new development projects shall be required to implement temporary on-site retention facilities in conformance with City standards.
- **A1.** Revise the Tracy Municipal Code to limit the amount of impervious surfaces in private yards.
- **Goal SA-2:** A reduction of hazards related to flooding or inundation
- **Objective SA-2.1:** Minimize flood risks to development.
- **P1.** Development shall only be allowed on lands within the 100-year flood zone, if it will not:
    1. Create danger to life and property due to increased flood heights or velocities caused by excavation, fill, roads and intended use.
    2. Create difficult emergency vehicle access in times of flood.
    3. Create a safety hazard due to the unexpected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site.
    4. Create excessive costs in providing governmental services during and after flood conditions, including maintenance and repair of public facilities.
    5. Interfere with the existing waterflow capacity of the floodway.
    6. Substantially increase erosion and/or sedimentation.
    7. Contribute to the deterioration of any watercourse or the quality of water in any body of water.
    - **P2.** Public and private development in the 100-year flood zones shall have the lowest floor elevated at least 1 foot above the base flood level, or be of flood proof construction.
    - **P3.** The City shall prevent the construction of flood barriers within the 100-year flood zone that divert flood water or increase flooding in other areas.
    - **P4.** Property owners within the 100-year floodplain are encouraged to purchase National Flood Insurance, which reduces the financial risk from flooding and mudflows.
- **A1.** Continue to participate in the National Flood Insurance Program.
- **A2.** Continue to implement the City's existing Storm Drainage Master Plan which provides storm drainage conveyance capacity sufficient to contain 100-year flood flows in the rights-of-way of the major public streets and 10-year flood flows within the top of the street curbs.
- **A3.** Continue to implement floodplain overlay zones provided by FEMA, control the types of structures and land uses permitted in areas deemed high risk and require these structures be built in a manner that minimizes flood losses.
- **A4.** Maintain historical data on flooding.
- **Objective SA-2.2:** Maintain a high level of preparedness in the event of flooding.
- **P1.** The City shall maintain operational contingency plans for essential public facilities in the event of flooding.
- **P2.** The City shall locate, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities, or identify construction or other methods to minimize damage if these facilities are located in flood hazards zones.

- **P3.** The City shall continue to work with other public agencies responsible for flood protection, including the Central Valley Flood Protection Board, the San Joaquin Office of Emergency Services, and the US Army Corps of Engineers.
- **A1.** Update the General Plan within 24 months of the adoption of the Central Valley Flood Protection Plan (CVFPP) to appropriately reflect the CVFPP and to identify State and local flood management facilities and flood hazard zones.

City of Tracy Municipal Code

The City of Tracy has incorporated stormwater quality regulations into its municipal code included in the following code chapters:

- **Chapter 9.52:** Addresses floodplain regulations and requirements for new development and construction within Flood Hazard Areas delineated by Flood Insurance Rate Maps published by FEMA.
- **Chapter 11.28:** Addresses the prevention of waste and unreasonable water use and to promote water conservation as an effective means to manage the local water supply.
- **Chapter 11.32:** Addresses the need to provide effective management of the City's storm drainage facilities.
- **Chapter 11.34**: Addresses City requirements for stormwater management and discharge control, including controlling nonstormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, reducing pollutants in urban stormwater discharges to the maximum extent practicable.

3.9.4 - Methodology

The following analysis is based on information provided by the City of Tracy General Plan, Tracy Municipal Code, Tracy Village Specific Plan, Tracy Village Specific Plan Water Supply Assessment prepared by West Yost Associates, 2015 Urban Water Management Plan (UWMP) for the City of Tracy, and Regional Water Quality Control Board documents. The information obtained from these sources was reviewed and evaluated to establish existing conditions and to identify potential environmental effects of the project related to hydrology and water quality as it relates to the significance criteria presented below.

3.9.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hydrology and water quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to

a level which would not support existing land uses or planned uses for which permits have been granted?

c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

e) 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?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (Refer to Section 6.1, Effects Found not to be Significant.)

h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows? (Refer to Section 6.1, Effects Found not to be Significant.)

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (Refer to Section 6.1, Effects Found not to be Significant.)

j) Inundation by seiche, tsunami, or mudflow? (Refer to Section 6.1, Effects Found not to be Significant.)

3.9.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Surface Water Quality

Impact HYD-1:	**Development and land use activities contemplated by the Tracy Village Specific Plan may violate water quality standards or waste discharge requirements.**

Impact Analysis

This impact concerns impacts to surface water quality. The analysis discusses the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

This analysis assesses the potential for the TVDP to degrade water quality in downstream surface water bodies (checklist questions A and F).

Construction

The project calls for construction of up to 600 lots that would support dwelling units ranging from 1,350 to 3,000 square feet over 133.2 acres. Grading and removal of vegetation would be required and would have the potential to increase erosion that could adversely affect water quality and lead to downstream sedimentation. Construction activities would require the use of gasoline- and diesel-powered heavy equipment such as bulldozers, backhoes, water pumps, and air compressors. Chemicals such as lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances could be utilized during construction. Any accidental release of any of these substances could degrade the quality of the surface water runoff and adversely affect surface waters.

Development within the TVDP site would be required to comply with the Construction General Permit as required by the Central Valley RWQCB and standard conditions of approval. Compliance with the Construction General Permit would require a SWPPP designed to reduce the potential impacts to surface water quality throughout the construction period of the project. The SWPPP would require BMPs in order to comply with water quality standards and reduce potential impacts to water quality. The SWPPP would prescribe construction-phase BMPs to adequately contain sediment on-site and prevent construction activities from degrading surface runoff. The erosion control plan in the SWPPP would include components for erosion control, such as biofilters, wetlands, drain inserts, entry strips, infiltration basins, or media filters. The BMPs would be implemented in accordance with criteria in the California Stormwater BMP Handbook for Construction [1] or other accepted guidance. The identified SWPPP Manager would ensure proper implementation, maintenance and performance of the BMPs during the construction phase of the project.

Compliance with the Construction General Permit and implementation of the SWPPP and BMPs would effectively control erosion and immobilize other pollutants during construction of the Specific Plan facilities and the project would not violate water quality standards. Impacts would be less than significant.

Operation

Development would include master-planned, age-qualified community that will include up to 600 single-family detached homes, in addition to a community building, pool and a series of lakes and open spaces that could be sources of stormwater pollution. Materials commonly associated with this use include cleaning solvents (e.g., degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil-based), acids and bases (such as many household cleaners), disinfectants, fertilizers, pesticides and trash.

Since the project site is currently vacant and contains pervious surfaces, buildout of the TVDP would result in an increase in impervious surfaces as compared to existing conditions, which could result in increased collection and conveyance of pollutants. However, the TVDP would also include open space and pervious surfaces that would decrease the amount of pollutants that might otherwise be conveyed. Open space, parks, and lakes would make up approximately 22.3 acres of the total 133.2 acres, and these pervious surfaces will provide opportunities for settlement and absorption of pollutants.

The project will be subject to section C3 requirements, which includes implementation of a Storm Water Management Plan (SWMP) applicable to the TVDP design and post-project operation and maintenance. Two fundamental components are associated with the SWMP: (1) treatment for pollutants collected in stormwater through the use of low impact development (LID) measures, and (2) no net increase in the erosion potential of the receiving stream over the pre-project (existing) condition. All LID treatment measures would be required to be designed in accordance with engineering criteria in the Multi Agency Post-Construction Stormwater Standards Manual, as described above. Implementation of the SWMP would require the preparation of a clearly defined operations and maintenance (O&M) plan to ensure that installed stormwater treatment measure(s) and hydromodification management control(s)[7] are inspected and properly operated and maintained for the life of the project. In addition, identification of responsible parties and adequate funding to operate and maintain stormwater improvements would be required through a legally enforceable agreement or mechanism (e.g., home owner's association, property deed, sales or lease agreement).

The primary treatment control measure at Tracy Village will be the on-site lake system. The proposed storm drain system for Tracy Village consists of a conventional on-site storm drain system with mains, catch basins, and manholes that conveys stormwater runoff from the development to a lake system. All stormwater runoff from Tracy Village would drain to the lake system, where pumps would circulate the water on a continuous basis.

Source control measures to be used at Tracy Village would include an ongoing street sweeping program as a part of the maintenance of the private streets, a public education package to be distributed to homeowners, upon purchase of their home, and catch basis stenciled with the words "No Dumping—Drains to River."

With the required implementation of RWQCB, NPDES, and SWMP requirements, the TVDP would not contribute to the violation of water quality standards. Impacts would be less than significant.

Residential Annexation Area

The Residential Annexation Area consists of 42 residential properties to the north and east that would be annexed into the City. The majority of the 42 lots are developed with detached single-family residences, and are served by private wells and septic systems. Connection to the City's water and sewer systems would be voluntary, unless new residential development requiring a building permit is proposed by the property owners.

Extension of City services as a result of annexation could encourage upgrades or additions to current structures. Though there are no new buildings proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. The construction of new structures could degrade water quality in downstream surface water bodies, as described above. As such, implementation of Mitigation Measures (MMs) HYD-1a and HYD-1b requiring the implementation of stormwater control measures during and after construction activities to prevent pollutants from adversely affecting surface water quality would be implemented. These mitigation measures would reduce impacts to less than significant.

[7] Hydromodification controls are required for projects that replace on acre or more of impervious surface.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-1a Pursuant to the 2015 Multi-Agency Post-Construction Stormwater Standards Manual, prior to the issuance of a grading or building permit, the applicant shall submit a draft of the Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP). After City approval, the NOI and SWPPP shall be sent to the State Water Resources Control Board (SWRCB) for approval. Approval by the SWRCB is required to the issuance of a grading or building permit by the City of Tracy.

MM HYD-1b The City of Tracy shall verify that the applicant has filed an NOI with the SWRCB to obtain a Construction General Permit (CGP) and shall comply with all the requirements associated with the CGP to mitigate for impacts that would result from the development of the project. The SWPPP shall address stormwater management during each phase of construction. Best management practices (BMPs) shall be integrated into the SWPPP, which will be effective and result in the reduction or elimination of pollutants in stormwater discharges and the stabilization of BMPs to reduce or eliminate pollutants after construction is completed. The SWPPP shall be consistent with the applicable Regional Water Quality Control Board (RWQCB) standards and NPDES permit requirements to protect water quality over the period of construction.

Level of Significance After Mitigation

Less than significant impact.

Groundwater

Impact HYD-2: The proposed project would not deplete groundwater supplies or interfere substantially with groundwater recharge.

Impact Analysis

This impact concerns potential impacts to groundwater. This section evaluates the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The City's 2015 UWMP addressed the sufficiency of the City's groundwater supplies, in conjunction with the City's other existing and additional water supplies, to meet the City's existing and planned future uses.[8] The projected future groundwater production in normal and dry years is summarized in Table 3.9-3.

[8] Chapter 6, City of Tracy 2015 Urban Water Management Plan, May 2016.

Table 3.9-3: City of Tracy Projected Future Groundwater Production in Normal and Dry Years

Category	2015	2020	2025	2030	2035
Total Groundwater Production During a Normal Year, afy	2,500	2,500	2,500	2,500	2,500
Total Groundwater Production During Dry Years, afy	9,000	9,000	9,000	9,000	9,000

Note:
afy = acre-feet per year
Source: Tracy Village Specific Plan Water Supply Assessment, 2017.

The City's use of groundwater over the last few years has significantly declined, primarily due to the availability of new high-quality surface water supplies from the SCWSP. As shown in Table 3.9-3, assuming normal year hydrologic conditions, annual groundwater use is anticipated to be 2,500 acre-feet per year (afy). In the future, although the City could sustainably extract up to 9,000 afy of groundwater on a continuous basis, the City's use of groundwater under normal hydrologic conditions is anticipated to decrease even further, as additional high-quality surface water supplies become available. This anticipated future groundwater pumpage is significantly below the City's maximum historical groundwater pumpage and the average annual operational yield of 9,000 afy.

Based on the information provided above and included in the City's 2015 UWMP, the City's groundwater supply, together with the City's other existing and additional planned future water supplies, is sufficient to meet the water demands of the TVDP, in addition to the City's existing and planned future uses.[9] Based on the WSA prepared for the TDVP, the project would utilize approximately 250 afy of water for normal year conditions based on Age Qualified Residential land use. Of this total water demand, the potable water demand at buildout is projected to be approximately 1,425 afy (indoor uses) and the recycled water demand at buildout is projected to be approximately 108 afy (outdoor uses) for normal year conditions. During dry years, the recycled water demand at buildout is projected to be approximately 135 afy (outdoor uses) (refer to Table 3.17-3 in Section 3.17, Utilities and Service Systems). This usage represents approximately 10 percent of the City's normal groundwater production and approximately 3.1 percent of the City's dry year groundwater production. The TVDP would include climate-appropriate landscaping to reduce water usage for landscaping, and will be required to comply with the Model Water Efficient Landscape Ordinance adopted by the City of Tracy.

The City of Tracy was recently awarded a federal grant which will facilitate the construction of a recycled water main from the Wastewater Treatment Plant down Lammers Road to Valpico Road. From this junction, a recycled water mainline will be constructed to serve Tracy Village and other properties in the future. The exact connection to the Tracy Village Development Project is not known at this time. The Tracy Recycled Water Project Mitigated Negative Declaration was adopted by City Council on February 7, 2017 by resolution number 2017-020. Once completed, recycled

[9] Chapter 6, City of Tracy Urban Water Management Plan, May 2016.

water is expected to be made available to the project site and could be used for landscape irrigation and to fill and maintain the water levels in the lakes instead of potable water. Because the projected water demand of the TVDP would not substantially deplete the City's groundwater supplies, the TVDP would not deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, impacts would be less than significant.

Residential Annexation Area

The water demand for the Residential Annexation Area was included in the WSA. As discussed above, anticipated future groundwater pumpage is significantly below the City's maximum historical groundwater pumpage; thus, the projected water demand of the Residential Annexation Area would not substantially deplete the City's groundwater supplies.

Development of any new single-family residences would be required to connect to City water service and be served by the City of Tracy. Therefore, the development would not deplete groundwater supplies or interfere substantially with groundwater recharge, and impacts to groundwater would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Drainage Patterns: Erosion

Impact HYD-3:	**Development and land use activities contemplated by the Specific Plan would not substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.**

Impact Analysis

This impact concerns potential impacts to drainage patterns in relation to erosion. This section evaluates the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The TVDP area does not include any streams or rivers. Therefore, the TVDP would not alter drainage patterns of these waters in any way that could increase erosion or siltation on- or off-site.

Construction

Planned construction and grading within the TVDP could cause soils to be exposed to runoff that could create erosion and increased sedimentation. Compliance with the Clean Water Act and NPDES regulations, including implementation of a SWPPP, would ensure that the TVDP would not substantially degrade water quality, due to erosion or siltation. Therefore, implementation of the

TVDP would not result in substantial erosion or siltation from the alteration of existing drainage patterns during construction.

Operation

Under the TVDP, there would be a series of three lakes totaling 10.5 acres as well as 11.8 acres of open space. The balance of the TVDP Area would be dominated by buildings, internal circulation, parking, and related impervious surfaces. As mentioned in Impact HYD-1, all stormwater runoff from Tracy Village would drain to the lake system for treatment prior to discharging to the downstream watershed. The TVDP would comply with any discharge permit requirements for storm drainage from the lakes issued by the California RWQCB. In general, the shoreline surface water level would vary only slightly (less than 6 inches) during non-storm events and should not interfere with any shoreline maintenance. The site manager would coordinate a regular site reconnaissance once every 4 months to assess shoreline integrity and make immediate repairs if necessary. In addition, shoreline landscape erosion would be spotted and controlled before it would be able to runoff. Therefore, while drainage patterns on the site would change, the changes would not contribute to substantial erosion or siltation on- or off-site. Impacts would be less than significant.

Residential Annexation Area

Extension of City services as a result of annexation could encourage upgrades or additions to current structures. Though no new construction is proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. As mentioned above, the Residential Annexation Area was included as a future service area in the City's General Plan and Storm Drainage Master Plan and any new buildings would connect with existing storm drainage facilities. Impacts caused by site improvements have already been analyzed in the General Plan and therefore the impacts to drainage patterns would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Drainage Patterns: Flooding

Impact HYD-4:	**Development and land use activities contemplated by the Tracy Village Specific Plan would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site.**

Impact Analysis

This impact concerns potential impacts to drainage patterns in relation to flooding. This section evaluates the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

There are no streams or rivers located within the TVDP area. The developable portion of the TVDP totals approximately 133.2 acres. The proposed storm drain system for TVDP consists of conventional on-site storm drainage system with mains, catch basins, and manholes that would convey stormwater runoff from the development to a lake system. The central location of the lake system would reduce the length and size of storm drain mains and would provide an opportunity to reduce peak stormwater flows before leaving Tracy Village by functioning as a detention basin. If a high flow event occurs, the low shoreline and grades around the lake system would allow water to overflow to the street for drainage. If the pump station is needed, backup power would be provided for the pump.

The TVSP would be required to comply with the regulations set forth by the NPDES Municipal Regional Stormwater Permit (MRP) as implemented by the Central Valley RWQCB. Requirements of the stormwater permit include:

- The lakes must temporarily detain the stormwater quality volume, which is equivalent to approximately 0.75 inches of runoff from the portion of the site tributary to the lakes. Thus, the lake's water level will rise after a rainfall event. Water level can return to normal in 12 hours, and detention is typically achieved through an orifice or weir at the outlet.
- The lakes must include a vehicle access ramp to allow access to the bottom of the lake. This can typically be incorporated into the lake shoreline with minimal impact on aesthetics.

The storm drain improvements would include a 36-inch storm drain main in Valpico Road from Tracy Village to the Westside Channel as identified in the City-wide Storm Drain Master Plan. However, because of the flat terrain, existing improvements and the shallow depth (5 feet to 6 feet) of the Westside Channel, a storm drain pump station and force main may be required to convey stormwater runoff from Tracy Village to the Westside Channel. The details and engineering analysis required to determine the feasibility of constructing a gravity storm drain main would be evaluated during engineering design of Tracy Village in consultation with the City.

The project would include the development of a storm drain system, and would implement a SWMP to manage both the pollutant load, rate, and volume of stormwater in the TVDP Area, thereby ensuring that on- or off-site flooding would not occur. Impacts would be less than significant.

Residential Annexation Area

Extension of City services as a result of annexation could encourage upgrades or additions to current structures. Though there is no new construction proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. As mentioned above, the Residential Annexation Area was included as a future service area in the City's General Plan and Storm Drainage Master Plan and any new buildings would connect with existing storm drainage facilities. Impacts caused by site improvements have already been analyzed in the General Plan and therefore impacts to drainage patterns would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Surface Runoff

Impact HYD-5:	**Development and land use activities contemplated by the Tracy Village Specific Plan would 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.**

Impact Analysis

This impact concerns potential impacts to drainage patterns in relation to flooding. This section evaluates the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The development of the TVDP would result in approximately 600 housing units. As discussed below, drainage systems would be designed with sufficient capacity to accommodate stormwater runoff, and would convey stormwater in accordance with RWQCB requirements.

The developable portion of the TVDP totals approximately 133.2 acres. The proposed storm drain system for TVDP consists of conventional on-site storm drainage system with mains, catch basins, and manholes that would convey stormwater runoff from the development to a lake system. As described above, all stormwater runoff from Tracy Village will drain to the lake system, where it will be circulated on a continuous basis with pumps. Lake water quality management would require technical analysis by the City's Stormwater Consultant to meet the requirements of the RWQCB. The lake treatment system employs multiple layers of water quality management to improve water quality, including:

- Lake water quality measures (biofilters and aeration)
- Urban stormwater runoff controls (water quality filters and wetland planter areas),
- Lake retention of dry weather runoff, and
- Detention of stormwater runoff.

These four elements would ensure that the water within the lake system and any discharge from the development to the storm drain outlet would be the same or better quality that pre-development discharge conditions.

Treatment of runoff and management of water quality would rely on re-creation of the natural chemical and biological processes within the lake system resulting from a unique combination of different layers of treatment. The general processes for the different target pollutants include:

- Filtering suspended solids in pretreatment wetlands.
- Reducing concentration of dissolved pollutant, nutrients, and salts through lake water volume flushing utilizing the lake system as the irrigation supply source.
- Reducing of nutrient concentrations (nitrogen and phosphorous) from inflows, and preventing algal blooms by using constructed gravel biofilter beds that rely on "biological filtration."
- Maintaining oxygen levels through aeration promotion oxygen exchange to prevent anaerobic conditions which allows natural process to occur such as denitrification for removal of nitrogen.
- Removing biochemical oxygen demand (BOD) and heavy metals through wetland planters.
- Pretreating and primary control through wetland water quality filters designed as attached-growth biological reactors.

The storm drain improvements would include a 36-inch storm drain main in Valpico Road from Tracy Village to the Westside Channel as identified in the City-wide Storm Drain Master Plan. However, because of the flat terrain, existing improvements and the shallow depth (5 feet to 6 feet) of the Westside Channel, a storm drain pump station and force main may be required to convey stormwater runoff from Tracy Village to the Westside Channel. The details and engineering analysis required to determine the feasibility of constructing a gravity storm drain main would be evaluated during engineering design of Tracy Village.

As discussed under Impact HYD-1, the project would include the development of a storm drain system, and would implement an SWMP to manage both the pollutant load, rate, and volume of stormwater in the TVDP Area, thereby ensuring the TVDP would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff or result in on- or off-site flooding. Source control measures would include an ongoing street sweeping program as a part of the maintenance of the private streets, a public education package to be distributed to homeowners, upon purchase of their home, and catch basins stenciled with words "No Dumping – Drains to River." With implementation of Mitigation Measures HYD-1a, HYD-1b, and HYD-5a, potential impacts from polluted runoff entering stormwater drainage systems would be less than significant.

Residential Annexation Area

Extension of City services as a result of annexation could encourage upgrades or additions to current structures. Though there are no new buildings proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. The construction of new structures could 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. As such, implementation of mitigation measures Mitigation Measures HYD-1a, HYD-1b, and HYD-5a, requiring the implementation of stormwater control measures during and after construction activities to prevent pollutants from adversely affecting surface runoff, would be implemented. These mitigation measures would reduce impacts to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-5 The applicant is required to provide site-specific or project-specific storm drainage solutions that are consistent with the overall infrastructure approach presented in the City of Tracy's Citywide Storm Drainage Master Plan (SDMP). The City of Tracy is subject to the Phase II municipal program and has prepared a Storm Water Management Program (SWMP) to comply with the regulations (General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ). The City Department of Public Works will review the stormwater treatment plan within the TVSP to ensure compliance with the SDMP.

Level of Significance After Mitigation

Less than significant impact.

Water Quality

Impact HYD-6: Development and land use activities contemplated by the Specific Plan may otherwise substantially degrade water quality.

Impact Analysis

Tracy Village Development Project

As discussed under Impact HYD-1, the Project Area has the potential to degrade water quality. The construction of residential units during both the construction and operation phases would remove vegetation and significant portions of earth, thus having the potential to increase erosion and sedimentation.

Development of the project site would add a significant amount of impervious surface area through the construction of housing, parking areas, roadways, and other improvements. A net increase in impervious surface area has the potential to increase runoff from the project site. As noted above, runoff from the project has the potential to degrade downstream surface water.

As such, implementation of Mitigation Measures HYD-1a, HYD-1b, and HYD-5, requiring the implementation of stormwater control measures during and after construction activities to prevent pollutants from adversely affecting surface water quality would be implemented. These mitigation measures would reduce impacts to less than significant.

Residential Annexation Area

Extension of City services as a result of annexation could encourage upgrades or additions to current structures. Though there no new buildings proposed for the Residential Annexation Area at this time, new buildings could be developed on vacant lots in the future. The construction of new structures could degrade water quality in downstream surface water bodies, as described above. As such, implementation of Mitigation Measures HYD-1a and HYD-1b requiring the implementation of stormwater control measures during and after construction activities to prevent pollutants from

adversely affecting surface water quality. These mitigation measures would reduce impacts to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures HYD-1a and HYD-1b.

Level of Significance After Mitigation

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.10 - Land Use and Planning

This section describes existing land use and planning and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the updated San Joaquin County General Plan 2035 (December 2016), Tracy Village Specific Plan (August 2016), City of Tracy General Plan (2016), the San Joaquin County Airport Land Use Compatibility Plan, and San Joaquin County Local Agency Formation Commission policies.

3.10.1 - Existing Conditions

The Tracy Village Development Project (TVDP) site is currently undeveloped and located on approximately 134 acres in unincorporated San Joaquin County, adjacent to the Tracy city limits. In addition to the annexation of the approximately 134-acre TVDP site, the City also seeks annexation of 42 residential lots to the north and west, fronting Corral Hollow and Valpico Roads (referred to as the Residential Annexation Area). The Tracy Village Specific Plan (TVSP) includes both the TVDP and the Residential Annexation Area, and is referred to collectively as the Project Area.

- TVDP—up to 600 active adult residential homes on approximately 134 acres
- Residential Annexation Area—the additional 42 lots being considered for annexation by the City of Tracy to rationalize the city limits
- Proposed Project and Project Area—refers to both the TVDP and the Residential Annexation Area

Surrounding Area

***North*—**North of the TVDP is Valpico Road and low-density, single-family residential uses along Valpico Road, which are part of the Residential Annexation Area. They are semi-rural in character, varied in design and age, with vestiges of agricultural uses such as small cultivated or open fields, outdoor equipment storage, and outbuildings intermixed with the houses. Behind these houses are an irrigation canal and an open area, the western portion of which is under development for a housing tract along Coral Hollow Road. Tract housing and a public park extend north of the entire area.

***East*—**Low-density, single-family housing tracts form the eastern boundary of the TVDP project site, separated in most locations by rear yard fencing. Small parks are scattered through the residential uses. Monticello Elementary School is also located east of the project site behind the residential uses. A similar pattern of low-density tract housing continues east of the 42-lot annexation area, north of Valpico Road.

***South*—**Low-density, single-family housing tracts form the southern boundary of the TVDP site, separated in most locations by rear yard fencing. Small residential parks are scattered through the residential uses. Anthony Traina Elementary and Jefferson Middle Schools are also located south of the project site behind the residential uses.

West—Low-density, single-family houses on irregular lots within the Residential Annexation Area form the western boundary of the TVDP. They are semi-rural in character, varied in design and age, with vestiges of agricultural uses such as small cultivated or open fields, outdoor equipment storage, and outbuildings intermixed with the houses. Agricultural/vacant land and a church are located on the western edge of Coral Hollow Road. Land to the southwest of the project site appears to be graded for development for the Ellis Specific Plan on Coral Hollow Road and West Linne Road.

3.10.2 - Regulatory Setting

San Joaquin County General Plan

The San Joaquin County General Plan applies to all unincorporated lands within San Joaquin County. Land use within incorporated cities is controlled by the General Plans and zoning ordinances of each individual city. The 2035 San Joaquin County General Plan includes objectives, policies, and implementation programs that pertain to the following: the type of development to be encouraged; where new development should occur; how new and existing residences should be provided with services and utilities; and when development should take place. The TVDP site is designated "Resource Conservation (OS/RC)" by the County of San Joaquin General Plan and zoned "Agriculture-Urban Reserve (AU)" by the San Joaquin County Zoning Ordinance, while all properties within the Residential Annexation Area are designated Low Density Residential (R/L) by both the San Joaquin and City of Tracy General Plan, as well as the San Joaquin County Zoning Ordinance.

The following are guiding and implementing policies associated with land use that are relevant to the TVDP:

- **Goal LU-1:** Direct most urban development towards cities and urban and rural communities within the unincorporated county to promote economic development, while preserving agricultural lands and protecting open space resources.
- **Policy LU-1.1:** Compact Growth and Development: The County shall discourage urban sprawl and promote compact development patterns, mixed-use development, and higher development intensities that conserve agricultural land resources, protect habitat, support transit, reduce vehicle trips, improve air quality, make efficient use of existing infrastructure, encourage healthful, active living, conserve energy and water, and diversify San Joaquin County's housing stock
- **Policy LU-1.2:** Accommodating Future Growth: The County shall ensure that the General Plan designates sufficient land for urban development to accommodate projected population and employment growth
- **Policy LU-1.3:** Building Intensity and Population Density: The County shall regulate the levels of building intensity and population density according to the standards and land use designations set out in the General Plan and the San Joaquin County Development Title.
- **Policy LU-1.10:** LAFCo and City Coordination: The County shall coordinate with San Joaquin LAFCo and cities within the county to ensure future annexation proposals and requests to expand Spheres of Influence reflect the growth and development patterns envisioned in the General Plan
- **Policy LU-2.14:** General Plan Land Use Amendments: The County shall consider the consistency of the proposal with the Vision and Guiding Principles and the goals and policies

of the General Plan, potential for an undesirable, growth-inducing precedent or premature conversion of agricultural land, and the availability of infrastructure and services

San Joaquin County Zoning Ordinances

Division 3 Title 9 of San Joaquin County Development Title covers regulations and policies related to Residential zones. Specifically, Chapter 9-900 constitutes subdivision regulations and Chapter 9-300 constitutes residential zones.

San Joaquin County Local Agency Formation Commission

The San Joaquin County Local Agency Formation Commission (LAFCo) is an independent County agency established by state law. LAFCo has approval authority regarding changes in organization to cities, including annexations, detachments, new formations, and incorporations. LAFCo approval is necessary for changes to the city limits of incorporated cities or the cities' Spheres of Influence. The regulations cited here are located on the San Joaquin County LAFCO website (www.sjgov.org /lafco/policies), under the heading, "CHANGE OF ORGANIZATION POLICIES AND PROCEDUREs (Including Annexations and Reorganizations) (Adopted September 21, 2007) Amended 10/16/2009, Amended 10/21/2011, Amended 12/14/12."

The following LAFCO regulations apply to the proposed annexation of the Tracy Village Specific Plan:

1. Spheres and Municipal Service Reviews

The annexation or detachment must be consistent with the internal planning horizon of the sphere of influence (SOI). The land subject to annexation shall normally lie within the first planning increment (5–10 year) boundary. The annexation must also consider the applicable Municipal Service Review. An annexation shall be approved only if the Municipal Services Review and the SOI Plan demonstrates that adequate services can be provided with the timeframe needed by the inhabitants of the annexed area. If detachment occurs, the sphere will be modified.

LAFCo generally will not allow spheres of influence to be amended concurrently with annexation proposals. Proposed annexations of land that lie outside of the first planning horizon (5–10 year) are presumed to be inconsistent with the Sphere Plan. In such a case, the agency must first request LAFCo to consider a sphere amendment pursuant to the above policies. If the amendment is approved, the agency may then proceed with the annexation proposal. A change of organization or reorganization will not be approved solely because an area falls within the SOI of any agency.

As an exception to the presumed inconsistency mentioned above, Master Plan and Specific Plan developments may span several planning horizons of the SOI. Annexation of the entire project area may be desirable in order to comprehensively plan and finance infrastructure and provide for amenity-based improvements. In these cases, no amendment of the planning horizon is necessary, provided project phasing is recognized in the SOI Plan.

2. Plan for Services

Every proposal must include a Plan for Services that addresses the items identified in Section 56653 of the Government Code. The Plan for Services must be consistent with the Municipal Service Review of the Agency. Proponents must demonstrate that the city or special district is capable of meeting the need for services.

3. Contiguity

Territory proposed to be annexed to a city must be contiguous to the annexing city or district unless specifically allowed by statute. Territory is not contiguous if the only connection is a strip of land more than 300 feet long and less than 200 wide, that width to be exclusive of highways. The boundaries of a proposed annexation or reorganization must not create or result in areas that are difficult to serve.

4. Development within Jurisdiction (does not apply)

Development of existing vacant or non-prime agricultural lands for urban uses within the existing jurisdiction or within the SOI should be encouraged before any proposal is approved which would allow for or lead to the development of existing open space lands for non-open space uses which are outside of the existing jurisdiction of the local agency or outside of the existing SOI of the local agency (Section 56377).

5. Progressive Urban Pattern

Annexations to agencies providing urban services shall be progressive steps toward filling in the territory designated by the affected agency's adopted SOI. Proposed growth shall be from inner toward outer areas.

6. Piecemeal Annexation Prohibited

LAFCo requires annexations and detachments to be consistent with the schedule for annexation that is contained in the agency's SOI Plan. LAFCo will modify small piece-meal or irregular annexations, to include additional territory in order to promote orderly annexation and logical boundaries, while maintaining a viable proposal. In such cases, detailed development plans may not be required for those additional areas but compliance with CEQA is required.

7. Annexations to Eliminate Islands

Proposals to annex islands or to otherwise correct illogical distortion of boundaries will normally be approved unless they would violate another provision of these standards. In order to avoid the creation of an island or to encourage the elimination of an existing island, detailed development plans may not be required for the remnant areas.

8. Annexations that Create Islands

An annexation will not be approved if it will result in the creation of an island of unincorporated territory of otherwise cause or further the distortion of existing boundaries. The Commission may nevertheless approve such an annexation where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at this time.

9. Substantially Surrounded

For the purpose of applying the provisions of the Cortese-Knox-Hertzberg Act regarding island annexation without protest hearings (Section 56375.5), the subject territory of an annexation proposal shall be deemed "substantially surrounded" if it is within the SOI of the affected city and two-thirds (66-2/3%) of its boundary is surrounded by the affected city.

10. Definite and Certain Boundaries

All boundaries shall be definite and certain and conform to lines of assessment or ownership. The Commission's approval of boundary change proposals containing split parcels will typically be subject to a condition requiring the recordation of a parcel map, lot line adjustment or other instrument to avoid creating remnants of legal lots.

11. Service Requirements

An annexation shall not be approved merely to facilitate the delivery of one or a few services to the determent of the delivery of a larger number of services or service more basic to public health and welfare.

12. Adverse Impact of Annexation on the Other Agencies

LAFCo will consider any significant adverse effects upon other service recipients or other agencies serving the area and may condition any approval to mitigate such impacts. Significant adverse effects shall include the effect of proposals that negatively impact special districts' budgets or services or require the continuation of services without the provision of adequate funding. LAFCo will not approve detachments from special districts or annexations that fail to provide adequate mitigation of the adverse impact on the district. LAFCo may determine an appropriate temporary mitigation, if any, and impose that temporary mitigation to the extent it is within its powers. If the needed mitigation is not within LAFCo's authority and approval would, in the opinion of the Commission, seriously impair the District's operation, the Commission may choose to deny the application.

13. District's Proposal to Provide New, Different, or Divestiture of a Particular Function or Class of Services

In addition to the plan for services specified in Section 2 of these Policies and Procedures any application for a new, different, or divestiture of a service shall also include the requirements outlined in Section 56824.12 of the Government Code. Applications for such request will be considered a change of organization and shall follow the requirements of such an application as outlined in the Cortese-Knox-Hertzberg Act and within these policies and procedures. The factors enumerated in Sections 56668 and 56824.14 of the Government Code shall be considered by the Commission at the time of consideration of the application for such functions.

14. Disadvantaged Unincorporated Communities (does not apply)

Disadvantaged Unincorporated Communities (DUCs) may be shown in a city municipal service review or SOI plan. The Commission shall not approve an annexation to a city or any territory greater than 10 acres where there exists a disadvantaged unincorporated community (DUC) that

is contiguous to the area of proposed annexation, unless a concurrent application to annex all or a portion of the DUC to the subject city has been filed.

City Annexations

1. Annexation of Streets

Annexations shall reflect the logical allocation of streets and rights of way as follows:

- Territory should be included within the annexation to assure that the city reasonably assumes the burden of providing adequate roads to the property to be annexed. LAFCo will require cities to annex streets where adjacent lands that are in the city will generate additional traffic or where the annexation will isolate sections of county road. Cities shall include all contiguous public roads that can be included without fragmenting governmental responsibility by alternating city and county road jurisdiction over short section of the same roadway.
- When a street is a boundary line between two cities the centerline of the street may be used as the boundary or may follow a boundary reached by agreement of the affected cities.

2. Pre-zoning Required

The Cortese-Knox-Hertzberg Act requires the City to pre-zone territory to be annexed, and prohibits subsequent changes to the General Plan and/or pre-zoning designations for a period of two years after completion of the annexation, unless the city council makes a finding at a public hearing consistent with the provisions of Government Code Section 56375(e). In instances where LAFCo amends a proposal to include additional territory, the Commission's approval of the annexation will be conditioned upon the pre-zoning of the new territory.

The City of Tracy prepared a Municipal Services Review (MSR) for the San Joaquin LAFCo in 2011 (City of Tracy 2011). The MSR provides the required information for the annexation of the TVSP. LAFCO will refer to the MSR, the Tracy's General Plan EIR, and this EIR to make the CEQA findings required to annex the TVSP.

San Joaquin County Airport Land Use Compatibility Plan

The San Joaquin Council of Governments (SJCOG), which serves as the Airport Land Use Commission (ALUC) for San Joaquin County, adopted an update to its 1993 Airport Land Use Compatibility Plan, the 2009 Airport Land Use Compatibility Plan (2009 ALUCP). The intention of the 2009 ALUCP is to protect and promote the safety and welfare of residents and airport users near the public use airports in San Joaquin County (County), while promoting the continued operation of those airports. Specifically, the plan seeks to protect the public from the adverse effects of airport noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

All projects within San Joaquin County must comply with the 2009 Airport Land Use Compatibility Plan (ALUCP). The southern portion of the Project Area lies within the Tracy Municipal Airport Zone 7 Traffic Pattern Zone shown in Exhibit 3.8-1. Flight hazards include physical, visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause

increased attraction for large flocks of birds that may result in aircraft safety impacts is also prohibited.

Regardless of location within San Joaquin County, ALUC review is required in addition to Federal Aviation Administration (FAA) notification in accordance with Code of Federal Regulations, Part 77, for any proposal for construction or alteration under the following conditions:

a) If requested by the FAA.
b) Any construction or alteration that is more than 200 ft. above ground level at its site.
c) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:
    - 100 to 1 for a horizontal distance of 20,000 ft. of a public use or military airport from any point on the runway of each airport with its longest runway more than 3,200 ft.
    - 50 to 1 for a horizontal distance of 10,000 ft. of a public use or military airport from any point on the runway of each airport with its longest runway no more than 3,200 ft.
    - 25 to 1 for a horizontal distance of 5,000 ft. of the nearest take off and landing area of a public use heliport
d) Any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards
e) Any construction or alteration located on a public use airport or heliport regardless of height or location.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The key purpose of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) 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. Other SJMSCP purposes include preserving landowner 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 (FESA) or the California Endangered Species Act (CESA); providing and maintaining open spaces which contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing mitigation costs to project proponents. The SJMSCP was designed to assist in the implementation of the resource management and open space management goals and policies of local general plans.

City of Tracy General Plan

The General Plan provides a vision for the future and establishes a framework for how the City of Tracy should grow and change over the next two decades. The General Plan establishes goals, objectives, policies, and actions to guide this change in a desired direction. The General Plan presents existing conditions in the City, including physical, social, cultural, and environmental resources and opportunities. The General Plan addresses all aspects of development, including land use, transportation, housing, economic development, public facilities, infrastructure, and open spaces, among other topics. The required Land Use Element designates all lands within the City for a specific use such as residential, office, commercial, industry, open space, recreation, or public uses.

The Land Use Element provides policy direction for each land use category, and provides overall land use policies for the City.

The TVDP site is located within the City's SOI and is designated "Active Adult" by the City's General Plan.

The TVDP project proposes a Specific Plan, General Plan amendment and a tentative subdivision map for the Tracy Village Project. Measure A, passed in 2000, amended sections of the City of Tracy's Growth Management Ordinance (GMO). Under the GMO, builders must obtain a Residential Growth Allotment (RGA) in order to secure a residential building permit, which would be limited to a 750 maximum and 600 average per year. Measure K, passed in 2015, established a separate growth allotment for the Tracy Village active senior community outside of the limits set by Measure A. Measure K exempts the Active Adult Residential Allotment (AARA) Program from the City's Growth Management Ordinance, thus allowing the development of the TVDP without any effect on the RGA process.

The San Joaquin County General Plan would no longer apply to the TVSP, as it would be annexed into the City of Tracy. The City of Tracy General Plan land use designation for the TVSP site is Active Adult Residential (Exhibit 2-4). The "Tracy Village Specific Plan" zoning serves as pre-zoning to meet the requirements for future development (Exhibit 2-6).

The land use designation of the Residential Annexation Area would remain unchanged from Residential Low, as specified in the City of Tracy General Plan (Exhibit 2-4). It would be pre-zoned Residential Estate (Exhibit 2-6).

The City of Tracy General Plan establishes the following guiding and implementing policies associated with land use planning that are relevant to the TVDP project:

- **Goal LU-1:** A balanced and orderly pattern of growth in the City.
- **Objective LU-1.4:** Promote efficient residential development patterns and orderly expansion of residential areas to maximize the use of existing public services and infrastructure
- **Goal LU-4:** Neighborhoods that support Tracy's small-town character.
- **P1:** Residential neighborhoods should contain a mix of housing types including single family homes on a range of lot sizes; townhomes; duplexes, triplexes and fourplexes; and apartments
- **Goal CC-1:** Superior design quality throughout Tracy.
- **Objective C 1.1:** Preserve and enhance Tracy's unique character and "hometown feel" through high-quality urban design
- **Goal CC-5:** Neighborhoods with a recognizable identity and structure

City of Tracy Municipal Code

The Tracy Municipal Code regulates land use and development activities within the city limits. Title 10 contains the Zoning Ordinance, which establishes zoning districts, allowable land use activities, and development standards. The Tracy Municipal Code consists of all ordinances adopted by the Tracy City Council.

3.10.1 - Methodology

The potential impacts associated with land use compatibility were evaluated in accordance with the Tracy General Plan, the Tracy Municipal Airport ALUCP, the proposed Specific Plan, San Joaquin LAFCO policies, and relevant county policies.

3.10.2 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Physically divide an established community?

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

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

3.10.3 - Project Impacts Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Divide an Established Community

Impact LUP-1: The project would not physically divide an established community.

Impact Analysis

This impact evaluates project consistent with the applicable provisions of the Active Adult land use designation and the applicable goals and policies set forth in the San Joaquin and Tracy General Plan.

Tracy Village Development

The physical division of an already established community typically refers to the construction of a linear feature, such as an interstate highway, railroad tracks, or removal of a means of access, such as a bridge that would impact mobility within an existing community and an outlying area. A wall will surround the new development but will not remove the current means of access to the site or impede the circulation system. The TVDP project consists of the buildout of a 600-unit residential development on a 133.2-acre lot within the City of Tracy SOI. The TVDP is currently a predominantly open field with one structure slated for demolition. There are no proposed actions that would constitute the division of an established community. Therefore, impacts would be less than significant.

Residential Annexation Area

Annexation of the existing lots to the City of Tracy would expand the surrounding established community. The process of annexation would not result in a physical division of the community, but would rather provide a rational boundary for the western city limits, which would be a beneficial impact to the City of Tracy.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Conflict with an Applicable Land Use Plan, Policy, or Regulation

Impact LUP-2:	**The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.**

Impact Analysis

This impact addresses the potential for the TVSP to conflict with the City of Tracy General Plan and Municipal Code. This impact will evaluate the TVDP and the Residential Annexation Area separately for all potential impact areas except for consistency with the Airport Land Use Compatibility Plan.

Tracy Village Development Project

The San Joaquin County General Plan land use designation for the TVDP site is Resource Conservation (OS/RC). The San Joaquin County General Plan would no longer apply to the TVSP, as it would be annexed into the City of Tracy. The new land use designation would be Residential Low. The TVDP site is designated "Active Adult Residential" by the City of Tracy General Plan, which is a non-binding designation. The City envisions that the site will be used as predominantly residential with a mixture of neighborhood park uses. Therefore, the project is consistent with the City's vision for the land use designation. The proposed project would be consistent with the permitted density from 0.1 to 9 units per gross acre for the individual neighborhoods.

The San Joaquin County General Plan anticipates that new urban development will occur within incorporated cities as well as their fringe areas. It also anticipates unincorporated urban communities would experience growth (San Joaquin County General Plan Volume 1, page III-3). The City of Tracy General Plan designates the site Active Adult and planned for this land to be annexed. Therefore, the TVDP is consistent with the current City and County land use plans.

Residential Annexation Area

The City of Tracy General Plan designates the Residential Annexation area as Residential Low, which is not binding until the annexation occurs. The City's zoning code classifies the RAA as Residential Estate (RE). The zoning designation allows lots to have a minimum lot size of 15,000 square feet. Most of these lots, ranging in size from 0.35 to 2.21 acres, are developed with single-family residences. The process of annexation would be consistent with the City's vision for the land use designation and zoning code.

General Plan Goals and Policies

The Tracy General Plan consistency analysis can be found below in Table 3.10-1.

The SJCOG, acting as the ALUC and Congestion Management Agency, reviewed the NOP for the project and concluded that the proposed project is compatible with the 2009 ALUCP for San Joaquin County (Appendix A, SJCOG NOP response, December 4, 2016). With the implementation of MM HAZ-3, management of the lakes will prevent nesting and flocking of waterfowl that could potentially increase the hazard of bird strikes by aircraft. The project would not include land uses that may cause visual, electronic, or increased bird strike hazards to aircraft in flight.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Conservation Plans

Impact LUP-3:	**The project may conflict with any applicable habitat conservation plan or natural communities conservation plan.**

Impact Analysis

This impact evaluates project consistency with the applicable provisions of the SJMSCP.

The SJMSCP is the applicable conservation plan adopted for the purpose of avoiding or mitigating an environmental effect. The SJMSCP is detailed in Section 3-4, Biological Resources. The City of Tracy adopted the SJMSCP in the early 2000s.

A Biological Resources Evaluation—prepared in 2015 by Live Oak Associates, Inc. and peer reviewed by FCS in May 2015—addresses the majority of relevant biological and aquatic resources that occur, or have potential to occur, within the proposed TVDP site. A separate Biological Resources Evaluation was prepared by FCS in April 2017 to address the Residential Annexation Area. These three reports are found in Appendix C.

The BREs concluded that development of the proposed project would not conflict with San Joaquin County's or the City of Tracy's tree ordinances. Incorporation of Mitigation Measure BIO-1b would ensure that the removal of any tree containing a Swainson's hawk nest would be prohibited until the nest is no longer occupied. The proposed project would not conflict with local policies or ordinances, and that impacts would be less than significant with incorporation of Mitigation Measure BIO-1b.

The BRE concluded that the SJMSCP applies to the proposed project because the project qualifies as a covered activity. The project would be assessed a land cover fee and would be required to implement a series of species-specific minimization measures. Thus, a project that complies with the SJMSCP can be considered to result in less than significant impacts on biological resources under CEQA. This project will participate in and comply with the SJMSCP.

Because the project seeks coverage under the SJMSCP, no take is permitted for Swainson's hawk and burrowing owl. Avoidance and minimization measures would be implemented as noted in Mitigation Measure BIO-1b, as discussed in Section 3.4, Biological Resources. Habitat fees or endowment fees with in-lieu lands (conservation easements) mitigate the loss of open space. The fees are required prior to ground-disturbance and must be paid prior to permit release.

Adoption of the proposed mitigation measures from Section 3.4, Biological Resources and compliance with the SJMSCP would result in a less than significant impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure BIO-1b.

Level of Significance After Mitigation

Less than significant impact.

Table 3.10-1: Land Use Compatibility Table

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
2—Land Use	Goal LU-1	Establish a clearly defined urban form and city structure	**Consistent:** The TVDP contains provisions that address land use, design, infrastructure, and phasing to ensure that development occurs in a logical, orderly, and planned manner.
	LU-1.1 P.2	The City shall maintain a Sphere of Influence that is consistent with the long-term land use vision in this General Plan	**Consistent:** The TVDP is contained within the City of Tracy SOI and is consistent with all applicable development regulations, including the Tracy Village Specific Plan.

Table 3.10-1 (cont.): Land Use Compatibility Table

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
	Objective LU-1.4	Promote efficient residential development patterns and orderly expansion of residential areas to maximize the use of existing public services and infrastructure	**Consistent:** Up to 600 single-family lots would be located in five distinct neighborhoods of varying lot sizes. All of the homes would be single-level to accommodate ease of access and aging-in-place, with an optional second floor living space.
	LU-1.4 P.3	The City shall encourage residential growth that follows an orderly pattern with initial expansion in Secondary Residential Growth Areas	**Consistent:** The TVDP project is within the secondary residential growth areas identified in the Tracy General Plan.
	Goal LU-4	Neighborhoods that support Tracy's small-town character	**Consistent:** The houses in the TVDP would be limited to 35 feet tall. Lot would be limited to 60%. The community wall around the development would be limited to 7 feet tall. These heights and lot coverages would continue the pattern of low-density housing in the adjoining areas of Tracy have similar walls around neighborhoods
	LU-4 P.1	Residential neighborhoods should contain a mix of housing types including single family homes on a range of lot sizes; townhomes; duplexes, triplexes and fourplexes; and apartments	**Consistent:** TVDP home sizes would range from 1,350 square feet to 3,000 square feet with different housing designs. This residential neighborhood would provide housing for Active Adults, which would allow them to remain in the City of Tracy. The development is intended to be a uniform style of housing to best serve this population.
	LU-6.1 P.2	Land development that mitigates its environmental, design and infrastructure impacts	**Consistent:** The development would meet all of California's Title 24 Energy Efficiency Standards through several design features, including the use of solar roofs and an on-site stormwater treatment system and pollution control system that would utilize the man-made lakes.

Table 3.10-1 (cont.): Land Use Compatibility Table

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
	LU-6.1 P.3	Use of berms, landscaped buffer zones, sound walls, and other similar measures between quarrying operations and noise-sensitive adjacent uses is encouraged to ensure consistency with standards established in City's Noise Element of the General Plan	**Consistent:** The TVDP project would incorporate a sound wall facing Valpico Street to meet applicable noise regulations in the General Plan.
	Objective LU-6.3	Ensure that development near the Tracy Municipal Airport is compatible with airport uses and conforms to safety requirements	**Consistent:** The TVSP and RAA are located within the Tracy Municipal Airport Safety Zone and are consistent with the land use restrictions. SJCOG review concluded that the TVSP and RAA are consistent with the 2009 SJCOG ACLUP.
	LU-6.3 P.1	New development and expansion of existing development shall conform to the requirements of the zoning ordinance (as related to the Airport Overlay area) and the requirements of the San Joaquin County Airport Land Use Plan	**Consistent:** The TVSP is located within the Tracy Municipal Airport Safety Zone and is consistent with the land use restrictions. SJCOG review concluded that the TVSP is consistent with the 2009 SJCOG ACLUP.
	LU-6.4 P.1	The City shall ensure that development permitting occurs in a manner to provide public safety in flood-prone areas.	**Consistent:** There are no areas within or surrounding the TVSP that are within a Federal Emergency Management Agency (FEMA) 100-year flood hazard area.
3—Community Character	Goal CC-1	Superior design quality throughout Tracy	**Consistent:** The TVSP contains design standards and guidelines that ensure quality development with limited visual impacts. Refer to Section 3.1, Aesthetics for further discussion.
	Objective CC 1.1	Preserve and enhance Tracy's unique character and "hometown feel" through high-quality urban design	**Consistent:** The TVSP contains design standards and guidelines that ensure quality development with limited visual impacts. Refer to Section 3.1, Aesthetics for further discussion.
	Goal CC-5	Neighborhoods with a recognizable identity and structure	**Consistent:** The TVSP contains design standards and guidelines that ensure quality development with limited visual impacts. Refer to Section 3.1, Aesthetics for further discussion.

Table 3.10-1 (cont.): Land Use Compatibility Table

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
	Goal CC-5.2	Size and design Neighborhoods to be walkable	**Consistent:** The TVDP would feature paseos, sidewalks, and the pedestrian promenade creating pedestrian- and bike-friendly streets promoting walkability within the neighborhood and pedestrian connections to adjoining developments.
	CC-5.2 P.1	Neighborhoods should not be bisected by a physical barrier, such as an arterial street, a railroad track or a major drainage way	**Consistent:** The TVDP land use concept contains a framework for private street circulation consisting of both a Primary Street Network and an Internal Street Network. A main community loop street will provide access within the gated TVDP to all neighborhoods and recreational areas by encircling the interior lake system.
	CC-6.2 P.5	The exterior of residential buildings shall be varied and articulated to provide visual interest to the streetscape	**Consistent:** The TVSP includes a variety of different styles for residential buildings: European Country, Hacienda, Italian, Spanish, and Tuscan.
6—Open Space and Conservation	Goal OSC-4	Provision of parks, open space, and recreation facilities and services that maintain and improve the quality of life for Tracy residents	**Consistent:** The TVDP includes approximately 22.6 acres of community open space is provided that includes the lake system, the two recreation areas, a dog park, and the landscape areas at the two entries to the community. In addition, a loop promenade is provided around the lake system.
	OSC-4.4 P.1	The City of Tracy shall oppose urbanization in lands outside of the Sphere of Influence, with particular emphasis on the preservation of undeveloped lands between the City of Tracy and the adjacent communities of Mountain House and Lathrop	**Consistent:** The TVSP is located within the City's SOI.
	OSC-5.3 P.6	Future development projects shall consider the following design features, during the Specific Plan, PUD, subdivision, and design/development review: solar access and orientation, natural	**Consistent:** The TVDP would install Energy Star or equivalent appliances, incorporate locally produced building and landscaping materials, use high reflectivity and CRRC roofing when appropriate.

Table 3.10-1 (cont.): Land Use Compatibility Table

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
		ventilation, energy efficient landscaping and energy efficient and conserving building design and technologies.	The development would meet all of California's Title 24 Energy Efficiency Standards through several design features including the use of solar roofs and an on-site stormwater treatment system and pollution control system that would utilize the man-made lakes.
7—Public Services and Facilities	PF-1.2 P.2	The City shall build and require roadways that are adequate in terms of width, radius and grade to facilitate access by City fire-fighting apparatus, while also maintaining and improving Tracy's neighborhood character and hometown feel	**Consistent:** The City will maintain all emergency access roads and gates that may be associated with them. The TVDP would also adhere to the Public Works Improvement Standards for roadway design.
	Goal PF-7	Meet all wastewater treatment demands and federal and State regulations	**Consistent:** TVDP would adhere to all federal and state regulations regarding wastewater treatment, including the CWA and NPDES permits.
8—Safety Element	SA-5.1 P.1	Ensure that new development shall be consistent with setbacks, height and land use restrictions as determined by the Federal Aviation Administration and the San Joaquin County Airport Land Use Commission, as well as the policies of the City's Airport Master Plan	**Consistent:** The TVSP is consistent with the 2009 San Joaquin ALUCP.
9—Noise Element	N-1.1 P.1	Noise sensitive land uses shall not be located in areas with noise levels that exceed those considered normally	**Consistent:** The TVDP would not place sensitive land uses within areas with noise levels exceed normal conditions. A sound wall would also be created on Valpico Road.
10—Air Quality	Goal AQ-1	Improved air quality and reduced greenhouse gas emissions	**Consistent:** The TVDP will be subject to regulatory measures adopted to meet ambient air quality standards. The proposed project would not be a source of significant toxic or hazardous air pollutants and odors. Refer to Section 3.3, Air Quality for further discussion.

Table 3.10-1 (cont.): Land Use Compatibility Table

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
	AQ-1.2 P.1	The City shall assess air quality impacts using the latest version of the CEQA Guidelines and guidelines prepared by the San Joaquin Valley Air Pollution Control District	**Consistent:** The TVDP will be subject to regulatory measures adopted to meet ambient air quality standards.
	AQ-1.3 P.5	The City shall require direct pedestrian and bicycle linkages from residential areas to parks, schools, retail areas, high-frequency transit facilities and major employment areas	**Consistent:** The TVSP would be accessible to public transit and would provide bicycle and pedestrian facilities. This is consistent with the objective of reducing vehicle miles traveled.
	Objective AQ-1.4	Support local and regional air quality improvement effort	**Consistent.** The TVSP design standards and guidelines include provisions for sustainable design features.
	AQ-1.4 P.3	The City shall be proactive in reducing greenhouse gas emissions from City operations as well as new or renovated development	**Consistent.** The TVSP design standards and guidelines include provisions for sustainable design features.
Source: City of Tracy General Plan, 2011.			

THIS PAGE INTENTIONALLY LEFT BLANK

3.11 - Mineral Resources

3.11.1 - Introduction

This section describes the existing mineral resources setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the California State Mining and Geology Board, San Joaquin County General Plan, and the City of Tracy General Plan. Descriptions refer to the Project Area, which includes both the Tracy Village Development Project and the Residential Annexation Area, unless otherwise noted.

3.11.2 - Environmental Setting

Mineral Resource Extraction Activities

With the City of Tracy, sand and gravel deposits are the predominant mineral resource. They are used mainly for construction materials such as concrete and asphalt.

According to the Phase I Environmental Site Assessment (ESA), the Project Area was never used for mining activities (ENGEO Phase I ESA, page 4-7). The closest mine to the project area is the Pereira mine, which produced sand and gravel. It is approximately 1.34 miles southeast of the project site. The mine is currently idle and is operating under an Interim Management Plan (IMP) with the intent to resume mining.

Mineral Resource Designations

The California Department of Conservation and related entities are responsible for monitoring and regulating mineral resources throughout the State. The State Mining and Geology Board operates within the Department of Conservation and serves as a regulatory body that represents the State's interest in the "development, utilization and conservation of mineral resources, reclamation of mined lands, and development of geologic and seismic hazard information . . ." (City of Tracy General Plan DEIR page 4.8-2). It is responsible for identifying and mapping sand and gravel resources into specific categories using Mineral Resource Zone (MRZ) Classifications, which are listed in Table 3.11-1.

Table 3.11-1: Mineral Resources Zones and Scientific Zones

Zone	Description
MRZ-1	Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exits for their presence.
MRZ-2	Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
MRZ-3	Areas containing mineral deposits-the significance of which cannot be evaluated from available data.

Table 3.11-1 (cont.): Mineral Resources Zones and Scientific Zones

Zone	Description
MRZ-4	Areas where available information is inadequate for assignment to any other MRZ zone.
SZ	Areas containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
Source: California Department of Conservation Division of Mines and Geology	

The California Department of Conservation, Division of Mines and Geology "Portland Cement Concrete Aggregate in the Stockton-Lodi Production-Consumption Region [San Joaquin County, California]" indicates that the Project Area is within MRZ-2 for aggregate (General Plan DEIR 4.8-5).

3.11.3 - Regulatory Framework

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) provides guidelines for the classification and designation of mineral lands. The California Geological Survey has produced a report and a Mineral Land Classification Map. The Classification Map designates areas where important Production-Consumption deposits occur, and are categorized in MRZs, as described above.

According to SMARA, mineral lands include areas containing sand and gravel, and related materials are known collectively as aggregate resources. SMARA requires all cities to contain a mineral resource management policy which:

1. Recognizes mineral information transmitted by the State Mining and Geology Boards;
2. Assists in the management of land use affecting areas of regional significance; and
3. Emphasizes the conservation and development of identified mineral resources.

Local

City of Tracy

General Plan

The City of Tracy General Plan recognizes the State's MRZ-2 designations in the south of the City, and designates these areas as "Resource Area," which allow for aggregate extraction or recreation uses. The Tracy General Plan sets for the following goals, objectives, policies, and actions that are relevant to mineral resources:

- **Goal OSC-3:** Reduction of the negative environmental and land use impacts of mining and resource extraction activities.
- **P.1:** When reviewing land use proposals, the City shall take into account potentially available mineral resources on the property or in the vicinity of the project site.

- **Objective OSC-3.2:** Minimize negative environmental effects of existing and new mining operations.
- **P.1:** Prior to approval of any new or expanded mining operation, the City shall ensure that the operation will not create significant nuisances, hazards or adverse environmental effects.
- **P.2:** Mining operations shall comply with all applicable City policies and standards in the Municipal Code and noise standards in the Noise Element of the General Plan.
- **P.3:** New or substantially expanded mining operations in the Planning Area shall adhere to the following standards:
  - Demonstrate no significant adverse impacts from the mining operation on adjoining areas and uses including, but not limited to noise, dust and vibration.
  - Demonstrate no substantial increase in hazards to neighboring uses, water quality, air quality, agricultural resources or biological resources.
  - Demonstrate that the proposed plan complies with existing applicable County and State waste management plans and standards.
  - Create a landscaped buffer zone between quarrying operations and all adjacent uses other than quarries.
  - Use berms, barriers, sound walls, and other similar measures to assure that noise from quarrying does not exceed ambient noise level standards relevant to noise-sensitive adjacent uses.
  - Demonstrate that the operation can be serviced by existing truck routes.
- **Objective OSC-3.3:** Reuse mined property in a manner consistent with General Plan goals.
- **P.1:** Mined property shall be left in a condition suitable for reuse in conformance with the General Plan land use designations and in accordance with the California Surface Mining and Reclamation Act (SMARA)
- **P.2:** Once mining operations are phased out, lands designated as Aggregate may be redeveloped.

3.11.4 - Methodology

FCS reviewed the California State Mining and Geology Board's "Portland Cement Concrete Aggregate in the Stockton-Lodi Production-Consumption Region [San Joaquin County, California]" and the City of Tracy General Plan for information about mineral resources.

3.11.5 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

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

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan? (Refer to Section 6.1, Effects Found not to be Significant.)

3.11.6 - Project Impacts and Mitigation Measures

Loss of Minerals of Statewide Importance

Impact MIN-1:	**The project would not 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.**

Impact Analysis

This impact analysis considers the Tracy Development Project Area and the Residential Annexation Area together, as they are both located within MRZ-2 for aggregate as designated by the State Mining and Geology Board. As previously mentioned, aggregate production has never occurred within the Project Area. In addition, the City of Tracy General Plan DEIR states that the City "has an agreement with the State Division of Mines and Geology that the area north of Linne Road would allow for urban development, while the area south of Linne Road would be protected for aggregate mining" (page 4.8-4). The Project Area is located to the north of Linne Road, and the City has set aside this land for urban development. The policies set forth in the General Plan would "minimize potential land use conflicts between aggregate resource activities and other uses" (General Plan DEIR, page 4.8-7). Therefore, the loss of mineral resources would be considered a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Loss of Mineral Resources of Local Importance

Impact MIN-2:	**The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan.**

Impact Analysis

The Project Area is located in a residential area, with no known active mineral extraction sites. The closest mineral resource recovery site is Pereira Mine, which is no longer in use and was sealed in 2008. The project would not result in the loss of minerals of local importance. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

THIS PAGE INTENTIONALLY LEFT BLANK

3.12 - Noise

3.12.1 - Introduction

This section describes the existing noise setting and potential effects from project implementation on the site and its surrounding area. This section also evaluates whether any additional impacts would result from inclusion of the 42-lot annexation area component. Descriptions and analysis in this section are based on noise modeling performed by FirstCarbon Solutions, the City of Tracy General Plan, and the City's General Plan Final Supplemental EIR. The noise modeling output is included in this EIR as Appendix I.

3.12.2 - Environmental Setting

Characteristics of Noise

Noise is generally defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

Several noise measurement scales exist which are used to describe noise in a particular location. A *decibel* (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3.0 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3.0 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the *A-weighted sound level* (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Table 3.12-1 shows some representative noise sources and their corresponding noise levels in dBA.

Table 3.12-1: Typical A-Weighted Noise Levels

Indoor Noise Source	Noise Level (dBA)	Outdoor Noise Sources
(Threshold of Hearing in Laboratory)	0	—
Library	30	Quiet Rural Nighttime
Refrigerator Humming	40	Quiet Suburban Nighttime
Quiet Office	50	Quiet Urban Daytime
Normal Conversation at 3 feet	60	—
Vacuum Cleaner at 10 feet	70	Gas Lawn Mower at 100 feet
Hair Dryer at 1 foot	80	Freight Train at 50 feet
Food Blender at 3 feet	90	Heavy-duty Truck at 50 feet
Inside Subway Train (New York)	100	Jet Takeoff at 2,000 feet

Table 3.12-1 (cont.): Typical A-Weighted Noise Levels

Indoor Noise Source	Noise Level (dBA)	Outdoor Noise Sources
Smoke Detector Alarm at 3 feet	110	Unmuffled Motorcycle
Rock Band near stage	120	Chainsaw at 3 feet
—	130	Military Jet Takeoff at 50 feet
—	140	(Threshold of Pain)
Source: Compiled by FCS, 2014.		

Noise impacts can be described in three categories. The first is audible impacts, which refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater, since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6-dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound, including during sensitive times of the day and night. The predominant rating scales in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). The equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. These additions are made to the sound levels at these times because there is a decrease in the ambient noise levels during the evening and nighttime hours, which creates an increased sensitivity to sounds. For this reason, sound is perceived to be louder in the evening and nighttime hours as compared to daytime hours, and is weighted accordingly. Many cities rely on the CNEL noise standard to assess transportation-related impacts on noise-sensitive land uses.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a

stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise standards in terms of percentile exceedance levels, Ln, are often used together with the L_{max} for noise enforcement purposes. When specified, the percentile exceedance levels are not to be exceeded by an offending sound over a stated time period. For example, the L_{10} noise level represents the level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level (which means that the noise level exceeds the L_{50} noise level half of the time, and is less than this level half of the time). The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the lowest noise level experienced during a monitoring period. The L_{90} noise level is normally referred to as the background noise level. For a relatively steady noise, the measured L_{eq} and L_{50} are approximately the same.

Construction Noise Fundamentals

Construction is performed in discrete steps or phases, each of which has its own mix of equipment and, consequently, its own noise characteristics. Typical phases of construction include demolition, excavation, grading, and building construction. These various sequential phases would change the character of the noise generated on each construction site and, therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Construction-period noise levels are higher than background ambient noise levels, but eventually cease once construction is complete. Table 3.12-2 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3.12-2: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pickup Truck	No	55
Pumps	No	77
Air Compressors	No	80
Backhoe	No	80
Front-End Loaders	No	80
Portable Generators	No	82
Dump Truck	No	84
Tractors	No	84
Auger Drill Rig	No	85
Concrete Mixer Truck	No	85
Cranes	No	85

Table 3.12-2 (cont.): Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Dozers	No	85
Excavators	No	85
Graders	No	85
Jackhammers	Yes	85
Man Lift	No	85
Paver	No	85
Pneumatic Tools	No	85
Rollers	No	85
Scrapers	No	85
Concrete/Industrial Saws	No	90
Impact Pile Driver	Yes	95
Vibratory Pile Driver	No	95
Source: FHWA, 2006.		

Groundborne Vibration Fundamentals

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish these vibration levels from noise levels, the unit is written as "VdB."

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project related impacts are expressed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 3.12-3.

The vibration level at a distance from a source can be calculated using the following propagation formula (this formula is based on point sources with normal propagation conditions) (FTA, 2006):

$$PPV_{equip} = PPV_{ref} \times (25/D)^{n}$$

Where:

PPV (equip) is the peak particle velocity in inches per second (in/sec) of the equipment adjusted for distance;
PPV (ref) is the reference vibration level in in/sec at 25 feet from Table 3.12-3;
D is the distance from the equipment to the receiver; and
n is the vibration attenuation rate through ground.

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment manual (2006), an "n" value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

Table 3.12-3: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer—small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer—Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112
Source: Compilation of scientific and academic literature, generated by FTA and FHWA.		

Existing Setting

Existing Noise Sources

The project site is generally bounded by Valpico Road to the north and Corral Hollow Road to the west. Existing high-density residences are situated to the east and south of the project site. Rural residential uses are immediately adjacent to the west of the project boundary with Corral Hollow Road west of these sensitive uses. Planned residential uses (in farmland use at the time of adoption of the Tracy Village Specific Plan) are also located to the west. Corral Hollow Road is the main north-south collector on the west side of the City of Tracy, and Valpico Road is an important east-west collector in the southern portion of the City of Tracy.

Traffic noise along Valpico Road adjacent to the northern boundary of the project site is the dominant noise source, as was observed at the time of the noise monitoring effort described below. Other noise sources in the project area include stationary noise sources such as typical neighborhood yard maintenance noise, seasonal agriculture activities, dogs barking, wind noise, and birds.

Noise Monitoring Results

Ambient noise measurements were conducted adjacent to the project site to document the existing noise environment and capture the noise levels associated with operations or activities in the project area. The short-term noise measurement results are described below and summarized in Table 3.12-4.

Short-term Noise Measurements

Short-term noise measurements were conducted during midday peak noise hours between 10:30 a.m. and 1:00 p.m. on Wednesday, April 1, 2015. The noise measurements reflect the ambient noise conditions during the midday hours, which typically have the highest daytime noise levels in urban environments. The sound level meter and microphone were mounted on a tripod 5 feet above the ground and were equipped with a windscreen during all measurements. The noise measurement locations are shown on Exhibit 3.12-1. The noise measurement data sheets are provided in Appendix H of this EIR.

Table 3.12-4: Noise Measurement Results Summary

Site Location	Description	L_{eq}	L_{max}	L_{min}
ST-1	Approximately 50 feet from the centerline of Valpico Rd at the northwest corner of the project site.	57.5	69.1	49.6
ST-2	Approximately 100 feet from the centerline of Valpico Rd at the northeast corner of the project site.	51.9	61.9	45.1
ST-3	At the western end of the cul-de-sac of Bluegrass Lane.	47.6	59.2	38.1
ST-4	Approximately 270 feet from the centerline of Corral Hollow Road at the western boundaries of the project site between two existing residential land uses.	53.1	65.8	41.1
Source: FirstCarbon Solutions, 2016.				



Source: ESRI Imagery, 2015

FIRSTCARBON SOLUTIONS™

500 250 0 500 Feet

Exhibit 3.12-1
Noise Monitoring Locations

THIS PAGE INTENTIONALLY LEFT BLANK

The noise measurement results show that daytime ambient noise levels were 57.5 dBA L_{eq} at ST-1, near the northwest corner of the project site. Ambient noise levels at ST-2 location were measured to be 51.9 dBA L_{eq}, near the northeast corner of the project site. The daytime ambient noise at ST-3 measured 47.6 dBA L_{eq}, along the eastern boundary of the project site. Measurement ST-4 documented noise levels of 53.1 dBA L_{eq}, near the western boundary of the project site. Maximum noise levels ranged from 59.2 dBA to 69.1 dBA L_{max} throughout the project vicinity. The maximum noise levels all reflect vehicular traffic noise sources. The minimum documented noise levels ranged from 38.1 dBA to 49.6 dBA L_{min}.

Existing Traffic Noise

Noise levels related to vehicular traffic were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, amongst other variables. The daily traffic volumes were obtained from the project-specific traffic study (Kimley-Horn 2017). The model inputs and outputs, including the 60 dBA, 65 dBA, and 70 dBA L_{dn} noise contour distances for modeled traffic conditions, without and with the project, are provided in Appendix H of this report. A summary of the modeling results for existing traffic conditions on roadway segments in the project vicinity are shown in Table 3.12-5 below.

Table 3.12-5: Existing Traffic Noise Levels

Roadway Segment	ADT [1]	Center-line to 70 L_{dn} (feet)	Center-line to 65 L_{dn} (feet)	Center-line to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane
Lammers Road—W Schulte Road to Valpico Road	6,600	< 50	< 50	75	61.9
Corral Hollow Road—Peony Drive to Middlefield Drive	5,800	< 50	< 50	104	64.0
Corral Hollow Road—Middlefield Drive to W. Linne Road	5,700	< 50	< 50	103	64.0
Tracy Boulevard—W. Central Avenue to Valpico Road	14,700	< 50	76	160	65.8
Valpico Road—Lammers Road to Corral Hollow Road	6,000	< 50	< 50	71	61.5
Valpico Road—Corral Hollow Road to N. Project Driveway	8,100	< 50	< 50	86	62.8
Valpico Road—N. Project Driveway to Cagney Way	8,100	< 50	< 50	86	62.8
Valpico Road—Cagney Way to Tracy Boulevard	8,400	< 50	< 50	90	61.9

Table 3.12-5 (cont.): Existing Traffic Noise Levels

Roadway Segment	ADT [1]	Center-line to 70 L_{dn} (feet)	Center-line to 65 L_{dn} (feet)	Center-line to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane
Middlefield Drive—Peony Drive to Corral Hollow Road	1,700	< 50	< 50	< 50	56.1
Peony Dr.—Corral Hollow Road to Middlefield Drive	1,300	< 50	< 50	< 50	51.5

Notes:
[1] Average Daily Traffic volumes.
[2] Traffic noise within 50 feet of roadway centerline requires site specific analysis.
Source: FCS, 2017

Existing Stationary Noise

The project site is surrounded by existing and planned residential land uses to the north, south, east, and west. Church and agricultural land uses are located west of Corral Hollow Road. These various land uses in the project vicinity generate noise from landscaping and maintenance equipment activities. These activities are potential point sources of noise that affect the existing noise environment.

Existing Vibration

The existing vibration environment, similar to that of the noise environment, is dominated by transportation-related vibration from roadways in the project area. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions. For example, large loaded trucks traveling on normal roadway surfaces have been found to produce vibration levels of up to 0.076 PPV at 25 feet. Under normal pavement conditions, free of major potholes, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the right-of-way.

3.12.3 - Regulatory Framework

Federal Regulations

United States Environmental Protection Agency (EPA)

In 1972, Congress enacted the Noise Control Act. This act authorized the EPA to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) categories, as shown in Table 3.12-6. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of achieving the levels.

Table 3.12-6: Summary of EPA Recommended Noise Levels to Protect Public Welfare

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.
Source: EPA, 1974.		

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The EPA activity and interference guidelines are designed to ensure reliable speech communication from a distance of approximately five feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Federal Transit Administration

The Federal Transit Administration (FTA) has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in the FTA's *Transit Noise and Vibration Impact Assessment* (FTA 2006). The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 3.12-7.

Table 3.12-7: Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced—Concrete, Steel or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non Engineer Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90
Source: FTA, 2006.		

State Regulations

The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the "State Noise Insulation Standard," it requires buildings to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the receptor. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor-ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA L_{dn} in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in an area with exterior noise levels greater than 60 dBA L_{dn}.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise and land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. The City of Tracy has adopted the State's land use compatibility guidelines, as discussed below and shown in Exhibit 3.12-2.

Local Regulations

The project site is located within unincorporated area of San Joaquin County and requires annexation into the City of Tracy. The City of Tracy addresses noise in the Noise Element of the General Plan[1] and in the Municipal Code.[2]

City of Tracy General Plan, 2011

The Noise Element establishes standards to provide compatible noise environments for new development or redevelopment projects and to control excessive noise exposure of existing developments. Goals, policies, actions, and standards provided in the Noise Element provide the basis for decision-making on determining land use compatibility with noise sources associated with the proposed project, as well as mitigation requirements.

Exhibit 3.12-2 shows a summary of different land uses in the City and their associated acceptable and unacceptable noise levels, as originally presented in Figure 9-3 of the Noise Element. These guidelines state that environments with noise levels ranging up to 60 dBA L_{dn} are considered "normally acceptable" for new residential land use development; environments with ambient noise levels greater than 60 dBA and up to 75 dBA L_{dn} are considered "conditionally acceptable" for new residential

[1] Tracy, City of, 2011. City of Tracy General Plan. February 1.
[2] Tracy, City of, 2014. Tracy, California Municipal Code. April 16.

development and new construction should only be undertaken after a detailed analysis of noise reduction requirements are made and needed noise insulation features are included in the design.

The City of Tracy General Plan includes the following goals and policies that address noise and are applicable to the project:

Chapter 9, Noise Element

- **Objective N-1.1:** Ensure appropriate exterior and interior noise levels for new land uses.
- **P4.** New residential uses exposed to noise levels exceeding 60 L_{dn} shall be analyzed following protocols in the operative California Building Code or other operative code.
- **P5.** For new residential land uses, noise from external sources shall not cause building interiors to exceed 45 L_{dn}.
- **P7.** New residential development affected by noise from railroads or aircraft operations shall be designed to limit typical maximum instantaneous noise levels to 50 dBA in bedrooms and 55 dBA in other rooms.
- **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 Exhibit 3.12-2.

Tracy, California Municipal Code

Title 4, Chapter 12, Article 9 of the Tracy, California Municipal Code also contains guidance with the intent to control noise and vibration to promote and maintain the health, safety, and welfare of its residents. Section 4.12.720 of the Municipal Code generally prohibits certain activities that have the potential to result in loud, excessive, or unreasonable noise levels. According to the general sound level limits for residential districts, no person shall 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 on which the sound is produced to exceed 55 dBA for any one-hour average period. Specific activities enumerated in the municipal code that could potentially pertain to the proposed project include minor maintenance to or improvement of real property. This limitation prohibits the generation of construction noise, other than between the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays. The noise ordinance also specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam or electric hoist, parking lot cleaning equipment, or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m.

3.12.4 - Methodology

Noise Monitoring Methodology

To ascertain the existing noise at and adjacent to the project site, field monitoring was conducted on Wednesday, April 1, 2015. The purpose of this noise monitoring was to document the existing noise environment and capture the noise levels associated with operations or activities in the project area. The field survey noted that noise within the project study area is generally characterized by vehicle traffic on the local roadways.

The short-term noise measurements were taken using Larson-Davis Model LxT2 Type 2 precision sound level meters programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 150. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Traffic Noise Modeling Methodology

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. Traffic data used in the model was obtained from the Kimley-Horn Traffic Impact Study (TIS) prepared for the project (Appendix H). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the L_{dn} values. The FHWA-RD-77-108 Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level. Adjustments are then made to the reference energy mean emission level to account for the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total average daily traffic (ADT); and the percentage of ADT that flows during the day, evening, and night; the travel speed; the vehicle mix on the roadway; a percentage of the volume of automobiles, medium trucks, and heavy trucks; the roadway grade; the angle of view of the observer exposed to the roadway; and the site conditions ("hard" or "soft") as they relate to the absorption of the ground, pavement, or landscaping.

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of traffic noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the FHWA community noise assessment criteria, this change is "barely perceptible." For reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

The model analyzed the noise impacts from the nearby roadways onto the project vicinity, which consists of the area that has the potential of being impacted from the on-site noise sources as well as the project-generated traffic on the nearby roadways**.** The roadways were analyzed based on a single-lane-equivalent noise source combining both directions of travel. A single-lane-equivalent noise source exists when the vehicular traffic from all lanes is combined into a theoretical single lane that has a width equal to the distance between the two outside lanes of a roadway, which provides almost identical results to analyzing each lane separately where elevation changes are minimal.

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						

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.

Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any building involved are of normal conventional construction, without any special insulation requirements.

Conditionally Acceptable
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

Unacceptable
New construction or development should generally not be undertaken becuase mitigation is usually not feasible to comply with noise element policies.

Exhibit 3.12-2
Land Use Compatibility for Community Noise Environment

FIRSTCARBON SOLUTIONS™

THIS PAGE INTENTIONALLY LEFT BLANK

3.12.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, noise impacts resulting from the implementation of the proposed project would be considered significant if the project would cause:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

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 expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Refer to Section 6, Effects Found not to be Significant.)

3.12.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

This analysis evaluates impacts associated with both components of the project, the Tracy Village Development component as well as the Residential Annexation Area component. As such, noise impacts are analyzed in consideration of implementation of the entire project, and not separately for each component. The Residential Annexation would not add any units or construct any units directly. However, it should be noted that, in general, as the following impact analysis shows, the Residential Annexation Area component of the project would not result in any new noise impacts: it would not result in an exceedance of established standards, it would not expose persons to excessive vibration levels, it would not result in a significant permanent or temporary increase in ambient noise levels, and it would not expose persons to excessive aircraft-related noise levels.

Noise Levels in Excess of Standards

Impact NOI-1: **The project could result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Impact Analysis

Tracy Village Development Project: Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

Short-term Construction Noise Impacts

The project's construction schedule will ultimately be determined by market demand, but site preparation activities may start as early as 2018. The project may be constructed in continuous, overlapping stages until up to 600 residences are built. However, as required by the City, all necessary on-site and off-site improvements, such as infrastructure, utilities, circulation access, and parking, must be in place prior to issuance of occupancy permits. Consistent with the provisions outlined in the Tracy Municipal Code, construction activities on the project site would be restricted to the hours of 7:00 a.m. to 10:00 p.m., daily.

Two types of short-term noise impacts would occur during site preparation and project construction. The first type would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. The transport of workers and construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Because workers and construction equipment would use existing routes, noise from passing trucks would be similar to existing vehicle-generated noise on these local roadways. For this reason, short-term intermittent noise from trucks would be minor when averaged over a longer time period and would not be expected to exceed existing peak noise levels in the project vicinity. Therefore, short-term construction-related noise impacts associated with worker and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during site-preparation, grading, and construction activities. Construction is performed in discrete steps, each of which has its own mix of equipment, and consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on-site. Thus, the noise levels vary as construction progresses. Despite the variety in the types and sizes of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction noise ranges to be categorized by work phase. Table 3.12-2 provides the maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 feet between the equipment and a noise receptor.

The site preparation phase, which includes excavation and grading activities, tend to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. Typical

operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

Construction of the project is expected to require the use of scrapers, bulldozers, water trucks, haul trucks, and pickup trucks. Based on the information provide in Table 3.12-2, the maximum noise level generated by each scraper is assumed to be 85 dBA L_{max} at 50 feet from this equipment. Each bulldozer would also generate 85 dBA L_{max} at 50 feet. The maximum noise level generated by graders is approximately 85 dBA L_{max} at 50 feet. Each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from an active construction area.

The project site is bordered by single-family residential land uses. The nearest off-site residences would be located approximately 100 feet from the center of construction activity where multiple pieces of heavy machinery would be operating. At this distance, construction noise levels at the exterior facade of these buildings would be expected to range up to 84 dBA L_{max} intermittently when multiple pieces of heavy construction equipment operate simultaneously at the nearest center of construction activity.

Although there would be a relatively high single event noise exposure potential causing intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small, but could result in annoyance or even sleep disturbance of nearby sensitive receptors if operating outside daytime hours. The noise ordinance of the Municipal Code prohibits the generation of construction noise, other than between the hours of 7:00 a.m. and 10:00 p.m. Thus, compliance with the City's permissible hours of construction, as well as compliance with best management practices (BMPs) construction noise reduction measures outlined in Mitigation Measure (MM) NOI-1a, would ensure that construction noise would not result in sleep disturbance of sensitive receptors or exposure of persons to noise levels in excess of established standards. With the incorporation of mitigation, short-term construction impacts associated with applicable noise standards established by the City of Tracy would be less than significant.

On-site Traffic Noise Impacts

A significant impact would occur if the project would be exposed to traffic noise levels in excess of the City's "normally compatible" standard of 60 dBA L_{dn} for new residential land use development. In addition, for new residential land uses, noise from external sources shall not cause building interiors to exceed 45 L_{dn}.

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate future project-related traffic noise levels along modeled roadway segments in the vicinity of the project site. Traffic data used in the model was obtained from the project-specific traffic study. The resultant noise levels were weighed and summed over a 24-hour period in order to determine the L_{dn} values. The traffic noise modeling input and output files are included in Appendix H. The project site is located adjacent to Valpico Road. The traffic noise modeling results for background (year 2016) and cumulative (year 2030) conditions, without and with the project, are summarized in Table 3.12-8.

As shown in Table 3.12-5, above, existing traffic noise levels along Valpico Road adjacent to the project site range up to 63 dBA L_{dn}, exceeding of the City's "normally compatible" standard of 60 dBA L_{dn} for new residential land use development. Based on the traffic noise modeling results shown in Table 3.12-8, the project site would be exposed to traffic noise levels ranging from 64.9 dBA to 67.6 dBA L_{dn} at 50 feet from the centerline of the nearest travel lane of Valpico Road, under background (year 2016) and future (year 2030) plus project conditions, respectively. Traffic noise levels for future year 2030 residents located adjacent to Valpico Road would exceed the City's "conditionally acceptable" (greater than 60 dBA L_{dn}) for new residential development, and new construction should only be undertaken after noise insulation features are included in the design to ensure that the interior noise level standard is maintained. It should be noted, that at the time of this analysis, exact lot layouts and detailed design features for proposed residential uses have not yet been developed.[3] However, the proposed project would include a minimum 6-foot-high soundwall along the northern property line bordering Valpico Road.

Table 3.12-8: Existing and Future Modeled Roadway Noise Levels

Roadway Segment	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane					
	Background (2016) No Project	Background (2016) + Project	Increase over Background No Project (dBA)	Cumulative (2030) No Project	Cumulative (2030) + Project	Increase over Future No Project (dBA)
Lammers Road—W Schulte Road to Valpico Road	66.8	67.2	0.4	71.5	71.5	0.0
Corral Hollow Road—Peony Drive to Middlefield Drive	69.9	69.9	0.0	69.4	69.4	0.0
Corral Hollow Road—Middlefield Drive to W. Linne Road	70.7	70.7	0.0	70.3	70.4	0.1
Tracy Blvd.—W. Central Avenue to Valpico Road	66.6	67.1	0.5	68.9	69.2	0.3
Valpico Road—Lammers Road to Corral Hollow Road	64.0	64.7	0.7	66.2	66.6	0.4
Valpico Road—Corral Hollow Road to N. Project Driveway	63.6	64.9	1.3	66.9	67.6	0.7
Valpico Road—N. Project Driveway to Cagney Way	62.8	63.8	1.0	66.9	67.4	0.5
Valpico Road—Cagney Way to Tracy Boulevard	63.5	64.2	0.7	66.0	66.4	0.4
Middlefield Drive—Peony Drive to Corral Hollow Road	59.3	59.5	0.2	59.3	59.5	0.2
Peony Dr.—Corral Hollow Road to Middlefield Drive	52.9	53.5	0.6	52.9	54.5	1.6
Source: FCS, 2017.						

[3] Impacts to new receptors are generally outside the scope of CEQA review, but are included for disclosure purposes.

According to the traffic noise modeling results shown in Table 3.12-8, traffic noise levels would range up to 67.6 dBA L_{dn} at the northern project property line adjacent to Valpico Road under cumulative plus project conditions. Implementation of a minimum 6-foot-high soundwall along the northern project property line bordering Valpico Road would provide a 7 dBA reduction as measured at the nearest residential lots compared to conditions that would exist without a soundwall. A minimum 8-foot-high soundwall would provide an expected 10 dBA reduction. Therefore, traffic noise levels would range up to approximately 61 dBA L_{dn} as measured at the nearest outdoor active use areas (backyards) of proposed residential lots bordering Valpico Road with implementation of a 6-foot-high soundwall. With implementation of an 8-foot-high soundwall traffic noise levels would range up to approximately 58 dBA L_{dn} as measured at the nearest outdoor active use areas.

Based on the EPA's Protective Noise Levels (EPA 550/9-79-100, November 1978), with a combination of walls, doors, and windows, standard construction for northern California residential buildings would provide approximately 25 dBA in exterior to interior noise reduction with windows closed and approximately 15 dBA with windows open.

With windows open, and with implementation of only a 6-foot-high soundwall, interior residential living spaces facing Valpico Road would not meet the interior noise standard of 45 dBA L_{dn} (62 dBA - 15 dBA = 47 dBA) established for new development. At a distance of approximately 180 feet from the centerline of Valpico Road, traffic noise levels would attenuate to below 60 dBA L_{dn}. Thus, as required by Mitigation Measure NOI-1b, all proposed residences with façades within 180 feet of the centerline of Valpico Road would require an alternative ventilation system, such as central air conditioning, to ensure that windows can remain closed for a prolonged period of time in order to meet the interior noise standard. This noise reduction feature would reduce on-site traffic noise impacts to meet the City's interior residential living space noise level standard of 45 dBA L_{dn} (62 dBA - 25 dBA = 37 dBA). With the incorporation of Mitigation Measure NOI-1b, long-term operational impacts associated with on-site traffic noise would be less than significant.

Alternatively, with implementation of an 8-foot-high soundwall, interior residential spaces facing Valpico Road would meet the interior noise standard of 45 dBA L_{dn} (59 dBA - 15 dBA = 44 dBA) established for new development. Therefore, no additional mitigation would be required.

On-site Stationary Source Noise Impacts

Typical new residential mechanical ventilation systems (such as exterior air conditioning units) generate noise levels from approximately 50 dBA to 65 dBA L_{eq} at 10 feet (Noise Navigator™ Sound Level Database 2015). The project site is bordered by single-family residential land uses. The closest off-site residential receptor is located approximately 35 feet from where the potentially closest new mechanical equipment could be located. At this distance, these noise levels would attenuate to below 54 dBA L_{eq} at the nearest noise sensitive receptor. This is below the existing daytime ambient noise levels, as documented through the short-term ambient noise measurements provided in Table 3.12-4. On-site stationary operational noise levels would not exceed the City's noise performance standards or result in a substantial increase in the existing ambient noise environment. Therefore, long-term operational impacts associated with on-site stationary source noise would be less than significant.

Residential Annexation Area: Implementation of the Residential Annexation Area component of the project would not result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

MM NOI-1a To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:

- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment.
- The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. 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.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site.
- The construction contractor shall ensure that all construction activities shall be limited to the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays.

MM NOI-1b Assuming implementation of only a 6-foot-high soundwall along the project's northern property line bordering Valpico Road, all proposed residences located within 180 feet of the centerline of Valpico Road shall include an alternate form of

ventilation, such as an air conditioning system, in order to ensure that windows can remain closed for a prolonged period of time. The building plans approved by the City shall reflect this requirement. Alternatively, if the project will implement construction of an 8-foot-high soundwall along the project's northern property line bordering Valpico Road, then no additional mitigation such as an alternate form of ventilation would be required.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Excessive Groundborne Vibration

Impact NOI-2:	**The project would not result in expose persons to or generation of excessive groundborne vibration or groundborne noise levels.**

Impact Analysis

Tracy Village Development Project

Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

Short-term Construction Vibration Impacts

Construction activities can result in varying degrees of ground vibration, depending on the equipment used on the construction site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table 3.12-2 provides approximate vibration levels for particular construction activities. The data in Table 3.12-7 presents a reasonable estimate for a wide range of soil conditions.

Construction of the project would require the use of heavy construction equipment such excavators, graders, backhoes, and loaders. These types of equipment produce groundborne vibration levels ranging up to 0.051 inch per second peak particle velocity (PPV) at 25 feet from the operating equipment (see Table 3.12-3). It is anticipated that this type of equipment could operate as close as 25 feet from the nearest off-site sensitive receptor. At this distance, vibration levels would range up to 0.051 PPV. This is well below the industry standard vibration damage criterion of 0.2 PPV for buildings of this type of construction (see Table 3.12-7).

Of all the equipment used during construction activities, the vibratory rollers that would be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Large vibratory rollers produce groundborne vibration levels ranging up to 0.21 PPV at 25 feet from the operating equipment. However, the closest this would operate to the nearest off-site sensitive

receptors, is approximately 110 feet during construction of the proposed internal roadways. At this distance, groundborne vibration levels could range up to 0.02 PPV from operation of a large vibratory roller at the nearest project boundary. This is well below the industry standard vibration damage criterion of 0.2 PPV for buildings of this type of construction (see Table 3.12-7). Therefore, short-term construction impacts associated with groundborne vibration would be less than significant.

Operational Vibration Impacts

Operation of the project would not include any permanent sources of groundborne vibration that would expose persons in the project vicinity to vibration levels that could be perceptible without instruments at any existing off-site sensitive land use. Additionally, there are no existing significant permanent sources of groundborne vibration in the project vicinity to which the project would be exposed. Therefore, long-term operational groundborne vibration impacts would be less than significant.

Residential Annexation Area: Implementation of the Residential Annexation Area component of the project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Permanent Increase in Ambient Noise Levels

Impact NOI-3:	**The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

Impact Analysis

Tracy Village Development Project

Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

Significant noise impacts to off-site receptors would occur if the project would result in a substantial increase in ambient noise levels compared to noise levels existing without the project. A change of 3 dB is the lowest change that can be perceptible to the human ear in outdoor environments, while a change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, a substantial increase is considered 5 dBA or greater in ambient noise levels in the project vicinity above levels existing without the project.

Off-site Traffic Noise Impacts

The greatest increase in traffic noise levels with implementation of the project would occur along Valpico Road from Corral Hollow Road to N. Project Driveway. This roadway segment currently experiences traffic noise levels of 62.8 dBA L_{dn} under existing conditions. Under the 2016 traffic scenario, Valpico Road from Corral Hollow Road to N. Project Driveway would experience traffic noise levels of 63.6 dBA L_{dn} without project traffic and 64.9 dBA L_{dn} with project traffic. This represents an increase of only 1.3 dBA. Under the 2030 traffic scenario, Valpico Road from Corral Hollow Road to N. Project Driveway would experience traffic noise levels of 66.9 dBA L_{dn} without project traffic and 67.6 dBA L_{dn} with project traffic. This represents an increase of only 0.7 dBA. Audible increases in noise levels generally refer to a change of 3.0 dBA or greater, since this level has been found to be barely perceptible in exterior environments. Thus, project-related traffic would not result in a perceptible permanent increase in existing ambient noise levels along any roadway segment in the project vicinity. Therefore, long-term operational impacts associated with off-site traffic noise would be less than significant.

Off-site Stationary Source Noise Impacts

Further, typical new residential mechanical ventilation systems (such as exterior air conditioning units) generate noise levels from 50 dBA to 65 dBA L_{eq} at 10 feet. As is shown in the Impact NOI-1 discussion above, noise levels from proposed mechanical ventilation equipment would attenuate to below 54 dBA L_{eq} at the nearest off-site noise sensitive receptor. This is below the existing daytime ambient noise levels, as documented through the short-term noise measurements provided in Table 3.12-4. On-site stationary operational noise levels would not exceed the City's noise performance standards or result in a substantial increase in the existing ambient noise environment. Therefore, long-term operational impacts associated with off-site stationary source noise would be less than significant.

Residential Annexation Area: Implementation of the Residential Annexation Area component of the project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Temporary or Periodic Increase in Ambient Noise Levels

Impact NOI-4:	**The project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Impact Analysis

Tracy Village Development Project

Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

Construction noise impacts were analyzed in the Impact NOI-1 discussion above. As discussed previously, project-related construction noise levels at the closest noise-sensitive land use to the project site could range up to approximately 84 dBA L_{max} when multiple pieces of construction equipment operate simultaneously on the project site. The closest noise-sensitive land uses are the residential land uses on the east side of the project boundary. Overall, average daily project construction noise levels would be much lower than the scenario described above, as all equipment would not always operate simultaneously, and it would also be lower as the equipment operates toward the center of the project site further from off-site receptors. Therefore, although there would be a relatively high single event noise exposure potential causing intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small. However, compliance with the stated restrictions on permissible hours of construction, as well as implementation of best management noise reduction measures as outlined in Mitigation Measure NOI-1, would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels as measured at sensitive receptors in the project vicinity.

Residential Annexation Area

Implementation of the Residential Annexation Area component of the project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

Implement Mitigation Measure NOI-1.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Airport Noise Levels

Impact NOI-5:	**The project would not expose people residing or working in the project area to excessive noise levels due to its location within an airport land use plan.**

Impact Analysis

Tracy Village Development Project

Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

The nearest public airport to the project site is the Tracy Municipal Airport, which is located approximately 1.3 miles south of the site. According to Figure 9-1 and Figure 9-2 in the General Plan, the project site lies outside of the existing as well as future 55 dBA CNEL noise contours around the Tracy Municipal Airport. Therefore, while occasional aircraft noise would be audible on the project site, implementation of the project would not expose persons residing or working in the project area to noise levels from airport activity that would be in excess of normally acceptable standards for residential land use development. Impacts associated with public airport noise would be less than significant.

Residential Annexation Area

Implementation of the Residential Annexation Area component of the project would not expose people residing or working in the project area to excessive noise levels. According to Figure 9-1 and Figure 9-2 in the General Plan, the project site lies outside of the existing as well as future 55 dBA CNEL noise contours around the Tracy Municipal Airport. Therefore, while occasional aircraft noise would be audible on the project site, implementation of the project would not expose persons residing or working in the project area to noise levels from airport activity that would be in excess of normally acceptable standards for residential land use development. Impacts associated with public airport noise would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Private Airstrip Noise Levels

Impact NOI-6:	**The project would not expose people residing or working in the project area to excessive noise levels because of its location within the vicinity of a private airstrip.**

Impact Analysis

Tracy Village Development Project

Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

The nearest private airstrip is the 33 Strip Airport, located approximately 7 miles southeast of the project site. Because of the distance from and orientation of the airport runways, the project would not be affected by airport noise levels. Therefore, less than significant impacts associated with private airstrip noise will occur with implementation of the project.

Residential Annexation Area

Implementation of the Residential Annexation Area component of the project would not expose people residing or working in the project area to excessive noise levels because it is not located within the vicinity of a private airstrip.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Cumulative Noise Levels

Impact NOI-7: The project would not contribute to cumulative noise impacts in the area.

Impact Analysis

Tracy Village Development Project

Noise impacts associated with the proposed Tracy Village Development Project are analyzed as follows.

Implementation of the project could potentially result in cumulative impacts associated with noise when combined with other past, present, and reasonably foreseeable future projects in the broader project area (see Section 3 of this Draft EIR for a list of cumulative projects). However, as addressed above, the project's individual impacts related to noise would be less than significant with mitigation and project implementation would not exceed applicable noise standards established by the City of Tracy or result in a permanent or temporary increase in ambient noise levels in the project vicinity.

Significant noise impacts to off-site receptors would occur if the project resulted in a substantial increase in ambient noise levels contributing to a cumulative noise impact in the project area. As previously addressed in Impact NOI-3, the greatest increase in project-related traffic noise levels would occur along Valpico Road from Corral Hollow Road to N. Project Driveway. This roadway would experience an increase of 1.7 dBA under 2016 traffic conditions and a 0.7 dBA increase under the 2030 traffic conditions, with implementation of the project compared to conditions without the project. Audible increases in noise levels generally refer to a change of 3.0 dBA or greater, since this level has been found to be barely perceptible in exterior environments. Thus, implementation of the proposed project would not result in any perceptible permanent increase in ambient noise levels compared to levels existing without the project. In addition, project-related traffic noise levels would not result in an exceedance of any of the City's "conditionally acceptable" land use noise compatibility standards for any receiving land use in the project vicinity. As such, project-related traffic noise increases would not contribute to an existing noise impact. Therefore, in combination with existing and reasonably foreseeable future projects, the proposed project would not contribute to a cumulatively considerable impact to noise.

Residential Annexation Area

Implementation of the Residential Annexation Area component of the project would not contribute to a cumulatively considerable impact to noise.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

3.13 - Population and Housing

This section describes population and housing and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the City of Tracy 2009–2014 Housing Element, San Joaquin Association of Governments (SCAG), the United States Census Bureau (U.S. Census Bureau), the American Community Survey (ACS), and City records.

3.13.1 - Existing Conditions

Current Population, Housing, and Employment Estimates

The California Department of Finance estimated the population of the City of Tracy to be 73,067 as of January 1, 2016. The California Department of Employment Development estimated employment to be 36,000 in July 2014. Population, housing, and employment characteristics for City of Tracy and San Joaquin County are summarized in Table 3.13-1.

Table 3.13-1: Population, Housing, and Employment Characteristics (2016)

Area	Population	Housing Units	Employment
City of Tracy	89,208	26,223	—
San Joaquin County	733,383	239,405	—
Source: Table 2: E-5 City/County Population and Housing Estimates, January 2016 Website http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/. Accessed March 30, 2017.			

Historic Population Growth

The population of the City of Tracy has grown significantly between 1990 and 2010. Table 3.13-2 depicts population and household trends from 1990, 2000, and 2010. The City of Tracy is predicted to outpace the growth of San Joaquin County.

Table 3.13-2: Historic Population Growth Trends in San Joaquin County

Jurisdiction	1990	2000	2010	2015	Population Growth		
					1990–2000	2000–2010	2010–2015
Escalon	4,437	5,963	7,132	7,413	34.4%	19.6%	3.9%
Lathrop	6,841	10,445	18,023	20,353	52.7%	72.6%	12.9%
Lodi	51,874	56,999	62,134	63,719	9.9%	9.0%	2.6%
Manteca	40,773	49,258	67,096	73,787	20.8%	36.2%	10.0%
Ripon	7,455	10,146	14,297	14,922	36.1%	40.9%	4.4%
Stockton	210,943	243,771	291,707	306,999	15.6%	19.7%	5.2%
Tracy	33,558	56,929	82,922	85,296	69.6%	45.7%	2.9%

Table 3.13-2 (cont.): Historic Population Growth Trends in San Joaquin County

Jurisdiction	1990	2000	2010	2015	Population Growth		
					1990–2000	2000–2010	2010–2015
County Total	480,628	563,598	685,306	719,511	17.3%	21.6%	5.0%

Sources:
[1] Bureau of the Census, 1990, 2000, and 2010.
[2] State of the Department of Finance Population and Housing Estimates, 2015.

The City of Tracy population increased from approximately 33,558 to 56,929 persons from 1990 to 2000 (Table 3.13-2). This 70 percent increase in population was the highest of any San Joaquin County city during the Census period. Other cities in San Joaquin County had high population growth as well, as shown in Table 3.13-2. By 2015, the City population reached 85,296, according to the Census. The State Department of Finance estimated the 2016 City population at 89,208 people.[1]

Houses/Housing Size

At the City level, the number of houses increased slightly by 260 homes from 2010 to 2016, a 1 percent change. In the County, housing units grew almost 2.4 percent from 233,755 to 239,405 units. Household size, measure as person per household, also grew in both the City and the County (Table 3.13-3).

Table 3.13-3: Housing and Persons per Household

Area	Total Units of Houses[1] in 2010	Persons Per Household in 2010	Total Units of Houses in 2016	Persons Per Household in 2016	(HH) Percent Change from 2010–2016	(PPH) Percent Change from 2010–2016
City of Tracy	25,963	3.40	26,223	3.44	1%	1%
San Joaquin County	233,755	3.12	239,405	3.17	2.36%	1.6%

Note:
[1] Includes multi-family units
Source: Table 2: E-5 City/County Population and Housing Estimates, January 2016. Website: http://www.dof.ca.gov /Forecasting/Demographics/Estimates/E-5/. Accessed March 30, 2017. Employment Growth.

Between 1990 and 2003, the number of jobs in Tracy increased from 11,112 to 29,078. From 2008-2013, there was 36,537 jobs in the City of Tracy. As population continues to increase, similar trends in employment are likely to continue. Table 3.13-4 shows the breakdown of the different types of jobs in Tracy.

[1] Department of Finance E-1 City/County Population Estimates, Website: http://www.dof.ca.gov/Forecasting/Demographics /Estimates/E-1/. Accessed March 31, 2017.

Table 3.13-4: Employment Profiles

Industry	2006–2010		2008–2013	
	Number	Percent	Number	Percent
Agriculture, Forestry, Fishing and Hunting and Mining	430	1.2%	505	1.4%
Construction	3,346	9.4%	3,248	8.9%
Manufacturing	4,755	13.4%	4,561	12.5%
Wholesale Trade	1,176	3.3%	1,758	4.8%
Retail Trade	4,785	13.5%	5,485	15.0%
Transportation and Warehousing, and Utilities	2,295	6.5%	1,957	5.4%
Information	1,236	3.5%	1,255	3.4%
Finance, Insurance, Real Estate	2,376	6.7%	2,016	5.5%
Professional, Scientific, Management, Administrative	4,227	11.9%	4,273	11.7%
Educational, Health and Social Services	5,106	14.4%	5,580	15.3%
Arts, Entertainment, Recreation, Accommodation & Food Services	2,581	7.3%	2,882	7.9%
Other Services	1,412	4.0%	1,563	4.3%
Public Administration	1,708	4.8%	1,454	4.0%
Total	**35,433**	**100.0%**	**36,537**	**100.0%**
Source: Bureau of the Census, American Community Survey, (2006–2010 and 2008–2013)				

According to the California Employment Development Department, there were 39,400 jobs in February 2017.[2]

Employment Growth Projections

The City of Tracy estimates a total of 29,557 jobs within the city limit. According to the SJCOG Regional Housing Needs Plan, employment growth projections for Tracy are expected to reach 24,581 jobs by 2023, which is 4,976 fewer jobs than reported by the City of Tracy for 2017.[3] The two different sources list conflicting numbers and have been included for informational purposes.

Regional Housing Needs Allocation

The Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan, and is a key tool for SJCOG and its member governments to create a better balance of jobs and housing in communities, ensure the availability of decent affordable housing for all income groups and achieve sustainability through long term strategic land use planning.

[2] California Employment Development Department Monthly Labor Data Force, February 2017. Website: http://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html.

[3] Ewen, Josh. Management Analyst, City of Tracy. Personal communication: e-mail. May 11, 2017.

The RHNA allows local jurisdictions to quantify the need for housing, allowing them to plan, consider, and decide how to address this need through the process of preparing Housing Elements for their general plans. The RHNA does not necessarily encourage or promote growth, but allows communities to anticipate and plan for growth in order to enhance quality of life, improve access to jobs, transportation, and housing, and avoid adverse environmental effects. The RHNA quantifies the need for housing within each jurisdiction during specified planning periods. The current RHNA planning period is January 1, 2014 through December 31, 2023.

The Regional Housing Needs Plan for San Joaquin County, developed by SJCOG, allocates cities and counties their "fair share" of the region's projected housing needs. This is also known as the RHNA Allocation. The Regional Housing Needs Plan allocates the RHNA Allocation based on household income groupings over the 10-year planning period for each specific jurisdiction's Housing Element.

Local governments then revise their housing elements to identify development sites and housing policies that will allow the community to meet its housing needs. SJCOG's current RHNA was issued in August 2014 and guides the production of affordable housing from 2014 through 2023 (Table 3.13-5). The City's 2015–2023 Housing Element Update was certified in January 2015 (Table 3.13-6).

Table 3.13-5: Total Housing Needs Allocation for Eight Local Jurisdictions (2014–2023)

Income Category	Dwelling Unit Allocation
Very Low (Up to 50% of median income)	9,485
Low (Income between 50% and 80% of median)	6,500
Moderate (Income between 80% and 120% of median)	7,065
Above Moderate (Above 120% of + median income)	17,310
Total	40,360
Source: SJCOG 2014-2023 Regional Housing Needs Plan, August.	

Table 3.13-6: Tracy's Housing Needs Allocation (2014–2023)

Income Category	Dwelling Unit Allocation
Very Low (Up to 50% of Tracy's median income)	980
Low (Income between 50% and 80% of Tracy's median)	705
Moderate (Income between 80% and 120% of Tracy's median)	828
Above Moderate (Above 120% of Tracy's median income)	2,463
Total	4,976
Source: SJCOG, 2014–2023 Regional Housing Needs Plan.	

3.13.2 - Regulatory Setting

Local Regulations

Growth Management Ordinance and Guidelines

The City of Tracy adopted a residential Growth Management Ordinance (GMO) in 1987, which was amended in 2000 by the voter-initiated Measure A. Since then, it has been amended several times, including a 2012 amendment to the GMO Guidelines relating to residential growth allotments (RGAs) project prioritization. The goal of the GMO is to achieve a steady and orderly growth rate that allows for the adequate provision of services and community facilities, and includes a balance of housing opportunities. Under the GMO, builders must obtain a Residential Growth Allotment (RGA) in order to secure a residential building permit. One RGA equals the public services and facilities required by one residential dwelling unit. The GMO limits the number of RGAs and building permits to an average of 600 housing units per year for market rate housing, with a maximum of 750 units in any single year. There are exceptions for affordable housing. Measure K was enacted by initiative by Tracy voters on December 8, 2015, and provides an allotment of 600 Active Adult Residential Units for this location, excluding it from the provisions of the Tracy Growth Management ordinance. The full language of the initiative is contained in Appendix K of this EIR.

General Plan

The City of Tracy General Plan sets forth the following goals, objectives, policies, and programs related to population and housing:

Housing Element

- **Goal 1.0:** Conserve and improve the condition of the existing housing stock, especially affordable housing.
- **P1.** Promote the continued maintenance and enhancement of residential units.
- **P2.** Work to preserve affordable units in publicly assisted housing developments that are at risk of converting to market-rate housing.
- **P3.** Facilitate the removal of existing housing that poses serious health and safety hazards to residents and adjacent structures.
- **P4.** Work with property owners and nonprofit housing providers to preserve existing housing for low and moderate income households.
- **P5.** Promote energy conservation in housing.
- **Goal 2.0:** Assist in the provision of housing that meets the needs of all economic segments of the community.
- **P1.** Facilitate homeownership opportunities for low and moderate income households.
- **P2.** Use density bonuses and other incentives to facilitate the development of new housing for extremely low, very low, and low income households.
- **P3.** Work with non-profit and for-profit developers to maximize resources available for the provision of housing affordable to lower income households.
- **P4.** Address the housing needs of special populations and extremely low income households through a range of housing options, including emergency shelters, transitional housing, supportive housing, and single-room occupancy units.

- **P5.** Promote the use of energy conservation features in the design of residential development to conserve natural resources and lower energy costs.
- **Goal 3.0:** Provide suitable sites for housing development which can accommodate a range of housing by type, size, location, price, and tenure.
- **P1.** Provide for a range of residential densities and products, including low-density single-family uses, moderate-density town homes, and higher-density apartments, condominiums, and units in mixed-use developments.
- **P2.** Encourage development of a residential uses in strategic proximity to employment, recreation facilities, schools, neighborhood commercial areas, and transportation routes.
- **P3.** Encourage compatible residential development in areas with recyclable or underutilized land.
- **P4.** Promote the adaptive reuse of existing commercial/industrial buildings as a conservation measure.
- **P5.** Promote flexible development standards to provide for a variety of housing types.
- **Goal 4.0:** Mitigate any potential governmental constraints to housing production and affordability.
- **P1.** Review and adjust as appropriate residential development standards, regulations, ordinances, and processing procedures that are determined to constrain housing development, particularly housing for lower and moderate income households and for persons with special needs.
- **P2.** Allow more than 150 affordable housing units as exceptions under the GMO
- **Goal 5.0:** Continue to promote equal housing opportunities in the City's housing market consistent with federal and State fair housing laws.
- **P1.** Provide fair housing services to Tracy residents, and ensure that residents are aware of their rights and responsibilities regarding fair housing.
- **P2.** Provide equal access to housing for special needs residents such as the homeless, elderly, and disabled.
- **P3.** Promote the provisions of disabled-accessible units and housing for mentally and physically disabled.

3.13.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to population and housing are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

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

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

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

3.13.4 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Population Inducement

Impact POP-1: Development and land use activities contemplated by the project would not induce substantial population growth.

Impact Analysis

CEQA Guidelines Section 15126.2(d) requires that an EIR discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This impact analysis will first discuss the potential for direct and indirect growth inducement and then address consistency with regional population and growth projections.

Direct and Indirect Growth

Direct growth consists of activities that directly facilitate population growth. The construction of new dwelling units is considered an activity that directly results in population growth. Indirect growth inducements consist of activities that in and of themselves do not facilitate growth, but instead indirectly cause growth. Examples include the creation of new jobs in a sparsely populated area that results in workers moving into the area or the removal of a physical barrier to growth, such as the extension of a sewer service to an unserved area.

A key consideration in evaluating growth inducement is whether the activity in question constitutes "planned growth." A residential project that is consistent with the underlying General Plan and zoning designations would generally be considered planned growth because it was previously contemplated by long-range documents, and thus would not be deemed to have a significant growth-inducing effect. Likewise, a project that requires a General Plan Amendment and re-zone to develop more intense uses than are currently allowed may be considered to have a substantial growth-inducing effect because such intensity was not contemplated by the applicable long-range documents. It should be noted that these are hypothetical examples, and conclusions about the potential for growth inducement vary on a case-by-case basis.

The Tracy Village Development Project would involve the construction of a 600-unit active adult residential development on 133.2 acres. The City also seeks annexation of 42 residential lots to the north and west, fronting Corral Hollow and Valpico Roads (Residential Annexation Area). The TVDP would feature three man-made lakes totaling approximately 10.5 acres and a community recreation center with pool, spa, bocce courts, open space, and a community building. The project also includes a 3.2-acre park, a 0.5-acre secondary recreation area (containing a pool, spa and open space), and a dog park. Table 3.13-7 summarizes the population growth attributable to the proposed project. As shown in the table, the proposed project is expected to increase the City's population by approximately 1,200 persons.

The Residential Annexation Area contains 42 lots. Assuming the 2016 persons per household size and that all lots would be occupied, the annexation would account for 145 people. In total, the Project Area would house 1,345 people.

Table 3.13-7: Project Population for Age-Qualified Residential

Dwelling Units	Average Household Size Age-Restricted	Population Growth
600	2.00	1,200

As shown in Table 3.13-8, the City of Tracy plans for future population growth. The projected population increase from the whole project is consistent with the forecast population for the City of Tracy. Measure K, passed in 2015, established a separate growth allotment for the Tracy Village active senior community outside of the limits set by Measure A, discussed above. Measure K exempts the Active Adult Residential Allotment (AARA) Program from the City's Growth Management Ordinance, thus allowing the development of the 600 Active Adult Residential Allotments (AARA) as part of the TVDP. The TVDP is designated Active Adult Residential by the City's General Plan. The Residential Annexation portion would be zoned Residential Estate, which would conform to the General Plan land use designation of Residential Low. The Specific Plan serves as pre-zoning to meet the requirements for future development.

Since the project's projected growth would be within the growth forecast—provided in Table 3.13-8, which includes other concurrent developments—it can be concluded that the proposed project would be considered planned growth and, therefore, not "growth inducing."

Table 3.13-8: Forecast Populations—City of Tracy and San Joaquin County

	City of Tracy		San Joaquin County	
Year	Population	Percentage Growth	Population	Percentage Growth
1990	33,558	—	480,628	—
2000	56,929	69.6%	563,598	17.3%
2010	82,992	45.7%	685,306	21.6%
2015	85,296	2.9%	719,511	5.0%
Source: Table 1 in the City of Tracy 2015–2023 Housing Element. Adopted March 15, 2016.				

Removal of Barrier to Growth

The barrier to growth is planned to be removed by the City of Tracy thru the Capital Improvement Program. All residencies within the Residential Annexation Area are currently served by private wells and septic systems, and all parcels have direct driveway access connections to either Corral Hollow Road or Valpico Road. The project is located on the south side of West Valpico Road, just east of Corral Hollow Road. Corral Hollow Road is the main north-south collector on the west side of the

City of Tracy, and Valpico Road is an important east-west collector in the southern portion of the City of Tracy. Although the project would induce indirect growth from expansion of roadway infrastructure and improvements, some of the roadways were previously analyzed in the San Joaquin Council of Governments Regional Transportation Plan and the City's Transportation Master Plan (TMP). The RTP sets out a list of several transportation capital improvement projects, including projects on Corral Hollow Road, Linne Road, and Valpico Road. More details on roadway infrastructure are discussed in Section 3-16, Transportation and Traffic.

The barrier to growth related to transportation infrastructure has been previously analyzed and projected from the 2011 SJCOG Regional Transportation Plan. Therefore, the proposed project would not induce substantial population growth in the area, either directly or in directly through roads or other infrastructure. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Housing Displacement

Impact POP-2:	**The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.**

Impact Analysis

This impact assesses the project's potential impact to displace existing housing or population.

The proposed Tracy Village Development Project is located on approximately 133.2 acres in unincorporated San Joaquin County. The project proposes to construct up to 600 active adult residential homes on 133.2 acres, and is considering the residential annexation of 42 lots to rationalize the city limits. No homes are located currently on the project site. Impacts would be less than significant.

Level of Significance before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Population Displacement

Impact POP-3: The project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impact Analysis

This impact assesses the project's potential impact to displace substantial numbers of people.

The proposed TVDP is located on approximately 133.2 acres in unincorporated San Joaquin County. The project proposes to construct up to 600 active adult residential homes on 133.2 acres, and is considering the residential annexation of 42 lots to rationalize the city limits. The Residential Annexation Area is located in San Joaquin County but within the City of Tracy Sphere of Influence. All 42 properties are designated Low Density Residential (R/L) by both the San Joaquin and City of Tracy General Plan. No homes are located on the project site. Therefore, no construction of replacement housing elsewhere would be necessary. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.14 - Public Services

3.14.1 - Introduction

This section describes the existing public services and potential effects from project implementation of the Tracy Village Specific Plan (TVSP) on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by City of Tracy General Plan, the California Department of Education, and the City of Tracy Parks and Community Services Department. Additional information was provided through correspondence with the Tracy Fire Department and the Tracy Police Department (Appendix J).

3.14.2 - Environmental Setting

Fire Protection and Emergency Medical Services

The Tracy Fire Department (Fire Department) provides fire protection and emergency medical services to over 200 square miles and over 100,000 people, encompassing the City of Tracy as well as all of the surrounding rural areas from the Stanislaus County line to the Alameda County line, and the Mountain House Community Services District. The City of Tracy Fire Department merged with the Tracy Rural Fire Protection District forming the South County Fire Authority (SCFA) in 1999. The SCFA was created to provide fire protection services to the entire jurisdictional area of both the corporate city limits and surrounding rural community (City of Tracy 2015a). Both Tracy Rural 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 Fire Department Administration is headquartered at 835 Central Avenue.

Stations

The Fire Department maintains seven stations and an administrative office. Three stations are located within the City of Tracy while three additional fire stations are located within the boundaries of the Tracy Rural Fire Protection District. The remaining fire station serves the Mountain House Community Service District. Fire Station 97, located at 595 W. Central Avenue, is the nearest fire station to the project site.

Apparatus

The Fire Department staffs seven front line Type 1 engines, one ladder truck, one Type 1 water tender, a Urban Search and Rescue Unit, and a Hazmat Unit.

Staffing

The Fire Department employs a force consisting of 70 professional firefighters, 12 reserve firefighters, a fire chief, three division chiefs, two civilian fire inspectors and a two-person administrative support staff. A total of 24 personnel are maintained for daily operations. Since department firefighters are often the first to arrive to emergency sites, they provide many other valuable services to the community in addition to fire suppression, including emergency medical treatment, technical rescue services, and response to hazardous material releases.

Response Times and Protocols

The SCFA's goal is to arrive on scene within 6.5 minutes total reflex time (911 call, call processing, firefighter turnout and travel time) 90 percent of the time for a municipal level of service and 10 minutes total reflex 90 percent of the time for a rural level of service. The average response time for the City of Tracy for Fiscal Year 2013/2014 was 4 minutes and 37 seconds for "code 3" emergency incidents (South County Fire Authority Annual Response Performance Report, Fiscal Year 2013, 2014 page 7). In the 2013/2014 fiscal year, the SCFA responded to 6,443 calls for assistance, where total reflex time 90 percent of the time for the City of Tracy was 9 minutes and 7 seconds.

Mutual Aid

The Fire Department is responsible for fire protection and suppression for all areas within the City of Tracy, all of the surrounding rural areas from the Stanislaus County line to the Alameda County line, and the Mountain House Community Services District. Wildland responses include two fire engines, a duty chief, and water tenders that often work in conjunction with firefighting aircraft and hand crews from CAL FIRE to protect the wildland-urban interface areas of the department where residential development meets with open space and natural wilderness areas (City of Tracy 2015a).

Emergency Medical Response

The SCFA provides emergency medical services to citizens located within the San Joaquin Emergency Medical Services Agency (SJEMSA) Zone C. American Medical Response is the exclusive emergency ambulance service provider in San Joaquin County, under contract with the SJEMSA. The department currently has 25 paramedics who provide Advance Life Support service from seven stations where apparatus are equipped with a minimum of one paramedic. All other department personnel are trained to the Emergency Medical Technician-1 level. Because of the large geographical area covered by the department, air ambulances (helicopters) are frequently used to deliver medical care in remote areas to avoid unnecessary delays in patient transport.

Police Protection

The Tracy Police Department (Police Department) provides police protection within the Tracy city limits.

Police Facilities

The Police Department is currently headquartered at 1000 Civic Center Drive, Tracy, approximately 3.8 miles from the Project Area.

Organization, Staffing, and Resources

The Police Department contains three divisions: Field Operations, Support Operations, and Special Operations.

The Field Operations Division consists of the Police Captain, four Police Lieutenants, seven Police Sergeants, one Animal Services Supervisor, and 54 sworn members, most of whom are uniform patrol officers. This Division comprises a Special Enforcement Team, Traffic Unit, Community Preservation Unit, and Animal Services. The Field Operations Division not only patrols the City but also responds to all types of calls, from parking complaints to homicides.

The Support Operations Division comprises the Records Unit, the Communications Unit, the Fiscal Management and Planning Unit, and the Forensic Services Unit. The goal of the Support Operations Division is to provide essential support services efficiently and effectively for line operations of the department and to the community members of Tracy.

The Special Operations Division includes the General Investigations Unit, the Special Investigations Unit, and the Professional Standards Unit. All of these units are focused in supporting community oriented policing and problem solving initiatives undertaken by the police department (City of Tracy 2015b).

The 2008 ratio of police per thousand residents was just over one per 1,000 population.

Police Activity

The Police Department responded to 130,387 incoming calls in 2016, 74,868 of which were calls for service and 30,927 were 9-1-1 calls. Table 3.14-1 provides a summary of incoming call trends for 2015 and 2016.

Table 3.14-1: Incoming Calls to the Communications Unit (2015 and 2016)

Category	2015 Calls	2016 Calls	% Change 2015–2016
Total Incoming Calls	123,690	130,387	5.41%
Calls for Service	74,568	74,868	.40%
9-1-1 Calls	31,106	30,927	-0.58%
Wireless Calls	22,521	22,441	-0.36%
Source: City of Tracy, 2016 Annual Report.			

Response Times

The Tracy Police Department's response time goals for emergency calls is 7 minutes. The current response time for 2017 is 7 minutes and 7 seconds (Watney, pers. comm.).

Schools

The Tracy Unified School District provides K-12 education to the residents of Tracy. The City of Tracy and its planning area is also served by the Jefferson Elementary School District, Lammersville Elementary School District, Banta Elementary School District, and New Jerusalem School District.

Local Schools

Tracy and its Planning Area are served by the following school districts:

- Tracy Unified School District
- Jefferson Elementary School District
- Lammersville Elementary School District
- Banta Elementary School District
- New Jerusalem School District

The Tracy Unified School District comprises seven elementary schools, four K-8 schools, two middle schools, four high schools, and four alternative programs. The Jefferson Elementary School District includes four elementary schools and provides education for students in southern Tracy and south of Tracy. The Lammersville Elementary School District includes two existing elementary schools—and a proposed elementary school, which would be built in the future. Banta Elementary School District includes one elementary school, and the New Jerusalem School District operates three schools.

Parks

The City of Tracy has 263.30 acres of park land at 72 sites. Included in these sites are 48 mini parks (totaling 41.1 acres), 19 neighborhood parks (totaling 100.8 acres), and nine community parks (totaling 188.4 acres). Additionally, the City owns 228.5 acres at the planned Holly Sugar Park that has not yet been classified or designated for a specific type of park development. Legacy Fields is envisioned as a 166-acre sports park at full buildout located on Tracy Boulevard north of Interstate 205. Currently, there are ten baseball and eight soccer fields that have been constructed and in operation.

The City of Tracy Parks Master Plan establishes the standard of 4 acres of parkland per 1,000 residents. The City of Tracy currently provides about 4.1 acres of parkland per 1,000 residents (City of Tracy 2013).

The Parks Master Plan locates the project site within the Keenan future service area. This 130-acre service area is due southeast of Valpico and Corral Hollow Roads and is planned to support residential development, with over 1,000 new housing units.

Other Public Facilities

Library Services

The Tracy Branch Library is located at 20 East Eaton Avenue on 1.3 acres in central Tracy within Lincoln Park. The library includes 130,000 library volumes, CDs, books on tape, eBooks, DVDs, and other items (City of Tracy 2011).

3.14.3 - Regulatory Framework

State

California Fire Code and California Building Code

The International Fire Code and the International Building Code, established by the International Code Council (ICC) and amended by the State of California, prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection.

Leroy F. Greene School Facilities Act of 1998

The California State Legislature enacted the Leroy F. Green School Facilities Act of 1998 (Senate Bill 50), which made significant amendments to existing state law governing school fees. Senate Bill 50 prohibited state or local agencies from imposing school impact mitigation fees, dedications, or other requirements in excess of those provided in the statute. The legislation also prohibited local

agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any project.

Local

City of Tracy

General Plan

The City of Tracy General Plan sets forth the following goals, objectives, policies, and actions that are relevant to public services:

Public Services and Safety Element

- **Goal PF 1:** Minimal loss of life and property from fires, medical emergencies and other types of emergencies.
- **Objective PF-1.1:** Strive to continuously improve the performance and efficiency of fire protection services.
- **P.1.** Provide fire and emergency response facilities and personnel necessary to meet residential and employment growth in the city.
- **P2.** Ensure that new development pays a fair and equitable amount to offset the costs for fire facilities by collecting a Public Buildings impact fee, or by requiring developers to build new facilities.
- **Objective PF-1.2:** Promote coordination between land use planning and fire protection.
- **P1.** Fire hazards shall be identified and mitigated during the project review and approval process.
- **P5.** New developments shall satisfy fire flow and hydrant requirements and other design requirements as established by the Fire Department.
- **Goal PF 2:** A safe environment in Tracy through the enforcement of law.
- **Objective PF-2.1:** Plan for on-going management and development of law enforcement services.
- **P1.** Maintain adequate police staffing, performance levels and facilities to serve Tracy's existing population as well as any future growth.
- **P2.** The City shall ensure that new development pays a fair and equitable amount to offset the capital costs for police service and expansion by collecting a public facilities impact fee.
- **Objective PF-2.2:** Promote coordination between land use planning and law enforcement.
- **P1.** Law enforcement hazards shall be identified and mitigated during the project review and approval process.
- **P2.** Physical site planning should be used as an effective means of preventing crime. This can be achieved by locating walkways, open spaces, landscaping, parking lots, parks, play areas and other public spaces in areas that are visible from buildings and streets.
- **Objective PF-2.3:** Maintain and improve law enforcement services to keep up with Tracy's changing population.
- **A1.** Provide neighborhood security and crime prevention information and training to neighborhood groups and homeowners' associations.
- **A2.** Establish Neighborhood Watch programs that promote mutual assistance and crime prevention techniques among residents.

- **Goal PF 3:** Sufficient educational facilities to meet the demands of existing and new development.
- **Objective PF-3.1:** Assist the school districts serving the City of Tracy in developing new school facilities to serve Tracy's current and future population.
- **P2.** The City shall provide the school districts with the opportunity to review proposed residential developments and make recommendations about the need for additional facilities based on school-child projections, existing school capacity, access and traffic issues.
- **Goal PF-4:** Public buildings that are a source of civic pride for all residents.
- **Objective PF-4.2:** Provide sufficient library service to meet the informational, cultural and educational needs of the City of Tracy.
- **P2.** The City shall ensure that new residential development pays its fair share of the Public Buildings Impact Fee for the cost of library expansion.

3.14.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on public services through review of the General Plan and consultation with the Tracy Fire Department and the Tracy Police Department.

3.14.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, public services and utilities impacts resulting from the implementation of the proposed project would be considered significant if the project would:

> . . . 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:
>
> a) Fire Protection?
> b) Police Protection?
> c) Schools? (Refer to Section 6.1, Effects Found not to be Significant.)
> d) Parks?
> e) Other public facilities?

3.14.6 - Project Impacts and Mitigation Measures

Fire Protection

Impact PS-1:	**The project would not result in a need for new or expanded fire protection facilities.**

Impact Analysis

This impact will evaluate the Tracy Village Development Project (TVDP) and the Residential Annexation Area separately.

Tracy Village Development Project

Development of the TVDP would add up to 1,200 residents to the City of Tracy at full Project buildout. As a gated community, the TVDP is required to provide access to the Fire Department for emergency access. The SCFA would provide fire protection for the TVDP. The nearest fire station (Station 97, 595 W Central Avenue) is located 1.4 miles southwest of the TVDP. Objective PF-1.1 in the General Plan states that the City of Tracy shall "strive to continuously improve the performance and efficiency of fire protection services" (City of Tracy General Plan, page 7-4). At its current location, the Fire Station would meet its desired response times. However, Fire Station 97 is scheduled to be moved two miles east of its current location. As described in Mitigation Measure PS-1, if construction of a new station is necessary to serve the residents of the TVDP, the station would be funded by new development, including the TVDP's development impact fees. With the payment of impact fees, impacts would be less than significant.

Residential Annexation Area

The Residential Annexation Area is currently within the boundaries of the SCFA. As part of the Annexation, the Residential Annexation Area would continue to be served by the SCFA. Therefore, the annexation would not increase calls for service and would not cause the need for new or expanded fire facilities. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Potentially significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

MM PS-1 Condition of Approval for the TVDP.

Tracy Village Development Project

As part of the approval process for the TVDP, the project applicant shall be required to pay the applicable development impact fee as a Condition of Approval for the TVDP.

Residential Annexation Area

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Law Enforcement

Impact PS-2: The project would not result in a need for new or expanded police protection facilities.

Impact Analysis

This impact will evaluate the TVDP and the Residential Annexation Area separately.

The Police Department provided written responses to a questionnaire regarding impacts to police protection. The responses are summarized below and a copy of the document is provided in Appendix J

Tracy Village Development Project

The San Joaquin County Sheriff's Department currently provides law enforcement services to the TVDP. As part of the Tracy Village Specific Plan approvals, the area would be annexed into the City of Tracy. After annexation, the Tracy Police Department would provide law enforcement services to the TVDP.

The Police Department indicated in a written response (Appendix J) that once the project is within the city limits of Tracy, the Police Department would not need to expand police facilities solely as a result the TVDP. There are plans to expand police facilities because of future citywide growth contemplated by the General Plan, which would include the TVDP. The TVDP, as a gated Community, is required to provide emergency access to the Police Department. As such, no new or expanded police facilities would be necessary to serve the TVDP. For these reasons, impacts would be less than significant.

Residential Annexation Area

The Residential Annexation Area is currently within the boundaries of unincorporated San Joaquin County and is served by the San Joaquin County Sheriff's Department. The annexation would result in this area being served by the Tracy Police Department.

The Residential Annexation Area currently contains 42 dwelling units. Using unincorporated San Joaquin County's 2016 average household size of 3.44 persons per dwelling unit, the estimated population of the annexation area is 144 persons. The 2016 estimated population for the City of Tracy is 89,461;[1] therefore, the addition of 144 persons would represent a population growth of 0.15 percent. This figure represents a negligible amount of population growth, such that the additional calls for service generated by these uses would not cause the need for new or expanded police facilities. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

[1] E-5 City/County Population and Housing Estimates, January 2016. Website: http://www.dof.ca.gov/Forecasting/Demographics /Estimates/E-5/. Accessed May 9, 2017.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Parks

Impact PS-3: The project would not result in a need for new or expanded park facilities.

Impact Analysis

This impact will evaluate the TVDP and the Residential Annexation Area separately.

Tracy Village Development Project

The proposed TVDP would develop up to 600 single-family housing units, which could add as many as 1,200 people to the City's population (based on a rate of 2.0 people per household for the Age-Qualified Residential Land Use. The population growth facilitated by the project would increase demand for parks.

The project would feature three man-made lakes totaling approximately 10 acres. Approximately 18.3 acres of parkland would be provided including a lake system, open space landscape areas at the two entries, a walking park, a dog park, and a pedestrian connection to Coral Hollow Road (Tracy Village Specific Plan, page 2-6). These parks would be private facilities within a gated community. The project will be subject to payment of park development impact fees as applicable, pursuant to Chapter 13.12 of the Tracy Municipal Code, as the on-site park facilities would be private. Impacts would be less than significant.

The impacts associated with construction of open space and recreational facilities have been evaluated throughout this Draft EIR. The project would not result in the off-site construction of new or expanded existing park facilities. Therefore, impacts associated with the construction or expansion of park and recreational facilities would be less than significant.

Residential Annexation Area

The annexation would not result in a substantial increase in resident use of park facilities within the City of Tracy. It is reasonably foreseeable that these residents would continue using the same park facilities as before the annexation. Therefore, the annexation would not increase the use of existing neighborhood and regional parks such that substantial physical deterioration of the facilities would be accelerated. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Other Public Facilities

Impact PS-4: The project would not result in a need for new or expanded public facilities such as libraries.

This impact will evaluate the TVDP and the Residential Annexation Area separately.

Impact Analysis

Tracy Village Development Project

The Tracy Branch Library would provide library services to the TVDP. On January 15, 2013, the City adopted a Public Facilities Master Plan (CPFMP), which anticipates 54,500 new residents and approximately 147,200 new workers (which includes residents of the TVDP). The CPFMP would renovate the 17,000 square foot Tracy Branch Library and would add 30,432 square feet of new library space to the Tracy Branch Library. The proposed TVDP would develop up to 600 single-family housing units, which could add as many as 1,200 people to the City's population (based on a rate of 2.0 people per household for an Age-Qualified Land Use). The population growth facilitated by the project would increase demand for public facilities, such as libraries. However, the growth has been planned for within the City's General Plan and master planning process, which includes the CPFMP. Therefore, the TVDP would not necessitate additional library facilities beyond those planned for in the CPFMP. The TVDP would also be required to pay the applicable impact fees, which would ensure the development pay its proportionate fair share toward planned facilities as they are constructed over time to accommodate the additional demand from the TVDP.

Therefore, impacts associated with other public facilities such as public libraries would be less than significant.

Residential Annexation Area

The annexation would not result in a substantial increase in resident use of public facilities, such as libraries, within the City of Tracy. It is reasonably foreseeable that these residents would continue using the same public facilities as before the annexation. Therefore, the annexation would not increase the use of public facilities such that substantial physical deterioration of the facilities would be accelerated. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.15 - Recreation

3.15.1 - Introduction

This section describes the existing setting for recreation and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the City of Tracy Parks Master Plan, Open Space and Conservation Element of the City of Tracy General Plan, and from the City of Tracy Parks and Community Services Department.

3.15.2 - Environmental Setting

San Joaquin County Regional Parks

San Joaquin County includes a wide range of open space, parks, and recreational areas, including Mossdale Crossing Regional Park, Micke Grove Regional Park, Oak Grove Regional Park, Durham Ferry Regional Park, Dos Reis Regional Park, and Caswell Memorial State Park. In total San Joaquin County contains 20 Regional Parks, encompassing roughly 768 acres, half of which are operated by San Joaquin County Parks and Recreation. Regional parks in San Joaquin County have incorporated natural resources such as waterways, oak groves, and riparian vegetation. Many of the parks are organized around natural rivers and provide water activities. The closet regional park to the Project Area is Mossdale Crossing Regional Park, which is located 11.4 miles northwest of the project.

Santiago Oaks Regional Park

The 7.57-acre park is located in the City of Lathrop. The regional parks offer boating, canoeing, kayaking, picnicking, and fishing.

Recreational Facilities in the Project Vicinity

Parks

The City of Tracy owns and currently maintains 72 parks on approximately 263 acres of parkland. The following three types of park facilities are available for recreational use by city residents and could be subject to impact from increased demand for recreational use as the City's population increases (City of Tracy General Plan DEIR, page 4.9-36):

- Mini-parks: Small parks, typically 1 to 5 acres, which provide recreational activities for a specific neighborhood or subdivision.
- Neighborhood Parks: Generally, 5 to 15 acres sites that provide basic recreational activities for a specific neighborhood area.
- Community Parks: Large parks, generally 15 acres of more, which include an equal mix of passive and active recreation areas that serve the entire city or a substantial portion of the city.

A summary of the nearby park and open space facilities is provided in Table 3.15-1. The City has recreation programs that on occasion are operated from the City's Community Center. Gymnastics classes utilize a third-party contractor's facilities.

Table 3.15-1: Nearby Park and Open Space Facilities

Park Name	Location	Amenities	Acreage
Gretchen Talley Park	1551 Dove Drive	Benches, picnic tables, seatwalls, shade structures, play structures, drinking fountain, roller hockey court, spray poles, restroom, baseball field, full basketball court, 2 soccer fields, children and tot play area, swings, two large climbing boulders, large group picnic area with shade structure, drinking fountain, benches, and trash receptacles.	10.1
Evans Park	1730 Parkside Drive	Play area, basketball courts, shade structures, Barbeque areas, and a walking path.	1.87
Schwatz (Bill) Park	Roxbury Drive & Mason Lane	Play area, shade structures, and a walking path.	3.47
Adams Park	4089 English Oak Avenue	Benches, picnic tables, drinking fountain, tennis court, tot playground, child playground, group picnic area, large shade structure, shuffleboard, and grills.	4.69
Cose (Don) Park	1780 Whirlaway Lane	Full court basketball, shaded picnic area over concrete, tot lot and children's playground, unshaded picnic area in lawn area, wrap around 8' wide walkway for bikes, trikes skaters, drinking fountain, benches, and trash receptacles.	3.79
Kimball Park	3765 Sudeley Drive	Half basketball court, shade structure, benches, picnic tables, grills, play structure, and drinking fountains	0.51
Westside Pioneer Park	1391 Hepburn Court	Bench, picnic tables, shade structure, play structures, and drinking fountains	0.51
Icardi Park	2505 Russell Street	Benches, picnic tables, play structures, shade structure, and seatwalls.	0.34
Open Space	—	—	81
Source: City of Tracy. 2011. General Plan, Open Space and Conservation Element. February.			

Recreational Corridors

The City maintains recreational corridors throughout the City of Tracy. The recreational corridors are mostly made up of Class I bikeways, and approximately 14 acres of such facilities exist. The longest Class I bikeway runs along Sycamore Parkway from Adams Park to the intersection of South Lammers Road and West Eleventh Street, a distance of approximately 4.5 miles (City of Tracy General Plan DEIR, page 4.9-45).

3.15.3 - Regulatory Framework

State Regulations

Quimby Act

Since the passage of the Quimby Act (California Government Code Section 66477) in 1975, counties and cities have been authorized to pass ordinances requiring developers to set aside land, donate conservation easements, or pay fees for park improvements. Quimby Act generated revenues cannot be used for the operation and maintenance of park facilities. The Quimby Act was originally designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (3 to 5 acres per 1,000 residents). According to the California Department of Parks and Recreation's overview of the Quimby Act, the Quimby Act was substantially amended in 1982 to further define acceptable uses of or restrictions on Quimby funds, provide acreage/population standards and formulas for determining the exaction, and indicate that the exactions must be closely tied (i.e., have a nexus) to a project's impacts as identified through traffic studies required by the California Environmental Quality Act (Westrup 2002).

Local Regulations

City of Tracy Ordinance

City of Tracy Ordinance 975, adopted in August 1998, implements Municipal Code Chapter 13, Park Development Impact Fees. In accordance with Ordinance 975, this section is adopted pursuant to Section 66477 of the Government Code, which authorizes the legislative body of a city to require the dedication of land or the payment of fees in lieu thereof, or a combination of both, for park and recreational facilities as a condition of approval of a tentative map or parcel map. More specifically, Section 13.12.080, Obligation to dedicate land or pay fees, of the City of Tracy Municipal Code specifies that:

> . . . all development projects shall be required to maintain the City standard of four (4) acres of park land per 1,000 population. All development projects, as a condition of approval of any tentative parcel map or tentative subdivision map, or as a condition of approval of any building permit, shall dedicate land to the City or pay a fee in lieu thereof, or a combination of both, in order to maintain this City standard.
>
> - Each implementing resolution for each park fee shall include a park fee subcomponent for small and medium size parks (such as neighborhood parks of approximately two (2) to fifteen (15) acres in size, and/or mini parks of approximately 0.5 acres in size), and a park fee subcomponent for community parks of a size larger than neighborhood parks.

City of Tracy General Plan

The City of Tracy General Plan sets forth the following goals, objectives, policies, and actions that are relevant to recreation:

Open Space and Conservation Element

- **Objective OSC 4.1:** Provision of parks, open space, and recreation facilities and services that maintain and improve the quality of life for Tracy residents.
- **Policy 4.1.4:** Additional or expanded parks in already developed areas shall be encouraged.
  - **Action 4.1.1:** Update the Parks Master Plan on a regular basis.
  - **Action 4.1.3:** Explore the development and funding of a regional park, possibly 60 to 100 acres in size, that includes both passive and active recreational amenities.
- **Objective OSC 4.2:** Ensure that new development is responsible for providing parks and recreation facilities throughout the City of Tracy.
- **Policy 4.2.1:** The City shall consider increasing the parks level of service from 4 acres per 1000 population to 5 acres per 1000 population, and require that new developments provide new park acreage or in-lieu fees at this ratio.
- **Policy 4.2.2:** All land dedicated for parks shall be of a shape and size suitable for parks. Land containing underground or overhead utilities, unsuitable topography, contamination or other factors that restrict the usability of the land shall not be credited against dedication requirements.
- **Policy 4.2.4:** New neighborhoods should be designed so that parks ideally are located no more than ½ mile from any home, or within walking or biking distance from most residents. Parks should be located in approximately the geographic center of the neighborhood, unless new parks can be co-located next to schools or existing parks or park sites in adjacent neighborhoods.
- **Policy 4.2.5:** New projects should be designed so that residents have direct pedestrian and bike access between homes and parks.
  - **Action 4.2.1:** Conduct the required studies to implement the increased parks standard.
- **Objective OSC 4.3:** Establish a regional linear parkway system that meets recreational, open space and transportation needs.
- **Policy 4.3.2:** All development projects shall provide linkages to the regional bike and trail system and circulation within the development project site, wherever feasible.

City of Tracy Parks Master Plan

The City of Tracy Parks Master Plan sets forth the following goals, objectives, policies, and actions that are relevant to recreation:

Group #1: Park Requirements for New Development Ensure that new development is responsible for providing appropriately designed and located parks and recreation facilities to serve new residential areas.

Policies

- **1-PI.** New park development in future services areas shall include the following types of parks:
  - Neighborhood Parks:
    - Definition: Medium-sized parks that provide recreation opportunities within walking or biking distance for residents in one or more neighborhoods.
    - Service Area: Approximately ¾-mile radius
    - Size Range: 4 to 10 acres[1]
  - Community Parks:
    - Definition: Large parks that provide specialized opportunities or community-scale facilities to serve a substantial portion of the City. Community parks may include specialized facilities, such as aquatic centers, sports complexes, and community centers. They may also provide a mix of active and passive recreation amenities, including large-group gathering spaces and unique facilities to support diverse recreation opportunities.
    - Service Area: Approximately 2-3 mile radius
    - Size Range: 30–50 acres
- **1-P2.** The City shall require that new developments provide neighborhood and community park acreage and park development impact fees at a service level of 4 acres per 1,000 residents.
- **1-P3.** The dedication of resources for park land shall be based on an allocation of 3 acres per 1,000 residents for neighborhood parks and 1 acre per 1,000 residents for community parks.
- **1-P4.** The City shall have the discretion to consider unique park types in exceptional cases. These exceptions for consideration are defined in Park Design and Development Guidelines.
- **1-P5.** New neighborhoods should be designed so that parks are located within walking or biking distance (approximately 3/4 mile) from most residents. New parks should be located and designed to maximize pedestrian and bicycle access from surrounding neighborhoods.
- **1-P6.** New neighborhood parks should be located in areas that are reasonably central to the neighborhoods or subdivisions they are intended to serve, unless new parks can be co-located adjacent to schools, existing park sites (in adjacent service areas), storm drainage detention basins, public facilities, off-street trails, or park sites in adjacent neighborhoods to maximize usability. (Public facilities include libraries, police and fire stations, recreation buildings or other government or non-profit facility.)
- **1-P7.** The parks development priority, for any residential project located within ¾ mile of an existing park, shall be to increase the size of that existing park, unless restricted by existing development.
- **1-P8.** All new neighborhood parks, wherever feasible, shall connect to Class I Bikeways (off-street pathways) or regional trails.

[1] The layout and density of new residential areas will influence the desired park size. In general, parks are desired within 0.75 mile of most residents, and should be sized appropriately to maintain this travel distance. However, in high-density residential areas, where fewer residents have yards and more people are likely to rely on public transportation, neighborhood parks may be as small as 4 acres to decrease the travel distance to 0.5 mile and provide nearby recreation opportunities. Because this will affect the types of facilities that can be provided, two smaller parks (4–6 acres) located in the same vicinity should be co-planned to provide different recreation opportunities.

- **1-P9.** Community parks should be located so that all residents have access within approximately 2-3 miles from their home. New parks should be located and designed to maximize pedestrian and bicycle access from surrounding neighborhoods.
- **1-P10.** All new community parks and major recreation facilities shall connect to Class I Bikeways (off-street pathways) or regional trails.
- **1-P11.** The City shall ensure that park acquisition, design, and development are consistent with all City standards, specifications and guidelines related to parks, right-of-way, and open space development (including minimum park size standards).
- **1-P12.** The design and development of proposed new parks and facilities shall take into account City guidelines and goals for park maintenance, recreation programming, sustainability, ADA accessibility, connectivity, parking, resource conservation and community development. The City shall involve all affected or interested departments, and applicable stakeholders such as the Parks and Community Services Commission, in the review and approval of parks master plans to ensure that parks effectively address these elements.
- **1-P13.** The City shall make every effort to complete timely construction of parks and recreational facilities serving new development concurrently with completion of those developments.

Actions

- **1-A1.** Establish impact fee methodology to reflect the desired level-of-service standards for amenities, maintenance, and renovation.
- **1-A2.** Create a park plan review protocol to ensure that key City staff, including but not limited to, staff from Parks Maintenance, Parks and Community Services, and Development and Engineering, and applicable stakeholders such as the Parks and Community Services Commission are involved in the review of proposed plans for new parks and facilities.
- **1-A3.** Periodically assess recreation program needs and make this information available to the public and the development community to consider in planning, designing and developing parks.
- **1-A4.** Identify maintenance costs for parks in each specific plan (in consultation with Parks Maintenance staff) and establish necessary funding mechanisms to support these operations on a long-term basis. Funding shall include preventative maintenance and scheduled renovation/rehabilitation.
- **1-A5.** Locate one (1) new neighborhood park between the current terminus of westbound Schulte Road and Lammers Road (Westside Residential planning area).
- **1-A6.** Locate one (1) new neighborhood park in the Tracy Hills planning area at the highest elevation where views of the city and surrounding region are provided.
- **1-A7.** Locate one (1) new community park in the southern portion of the city (Tracy Hills planning area).

Residential Annexation Area

The Residential Annexation Area is located in San Joaquin County, but within the City of Tracy Sphere of Influence. Based on an average household size of 3.44[2] residents per home, there are approximately

[2] City/County Population and Housing Estimates. January 2016. Website: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/. Accessed March 30, 2017.

144 residents living in this area. These residents would now be under the jurisdiction of the City of Tracy. It is reasonably foreseeable that these residents would continue using the same recreation facilities as they had before the annexation.

3.15.4 - Methodology

Evaluation of potential recreation impacts was based on research of parks and recreational facilities in the project area. Information was obtained from the City of Tracy General Plan and City of Tracy Master Parks Plan.

3.15.5 - Thresholds of Significance

Recreation

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to recreation are significant environmental effects, the following questions are analyzed and evaluated.

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

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

3.15.6 - Project Impacts and Mitigation Measures

Increase Use of Parks

Impact REC-1:	**The project would not 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.**

Impact Analysis

This impact will evaluate the Tracy Village Development Project and the Residential Annexation Area separately.

Tracy Village Development Project

The proposed Tracy Village Development Project would develop up to 600 single-family housing units, which could add as many as 1,200 people to the City's population (based on a rate of 2.0 people per household for an Age-Qualified Residential Land Use designation). The population growth facilitated by the project would increase demand for recreational facilities.

The project would feature three man-made lakes totaling approximately 10 acres and a community recreation center with a pool, bocce courts, open space, and a community building. Approximately 22.3 acres of community open space is provided that includes a lake system, two recreation areas including recreational buildings, open space landscape areas at the two entries, a walking park, a

dog park, and a pedestrian connection to Coral Hollow Road (Tracy Village Specific Plan, p. 2-6). Table 3.15-2 provides the acreage for each open space type.

Table 3.15-2: Open Space

Open Space Type	Acreage
Lake System	10.5
Recreation Facilities	4.0
Open Space System	2.4
Private Park	3.2
Dog Park	0.2
Pedestrian Connection	0.7
Total	**21.0**
Source: Tracy Village Specific Plan, p. 2-6	

The residents would utilize these on-site private facilities and open space. However, it is reasonably foreseeable that the residents of the TVDP would also utilize recreational facilities in the City of Tracy. Therefore, the project would be subject to applicable City park impact fees in effect at the time of permit issuance. Impacts would be less than significant.

Residential Annexation Area

The residential annexation would not result in a substantial increase in resident use of recreational facilities within the City of Tracy. It is reasonably foreseeable that these residents would continue using the same recreational facilities as before the annexation. Therefore, the Residential Annexation would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would be accelerated. Impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

Tracy Village Development Project

No mitigation is necessary.

Residential Annexation Area

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Recreational Facilities Physical Effect on Environment

Impact REC-2:	**The project would not include recreational facilities or require the construction or expansion of recreational facilities which would have an adverse physical effect on the environment.**

Impact Analysis

This impact will evaluate the Tracy Village Development Project and the Residential Annexation Area separately.

Tracy Village Development Project

The project would feature three man-made lakes totaling approximately 10 acres and a community recreation center with a pool, bocce courts, open space, and a community building. The project would develop approximately 22.3 acres (Table 3.15-2) of community open space, which would include a lake system, two recreation areas including recreational buildings, open space landscape areas at the two entries, a walking park, a dog park, and a pedestrian connection to Coral Hollow Road (Tracy Village Specific Plan, p. 2-6) are planned as private park facilities in the gated community. While the project would provide neighborhood parks for residents, residents would still be expected to use community/regional facilities. The project would be subject to City park impact fees in effect at the time of permit issuance. Impacts would be less than significant.

Residential Annexation Area

The residential annexation would not result in a substantial increase in residents using recreational facilities within the City of Tracy. It is reasonably foreseeable that these residents would continue using the same recreational facilities as before the annexation. Therefore, the residential annexation would not require the construction or expansion of recreational facilities. Impacts would be less than significant.

Level of Significance Before Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

Mitigation Measures

Tracy Village Development Project

No mitigation is necessary.

Residential Annexation Area

No mitigation is necessary.

Level of Significance After Mitigation

Tracy Village Development Project

Less than significant impact.

Residential Annexation Area

Less than significant impact.

3.16 - Transportation and Traffic

This section describes the existing transportation setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Transportation Impact Analysis (TIA), prepared on February 27, 2017 by Kimley-Horn and included in this EIR as Appendix H. The TIA analyzed a worst-case scenario using typical traffic generation from single-family residential use and compares that usage to the traffic generation of active adult residential use. The single-family residential traffic generation is provided for informational and comparison purposes only. The active adult residential use generates fewer trips in every scenario.

3.16.1 - Environmental Setting

Residential Annexation Area

The Residential Annexation Area includes existing single-family residential units, and no new land uses or redevelopment is proposed for the annexation parcels (Exhibit 3.16-1). Therefore, the annexation will not generate any new trips and the traffic for the annexation area is included in the existing counts. Therefore, the analysis and mitigation in this section focuses on the Tracy Village Development Project (TVDP). No further discussion of the Residential Annexation Area as it relates to transportation is necessary.

Roadway Network

The TVDP is located east of Corral Hollow Road and south of Valpico Road. Primary access to the TVDP would be provided by a main entrance from Valpico Road, with a secondary entrance from Middlefield Road, which would connect the TVDP to the residential development to the south. A main community loop street would provide access within the TVDP by encircling the interior lake system. Below is a description of the principal roadways within the study area.

Interstate 580

Interstate 580 (I-580) provides direct regional access to the Project Area via full-access interchanges at Mountain House Parkway/Patterson Pass Road and Corral Hollow Road. I-580 also provides access west to the Bay Area (via the Altamont Pass), and connects to I-5 south of the City of Tracy. I-580 currently has four lanes (two lanes in each direction) along the segments adjacent to the City of Tracy with a posted speed limit of 70 miles per hour. In the future, a new interchange will be constructed at Lammers Road.

Interstate 205

I-205 provides direct access to the central portion of the City of Tracy. It extends between I-580 and I-5 and runs east-west through the northern portion of the City of Tracy. Interchanges are provided at West Eleventh Street, Grant Line Road, Tracy Boulevard, and MacArthur Drive. I-205 consists of six lanes (three lanes in each direction), and a posted speed limit of 70 miles per hour east of the City of Tracy and 65 miles per hour through the City of Tracy and to the west. A new Lammers Road Extension interchange will be constructed at I-205, and the 11th Street interchange will be removed in the future.

Lammers Road

Lammers Road is a major roadway originating 1 mile south of Valpico Road on the western boundary of the existing developed area of the City of Tracy. The City recently constructed a six-lane facility between the south end of John Kimball High School and 11th Street. The remainder of the street to the south is a two-lane undivided facility. The posted speed limit within the City is 45 miles per hour. Lammers Road is designated in the City of Tracy Roadway Master Plan (RMP) as an urban expressway and future freeway connection between I-205 and I-580. Lammers Road is not designated a Congestion Management Plan (CMP) route in the Transportation Master Plan (TMP).

Old Schulte Road

Old Schulte Road is a discontinuous roadway extending from Mountain House Parkway to Chrisman Road. For a short segment of the roadway (east of Mountain House Parkway and adjacent to the Safeway Warehouse Terminal), Schulte Road is a five-lane truck route. East of this segment, Schulte Road narrows to two travel lanes. Schulte Road terminates at the intersection with Lammers Road. The roadway commences again at Corral Hollow Road, approximately 0.25 mile south of its westerly segment. From Lammers Road to Corral Hollow Road, it is a two-lane undivided roadway. East of Corral Hollow Road, the roadway has been widened to four travel lanes to MacArthur Drive. Between MacArthur Drive and Chrisman Road, Schulte Road is two lanes. Old Schulte Road is identified within the RMP as a major arterial. The posted speed limits on Old Schulte Road are 45 miles per hour and 55 miles per hour west of Lammers Road.

Valpico Road

Valpico Road is an approximately 4.5-mile continuous roadway extending from Lammers Road on the west side of the City to Chrisman Road on the east side of the City. The roadway is a two-lane undivided roadway from Lammers Road to Cagney Way, where it becomes a four-lane divided arterial up to Tracy Boulevard. The Valpico Road segment east of Tracy Boulevard is a two-lane undivided roadway and primarily provides access to residential neighborhoods, local farms in the west, and the Defense Distribution Depot in the east. The posted speed limit 35 miles per hour in the project vicinity.

Corral Hollow Road

Corral Hollow Road is a north-south roadway that extends from Lammers Road in the north part of the City of Tracy to past the I-580 Ramps in the south. Corral Hollow Road continues west past the I-580 ramps to the City of Livermore, eventually becoming Tesla Road. It is a two-lane, undivided roadway from Lammers Road to Naglee Road, a four-lane, divided roadway from Naglee Road to West Schulte Road, and a two-lane, undivided roadway from Schulte Road to the I-580 Ramps. North of Valpico Road in the project vicinity, Corral Hollow Road primarily provides access to residential uses with a 40-mile-per-hour posted speed limit. South of Valpico Road, Corral Hollow Road primarily provides access to undeveloped farmland and some residential uses, with a 45-mile-per-hour posted speed limit.



Source: ESRI Imagery, 2015

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 3.16-1
Annexation Area

17260008 • 03/2017 | 3.16-1_anex_area.mxd

THIS PAGE INTENTIONALLY LEFT BLANK

Tracy Boulevard

Tracy Boulevard is a north-south roadway continuing from State Route 4 (SR-4) north of the City to I-580 in the south. It is a route utilized by commuters and residents and provides access to farmland, commercial and residential uses, the Tracy Municipal Airport, Monte Vista Middle School, SR-4, I-205, and I-580. It is a two-lane, undivided roadway from SR-4 to I-205; a four-lane, divided roadway from I-205 to Vallerand Road; a four-lane undivided roadway with discontinuous two-way left-turn lanes from Vallerand Road to Sequoia Boulevard; a four-lane, divided roadway from Sequoia Boulevard to Linne Road; and a two-lane, undivided roadway from Linne Road to I-580. Tracy Boulevard has a posted speed limit of 40-mile-per-hour in the project vicinity.

Middlefield Drive

Middlefield Drive is a local residential collector street that connects the residential area to the south of the TVDP to Corral Hollow Drive. It will extend into the future Ellis project via a signalized intersection with Corral Hollow Drive.

Peony Drive

Peony Drive is a local residential collector street that connects the residential area to the south of the TVDP to Corral Hollow Drive. It will extend into the future Ellis project via a signalized intersection with Corral Hollow Drive.

Study Intersections

The study intersections, as shown on Exhibit 3.16-1 were selected as study locations in consultation with the City of Tracy staff. The study intersections are listed below:

1. Lammers Road/Old Schutle Road
   a. This is a three-legged, all-way stop controlled (AWSC) intersection. No marked pedestrian crosswalks exist at this intersection.
2. Lammers Road/Valpico Road
   a. This a four-legged, side-street stop control (SSSC) intersection (the west leg is a driveway to private residence). No marked pedestrian crosswalks exist at this intersection).
3. Lammers Road/Linne Road (future intersection)
4. Corral Hollow Road/Valpico Road
   a. This a four-legged, AWSC intersection. No marked pedestrian crosswalks exist at this intersection.
5. Corral Hollow Road/Peony Drive
   a. This is a four-legged, SSSC intersection. Marked pedestrian crosswalks exist on the east and west legs at this intersection.
6. Corral Hollow Road/Middlefield Drive
   a. This is a three-legged, signal controlled intersection. One marked pedestrian crosswalk exists crossing the east leg of this intersection.

7. Corral Hollow Road/Linne Road (CMP)
   a. This is a three-legged, SSSC intersection. No marked pedestrian crosswalk exists at this intersection.
8. Project Driveway #1/Valpico Road (Future Intersection)
9. Middlefield Drive/Peony Drive
   a. This is a four-legged, AWSC intersection. Marked pedestrian crosswalks exist on the east and west legs of this intersection.
10. Tracy Boulevard/Central Avenue
    a. This is a four-legged, signal controlled intersection. Marked pedestrian crosswalks exist on all four legs of this intersection.
11. Tracy Boulevard/Valpico Road
    a. This is a four-legged, signal controlled intersection. Marked pedestrian crosswalks exist on all four legs of this intersection.

Study Roadway Segments

The TVDP will generate new vehicular trips that will increase traffic volumes on the nearby street network. Lammers Road and Corral Hollow Road study roadway segments are part of the San Joaquin Council of Governments (SJCOG) CMP network. To assess changes in traffic conditions associated with the TVDP, the following roadway segments are selected for evaluation in this study, with CMP designated roadways indicated:

1. Lammers Road—Old Schulte Road to Valpico Road (CMP)
2. Lammers Road—Valpico Road to Linne Road (CMP)
3. Corral Hollow Road—Valpico Road to Peony Drive (CMP)
4. Corral Hollow Road—Peony Dive to Middlefield Drive (CMP)
5. Corral Hollow Road—Middlefield Drive to Linne Road (CMP)
6. Tracy Boulevard—Central Avenue to Valpico Road
7. Valpico Road—Lammers Road to Corral Hollow Road
8. Valpico Road—Corral Hollow Road to Project Driveway # 1
9. Valpico Road—Project Driveway #1 to Tracy Boulevard
10. Middlefield Drive—Peony Drive to Corral Hollow Road
11. Peony Drive—Corral Hollow Road to Middlefield Drive

Level of Service Methodology

Analysis of potential environmental impacts at intersection is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. LOS for this study were determined using methods defined the Highway Capacity Manual 2010 (HCM) and Synchro 9 traffic analysis software.

HCM methodologies include procedures for analyzing side-street stop controlled (SSSC), all-way stop-controlled (AWSC), and signalized intersections. The SSSC procedure defines LOS as a function

of average control delay for each minor street approach movement. Conversely, the AWSC and signalized intersection procedures define LOS as a function of average control delay for the overall intersection. Table 3.16-1 relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections.

Table 3.16-1: Intersection Level of Service Definitions

Level of Service	Description	Signalized (avg. control delay per vehicle sec/veh.)	Unsignalized (avg. control delay per vehicle sec/veh.)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	Equal or less than 10	Equal or less than 10
B	Stable traffic. Traffic flows smoothly with few delays.	10 to less than 20	10 to less than 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	20 to less than 35	15 to less than 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	35 to less than 55	25 to less than 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	55 to less than 80	35 to less than 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	Equal or more than 80	Equal or more than 50
Source: Kimley Horn and Associates, 2017.			

Existing Intersection Level of Service

Weekday intersection turning movement volumes for the nine existing study intersections, not including the future project driveway, were collected on November 17, 2016 (Thursday); November 30, 2016 (Wednesday); December 6, 2016 (Tuesday); and January 19, 2017 (Thursday). These counts included vehicles, bicycles, and pedestrians. Volumes for intersections were collected during the AM and PM peak periods of 5:30 a.m. to 8:30 a.m. and 4:00 to 6:00 p.m., respectively. These traffic counts were taken when local schools were in session and the weather was fair. Existing turning movements are shown in Exhibit 3.16-2 and existing lane geometries and traffic control are illustrated in Exhibit 3.16-3. There are no existing turning movements shown for Project Driveway #1 and Valpico Road (Study Intersection 8) and Lammers Road/Linne Road (Study Intersection #3) because they are future intersections and do not currently exist. Intersection volume data sheets for all traffic counts are provided in Appendix H. The results of the LOS analysis are presented in Table 3.16-2 and Synchro output sheets are provided in Appendix H.

Table 3.16-2: Existing Peak Hour Intersection Level of Service

#	Intersection	Agency	Control Type	Existing Conditions					
				AM Peak Hour			PM Peak Hour		
				Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	AWSC	Overall	34.0	D	Overall	20.1	C
2	Lammers Rd/Valpico Rd	Tracy	SSSC	Overall	9.7	A	Overall	8.3	A
				EB	17.2	C	WB	10.2	B
3	Lammers Rd/Linne Rd	Tracy	Does Not Exist						
4	Corral Hollow Rd/Valpico Rd	Tracy	AWSC	Overall	**71.7**	**F**	Overall	**84.6**	**F**
5	Corral Hollow Rd/Peony Dr	Tracy	SSSC	Overall	2.8	A	Overall	2.9	A
				EB	15.7	C	EB	20.4	C
6	Corral Hollow Rd/Middlefield Dr	Tracy	Signal	Overall	8.8	A	Overall	6.5	A
7	Corral Hollow Rd/Linne Rd	Tracy	SSSC	Overall	8.9	A	Overall	2.0	A
				WB	**43.6**	**E**	WB	12.2	B
8	Project Driveway #1/Valpico Rd	Tracy	Does Not Exist						
9	Middlefield Dr/Peony Dr	Tracy	AWSC	Overall	9.1	A	Overall	7.4	A
10	Tracy Blvd/Central Ave	Tracy	Signal	Overall	19.3	B	Overall	18.1	B
11	Tracy Blvd/Valpico Rd	Tracy	Signal	Overall	25.2	C	Overall	26.8	C

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold**.
Source: Kimley Horn and Associates, 2017.

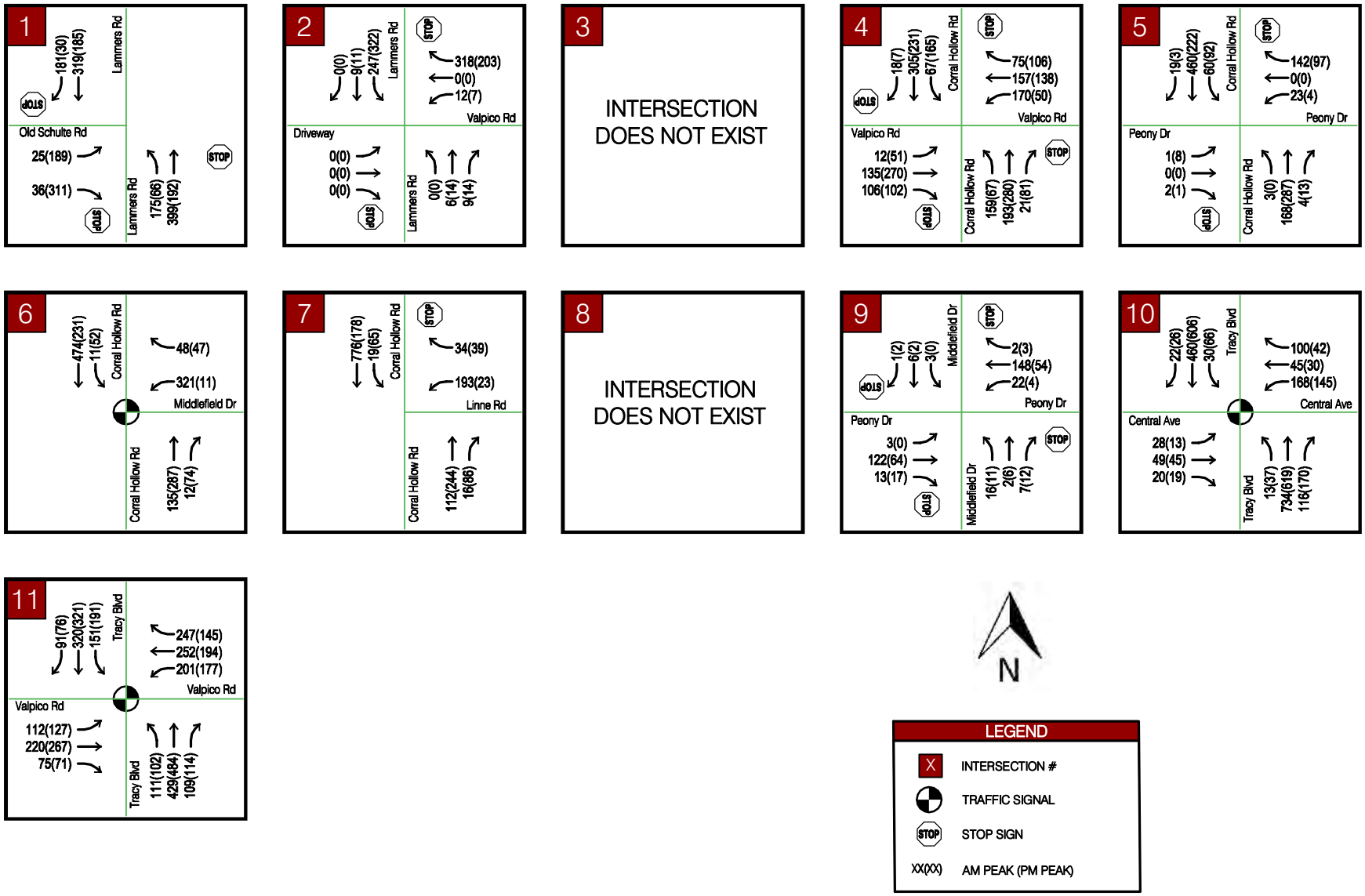


Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-2
Study Intersections

THIS PAGE INTENTIONALLY LEFT BLANK



Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-3
Existing Conditions Turning Movements

THIS PAGE INTENTIONALLY LEFT BLANK

Existing Roadway Segment Level of Service

Traffic operations were evaluated at the study roadway segments under Existing Conditions. Results of the analysis are presented in Table 3.16-3.

Table 3.16-3: Existing Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Existing			
				Volume		V/C	
				AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	891	449	238	0.50	0.27
		SB	891	306	415	0.34	0.47
	Valpico Rd to Linne Rd	NB	891	8	14	0.01	0.02
		SB	891	11	9	0.01	0.01
Corral Hollow Rd	Valpico Rd to Peony Dr	NB	891	342	410	0.38	0.46
		SB	891	560	350	0.63	0.39
	Peony Dr to Middlefield Dr	NB	891	179	317	0.20	0.36
		SB	891	485	255	0.54	0.29
	Middlefield Dr to Linne Rd	NB	891	260	322	0.29	0.36
		SB	891	795	243	0.89	0.27
Tracy Blvd	Central Ave to Valpico Rd	NB	742	826	791	**1.11**	**1.07**
		SB	742	605	679	0.82	**0.92**
Valpico Rd	Lammers Rd to Corral Hollow Rd	WB	742	332	211	0.45	0.28
		EB	742	255	380	0.34	0.51
	Corral Hollow Rd to Project Dwy #1	WB	742	402	294	0.54	0.40
		EB	742	223	516	0.30	0.70
	Project Dwy #1 to Cagney Way	WB	742	402	294	0.54	0.40
		EB	742	223	516	0.30	0.70
	Cagney Way to Tracy Blvd	WB	1485	454	372	0.31	0.25
		EB	1485	407	465	0.27	0.31
Middlefield Dr	Peony Dr to Corral Hollow Rd	NB	742	267	63	0.36	0.08
		SB	742	81	104	0.11	0.14
Peony Dr	Corral Hollow Rd to Middlefield Dr	WB	742	103	62	0.14	0.08
		EB	742	45	67	0.06	0.09
Linne Rd	Lammers Rd to Corral Hollow Rd	WB	—	—	—	—	—
		EB	—	—	—	—	—

Notes:
Volumes derived from Existing intersection counts. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E**; **≥1.00 = LOS F**.
Source: Kimley Horn and Associates, 2017.

Public Transit

Existing transit service to the project is provided by a local bus service (TRACER), San Joaquin Regional Transit District (SJRTD) County Hopper Service, and Altamont Corridor Express (ACE). The bus and rail system provides local and regional connectivity to residents of the City of Tracy. Since the TVDP vicinity is currently primarily undeveloped, no bus or rail services are currently provided.

TRACER

TRACER is a bus service the City of Tracy offers to residents. It provides both Fixed Route and Paratransit services to major destinations throughout the City. Its hours of operation are Monday through Friday from 7:00 a.m. to 8:00 p.m. and Saturday from 9:00 a.m. to 7:00 p.m. TRACER does not operate on Sundays or holidays.

The closest bus stops are served by Route D and are located at the intersection of Valpico Road/Sycamore Parkways as well as Middlefield Drive/Peony Drive. Both stops are located less than 0.25 mile from the Project Area. Route D is a commuter route, which provides service only on weekdays when school is in session. This route runs along 11th Street, Holly Drive Tracy Boulevard, Corral Hollow Road, Sycamore Parkway, and Central Avenue. Major destinations served along these routes include the library; the elementary, middle, and high schools in the City of Tracy, and the Tracy Sport Complex. It operates two services during the AM peak hour and four in the afternoon. The TRACER bus route map is shown in Appendix H.

San Joaquin Regional Transit District County Hopper Service

The SJRTD County Hopper is a deviated fixed-route bus service connecting Stockton, Tracy, and Lathrop. The Hopper replaces SJRTD Countywide General Public Dial-A-Ride (DAR). Rural Elderly & Disabled DAR, and County Area Transit fixed-route services during Hopper service hours in the area covered by the Hopper service.

In the TVDP vicinity, Route 90 runs along Grant Line Road and Route 97 runs along East Street within Tracy. Route 90 stops at Walmart on Grant Line Road, west of I-205 (approximately 4 miles north of the Project Area). Route 97 stops at the Tracy Transit Center (approximately 3 miles northeast of the Project Area), East Street/10th Street (approximately 3.5 miles northeast of the Project Area), and Grant Line/East Street (approximately 4.5 miles northeast of the Project Area). The routes operate from 5:25 a.m. to 10:07 p.m. (Route 90) and 6:05 a.m. to 7:01 p.m. (Route 97) on weekdays. The SJRTD Hopper Service route map is shown in Appendix H.

San Joaquin Regional Transit District Weekend Service

SJRTD weekend service in the TVDP vicinity provides fixed-route service via Route 797 to Tracy, Lathrop, Stockton, and Manteca. Route 797 runs along Grant Line Road and East Street, operates 9:39 a.m. to 4:49 p.m., and stops at the Walmart on Grant Line Road, west of I-205 (approximately 4 miles north of the Project Area). The SJRTD Weekend Service route map is shown in Appendix H.

Altamont Corridor Express

The ACE is a passenger rail service connecting Stockton to San Jose. ACE operates on weekdays, excluding holidays. The ACE station in the City of Tracy is located along Tracy Boulevard near Linne

Road, which is approximately 1.5 miles from the Project Area. The station is the second most popular station along the route for passenger boarding. Four westbound trains pass through the City of Tracy with approximately 1-hour headways at 4:51 a.m., 6:06 a.m., 7:11 a.m., and 7:36 a.m. and four eastbound trains returning through the City of Tracy with approximately 1-hour headways, at 5:11 p.m., 6:11 p.m., 7:11 p.m., and 8:14 p.m. Over a period of 7 months (January 1 through July 30, 2014), an average of 553 passengers board ACE trains at the Tracy station each weekday.[1]

ACE does not charge a fee for parking at the Tracy Station, though ACE closely monitors and ensures that lots are occupied by ACE patrons only. The surface lot at the Tracy station can accommodate 491 vehicles including handicapped stalls. During a field survey conducted in July 2014, the surface lot was 73.5 percent occupied, as shown in Table 3.16-4.

Table 3.16-4: Parking Occupancy at ACE Tracy Station

Lot Type	Occupancy	Capacity	Percent Occupied
Surface lot, Tracy Boulevard	361	491	73.5
Source: Kimley-Horn, 2014.			

Park and Ride Facilities

Park and Ride facilities are areas where users of public transit or carpoolers may drive and park their vehicles, then use public transit or carpooling to commute. The vehicles are usually parked at the facility during the day and retrieved when the commuter returns. The Park and Ride facility closest to the TVDP is approximately 4 miles north, adjacent to I-205/Naglee Road.

Bicycles

The rural nature of much of the immediate area's roadways generally requires that bicycles share the roadways with motor vehicles. However, Class I, II, and III bikeways facilities do exist within 0.25 mile of the TVDP and the closest ones are discussed below.

Class I facilities are paved bicycle paths that are physically separated from the vehicular travel lane. A Class I path exists on Sycamore Parkway less than 0.25 mile east of the TVDP. The path begins at Adams Park (just north of Linne Road, between Corral Hollow Road and Tracy Boulevard) and extends north onto Eleventh Street, Corral Hollow Road, and Lowell Avenue.

Class II facilities, which are striped bike lanes along the street, are generally found along the western portion of the existing urbanized area of the City. There are Class II bike lanes along portions of Valpico Road, Corral Hollow Road, Tracy Boulevard, Schulte Road, and within nearby neighborhoods. The nearest bike lanes are located less than 0.25 miles west of the TVDP on the east side of Corral Hollow Road south of the TVDP, and both (north and south) sides of Valpico Road east of the TVDP.

[1] Computed from "Daily Summary Report-Altamont Corridor Express." Herzog Transit services, Inc. 30 July 2014.

Class III bicycle facilities are bike routes marked by signs that are shared with vehicles along the roadway. Class III bicycle facilities are located mainly in the Central Tracy area.

A map of the existing City of Tracy bicycle network can be found in Figure 4.13-8, Existing Bikeway Map in the City of Tracy TMP.

Pedestrian Facilities

The roadway network in the vicinity of the TVDP is rural; no sidewalks exist within 0.25 mile of the TVDP, and there is no connectivity to the City's pedestrian network.

Existing pedestrian facilities closest to the TVDP are approximately 0.75 mile east on both north and south sides of Valpico Road. Sidewalks also exist on the east side of Corral Hollow Road south of the intersection of Corral Hollow Road/Peony Drive.

3.16.2 - Regulatory Framework

State

California Department of Transportation (Caltrans)

Caltrans builds, operates, and maintains the state highway system, including the interstate highway system. Caltrans's mission is to improve mobility statewide. The department operates under strategic goals to provide a safe transportation system, optimize throughput and ensure reliable travel times, improve the delivery of state highway projects, provide transportation choices, and improve and enhance the State's investments and resources. Caltrans controls the planning of the state highway system and accessibility to the system. Caltrans establishes LOS goals for highways and works with local and regional agencies to assess impacts and develop funding sources for improvements to the state highway system. Caltrans requires encroachment permits from agencies or new development before any construction work may be undertaken within the State's right-of-way. For projects that would impact traffic flow and levels of services on state highways, Caltrans would review measures to mitigate the traffic impacts.

Regional

San Joaquin County Regional Congestion Management Program 2016

The San Joaquin County Regional Congestion Management Program (CMP) is a state-mandated mechanism employing growth management techniques, including traffic level of service requirements, development mitigation programs, transportation systems management, and capital improvement programming, for the purpose of controlling and/or reducing the cumulative regional impacts of development. Caltrans utilizes the SJCOG LOS standards on the freeway segments within San Joaquin County. The following provisions of the CMP are relevant to the TVDP:

- The CMP system includes Lammers Road. The LOS thresholds for intersections are set at "D."
- A proposed development would have a significant impact to the network if for any CMP roadway currently operating at LOS D or better under No Project conditions operates at LOS E or F under project-added conditions.

The CMP requires a deficiency plan if a roadway segment LOS falls below LOS D after calculating required exemptions for a particular project. A deficiency plan identifies mitigations to alleviate a roadway segment of its deficiency through capital improvements or implementation of system-wide improvements to benefit circulation quality. The two primary purposes of a deficiency plan are to ensure a jurisdiction would not be found noncompliant with the CMP by exceeding its LOS standards and secondly, to increase the funding priority of any improvement identified through the deficiency planning process.

The CMP analysis segments in the vicinity of the TVDP are Lammers Road, Corral Hollow Road, and Linne Road roadways, as well as the intersection of Corral Hollow Road/Linne Road (Study Intersection #7).

San Joaquin Council of Governments Capital Improvement Program

The SJCOG CMP details the Capital Improvement Program (CIP), the action plan for the CMP that provides a framework for the funding and implementation of projects that maintain or improve the transportation performance standards of the CMP. SJCOG is required to adopt a 7-year CIP every odd-numbered year, which is intended to maintain or mitigate transportation impacts to the region in addition to conforming to transportation-related vehicle emission air quality mitigation measures. All projects in the Regional Transportation Improvement Program must first be listed in the CIP. (This applies to most state-funded projects.)

Local

City of Tracy

Standards of Significance

The City has established LOS D, where feasible, as the minimum acceptable LOS for roadways and overall intersection operations (for roadways a v/c ratio of 0.80-0.89 = LOS D). However, there are certain locations where this standard does not apply. The following provides a list and description of exceptions to the LOS D standard:

- LOS E or lower shall be allowed on streets and at intersections within 0.25 mile of any freeway, to discourage inter-regional traffic from using City streets.
- In the Downtown and Bowtie area of the City of Tracy, LOS E shall be allowed in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling, and walking.
- The City may allow individual locations to fall below the City's LOS D standard at intersections were construction of improvements is not feasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse impact on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience. Intersections may be permitted to fall below their adopted LOS standard on a temporary basis when the improvements necessary to preserve the LOS standard are in the process of construction or have been designed and funded but not yet constructed.

Significant Impact Criteria-Signalized Intersections

The City of Tracy determines a significant impact if:

- Signalized intersections operating at an acceptable level (LOS D or better, if located more than 0.25 mile from a freeway) degrade to an unacceptable level (LOS E or F).
- Addition of project trips causes a delay increase of more than four seconds to an intersection already operating at an unacceptable level.

Significant Impact Criteria-Unsignalized Intersections

- Un-signalized intersections operating at LOS D or better degrade to an unacceptable LOS E or under (outside 0.25 mile of a freeway), and LOS E or better degrade to an unacceptable LOS F (within 0.25 mile of a freeway), and a traffic signal warrant is met.
- Addition of project trips causes a volume increase of more than 10 percent at an intersection operating at an unacceptable level and meeting a signal warrant.

Roadway and Transportation Master Plan

The purpose of the TMP is to implement the transportation policies of the General Plan. The TMP identifies roadway improvements required at the citywide level to support the long-range buildout of the City. Roadway improvements identified include, but are not limited to alignments, cross-sections, roadway and intersection design, and access controls for expressways, arterials, collectors, and industrial streets. In addition, the TMP allocates widths for bike lanes, sidewalks, landscaped setbacks, and median widths. As development takes place, project-specific traffic analyses are utilized to determine the degree of roadway improvements required, as TMP roadway improvements are generally a subset of the ultimate roadway network required to support the buildout of the General Plan.

3.16.3 - Methodology

Kimley-Horn prepared a Traffic Impact Analysis that evaluated impacts on transportation. The complete analysis is provided in Appendix H. The analysis considers conditions occurring during weekday AM and PM peak hours. The traffic study considers the following scenarios:

- **Existing (2016) Conditions:** Based on current traffic counts taken in 2016 and 2017 and existing roadway geometry and traffic control.
- **Existing (2016) Plus Project Conditions:** Based on current traffic counts and existing roadway geometry and traffic control plus the traffic generated by the TVDP.
- **Background Conditions:** Based on current traffic counts and adding approved project traffic volumes to the existing roadway geometry and traffic control. These projects would include Ellis, Cordes Ranch, Tracy Hills, and Rocking Horse (Stringer).
- **Background Plus Project Conditions:** Based on current traffic county and adding approved project traffic volumes to the existing roadway geometry and traffic control plus the traffic generated by the TVDP.

- **Cumulative (2035) Conditions:** Cumulative conditions land use assumptions in the City's 2035 Travel Demand Model were updated based on discussion with City staff and updated model results were used from the Tracy Hills project and updated to reflect Rocking Horse.
- **Cumulative (2035) Plus Project Conditions:** Cumulative conditions plus traffic generated by the TVDP.

Trip Generation

Proposed Project Circulation Improvements

The TVDP will construct one full access driveway onto Valpico Road at the north end of the site (Study Intersection #8), internal project roadways, and a connection to Middlefield Drive at the south end of the site. Project Driveway #1/Valpico Drive (Study Intersection #8) will be signalized.

The TVDP will also construct an Americans with Disabilities Act (ADA)-compliant sidewalk along Valpico Road and along all internal roadways within the TVSP site, as illustrated in the site plan within the Project Description, Exhibit 2-5.

The TIA analyzed a worst-case scenario using typical traffic generation from single-family residential use and compares that usage to active adult trip generation rates published by Institute of Transportation Engineers (ITE), "Trip Generation," 9th Edition, 2012. The single-family residential traffic generation is for informational and comparison purposes only. The active adult residential use generates fewer trips in every scenario.

Trip Generation Estimates-Single Family, Detached

Trip generation for the TVDP was calculated using the Trip Generation Rates developed for the City of Tracy Travel Demand Model (2035) as cited in the City of Tracy Transportation Master Plan (November 2012). Trip generation for the TVDP was also calculated using the rates from the Institute of Transportation Engineer's publication Trip Generation 9th Edition, which is a standard reference used by jurisdictions throughout the country for the estimation of trip generation. Since the City of Tracy specifies its own rates, ITE rates are supplied for comparison purposes only. A trip is defined by the ITE as a single or one-directional vehicle movement with either the origin or destination at the project site. In other words, a trip can be either "to" or "from" the site. In addition, a single customer visit to a site is counted as two trips (i.e., one to and one from the site).

Trip generation calculations prepared are based on the number of residential dwelling units. Additionally, since the property is single use residential, no internal capture, linked trip, or pass-by trip reductions were applied. Table 3.16-5 shows trips generated by the proposed development based on both previously discussed standards. As illustrated in Table 3.16-5, total TVDP trips generated during the AM peak hour using the City's rates are lower than total TVDP trips generated using ITE's rates (628 vs. 600). Based on the City of Tracy rates, the TVDP will generate 329 net new trips in the AM peak hours and 628 net new trips in the PM peak hour. The PM peak hour trip generation indicates the highest travel demand and is sufficient for analysis purposes.

Table 3.16-5: Project Trip Generation

Land Uses	Project Size	AM Peak Hour			PM Peak Hour		
		Total Peak Hour	In	Out	Total Peak Hour	In	Out
Trip Generation Rates[1]							
Project Use							
Low/Mid Density Residential & Residential Real Estate	—	0.55	25%	75%	1.05	63%	37%
Trips Generated							
Project Use							
Low/Mid Density Residential & Residential Real Estate	600 DUs	330	82	248	630	397	233
Trips Reduction[2]							
Project Use							
Low/Mid Density Residential & Residential Real Estate	2 DUs	1	0	1	2	1	1
Total Project Trips		**329**	**82**	**247**	**628**	**396**	**232**
Total Project Trips as shown by ITE[3]		*450*	*113*	*337*	*600*	*378*	*222*
Comparison		*(120)*	*(31)*	*(89)*	*30*	*19*	*11*

Notes:
[1] Trip Generation Rates developed for the City of Tracy travel demand model as cited in the City of Tracy Transportation Master Plan (November, 2012) were used in this study.
[2] Project Trip reduction as a result of two existing single-family homes.
[3] Trip Generation using ITE rates provided for comparison purposes only.
Source: Kimley-Horn and Associates, Inc., 2017.

Trip Generation Estimates-Senior Adult Housing

Trip generation was prepared for Senior Adult Housing-Detached, to represent the project's active adult community. The property is single use residential. No internal capture, linked trip, or pass-by trip reductions were applied. Table 3.16-6 shows trips generated by the proposed development based on both previously discussed standards. As illustrated in Table 3.16-5, total project trips generated during the AM peak for senior adult housing are lower than the rates for single family-detached (329 vs. 1,131). During the PM peak, traffic generation rates for active adult housing are lower than the rates for single family-detached (170 vs. 628). According to ITE, the TVDP will generate 131 net new trips in the AM peak hour and 170 net new trips in the PM peak hour.

Table 3.16-6: Project Trip Generation-Senior Adult Housing

Land Uses	ITE Land Use code	Project Size	AM Peak Hour			PM Peak Hour		
			Total Peak Hour	In	Out	Total Peak Hour	In	Out
Trip Generation Rates[1]								
Project Use								
Senior Adult Housing—Detached	251	—	0.22	35%	65%	0.29	61%	39%
Trips Generated								
Project Use								
Senior Adult Housing—Detached	251	600 DUs	132	46	86	172	105	67
Trips Reduction[2]								
Project Use								
Low/Mid Density Residential & Residential Real Estate	—	2 DUs	1	0	1	2	1	1
Total Project Trips			**131**	**46**	**85**	**170**	**104**	**66**

Notes:
[1] Trip generation rates published by Institute of Transportation Engineers (ITE), "Trip Generation," 9th Edition, 2012.
[2] Trip reduction as a result of existing single-family homes on project site.
[3] 2014 Tracy Hills EIR Project Buildout Trip Generation rates used.
[4] ITE equation used to determine results.
Source: Kimley-Horn and Associates, Inc., 2017

Trip Distribution and Assignment

Because of the nature of the proposed development, most residents living at the proposed site are expected to travel predominately to the north, where they will have access to the nearest retail land uses, schools, downtown, regional roadways (I-205), and major arterials (11th Street, Tracy Boulevard, and Grant Line Road). Some will also distribute south to I-580 and for cumulative conditions, to local retail as well.

Significant improvements to the City's transportation system are identified in the TMP to be completed by 2035. Therefore, separate trip distribution and assignments were calculated for Existing/Background and Cumulative conditions. The Cumulative condition assumes the improvements in the City's TMP would be in place, but the Background (near term) Condition does not assume implementation of these improvements, resulting in potentially higher roadway volume estimates than may actually occur.

The City of Tracy Travel Demand Model, as well as knowledge of the study area, was used to determine the trip distribution and TVDP trip assignment. Major destinations and access for TVDP trips are located north, south, east, and west of the TVDP site. They include:

- **North of TVDP—**Retail, businesses, and schools in the north/northeast part of the City. East-west arterials including 11th Street, Grant Line Road, and New Schulte Road. Freeway access via I-205 on/off ramps.

- **South of TVDP—**Future Ellis Project mixed use area. Future Tracy Hills mixed use area. Freeway access via I-580 on/off ramps.
- **East of TVDP—**Retail, businesses, and schools in the east part of the City. North-south arterials including Corral Hollow Road, Tracy Boulevard, and McArthur Drive. Freeway access to I-5 on/off ramps via 11th Street.
- **West of TVDP—**Warehouse distribution centers (Cordes Ranch) in the west part of the City. Freeway access to I-580 on/off ramps via Mountain House Parkway and I-205.

Existing/Background Plus Project Conditions

For Background Base Line Conditions traffic analysis, it is assumed that improvements would be installed by approved, but not yet constructed development projects (i.e. Tracy Hills, Ellis, and Cordes Ranch projects). Mitigation has been previously identified for these approved projects and are included in the Background Base Line Conditions analysis for determining TVDP impacts.

The project driveway (Project Driveway #1/Valpico Road) and Middlefield Road connection south of the Project will be constructed for Existing and Background Conditions. Therefore, all TVDP trips will enter and exit the project site via these two access points. From the project driveway at Valpico Road and Middlefield roadway connection, trips will be distributed throughout the roadway network with approximately 87 percent (AM and Peak) traveling to and from the north via Lammers Road, Corral Hollow Road, Tracy Boulevard, and Central Avenue. Approximately 9 percent (AM and PM peak hours) will travel to the south via Corral Hollow Road and Tracy Boulevard. Approximately 3 percent (AM and PM peak hours) will travel to and from the east via Valpico Road.

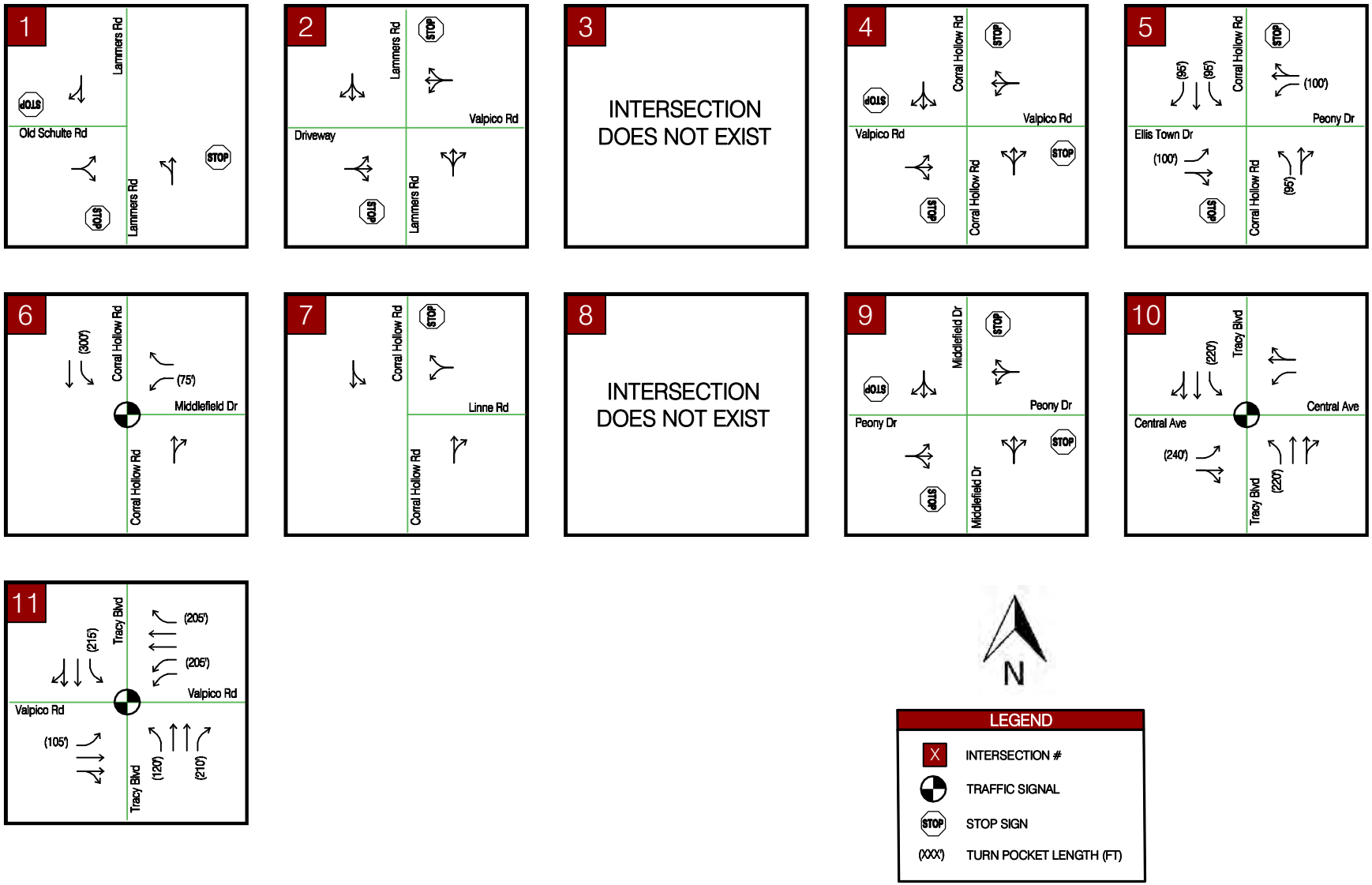
The distribution estimates for Existing and Background Conditions are illustrated in Exhibit 3.16-4. Exhibit 3.16-5 shows the TVDP trip assignment for AM and PM peak hour periods at study intersections.

Cumulative (2035) Plus Project Conditions

The project driveway (Project Driveway #1/Valpico Road) and Middlefield Road connection south of the Project will be constructed for Cumulative Conditions. The City 2035 Cumulative Conditions includes development on the project site and the analysis was conducted using the 2035 Cumulative traffic from the City's travel demand model.

In the TVDP vicinity, trips will be distributed throughout the roadway network with approximately a total of 73 percent (AM and PM peak hours) traveling to and from the north via Lammers Road, Corral Hollow Road, Tracy Boulevard, and Central Avenue. Of the trips that travel north from the TVDP, approximately 3 percent (AM and PM peak) will disperse west on Old Schulte Road from Lammers Road. Approximately 3 percent (AM and PM peak hours) will travel to and from east via Valpico Road, east of Tracy Boulevard. Approximately 7 percent (AM and PM peak hours) will travel to and from the south via Lammers Road and Corral Hollow Road.

The distribution estimates for Cumulative Conditions are illustrated in Exhibit 3.16-6 and Exhibit 3.16-7 shows the TVDP for Cumulative Conditions AM and PM peak-hour periods at study intersections.



Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-4
Existing Conditions Lane Geometry

THIS PAGE INTENTIONALLY LEFT BLANK

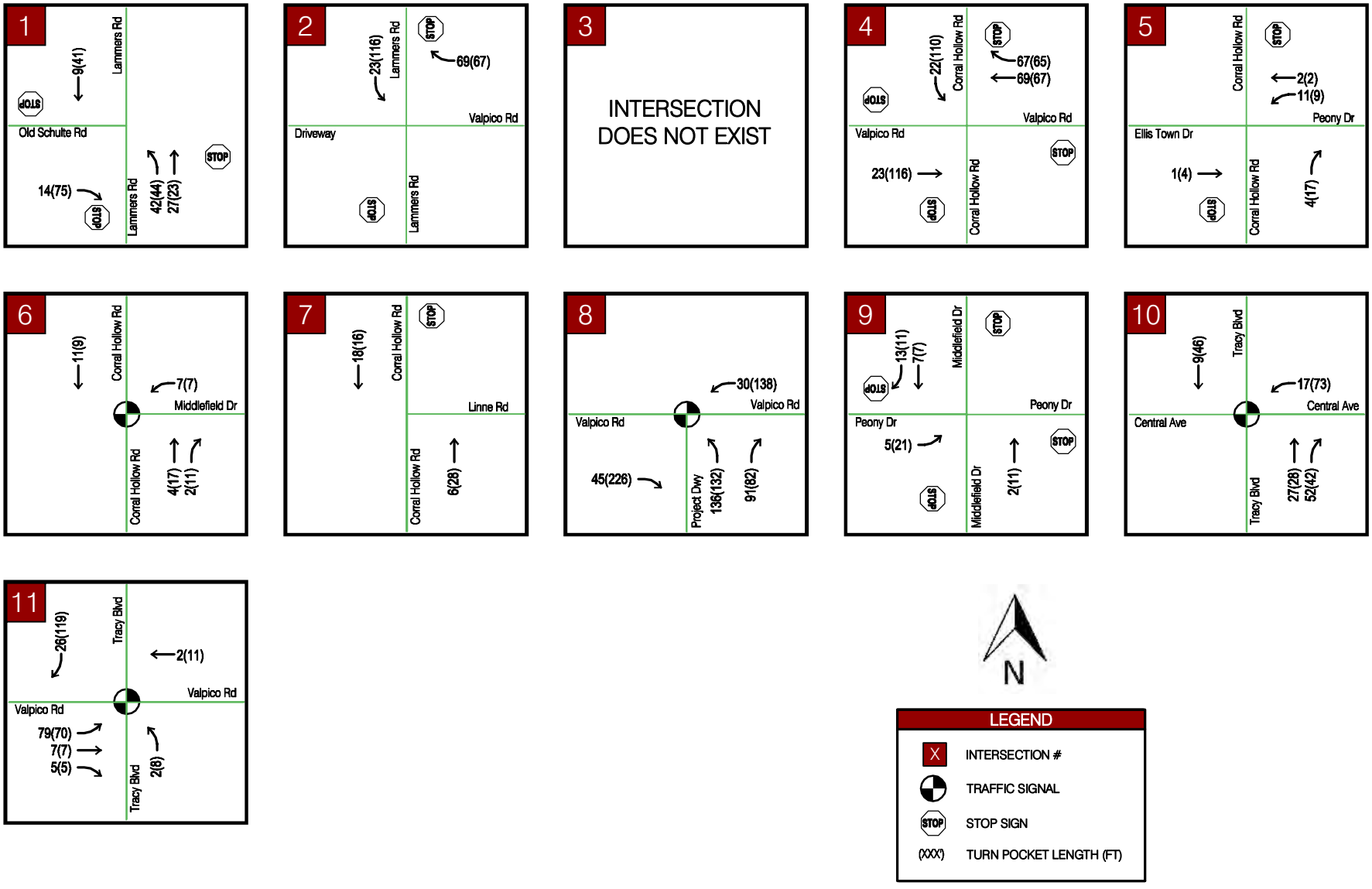


Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-5
Project Trip Distribution: Existing and Background Conditions

THIS PAGE INTENTIONALLY LEFT BLANK



Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-6
Project Trip Assignment: Existing and Background Peak Hour Conditions

THIS PAGE INTENTIONALLY LEFT BLANK



Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-7
Project Trip Distribution: Cumulative Conditions

THIS PAGE INTENTIONALLY LEFT BLANK

3.16.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether transportation and traffic impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

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

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

3.16.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the TVDP project and provides mitigation measures where appropriate.

Existing Plus Project Conditions

Impact TRANS-1:	**The project may conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system under Existing Plus Project Conditions.**

Impact Analysis

This scenario analyzes the Existing plus Project condition and the effect on intersection operations, traffic signal warrant analysis, and freeway mainline operations. This scenario assumes that the TVDP precedes the other approved projects in Table 3.16-7. Project impacts to baseline traffic conditions (i.e., existing conditions) have been identified along with mitigation measures necessary to reduce project-related impacts to less than significant.

The TIA analyzed a worst-case scenario using typical traffic generation from single-family residential use and compares that usage to active adult traffic generation trip generation rates published by Institute of Transportation Engineers (ITE), "Trip Generation," 9th Edition, 2012. The single-family

residential usage is for informational and comparison purposes only. The active adult usage generates fewer trips in every scenario.

Existing Plus Project Intersection Segment

Traffic operations were evaluated at the study intersections under Existing Plus Project Conditions. Exhibit 3.16-8 shows the Existing Plus Project lane geometry and traffic control and Exhibit 3.16-9 shows the Existing Plus Project peak hour traffic volumes.

Table 3.16-7: Existing Plus Project Conditions Intersection Level of Service

#	Intersection	Maintaining Agency	Control Type	Existing Conditions						Existing Plus Project Conditions						Existing Plus Project Conditions (Active Adult)					
				AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
				Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	AWSC	Overall	34.0	D	Overall	20.1	C	Overall	**54.8**	**F**	Overall	**42.0**	**E**	Overall	**40.3**	**E**	Overall	23.2	C
2	Lammers Rd/Valpico Rd	Tracy	SSSC	Overall	9.7	A	Overall	8.3	A	Overall	10.6	B	Overall	9.1	A	LOS & Delay Improved as Active Adult Community					
				EB	17.2	C	WB	10.2	B	EB	13.1	B	WB	11.4	B						
3	Lammers Rd/Linne Rd	Tracy	Does Not Exist																		
4	Corral Hollow Rd/Valpico Rd	Tracy	AWSC	Overall	**71.7**	**F**	Overall	**84.6**	**F**	Overall	**133.6**	**F**	Overall	**195.0**	**F**	Overall	**91.2**	**F**	Overall	**114.2**	**F**
5	Corral Hollow Rd/Peony Dr	Tracy	SSSC	Overall	2.8	A	Overall	2.9	A	Overall	3.1	A	Overall	3.1	A	LOS & Delay Improved as Active Adult Community					
				EB	15.7	C	EB	20.4	C	EB	16.3	C	EB	19.9	C						
6	Corral Hollow Rd/Middlefield Dr	Tracy	Signal	Overall	8.8	A	Overall	6.5	A	Overall	9.2	A	Overall	6.5	A	LOS & Delay Improved as Active Adult Community					
7	Corral Hollow Rd/Linne Rd	Tracy	SSSC	Overall	8.9	A	Overall	2.0	A	Overall	10.0	A	Overall	2.0	A	Overall	9.5	A	LOS & Delay Improved as Active Adult Community		
				WB	**43.6**	**E**	WB	12.2	B	WB	**51.0**	**F**	WB	12.7	B	WB	**47.8**	**E**			
8	Project Driveway #1/Valpico Rd	Tracy	Signal	Does Not Exist						Overall	5.7	A	Overall	6.9	A	LOS & Delay Improved as Active Adult Community					
9	Middlefield Dr/Peony Dr	Tracy	AWSC	Overall	9.1	A	Overall	7.4	A	Overall	9.3	A	Overall	7.6	A	LOS & Delay Improved as Active Adult Community					
10	Tracy Blvd/Central Ave	Tracy	Signal	Overall	19.3	B	Overall	18.1	B	Overall	21.8	C	Overall	23.2	C	LOS & Delay Improved as Active Adult Community					
11	Tracy Blvd/Valpico Rd	Tracy	Signal	Overall	25.2	C	Overall	26.8	C	Overall	32.3	C	Overall	36.1	D	LOS & Delay Improved as Active Adult Community					

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold**.
Source: Kimley Horn and Associates, 2017.

As shown in Table 3.16-7, the intersections that are anticipated to operate at unacceptable levels of service include:

- **Lammers Road/Old Schulte Road (Intersection #1) (AM & PM peak hours)**: The addition of project traffic causes the intersection to deteriorate from LOS D and C during the AM and PM peak hour, to LOS F in the AM peak hour and LOS E in the PM peak hours, respectively. The intersection would operate at an acceptable LOS A in the AM and PM Peak hours with the following improvements: Install a signal, add a separate northbound left turn pocket, add a separate right turn pocket, and add a separate eastbound left turn pocket. The City has recently approved the installation of this interim improvement at the intersection, and the intersection would operate acceptable at LOS A in the AM peak hour and LOS A in the PM peak hour. Since the improvement is funded, the project would not contribute to it.
- **Corral Hollow Road/Valpico Road (Intersection #4) (AM & PM peak hours)**: The addition of project traffic causes the intersection to deteriorate in delay and continue to operate at LOS F in both the AM and PM peak hour. The City has recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection. The improvements are identified in the City TMP. The project would pay the City Traffic Impact Fees. With these improvements, the intersection would operate at an acceptable LOS A in the AM and PM peak hours.
- **Corral Hollow Road/Linne Road (Intersection #7) (AM peak hour)**: The addition of the project traffic for an active adult land use would not add 10% or more of the existing traffic, and the active adult scenario traffic would not have a significant impact.

The TVDP project would result in a significant impact at two of the three intersections (Intersection #1 and Intersection #4) identified above. Project mitigation measures for the Existing Plus Project Condition Intersection Level of Service include Mitigation Measures TRANS-1a and TRANS-1b, which are illustrated at the end of this analysis.

Table 3.16-8 outlines the Mitigated Plus Project Conditions Levels of Service. As shown in the table, the implementation of Mitigation Measures TRANS-1a and TRANS-1b would reduce potential impacts to a less than significant level.

Table 3.16-8: Mitigated Existing Plus Project Conditions Intersection Level of Service

#	Intersection	Maintaining Agency	Existing Plus Project Conditions						Mitigated Existing Plus Project Conditions					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	Overall	**54.8**	**F**	Overall	**42.0**	**E**	Overall	3.7	A	Overall	8.2	A
4	Corral Hollow Rd/Valpico Rd	Tracy	Overall	**133.6**	**F**	Overall	**195.0**	**F**	Overall	6.7	A	Overall	7.7	A
7	Corral Hollow Rd/Linne Rd	Tracy	Overall	10.0	A	Overall	2.0	A	Overall	7.9	A	Overall	4.3	A
			WB	**51.0**	**F**	WB	13.3	B						

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold**.
Source: Kimley Horn and Associates, 2017.

Existing Plus Project Roadway Segment

Traffic operations were evaluated at the study roadway segments under Existing Plus Project traffic conditions. Results of the analysis are presented in Appendix H of this EIR. The following segments were found to function at an unacceptable Level of Service per City of Tracy requirements with the addition of project traffic:

- Southbound Corral Hollow Road—Middlefield Drive to Linne Road (AM peak hour)
- Eastbound Valpico Road—Corral Hollow Road to Project Driveway (PM peak hour)

Existing Plus Project Conditions Roadway Segment Level of Service can be found in Table 3.16-9.

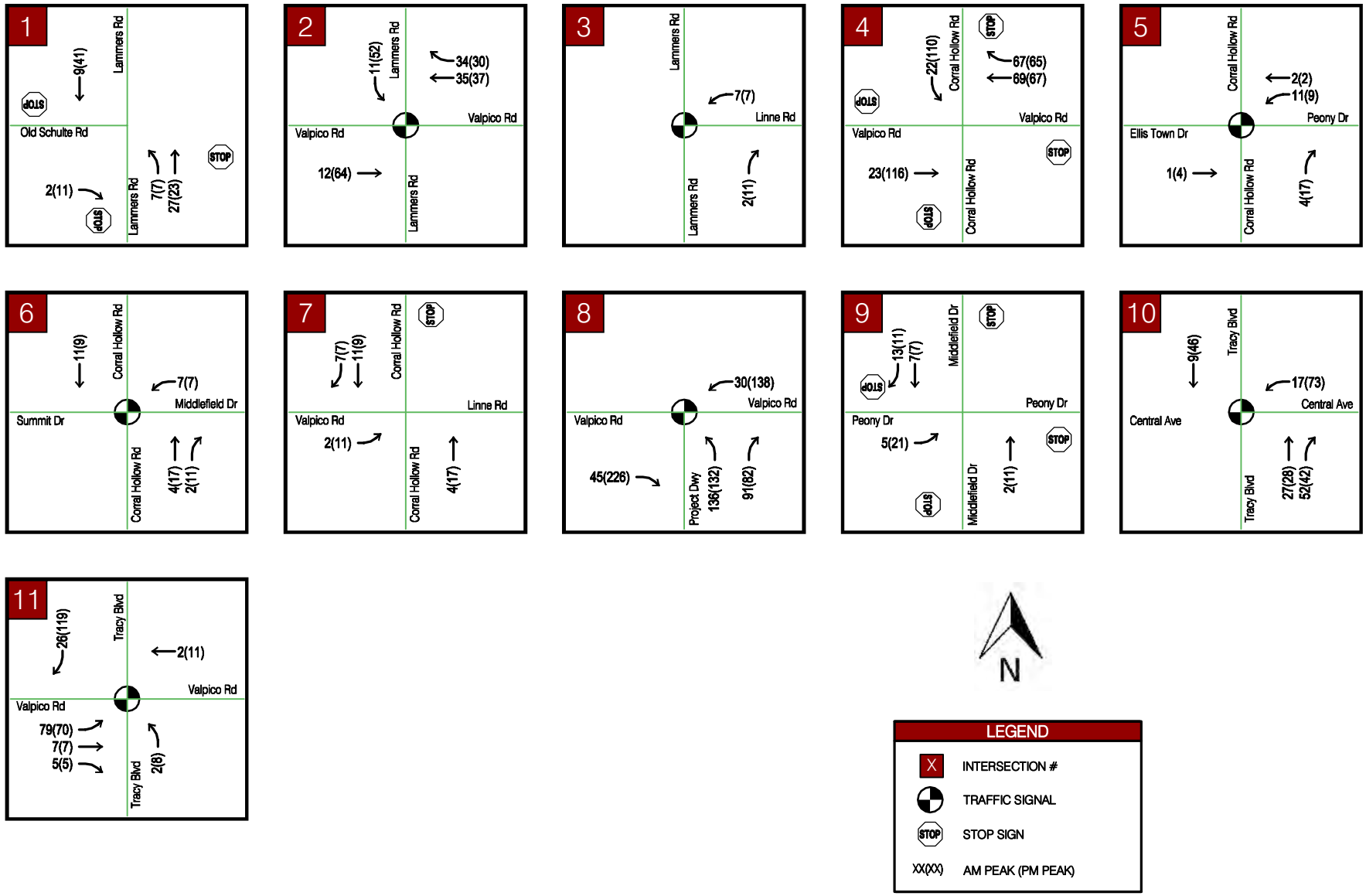
Table 3.16-9: Existing Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Existing				Existing Plus Project			
				Volume		V/C		Volume		V/C	
				AM	PM	AM	PM	AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	891	449	238	0.50	0.27	518	305	0.58	0.34
		SB	891	306	415	0.34	0.47	329	531	0.37	0.60
	Valpico Rd to Linne Rd	NB	891	8	14	0.01	0.02	8	14	0.01	0.02
		SB	891	11	9	0.01	0.01	11	9	0.01	0.01
Corral Hollow Rd	Valpico Rd to Peony Dr	NB	891	342	410	0.38	0.46	342	410	0.38	0.46
		SB	891	560	350	0.63	0.39	560	350	0.63	0.39
	Peony Dr to Middlefield Dr	NB	891	179	317	0.20	0.36	183	334	0.21	0.37
		SB	891	485	255	0.54	0.29	496	264	0.56	0.30
	Middlefield Dr to Linne Rd	NB	891	260	322	0.29	0.36	153	350	0.17	0.39
		SB	891	795	243	0.89	0.27	813	259	**0.91**	0.29
Tracy Blvd	Central Ave to Valpico Rd	NB	1485	826	791	0.56	0.53	905	861	0.61	0.58
		SB	1485	605	679	0.82	0.46	631	798	0.42	0.54
Valpico Rd	Lammers Rd to Corral Hollow Rd	WB	742	332	211	0.45	0.28	401	278	0.54	0.37
		EB	742	255	380	0.34	0.51	278	496	0.37	0.67
	Corral Hollow Rd Project Dwy #1	WB	742	402	294	0.54	0.40	538	426	0.73	0.57
		EB	742	223	516	0.30	0.70	268	742	0.36	**1.00**
	Project Dwy #1 to Cagney Way	WB	742	402	294	0.54	0.40	432	432	0.58	0.58
		EB	742	223	516	0.30	0.70	314	598	0.42	0.81
	Cagney Way to Tracy Blvd	WB	1485	454	372	0.31	0.25	484	510	0.33	0.34
		EB	1485	407	465	0.27	0.31	498	547	0.34	0.37

Table 3.16-9 (cont.): Existing Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Existing				Existing Plus Project			
				Volume		V/C		Volume		V/C	
				AM	PM	AM	PM	AM	PM	AM	PM
Middlefield Dr	Peony Dr to Corral Hollow Rd	NB	742	267	63	0.36	0.08	277	72	0.37	0.10
		SB	742	81	104	0.11	0.14	84	120	0.11	0.16
Peony Dr	Corral Hollow Rd to Middlefield Dr	WB	742	103	62	0.14	0.08	113	71	0.15	0.10
		EB	742	45	67	0.06	0.09	48	83	0.06	0.11
Linne Rd	Lammers Rd to Corral Hollow Rd	WB	—	—	—	—	—	—	—	—	—
		EB	—	—	—	—	—	—	—	—	—

Notes:
Volumes derived from existing intersection counts and Project trip assignment. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E; ≥1.00 = LOS F.**
Source: Kimley Horn and Associates, 2017.

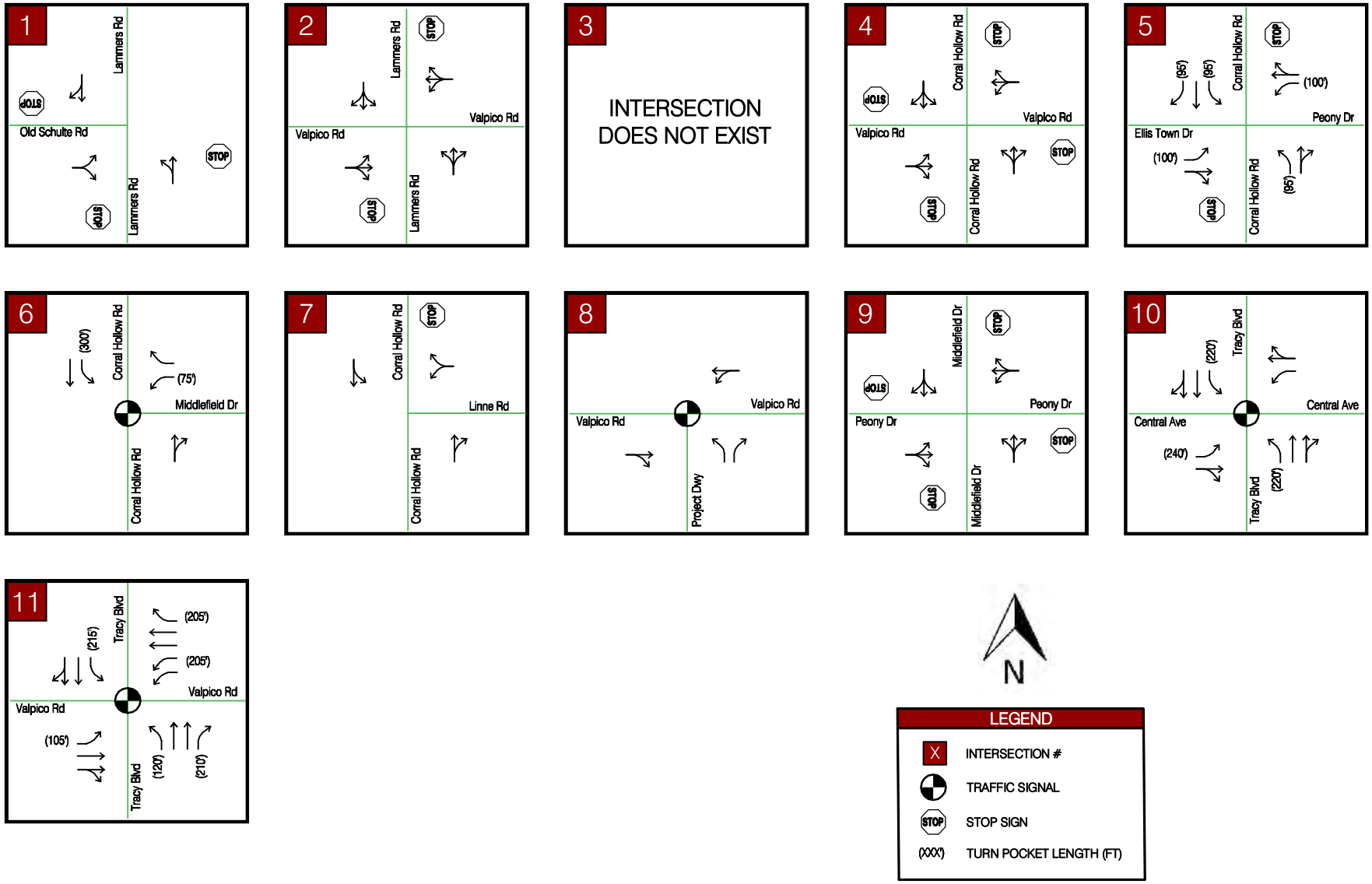


Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-8
Project Trip Assignment: Cumulative Peak Hour Conditions

THIS PAGE INTENTIONALLY LEFT BLANK



Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-9
Existing Plus Project Conditions Lane Geometry and Traffic Control

THIS PAGE INTENTIONALLY LEFT BLANK

The Traffic Impact Report prepared by Kimley-Horn (Appendix H) analyzed the existing road network for Existing Plus Project Conditions without considering the improvements planned in the City's Transportation Master Plan (TMP), resulting in higher volumes on existing roads than would be the case after the planned City grid road network was installed. The City's planned improvements include the following:

- **Lammers Road**: Old Schulte Road to Valpico—Expand from two lanes to four lanes. The widening of this segment to four lanes will complement and overlap with the intersection improvements for background conditions. The intersections govern the capacity in this urban setting and thus the segment can also be expected to operate acceptably. The deficient segments on Lammers Road indicated in Table 3.16-9 do not accurately reflect the roadway network operations. The model is a planning level tool to determine the general number of lane required and ignores the intersection capacities. The project will pay a fair share towards widening the roadway. The widening is included in the City TIF.
- **Corral Hollow Road**: Valpico Road to Linne Road—no addition of lanes. The widening of this segment to four lanes will complement and overlap with the intersection improvements for background conditions. The intersections govern the capacity in this urban setting and thus the segment can also be expected to operate acceptably. The deficient segments on Corral Hollow Road indicated in Table 3.16-9 do not accurately reflect the roadway network operations. The model is a planning level tool to determine the general number of lane required and ignores the intersection capacities.

The proposed project improvements would reduce impacts to Roadway Segment Levels of Service to less than significant levels according to City thresholds. As such, the project would result in less than significant impacts.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM TRANS-1a Install a signal, optimize cycle lengths and splits, add a separate northbound left-turn pocket, add a separate right-turn pocket, and add a separate eastbound left-turn pocket at the Lammers Road/Old Schulte Road (Intersection #1). The City has recently approved the installation of this interim improvement at the intersection and the intersection would operate acceptable at LOS A in the AM peak hour and LOS A in the PM peak hour. Because this improvement was previously identified for other approved projects (Ellis and Cordes Ranch), this background improvement is already funded. As a result, the project would not contribute funding to this improvement. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Project Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. Under this scenario, the TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

MM TRANS-1b The City has recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection. The improvements are identified in the City TMP. Prior to issuance of a building permit, the project would pay the City Traffic Impact Fees. With these improvements, the intersection would operate at an acceptable LOS A in the AM and in the PM peak hour.

Level of Significance After Mitigation

Less than significant impact.

Background Plus Project Conditions

Impact TRANS-2: The project may conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system under Background Plus Approved Projects Plus Project Conditions.

Impact Analysis

The TIA analyzed a worst-case scenario using typical traffic generation from single-family residential use and compares that usage to active adult traffic generation. The single-family residential usage is provided for informational and comparison purposes only. The active adult usage generates fewer trips in every scenario.

Background Base Line and the added TVDP mitigation may include ultimate City of Tracy TMP Program improvements, towards which the applicant would pay the applicable City Traffic Impact Fees. TMP Program improvements constructed by a developer would be eligible to receive fee credits upon completion of construction and acceptance by the City. Any interim roadway mitigation and improvements not included in the City of Tracy TMP Program improvements, would be funded by the approved projects and the TVDP applicant. However, if the approved projects do not proceed or an application for a building permit is not submitted before the TVDP submits an application, the TVDP applicant shall install the full Background Conditions Plus Project improvements, which would include the Background Base Line improvements. The TVDP applicant would be reimbursed by the other approved projects through a Business Improvement District. The reimbursement from future projects to the TVDP applicant shall constitute their share of the improvement.

Background Conditions include existing traffic, plus traffic generated by projects that would be constructed and operational by the time the TVDP is occupied. Roadway improvements identified and required to be implemented as the approved projects are constructed, as identified by the City of Tracy Public Works Department, were also included in this analysis.

City and County staff determined the list of relevant projects that were approved at the time of issuance of the Notice of Preparation. Four approved projects were included in the Background Conditions:

- Stringer/Rocking Horse (residential)
- Ellis (residential/mixed use)
- Cordes Ranch Phase 1 (warehousing)
- Tracy Hills Phase 1A (residential)

Volume Development

Background volumes were developed by reviewing the transportation impact analysis (TIA) studies for each approved project discussed above, and identifying where approved project trips would travel. The trips were added to Existing Conditions volumes shown in Exhibit 3.16-9 and Table 3.16-3.

Roadway/Intersection Improvements

TIAs for approved projects were reviewed, and improvements to be implemented by each project were evaluated to determine if they are applicable to the TVDP study intersections and/or roadway segments. Where applicable, approved project roadway and/or intersection improvements were incorporated into the Background and Background Plus Project Conditions analysis illustrated in the following sections. Roadway and/or intersection improvements are summarized by approved project in the following sections.

Ellis

- **Corral Hollow Road/Valpico Road (Intersection #5)**—Signalize the intersection and add a southbound left-turn lane. The City has approved implementation of a project that would improve the intersection to its TMP geometry.
- Corral Hollow Road/Linne Road (Intersection #7)—Install a signal at the intersection.
- **Lammers Road/Old Schulte Road (Intersection #1)**—Signalize the intersection, optimize cycle lengths and splits.

Cordes Ranch

- **Lammers Road/Old Schulte Road (Intersection #1)**—An interim improvement has been identified at the intersection of Lammers Road and Old Schulte Road. This improvement is funded.
- **Lammers Road/Valpico Road (Intersection #2)**—Cordes Ranch developer will install a signal and a southbound left-turn lane at the intersection of Lammers Road and Valpico Road.

Tracy Hills

- **Corral Hollow Road/Valpico Road (Intersection #5)**—The City is planning to implement widening of Corral Hollow Road and the intersection. This improvement is funded.
- **Corral Hollow Road/Linne Road (Intersection #7)**—Tracy Hills Phase 1A will install a signal at the intersection. For Tracy Hills buildout, the project will add one northbound channelized right-turn lane and one southbound left-turn lane.

Background Conditions Intersection

Background Conditions were evaluated at the study intersections based on lane geometry and traffic control and peak hour volumes presented in Exhibit 3.16-4. All study intersections operate at an acceptable LOS except for the following:

- Lammers Road/Valpico Road (Intersection #2) (AM & PM Peak)
- Corral Hollow Road/Linne Road (Intersection #7) (AM & PM Peak)
- Valpico Road/Tracy Boulevard (Intersection #11) (PM Peak)

Background Conditions Intersection Level of Service can be found below in Table 3.16-10:

Table 3.16-10: Background Conditions Intersection Level of Service

#	Intersection	Agency	Control Type	Background Conditions					
				AM Peak Hour			PM Peak Hour		
				Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	AWSC	Overall	9.8	A	Overall	43.5	D
2	Lammers Rd/Valpico Rd	Tracy	Signal	Overall	**127.4**	**F**	Overall	**82.9**	**F**
3	Lammers Rd/Linne Rd	Tracy	Does Not Exist						
4	Corral Hollow Rd/Valpico Rd	Tracy	AWSC	Overall	11.3	B	Overall	12.0	B
5	Corral Hollow Rd/Peony Dr	Tracy	SSSC	Overall	16.7	B	Overall	20.7	C
6	Corral Hollow Rd/Middlefield Dr	Tracy	Signal	Overall	43.0	D	Overall	42.9	D
7	Corral Hollow Rd/Linne Rd	Tracy	Signal	Overall	**99.3**	**F**	Overall	**151.0**	**F**
8	Project Driveway #1/Valpico Rd	Tracy	Does Not Exist						
9	Middlefield Dr/Peony Dr	Tracy	AWSC	Overall	9.6	A	Overall	7.9	A
10	Tracy Blvd/Central Ave	Tracy	Signal	Overall	27.4	C	Overall	29.8	C
11	Tracy Blvd/Valpico Rd	Tracy	Signal	Overall	31.5	C	Overall	**55.0**	**E**

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold.**
Source: Kimley Horn and Associates, 2017.

Background Plus Project Conditions Intersection

Traffic operations were evaluated at the study intersections based on Background Plus Project Conditions and can be found below in Table 3.16-11. Background Plus Project lane geometry and traffic control and Background Plus Project peak hour traffic volumes are shown in Appendix H of this EIR.

Table 3.16-11: Background Plus Project Conditions Intersection Level of Service

#	Intersection	Maintaining Agency	Control Type	Background Conditions						Background Plus Project Conditions						Background Plus Project Conditions (Active Adult)					
				AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
				Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	AWSC	Overall	9.8	A	Overall	43.5	D	Overall	14.5	B	Overall	**64.0**	**E**	LOS & Delay Improved as Active Adult Community			Overall	48.2	D
2	Lammers Rd/Valpico Rd	Tracy	Signal	Overall	**127.4**	**F**	Overall	**82.9**	**F**	Overall	**159.3**	**F**	Overall	**124.1**	**F**	Overall	**138.9**	**F**	Overall	**93.0**	**F**
3	Lammers Rd/Linne Rd	Tracy	Does Not Exist																		
4	Corral Hollow Rd/Valpico Rd	Tracy	AWSC	Overall	11.3	B	Overall	12.0	B	Overall	11.1	B	Overall	17.0	B	LOS & Delay Improved as Active Adult Community					
5	Corral Hollow Rd/Peony Dr	Tracy	Signal	Overall	16.7	B	Overall	20.7	C	Overall	18.2	B	Overall	21.0	C	LOS & Delay Improved as Active Adult Community					
6	Corral Hollow Rd/ Middlefield Dr	Tracy	Signal	Overall	43.0	D	Overall	42.9	D	Overall	44.4	D	Overall	41.4	D	LOS & Delay Improved as Active Adult Community					
7	Corral Hollow Rd/Linne Rd	Tracy	Signal	Overall	**99.3**	**F**	Overall	**151.0**	**F**	Overall	**102.4**	**F**	Overall	**155.7**	**F**	Overall	**100.3**	**F**	Overall	**152.3**	**F**
8	Project Driveway #1/Valpico Rd	Tracy	Signal	Does Not Exist						Overall	5.0	A	Overall	4.8	A	LOS & Delay Improved as Active Adult Community					
9	Middlefield Dr/Peony Dr	Tracy	AWSC	Overall	9.6	A	Overall	7.9	A	Overall	9.9	A	Overall	8.2	A	LOS & Delay Improved as Active Adult Community					
10	Tracy Blvd/Central Ave	Tracy	Signal	Overall	27.4	C	Overall	29.8	C	Overall	32.7	C	Overall	48.1	D	LOS & Delay Improved as Active Adult Community					
11	Tracy Blvd/Valpico Rd	Tracy	Signal	Overall	31.5	C	Overall	**55.0**	**E**	Overall	47.6	D	Overall	**85.4**	**F**	LOS & Delay Improved as Active Adult Community			Overall	**62.6**	**E**

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold.**
Source: Kimley Horn and Associates, 2017.

The following intersections operate at unacceptable LOS under Background Plus Project Conditions:

- **Lammers Road/Old Schulte Road (Intersection #1) (PM peak hour)**: The addition of the project traffic for an Active Adult land use would result in LOS D operating conditions in the PM peak period, which is acceptable, and the project would not cause an impact. The AM peak would also operate at acceptable LOS.
- **Lammers Road/Valpico Road (Intersection #2) (AM & PM peak hour):** The addition of project traffic causes the intersection to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS C and D with the following improvement: Add a separate westbound right turn lane, and a shared westbound left turn and through lane. The westbound right turn phase will be overlapped with the southbound left turn phase. If a signal is not installed at the time the first building permit is applied for, the TVSP Applicant shall also install a signal and a southbound left-turn lane at the intersection. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. The costs of the non-TMP improvements are the responsibility of the applicant and other approved projects listed above. The TVSP applicant would be reimbursed by the approved projects through a Business Improvement District. The reimbursement from future projects to the TVSP applicant shall constitute their share of the improvement. The applicant shall install this improvement with the issuance of the first building permit.
- **Corral Hollow Road/Linne Road (Intersection #7) (AM and PM peak hour):** The addition of project traffic would add delay and continue to cause this intersection to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS B and D with the following improvements: Add a southbound through lane, and add a northbound through lane, and add a separate westbound right turn lane. The applicant shall install these improvements at the issuance of the first building permit. If a signal is not installed at the time the first building permit is applied for, the TVSP Applicant shall also install a signal. Improvements shall also be constructed at the railroad crossing gates. The improvements are a Public Utilities Commission (PUC) requirement because vehicle queues will spill across the railroad tracks and will cause safety concerns for train traffic. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. The costs of the non-TMP improvements are the responsibility of the applicant and other approved projects listed above. The TVSP applicant would be reimbursed by the approved projects through a Business Improvement District. The reimbursement from future projects to the TVSP applicant shall constitute their share of the improvement. The applicant shall, in collaboration with the City Engineer and Union Pacific Railroad (UPRR)/PUC, commence with an engineering design process to install the improvements identified. This design shall commence immediately following the approval of this Project Application by the City of Tracy. The City does not have control over the UPRR/PUC approval of this improvement and until the improvement is installed, the project impact will remain significant and unavoidable.

- **Valpico Road/Tracy Boulevard (Intersection #11) (PM peak hour):** The addition of project traffic causes the intersection to deteriorate from LOS E to LOS F in the PM peak hour. The intersection would operate at acceptable LOS D in the AM and PM peak hours with the following improvements: optimize the signal cycle length, splits, and phasing. The applicant shall install this improvement at the issuance of the first building permit.

Impacts associated with Background Plus Project Conditions Level of Service can be reduced to a less than significant level through the implementation of mitigation measures TRANS-2a through TRANS-2d, which include various intersection improvements described at the end of this section. Table 3.16-12 shows the effect of implementation of TRANS 2a through TRANS-2d:

Table 3.16-12: Mitigated Background Plus Project Conditions Intersection Level of Service

#	Intersection	Maintaining Agency	Background Plus Project Conditions						Mitigated Background Plus Project Conditions					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	Overall	14.5	B	Overall	**64.0**	**E**	Overall	15.4	B	Overall	47.5	D
2	Lammers Rd/Valpico Rd	Tracy	Overall	**159.3**	**F**	Overall	**124.1**	**F**	Overall	32.6	C	Overall	38.0	D
7	Corral Hollow Rd/Linne Rd	Tracy	Overall	**102.4**	**F**	Overall	**155.7**	**F**	Overall	14.2	B	Overall	54.7	D
11	Tracy Blvd/Valpico Rd	Tracy	Overall	47.6	D	Overall	**85.4**	**F**	Overall	47.6	D	Overall	41.8	D

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold**.
Source: Kimley Horn and Associates, 2017.

Background Conditions Roadway Segment

Traffic operations were evaluated at the study roadway segments under Background Conditions. Results of the analysis are presented in Table 3.16-13.

Table 3.16-13: Background Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Background			
				Volume		V/C	
				AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	891	1133	769	**1.27**	0.86
		SB	891	589	1265	0.66	**1.42**
	Valpico Rd to Linne Rd	NB	891	381	363	0.43	0.41
		SB	891	213	495	0.24	0.56
Corral Hollow Rd	Valpico Rd to Peony Dr	NB	1485	942	1349	0.63	**0.91**
		SB	1485	1188	1213	0.80	0.82
	Peony Dr to Middlefield Dr	NB	1485	723	1148	0.49	0.77
		SB	1485	1116	1057	0.75	0.71
	Middlefield Dr to Linne Rd	NB	1485	663	1450	0.45	**0.98**
		SB	1485	1620	1206	**1.09**	0.81
Tracy Blvd	Central Ave to Valpico Rd	NB	1485	907	954	0.61	0.64
		SB	1485	773	839	0.52	0.56
Valpico Rd	Lammers Rd to Corral Hollow Rd	WB	1485	545	387	0.37	0.26
		EB	1485	388	674	0.26	0.45
	Corral Hollow Rd to Project Dwy #1	WB	1485	520	466	0.35	0.31
		EB	1485	280	485	0.19	0.33
	Project Dwy #1 to Cagney Way	WB	1485	520	520	0.35	0.35
		EB	1485	280	280	0.19	0.19
	Cagney Way to Tracy Blvd	WB	1485	628	545	0.42	0.37
		EB	1485	499	646	0.34	0.44
Middlefield Dr	Peony Dr to Corral Hollow Rd	NB	742	349	160	0.47	0.21
		SB	742	91	191	0.12	0.26
Peony Dr	Corral Hollow Rd to Middlefield Dr	WB	742	111	85	0.15	0.11
		EB	742	65	92	0.09	0.12
Linne Rd	Lammers Rd to Corral Hollow Rd	WB	—	—	—	—	—
		EB	—	—	—	—	—

Table 3.16-13 (cont.): Background Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Background			
				Volume		V/C	
				AM	PM	AM	PM

Notes:
Volumes derived from Existing intersection counts. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E; ≥1.00 = LOS F.**
Source: Kimley Horn and Associates, 2017.

As shown in Table 3.16-13, the following study roadway segments function at unacceptable level of service per City requirements:

- Northbound Lammers Road—Old Schulte Road to Valpico Road (AM peak hour)
- Southbound Lammers Road—Old Schulte Road to Valpico Road (PM peak hour)
- Northbound Corral Hollow Road—Valpico Road to Peony Drive (PM peak hour)
- Northbound Corral Hollow Road—Middlefield Drive to Linne Road (PM peak hour)
- Southbound Corral Hollow Road—Middlefield Drive to Linne Road (AM peak hour)

Background Plus Project Conditions Roadway Segment

Traffic operations were evaluated at the study roadway segments under Background Plus Project traffic conditions. Results of the analysis are presented in Table 3.16-14.

Table 3.16-14: Background Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Background				Background Plus Project			
				Volume		V/C		Volume		V/C	
				AM	PM	AM	PM	AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	891	1133	769	**1.27**	0.86	1202	836	**1.35**	**0.94**
		SB	891	589	1265	0.66	**1.42**	612	1381	0.69	**1.55**
	Valpico Rd to Linne Rd	NB	891	381	363	0.43	0.41	381	363	0.43	0.41
		SB	891	213	495	0.24	0.56	213	495	0.24	0.56
Corral Hollow Rd	Valpico Rd to Peony Dr	NB	1485	942	1349	0.63	**0.91**	942	1349	0.63	**0.91**
		SB	1485	1188	1213	0.80	0.82	1188	1213	0.80	0.82
	Peony Dr to Middlefield Dr	NB	1485	723	1148	0.49	0.77	727	1165	0.49	0.78
		SB	1485	1116	1057	0.75	0.71	1127	1066	0.76	0.72
	Middlefield Dr to Linne Rd	NB	1485	663	1450	0.45	**0.98**	669	1478	0.45	**0.99**
		SB	1485	1620	1206	**1.09**	0.81	1638	1222	**1.10**	0.82
Tracy Blvd	Central Ave to Valpico Rd	NB	1485	907	954	0.61	0.64	986	1024	0.66	0.69
		SB	1485	773	839	0.52	0.56	799	958	0.54	0.64
Valpico Rd	Lammers Rd to Corral Hollow Rd	WB	1485	545	387	0.37	0.26	614	454	0.41	0.31
		EB	1485	388	674	0.26	0.45	411	790	0.28	0.53
	Corral Hollow Rd Project Dwy #1	WB	1485	520	466	0.35	0.31	656	598	0.44	0.40
		EB	1485	280	485	0.19	0.33	325	711	0.22	0.48
	Project Dwy #1 to Cagney Way	WB	1485	520	520	0.35	0.35	550	658	0.37	0.44
		EB	1485	280	280	0.19	0.19	371	362	0.25	0.24
	Cagney Way to Tracy Blvd	WB	1485	628	545	0.42	0.37	658	683	0.44	0.46
		EB	1485	499	646	0.34	0.44	590	728	0.40	0.49

Table 3.16-14 (cont.): Background Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Background				Background Plus Project			
				Volume		V/C		Volume		V/C	
				AM	PM	AM	PM	AM	PM	AM	PM
Middlefield Dr	Peony Dr to Corral Hollow Rd	NB	742	349	160	0.47	0.21	359	169	0.48	0.23
		SB	742	91	191	0.12	0.26	94	207	0.13	0.28
Peony Dr	Corral Hollow Rd to Middlefield Dr	WB	742	111	85	0.15	0.11	121	94	0.16	0.13
		EB	742	65	92	0.09	0.12	68	108	0.09	0.15
Linne Rd	Lammers Rd to Corral Hollow Rd	WB	—	—	—	—	—	—	—	—	—
		EB	—	—	—	—	—	—	—	—	—

Notes:
Volumes derived from existing intersection counts and Project trip assignment. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E; ≥1.00 = LOS F.**
Source: Kimley Horn and Associates, 2017.

As shown in Table 3.16-14, the following study roadway segments function at unacceptable level of service per City requirements:

- Northbound Lammers Road—Old Schulte Road to Valpico Road (AM hour & PM peak hours)
- Southbound Lammers Road—Old Schulte Road to Valpico Road (PM peak hour)
- Northbound Corral Hollow Road—Valpico Road to Peony Drive (PM peak hour)
- Northbound Corral Hollow Road—Middlefield Drive to Linne Road (PM peak hour)
- Southbound Corral Hollow Road—Middlefield Drive to Linne Road (AM peak hour)

It should be noted that the Background Condition reflects higher roadway volumes than expected, since the Background Condition does not include planned improvements to the broader road network, contemplated by the City's TMP, in order to reduce project impacts to Background Plus Project Conditions Roadway Segment Level of Service, the following project improvements for all deficient road segments must be implemented:

- **Lammers Road:** Old Schulte Road to Valpico—Expand from two lanes to four lanes. The widening of this segment to four lanes will complement and overlap with the intersection improvements for background conditions. The intersections govern the capacity in this urban setting and thus the segment can also be expected to operate acceptably. The deficient segments on Lammers Road indicated in Table 3.16-15 do not accurately reflect the roadway network operations. The model is a planning level tool to determine the general number of lane required and ignores the intersection capacities. The project will pay a fair share towards widening the roadway. The widening is included in the City TIF.
- **Corral Hollow Road:** Valpico Road to Linne Road—no addition of lanes. The widening of this segment to four lanes will complement and overlap with the intersection improvements for background conditions. The intersections govern the capacity in this urban setting and thus the segment can also be expected to operate acceptably. The deficient segments on Corral Hollow Road indicated in Table 3.16-15 do not accurately reflect the roadway network operations. The model is a planning level tool to determine the general number of lane required and ignores the intersection capacities.

Table 3.16-15: Mitigated Background Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Background Plus Project				New Capacity	Background Plus Project with Mitigations			
				Volume		V/C			Volume		V/C	
				AM	PM	AM	PM		AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	891	1202	836	**1.35**	**0.94**	1485	1202	836	0.81	0.56
		SB	891	612	1381	0.69	**1.55**	1485	612	1381	0.41	**0.92**
	Valpico Rd to Linne Rd	NB	891	381	363	0.43	0.41	1485	381	363	0.26	0.24
		SB	891	213	495	0.24	0.56	1485	213	495	0.14	0.33

Notes:
Volumes derived from existing intersection counts and Project trip assignment. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E; ≥1.00 = LOS F.**
Source: Kimley Horn and Associates, 2017.

Mitigated Background Plus Project Conditions Roadway Segment

The above-mentioned Road Segment Improvements would reduce project impacts to less than significant levels and operate as acceptable levels of LOS. Thus, project impacts would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM TRANS-2a The addition of project traffic causes the intersection of Lammers Road/Valpico Road (Intersection #2) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS C and D with the following improvement: Add a separate westbound right-turn lane, and a shared westbound left-turn and through lane. The westbound right-turn phase will be overlapped with the southbound left-turn phase. The TVDP Applicant shall install this improvement prior to the issuance of the first building permit.

Because this improvement is identified in the Tracy TMP, this improvement is eligible to receive fee credits via the City's TIF upon completion of construction and acceptance by the City. This project improvement will supplement background improvements previously identified for another approved project (Cordes Ranch) which includes installation of a signal and a southbound left turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

MM TRANS-2b The addition of project traffic causes the intersection of Corral Hollow Road/Linne Road (Intersection #7) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS B and D with the following improvements: Add a southbound through lane, and add a northbound through lane, and add a separate westbound right-turn lane. Improvements shall be constructed at the railroad crossing gates.

This project improvement will supplement background improvements previously identified for other approved projects (Ellis and Tracy Hills) which includes installation of a signal, the addition of one northbound channelized right-turn lane, and the addition of one southbound left-turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

This Project improvement is required by the Public Utilities Commission because vehicle queues will spill across the railroad tracks and will cause safety concerns for train traffic. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. Any costs related to non-TMP improvements are the responsibility of the applicant and other approved projects listed above.

The TVDP Applicant shall, in collaboration with the City Engineer and UPRR/PUC, commence with an engineering design process to install the improvements identified. This design process shall commence immediately following approval of this Project Application by the City of Tracy. Because approval by UPRR/PUC is required before this improvement can be installed, the project impact will remain significant and unavoidable.

Level of Significance After Mitigation

Mitigation Measure TRANS-2a will reduce the potentially significant impact to less than significant. However, because the improvement associated with Mitigation Measure TRANS-2b may not occur before the project is constructed, impacts associated with this intersection will be significant and unavoidable until the improvement can be installed.

Cumulative with Project Conditions

Impact TRANS-3: The project may conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system under Cumulative Conditions.

Impact Analysis

The TIA analyzed a worst-case scenario using typical traffic generation from single-family residential use and compares that usage to active adult traffic generation. The single-family residential usage is provided for informational and comparison purposes only. The active adult usage generates fewer trips in every scenario.

Cumulative Conditions describes the conditions anticipated in 2035. The Tracy TMP, Tracy Travel Demand Model, and approved projects identified in previous sections were evaluated to determine Cumulative volumes and roadway network.

Volume Development

Cumulative volumes were developed from Kimley-Horn by utilizing data from Furnessing Tracy TDM Baseline (2009) and Horizon Year (2035), as well as Existing traffic counts. Roadway and intersection improvements were identified using the Tracy TMP and approved project TIAs. Volumes were also taken from Tracy Hills and adjusted to reflect increased current volumes. Cumulative Conditions volumes are shown in Exhibit 3.16-6.

Roadway/Intersection Improvements

The Tracy TMP was evaluated to determine applicable roadway and/or intersection improvements planned by the City of Tracy. TIAs for approved projects were also reviewed and improvements to be implemented by each project in Cumulative Conditions were evaluated to determine if it is applicable to the TVDP study intersections and/or roadway segments. Where applicable, approved project and/or roadway/intersection improvements were incorporated into the Cumulative and Cumulative Plus Project Conditions analysis illustrated in the following sections.

Roadway and/or intersection improvements are summarized by the TMP and approved projects in the following sections below. Exhibit 3.16-10 of this EIR illustrates the intersection geometry and traffic control assumed in the Cumulative and Cumulative Plus Project analysis, respectively.

Tracy TMP

- **Lammers Road:** Old Schulte to Linne Road—Widen to six-lane road.
- **Corral Hollow Road:** Valpico Road to Linne Road—Widen to four-lane road.
- **Valpico Road:** Lammers Road to Tracy Boulevard—Widen to four-lane road.

TMP Intersections—All intersections included in the TMP will also be improved in Cumulative Conditions. Additional intersections could be included updates on the TMP and the developers would pay proportional fair share payments. For Cumulative Conditions analysis for the TVDP, the following intersections are included in the TMP:

- Lammers Road/Old Schulte Road (Intersection #1)
- Lammers Road/Valpico Road (Intersection #2)
- Corral Hollow Road/Valpico Road (Intersection #6)
- Corral Hollow Road/Linne Road (Intersection #7)
- Tracy Boulevard/Valpico Road (Intersection #8)

Cumulative Conditions Intersection

Traffic operations were evaluated at the study intersections based on Cumulative lane geometry and traffic control and Cumulative peak hour traffic volumes as shown in Exhibit 3.16-10.

The following intersections operate at unacceptable LOS under Cumulative conditions:

- Lammers Road/Valpico Road (Intersection #2) (AM & PM peak hours)
- Corral Hollow Road/Linne Road (Intersection #7) (PM peak hour)

Cumulative Conditions Intersection Level of Service is shown in Table 3.16-16:

Table 3.16-16: Cumulative Conditions Intersection Level of Service

#	Intersection	Agency	Control Type	Cumulative Conditions					
				AM Peak Hour			PM Peak Hour		
				Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	Signal	Overall	14.1	B	Overall	21.3	C
2	Lammers Rd/Valpico Rd	Tracy	Signal	Overall	**123.9**	**F**	Overall	**110.0**	**F**
3	Lammers Rd/Linne Rd	Tracy	Signal	Overall	15.7	B	Overall	42.1	D
4	Corral Hollow Rd/Valpico Rd	Tracy	Signal	Overall	18.6	C	Overall	41.4	D
5	Corral Hollow Rd/Peony Dr	Tracy	Signal	Overall	15.7	B	Overall	17.3	B
6	Corral Hollow Rd/Middlefield Dr	Tracy	Signal	Overall	18.7	B	Overall	24.5	C
7	Corral Hollow Rd/Linne Rd	Tracy	Signal	Overall	20.4	C	Overall	43.2	D
8	Project Driveway #1/Valpico Rd	Tracy	Does Not Exist						
9	Middlefield Dr/Peony Dr	Tracy	AWSC	Overall	8.3	A	Overall	7.6	A
10	Tracy Blvd/Central Ave	Tracy	Signal	Overall	36.9	D	Overall	47.0	D
11	Tracy Blvd/Valpico Rd	Tracy	Signal	Overall	33.9	C	Overall	50.6	D

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold.**
Source: Kimley Horn and Associates, 2017.

Cumulative Plus Project Intersections

Traffic operations were evaluated at the study intersections based on Cumulative Plus Project Conditions. Cumulative Plus Project lane geometry and traffic controls are shown in Exhibit 3.16-10, and Cumulative peak hour traffic volumes are shown in Exhibit 3.16-11.

The following intersections operate at unacceptable LOS under Cumulative Plus Project Conditions, as shown in Table 3.16-17:

- **Lammers Road/Valpico Road (Intersection #2) (AM & PM peak hours)**: The addition of project traffic would result in additional delay and would cause this intersection to continue to operate at deficient LOS F. The intersection would operate at acceptable LOS B and LOS D with the following improvements: install a channelized westbound right-turn pocket, a second southbound left-turn pocket, an eastbound right-turn overlap phase, and a northbound right-turn overlap phase. These improvements are in addition to the TMP improvements, and the project will pay impact fees toward these additional improvements.

Table 3.16-17: Cumulative Plus Project Intersection Level of Service

#	Intersection	Maintaining Agency	Control Type	Cumulative Conditions						Cumulative Plus Project Conditions						Cumulative Plus Project Conditions (Active Adult)					
				AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
				Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS	Movement	Delay	LOS
1	Lammers Rd/Old Schulte Rd	Tracy	Signal	Overall	14.1	B	Overall	21.3	C	Overall	14.3	B	Overall	24.0	C	LOS & Delay Improved as Active Adult Community					
2	Lammers Rd/Valpico Rd	Tracy	Signal	Overall	**123.9**	**F**	Overall	**110.0**	**F**	Overall	**135.1**	**F**	Overall	**116.3**	**F**	Overall	**128.1**	**F**	Overall	**111.8**	**F**
3	Lammers Rd/Linne Rd	Tracy	Signal	Overall	15.7	B	Overall	24.3	C	Overall	15.7	B	Overall	24.9	C	LOS & Delay Improved as Active Adult Community					
4	Corral Hollow Rd/Valpico Rd	Tracy	Signal	Overall	18.6	C	Overall	41.4	D	Overall	20.0	C	Overall	**62.9**	**E**	LOS & Delay Improved as Active Adult Community			Overall	45.9	D
5	Corral Hollow Rd/Peony Dr	Tracy	Signal	Overall	15.7	B	Overall	17.3	B	Overall	15.9	B	Overall	17.6	B	LOS & Delay Improved as Active Adult Community					
6	Corral Hollow Rd/Middlefield Dr	Tracy	Signal	Overall	18.7	B	Overall	24.5	C	Overall	18.9	B	Overall	25.4	C	LOS & Delay Improved as Active Adult Community					
7	Corral Hollow Rd/Linne Rd	Tracy	Signal	Overall	20.4	C	Overall	43.2	D	Overall	20.6	C	Overall	44.5	D	LOS & Delay Improved as Active Adult Community					
8	Project Driveway #1/Valpico Rd	Tracy	Signal	Does Not Exist						Overall	4.8	A	Overall	4.9	A	LOS & Delay Improved as Active Adult Community					
9	Middlefield Dr/Peony Dr	Tracy	AWSC	Overall	8.3	A	Overall	7.6	A	Overall	8.3	A	Overall	7.9	A	LOS & Delay Improved as Active Adult Community					
10	Tracy Blvd/Central Ave	Tracy	Signal	Overall	36.9	D	Overall	47.0	D	Overall	39.8	D	Overall	51.6	D	LOS & Delay Improved as Active Adult Community					
11	Tracy Blvd/Valpico Rd	Tracy	Signal	Overall	33.9	C	Overall	50.6	D	Overall	39.7	D	Overall	**69.2**	**E**	LOS & Delay Improved as Active Adult Community			Overall	54.9	D

Notes:
[1] Analysis performed using HCM 2010 methodologies.
[2] Delay indicated in seconds/vehicle.
[3] Overall level of service (LOS) standard is D.
[4] Intersections that fall below City standard are highlighted and shown in **bold.**
Source: Kimley Horn and Associates, 2017.

Cumulative Conditions Roadway Segment

Traffic operations were evaluated at the study roadway segments under Cumulative Conditions. Results of the analysis are presented in Table 3.16-18. As shown in Table 3.16-18, the following study roadway segments function at an unacceptable LOS per City requirements:

- Northbound Lammers Road—Old Schulte Road to Valpico Road (AM & PM Peak)
- Southbound Lammers Road—Old Schulte Road to Valpico Road (PM Peak)
- Northbound Lammers Road—Valpico to Linne Road (PM Peak)
- Northbound Corral Hollow Road—Middlefield Drive to Linne Road (PM Peak)
- Northbound Tracy Boulevard—Central Avenue to Valpico Road (AM & PM Peak)
- Southbound Tracy Boulevard—Central Avenue to Valpico Road (PM Peak)

Table 3.16-18: Cumulative Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Cumulative			
				Volume		V/C	
				AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	2673	2802	2463	**1.05**	**0.92**
		SB	2673	1554	3475	0.58	**1.30**
	Valpico Rd to Linne Rd	NB	2673	2105	2342	0.79	0.88
		SB	2673	1427	2941	0.53	**1.10**
Corral Hollow Rd	Valpico Rd to Peony Dr	NB	1485	805	1236	0.54	0.83
		SB	1485	715	1056	0.48	0.71
	Peony Dr to Middlefield Dr	NB	1485	565	1196	0.38	0.81
		SB	1485	426	780	0.29	0.52
	Middlefield Dr to Linne Rd	NB	1485	533	1514	0.36	**1.02**
		SB	1485	879	942	0.59	0.63
Tracy Blvd	Central Ave to Valpico Rd	NB	1485	1416	1558	**0.95**	**1.05**
		SB	1485	977	1474	0.66	**0.99**
Valpico Rd	Lammers Rd to Corral Hollow Rd	WB	1485	924	748	0.62	0.50
		EB	1485	467	990	0.31	0.67
	Corral Hollow Rd to Project Dwy #1	WB	1485	873	911	0.59	0.61
		EB	1485	425	1176	0.29	0.79
	Project Dwy #1 to Cagney Way	WB	1485	873	911	0.59	0.61
		EB	1485	425	1176	0.29	0.79
	Cagney Way to Tracy Blvd	WB	1485	859	997	0.58	0.67
		EB	1485	798	1143	0.54	0.77

Table 3.16-18 (cont.): Cumulative Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Cumulative			
				Volume		V/C	
				AM	PM	AM	PM
Middlefield Dr	Peony Dr to Corral Hollow Rd	NB	742	350	160	0.47	0.21
		SB	742	91	191	0.12	0.26
Peony Dr	Corral Hollow Rd to Middlefield Dr	WB	742	111	85	0.15	0.11
		EB	742	65	92	0.09	0.12
Linne Rd	Lammers Rd to Corral Hollow Rd	WB	1485	680	919	0.46	0.62
		EB	1485	570	950	0.38	0.64

Notes:
Volumes derived from Existing intersection counts. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E; ≥1.00 = LOS F.**
Source: Kimley Horn and Associates, 2017.

Cumulative Plus Project Conditions Roadway Segment

Traffic operations were evaluated at the study roadway segments under Cumulative Plus Project traffic conditions. Results of the analysis are presented in Table 3.16-19**.** As shown in Table 3.16-19, the following study roadway segments function at an unacceptable level of service per City requirements:

- Northbound Lammers Road—Old Schulte Road to Valpico Road (AM & PM peak hours)
- Southbound Lammers Road—Old Schulte Road to Linne Road (PM peak hour)
- Southbound Lammers Road—Valpico Road to Linne Road (PM peak hour)
- Northbound Corral Hollow Road—Middlefield Drive to Linne Road (PM peak hour)
- Northbound Tracy Boulevard—Central Avenue to Valpico Road (AM & PM peak hours)
- Southbound Tracy Boulevard—Central Avenue to Valpico Road (AM & PM peak hours)
- Eastbound Valpico Road—Corral Hollow to Project Driveway (PM peak hour)

Table 3.16-19: Cumulative Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Cumulative				Cumulative Plus Project			
				Volume		V/C		Volume		V/C	
				AM	PM	AM	PM	AM	PM	AM	PM
Lammers Rd	Old Schulte Rd to Valpico Rd	NB	2673	2802	2463	**1.05**	**0.92**	2836	2493	**1.06**	**0.93**
		SB	2673	1554	3475	0.58	**1.30**	1565	3527	0.59	**1.32**
	Valpico Rd to Linne Rd	NB	2673	2105	2342	0.79	0.88	2105	2342	0.79	0.88
		SB	2673	1427	2941	0.53	**1.10**	1427	2941	0.53	**1.10**
Corral Hollow Rd	Valpico Rd to Peony Dr	NB	1485	805	1236	0.54	0.83	805	1236	0.54	0.83
		SB	1485	715	1056	0.48	0.71	715	1056	0.48	0.71
	Peony Dr to Middlefield Dr	NB	1485	565	1196	0.38	0.81	569	1213	0.38	0.82
		SB	1485	426	780	0.29	0.52	437	789	0.29	0.53
	Middlefield Dr to Linne Rd	NB	1485	533	1514	0.36	**1.02**	539	1542	0.36	**1.04**
		SB	1485	879	942	0.59	0.63	897	958	0.60	0.65
Tracy Blvd	Central Ave to Valpico Rd	NB	1485	1416	1558	**0.95**	**1.05**	1495	1628	**1.01**	**1.10**
		SB	1485	977	1474	0.66	**0.99**	1003	1593	0.68	**1.07**
Valpico Rd	Lammers Rd to Corral Hollow Rd	WB	1485	924	748	0.62	0.50	993	815	0.67	0.55
		EB	1485	467	990	0.31	0.67	490	1106	0.33	0.74
	Corral Hollow Rd Project Dwy #1	WB	1485	873	911	0.59	0.61	1009	1043	0.68	0.70
		EB	1485	425	1176	0.29	0.79	470	1402	0.32	**0.94**
	Project Dwy #1 to Cagney Way	WB	1485	873	911	0.59	0.61	903	1049	0.61	0.71
		EB	1485	425	1176	0.29	0.79	516	1258	0.35	0.85
	Cagney Way to Tracy Blvd	WB	1485	859	997	0.58	0.67	889	1135	0.60	0.76
		EB	1485	798	1143	0.54	0.77	889	1225	0.60	0.82

Table 3.16-19 (cont.): Cumulative Plus Project Conditions Roadway Segment Level of Service

Street	Segment	Direction	Capacity	Cumulative				Cumulative Plus Project			
				Volume		V/C		Volume		V/C	
				AM	PM	AM	PM	AM	PM	AM	PM
Middlefield Dr	Peony Dr to Corral Hollow Rd	NB	742	350	160	0.47	0.21	360	169	0.48	0.23
		SB	742	91	191	0.12	0.26	94	207	0.13	0.28
Peony Dr	Corral Hollow Rd to Middlefield Dr	WB	742	111	85	0.15	0.11	121	94	0.16	0.13
		EB	742	65	92	0.09	0.12	124	164	0.17	0.22
Linne Rd	Lammers Rd to Corral Hollow Rd	WB	1485	680	919	0.46	0.62	687	926	0.46	0.62
		EB	1485	570	950	0.38	0.64	572	961	0.39	0.65

Notes:
Volumes derived from existing intersection counts and Project trip assignment. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: <0.60 = LOS A; 0.60–0.69 = LOS B; 0.70–0.79 = LOS C; 0.80–0.89 = LOS D; **0.90–0.99 = LOS E; ≥1.00 = LOS F.**
Source: Kimley Horn and Associates, 2017.

For cumulative conditions, when the full road network is built out, the intersection would govern capacity on the City urban street network, and not the segments. All the intersections analyzed would operate at or better than the City LOS standards and, as such, the segments can also be expected to operate at acceptable conditions. The TVDP project will pay the City Transportation Improvement Fee, implemented as a mitigation measure, as its fair share contribution towards the potential incremental cumulative roadway impacts. As such, with the implementation of Mitigation Measure TRANS-3, cumulative project impacts would be reduced to less than significant levels.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-3 Prior to the issuance of a building permit, the Applicant shall pay Traffic Impact Fees to the City of Tracy to account for the Cumulative Traffic Impacts.

Level of Significance After Mitigation

Less than significant impact.

Congestion Management Program

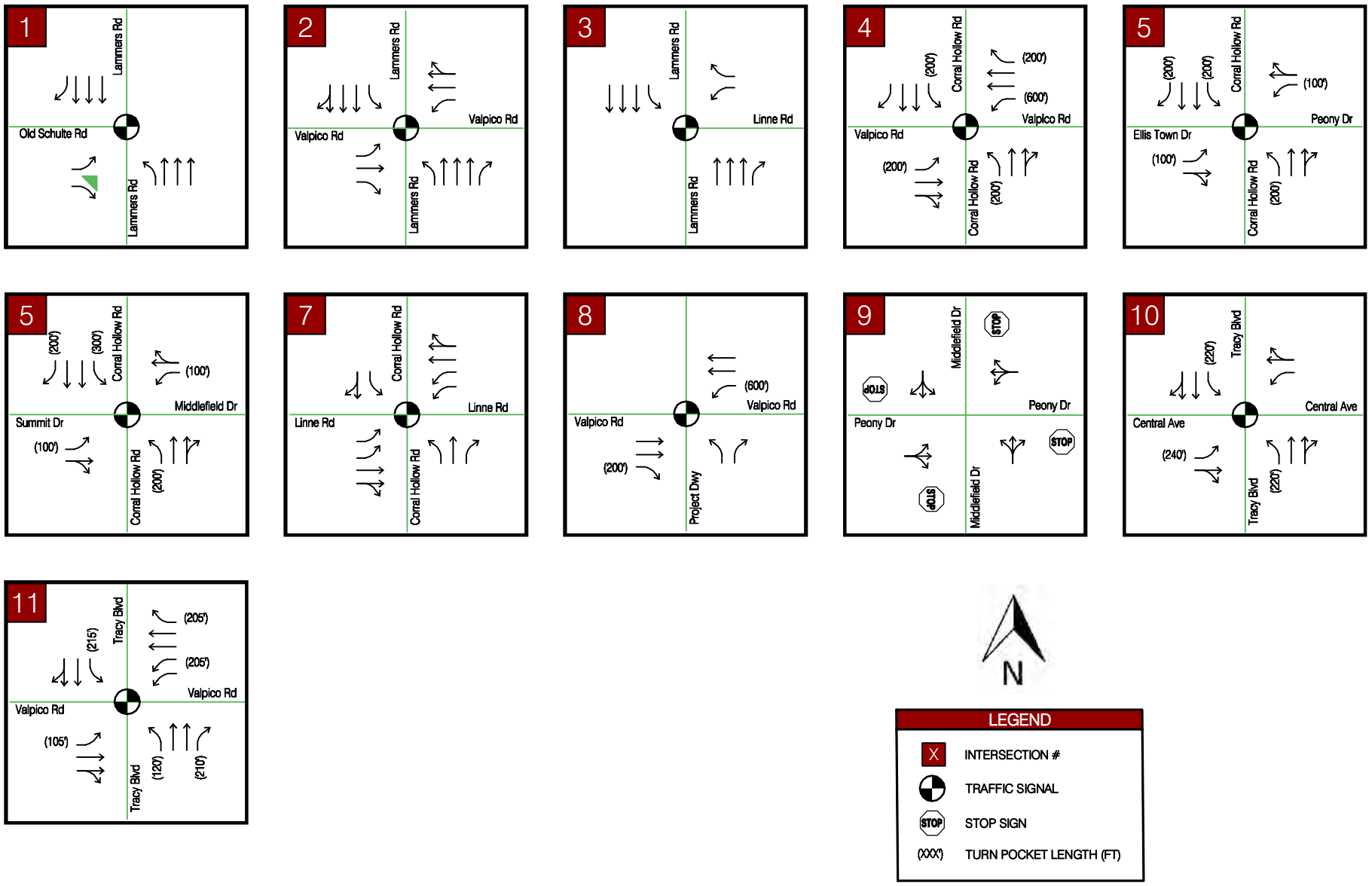
Impact TRANS-4: The project may conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Impact Analysis

The San Joaquin County Regional Congestion Management Program (CMP) is a state-mandated mechanism that employs growth management techniques including traffic level of service requirements, development mitigation programs, transportation systems management, and capital improvement programming, for the purpose of controlling and/or reducing the cumulative regional impacts of development. Caltrans utilizes the SJCOG LOS standards on the freeway segments within San Joaquin County. The following provisions of the CMP are relevant to the TVDP:

- The CMP system includes Lammers Road. The LOS thresholds for intersections are set at "D."
- A proposed development would have a significant impact to the network if for any CMP roadway currently operating at LOS D or better under No Project conditions operates at LOS E or F under project-added conditions.

As mentioned above, some intersections and roadway segments operate at LOS E or F under project-added conditions. To reduce these impacts to the CMP intersections and roadway segments, the TVDP would be required to implement the above-mentioned mitigation measures and design improvements. Implementation of these mitigation measures and design improvements would reduce project impacts to an acceptable level.

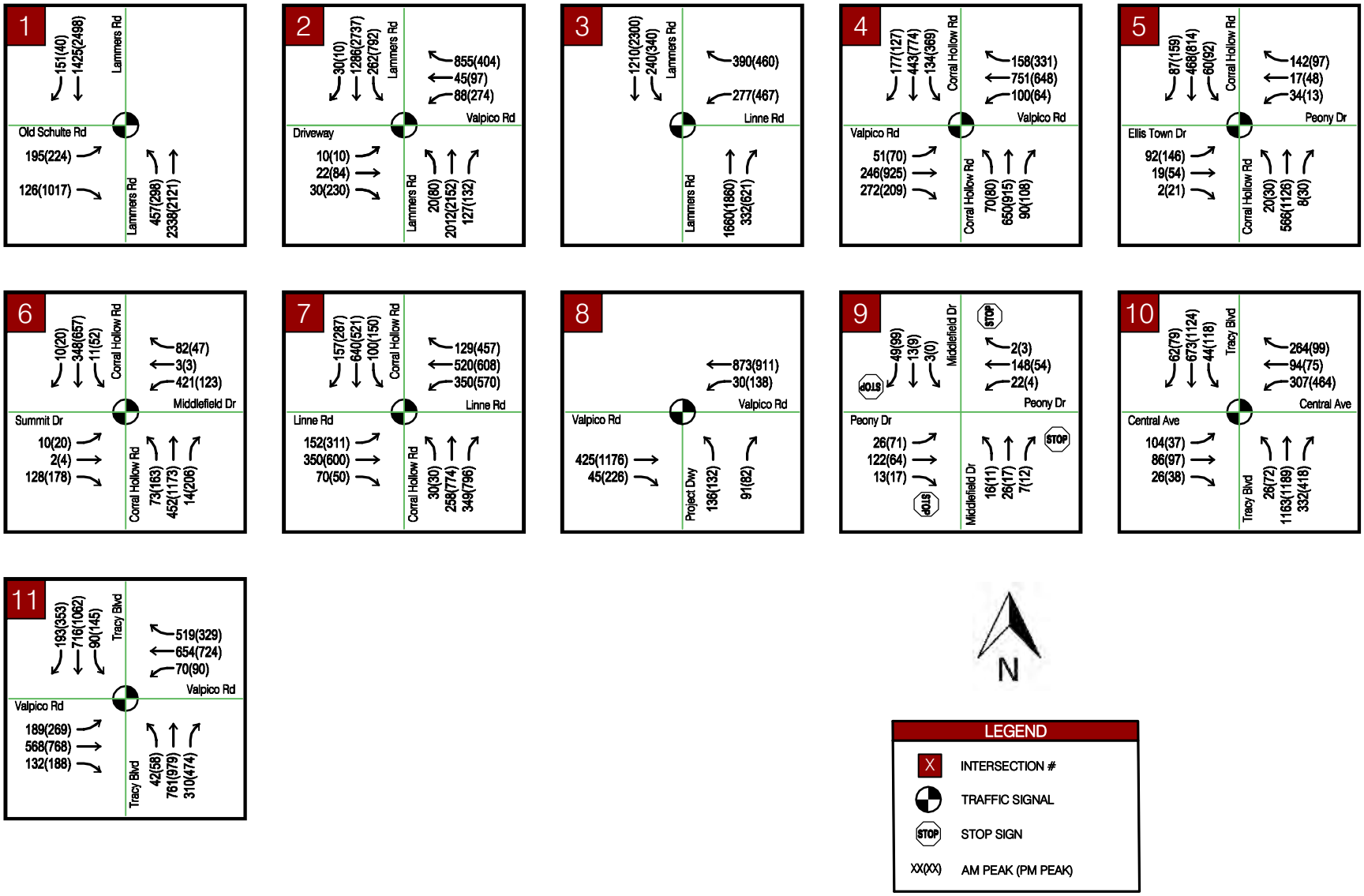


Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-10
Cumulative Plus Project Lane Geometry and Traffic Control

THIS PAGE INTENTIONALLY LEFT BLANK



Sources: Kimley Horn, 2017

FIRSTCARBON SOLUTIONS™

Exhibit 3.16-11
Cumulative Plus Project Intersection Volumes

THIS PAGE INTENTIONALLY LEFT BLANK

Additionally, the CMP requires a deficiency plan if a roadway segment LOS falls below LOS D after calculating required exemptions for a particular project. A deficiency plan identifies mitigations to alleviate a roadway segment of its deficiency through capital improvements or implementation of system-wide improvements to benefit circulation quality. The two primary purposes of a deficiency plan are to ensure a jurisdiction would not be found noncompliant with the CMP by exceeding its LOS standard and secondly, to increase the funding priority of any improvement identified through the deficiency planning process. As such, a deficiency plan would be required, if needed, to ensure project compliance with the CMP.

In addition to the above-mentioned deficiency plan, the TVDP would be required to implement all above-mentioned TMP improvements and mitigation measures to reduce project impacts. Thus, project impacts to a CMP would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM TRANS-1a and 1b; MM TRANS-2a, 2b, and 2c; and MM TRANS-3.

Level of Significance After Mitigation

Less than significant impact.

Air Traffic Patterns

Impact TRANS-5:	**Development and land use activities contemplated by the project would not cause a change in air traffic patterns that results in substantial safety risks.**

Impact Analysis

San Joaquin County Airport Land Use Compatibility Plan Appendix A depicts Tracy Municipal Airport Compatibility Zone (Exhibit 3.10-1) sets forth airspace protection zones based on distance from the airport. The TVDP overlaps with Airport Land Use Compatibility Zone 7. Within this zone, there is no limit on the number of dwelling units per acre. The required open land is 10 percent. Prohibited uses include uses that are hazardous to flight and outdoor stadiums. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also prohibited. It is important to note that the prohibited uses are ones that are explicitly prohibited regardless of whether they meet the intensity criteria. Airspace review is required for objects taller than 100 feet (Project Review Guidelines for the Airport Land Use Commission, page 3-17). The houses would be at most 30 feet tall with lot coverage of no more than 55 percent. Thus, the project would be consistent with the airspace protection policies of the Airport Land Use Compatibility Plan.

Additionally, the TVDP does not: (1) propose any exterior lights that could be mistaken for airport lights; (2) propose any uses or activities that emit substantial amounts of dust, heat, steam or smoke; or (3) propose any uses or activities that would generate electrical interference.

Because the TVDP includes the creation of three man-made lakes totaling approximately 10.5 acres, there is a potential impact from birds attracted to the lakes. As discussed in MM HAZ-3, the lake system shall be designed and managed to avoid attracting waterfowl. More specific design measures are included in that mitigation. After implementation of MM HAZ-3, the impact would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM HAZ-3.

Level of Significance After Mitigation

Less than significant impact.

Roadway Safety

Impact TRANS-6: The project would not substantially increase hazards due to a design feature or incompatible uses.

Impact Analysis

Site Access and Circulation

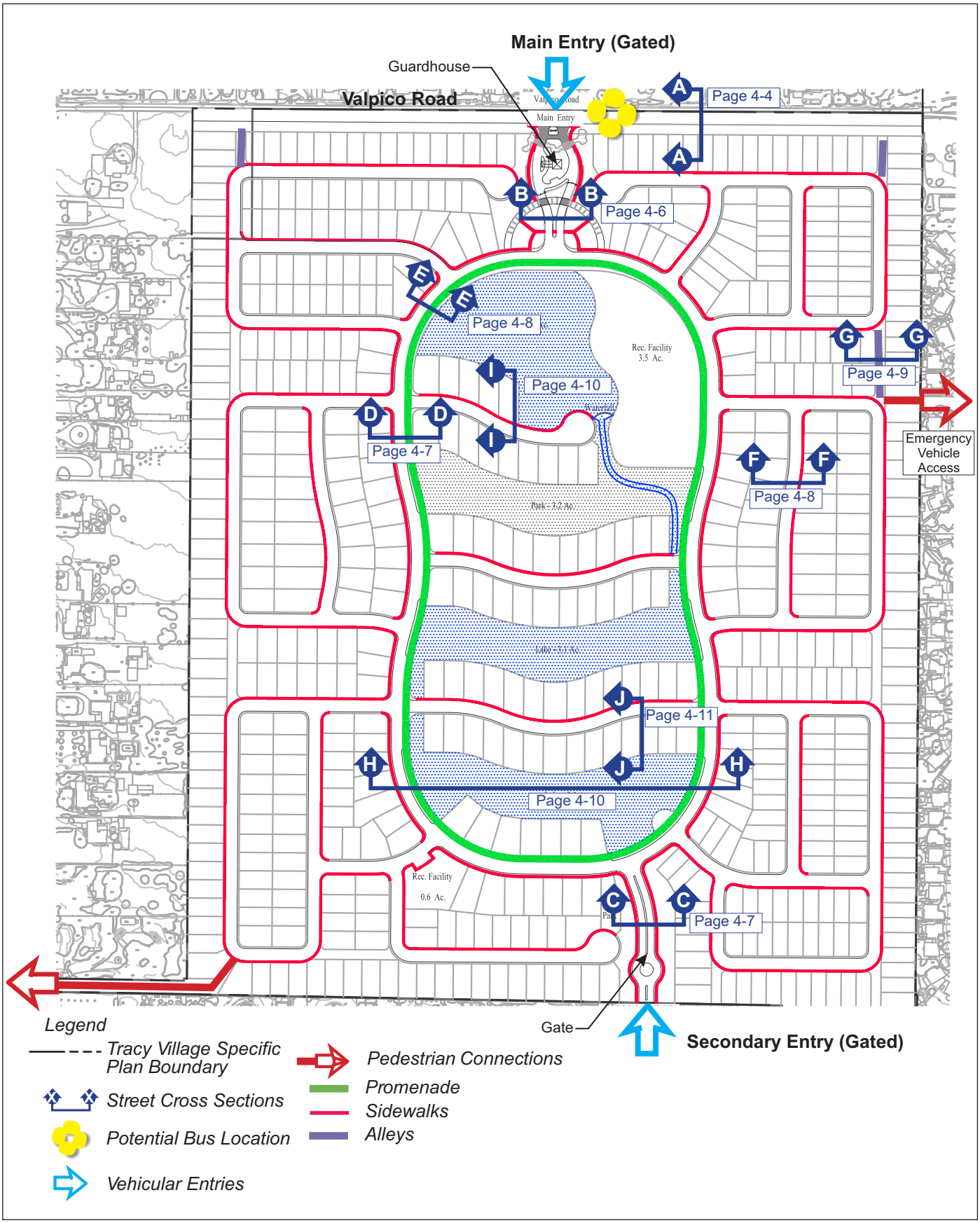
The land use concept for the TVDP contains a framework for private street circulation consisting of both a Primary Street Network and an Internal Street Network. Access to the community will be provided by a main entrance from Valpico Road, the main east/west arterial defining the northern edge of the TVDP, and a minor entrance from Middlefield Road, connecting the new community to the residential development to the south. A main community loop street will provide access within the TVDP to all neighborhoods and recreational areas by encircling the interior lake system. This street will provide a two-way travel consisting of one lane in each direction, parallel parking spaces on either side of the street, and sidewalks along the neighborhood side.

Several private residential streets will flow off of the loop street providing direct access to the neighborhoods and residential areas. The residential private streets will provide two-way travel with one lane in each direction and parallel parking on either side of the street. Each neighborhood will have two points of ingress and egress to the loop street providing easy circulation within Tracy Village. The proposed circulation plan is shown in Exhibit 3.16-12. The proposed site access and circulation would not create roadway safety hazards associated with design features, and impacts would be less than significant.

Truck Traffic

The TVDP would not add any truck traffic, except during construction, onto the City's road network.

All freeway interchanges, by nature, serve as truck route access locations to the City of Tracy road network. From the interchanges and freeways, regional routes continue throughout the City's road network. In the vicinity of the TVDP, trucks can access the road network from the interchange at I-580 onto Corral Hollow Road. From Corral Hollow Road, the truck route follows Linne Road eastwards.



FIRSTCARBON SOLUTIONS™

Exhibit 3.16-12
Circulation Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Section 3.08.290 of the City's Municipal Code establishes truck routes throughout the City, restricting vehicle routes within the City with a gross vehicle weight of 5 tons or more, licensed commercially as a truck in the state of origin, and used for carrying goods for pickup and delivery. Vehicles meeting this requirement shall drive only on truck route designated streets except when necessary for egress and ingress by direct route to and from restricted streets for the purpose of loading or unloading.

In summary, the TVDP would not create roadway safety hazards associated with design features, and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Emergency Access/Response

Impact TRANS-7: The project would not result in inadequate emergency access.

Impact Analysis

Emergency vehicles would access the site via a 10-foot wide emergency vehicle access road along the eastern boundary of the site (as shown in Exhibit 3.16-12). All cul-de-sacs, streets, knuckles and intersections shall meet City standards for minimum width and turning radius of fire trucks. The Homeowner's association would maintain all emergency access roads and gates that may be associated within the TVDP. The City would also have an easement over the internal circulation system, which would be utilized for emergency services. Gates would be accessible by the Fire Department for emergency applications (Knox Box, Knox Padlock, Opticon, etc.). The TVDP is also required to adhere to the California Fire Code. With emergency vehicle access that would be provided by the project and adherence to the California Fire Code, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Bicycle, Pedestrian and Public Transit

Impact TRANS-8: The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact Analysis

The TVDP will provide sidewalks on all on-site streets and along the south side of Valpico Road as shown in Exhibit 2-5. Bike lanes will be provided along the south side of Valpico Road and along Middlefield Drive and Project Driveway #1 within the TVDP site.

Transit stops do not currently exist within 0.25 mile of the TVDP (walking distances); therefore, the TVDP will not cause any adverse effects. Future transit stops and routes are identified in the TMP and provide mode choice opportunities to TVDP residents once implemented.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.17 - Utilities and Service Systems

3.17.1 - Introduction

This section describes the existing utilities and services systems and potential environmental effects from Project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on, among other things, information provided by the updated Water Supply Assessment (WSA) (dated February 2017) prepared by West Yost Associates (Appendix I).

3.17.2 - Environmental Setting

Potable Water

The City receives water supplies from three sources: Central Valley Project via the Delta Mendota Canal (DMC), South County Water Supply Project (SCWSP) via the Stanislaus River, and groundwater from nine wells. The United States Bureau of Reclamation (USBR) is the wholesale supplier for the Central Valley Project water and the South San Joaquin Irrigation District (SSJID) is the wholesale supplier for the South County Water Supply Project.

Central Valley Project Water via the Delta-Mendota Canal

In July 1974, the City entered into a 40-year Municipal and Industrial (M&I) contract with the United States Bureau of Reclamation (USBR) for an annual entitlement of 10,000 acre-feet per year (afy) of surface water from the Central Valley Project (CVP) via the (DMC). In 2004, the USBR approved the assignment of 5,000 afy of Ag-reliability CVP contract entitlement to the City from the Banta Carbona Irrigation District (BCID). Also in 2004, the USBR approved the assignment of 2,500 afy of Ag-reliability CVP contract entitlement water to the City from the West Side Irrigation District (WSID), with the option to purchase an additional 2,500 afy of CVP contract entitlement from the WSID. In December 2013, the City and WSID approved the additional assignment in which the City's current assignment of WSID-CVP water is 5,000 afy. In the aggregate, the City's contractual entitlement to the Municipal & Industrial-reliability CVP water and assignments of Ag-reliability water CVP water from BCID and WSID are referred to as the City's "Existing Contract" with the USBR. The total quantity of CVP water available to the City under its Existing Contract is 20,000 afy (10,000 afy of M&I-reliability water and 10,000 afy of Ag-reliability water).

Treatment of Central Valley Project Water

Tracy's DMC/Central Valley Project water is treated at the John Jones Water Treatment Plant (JJWTP), located at the southern end of the City, just east of the DMC and the California Aqueduct. The current treatment capacity of the plant is 30 million gallons per day (mgd). The JJWTP uses water treatment processes such as chemical oxidation, temperature equilibration, coagulation, flocculation, sedimentation, filtration, granulated activated carbon adsorption, chlorine, and ultraviolet light disinfection.

South County Water Supply Project via the Stanislaus River

The SCWSP is a partnership between the City of Tracy, SSJID, and the cities of Manteca, Lathrop, and Escalon. This water supply is based on SSJID's senior pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the USBR to store water in New Melones

Reservoir. As part of the SCWSP, the City was allocated up to 10,000 afy of water based upon SSJID's senior water rights. In August 2013, SSJID and the cities of Tracy and Lathrop approved a Lathrop-Tracy Purchase, Sale and Amendment Agreement for the sale of a portion of the City of Lathrop's SCWSP supply and capacity to the City of Tracy. The agreement provides the City of Tracy with an additional 1,120 afy of SCWSP supply and 2 mgd of SCWSP capacity. This additional SCWSP supply has the same reliability as the City's original SCWSP supplies. Currently, the City has access to 11,120 afy of Stanislaus River water provided for by the SCWSP.[1]

Treatment of SCWSP Water

The Stanislaus River water is treated at the Nick C. DeGroot Water Treatment Plant (DGWTP,) located near Woodward Reservoir in Stanislaus County. The DGWTP treatment processes include high-rate dissolved air flotation and submerged membrane filtration. The DGWTP currently has a capacity to treat 36 mgd with a final build-out capacity of 60 mgd. The SSJID can deliver both free available chlorine or add ammonia at their Tracy booster pumping station, which then converts the free chlorine to chloramines.

Groundwater

The City overlies a portion of the San Joaquin Valley Groundwater Basin-Tracy Sub-basin (Tracy Sub-basin). The City currently operates nine groundwater wells, with a total extraction capacity of about 18,300 gpm, or 26 mgd. Four wells (Production Wells 1, 2, 3 and 4) are located near the City's JJWTP and pump directly into the JJWTP clearwells, where the groundwater is blended with treated surface water. The other wells including Lincoln Well, Lewis Manor Well (Well 5), Park and Ride Well (Well 6), Ball Park Well (Well 7) and Well 8 are located throughout the City and pump water directly into the distribution system after disinfection. The Tracy Sub-basin comprises continental deposits of Late Tertiary to Quaternary age. These deposits include the Tulare Formation, Older Alluvium, Flood Basin Deposits, and Younger Alluvium. The cumulative thickness of these deposits increases from a few hundred feet near the Coast Range foothills on the west to about 3,000 feet along the eastern margin of the sub-basin.

Recycled Water

Recycled Water Plan

In 2002, the City adopted a Recycled and Non-Potable Water Ordinance requiring all new subdivisions, to the extent practicable, to install the required infrastructure (such as dual-distribution pipelines) to provide recycled water to meet non-potable water demands at parks, golf courses, athletic fields, schools, median island landscapes, and industrial sites. The ordinance was codified into the Tracy Municipal Code as Chapter 11.30 "Recycled and Non-Potable Water."

The 2012 Citywide Water System Master Plan and 2012 Tracy Wastewater Master Plan included recommended capital improvement projects for the development of the City's recycled water system, including facilities to deliver recycled water to future planning areas. To date, the City has spent approximately $85 million on improvements to the City's Wastewater Treatment Plant to allow the plant to produce tertiary-treated wastewater meeting Title 22 requirements for recycled water

[1] Water Supply Assessment for Tracy Village Specific Plan, "Stanislaus River Water", February 2017

use for landscape irrigation and other non-potable uses. In December 2013, the City adopted Development Impact Fees to fund recycled water infrastructure improvements. In 2016, the City received an $18 million Proposition 84 grant funding from the Department of Water Resources (DWR) to fund construction of pump stations and pipelines to distribute recycled water.

In March 2013, the City adopted Ordinance 1183 amending Chapter 11.30 of the Tracy Municipal Code to update the City's recycled water requirements to be consistent with state, regional and local standards, including the California Water Conservation Act of 2009 (SBx7-7), 2010 California Green Building Standards Code, California Model Water Efficient Landscape Ordinance, and the City of Tracy Sustainability Action Plan. One of the key provisions of the new ordinance provides that untreated surface water supplies may be used in lieu of recycled water supplies to meet non-potable demands on an interim basis, but only until December 31, 2020.

In the City's 2015 Urban Water Management Plan (UWMP), the City projected recycled water demands of 4,814 afy in 2040 and 7,696 afy at buildout of the recycled water system. Recycled water will be treated to a tertiary level in accordance with Title 22 requirements at the City's Wastewater Treatment Plant (WWTP) and will be distributed to recycled water use areas within the City's sphere of influence.

Wastewater

Collection

The City of Tracy's wastewater collection system consists of gravity sewer lines, pump stations, and force mains. The City's wastewater flows toward the northern part of the City where it is treated at the WWTP and then discharged into the Old River of the Southern Sacramento-San Joaquin Delta.

Treatment

The WWTP is located between MacArthur Drive and Holly Drive just north of Interstate 205. The WWTP completed an upgrade in 2008. The National Pollutant Discharge Elimination System (NPDES) permit CA 0079154 allows for discharge of 10.8 mgd and up to 16 mgd if applicable treatment facilities are constructed. The WWTP provides disinfected tertiary level treatment meeting Title 22 requirements of the Code of Regulations from the State Water Resource Control Board. The WWTP includes primary clarifiers, activated sludge, secondary clarifiers, flocculation, tertiary filtration, and disinfection.

Storm Drainage

The City's Public Works Department manages Tracy's storm drainage system. Stormwater drains through open channels, storm drains, and closed conduits that are owned, operated, and maintained by the City and the West Side Irrigation District. The system includes three outfalls: the West Side Irrigation District (WSID) Main Drain; the Westside Channel Outfall System; and the Sugar Cut Outfall. These outfalls carry and discharge storm runoff into the Old River and utilize pump stations to move water over grades; however, the majority of the system is gravity operated.

Solid Waste

The City of Tracy is serviced by the Tracy Disposal Service, a private company, for solid waste collection and disposal. The City's solid waste is taken to the Tracy Material Recovery Facility (MRF) and Transfer Station on South MacArthur Drive before being sent to the Foothill Sanitary Landfill on Shelton Road. The Transfer Station is approximately 40 acres of land. The MRF has a daily intake capacity of 1,000 tons of solid waste and on average takes in 354 tons per day. Currently, the permitted capacity of the Foothill Landfill is 102 million cubic yards. The facility has a remaining capacity to accommodate 95 million cubic yards of solid waste. Current permits indicate a closure in 2054.

Recycling

The Tracy Disposal Service also provides recycling services to city residents and businesses. Materials accepted in recycling bins include glass containers, all plastics, tin and aluminum cans, plastic milk cartons, newsprint, boxboard, corrugated cardboard, bond paper, and magazines. The City offers special recycling programs including an electronic waste program, a tire-recycling program, and a twice-per-year residential cleanup program on large items and debris. The City's waste diversion goal corresponds with the State's goal of diverting 50 percent of all solid waste from landfills by January 1, 2000 through source reduction, recycling and education. Today, the City has implemented 43 waste diversion programs and is currently exceeding its state residential disposal rate target by over 50 percent.

Composting

A bi-weekly leaf and yard waste collection program is the forefront of the City's composting program. The City has also incorporated a grass-cycling program at city parks, where grass is cut and left as mulch. The City recorded 10,292 tons of curbside residential composting while grass-cycling generated approximately 2,578 tons of compost.

Energy

The Pacific Gas and Electric Company (PG&E) provides natural gas and electricity services to the City of Tracy. PG&E provides natural gas and electric to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. PG&E produces or buys its energy from a mix of conventional and renewable generating sources, which travel through our electric transmission and distribution systems to reach customers.

Electricity

PG&E, which is regulated by the California Public Utilities Commission, provides electricity to all or part of the 47 counties in California, including San Joaquin County. PG&E charges connection and user fees for all new development, and sliding use-based rates for electrical and natural gas service. PG&E-owned generating facilities include nuclear, natural gas, and hydroelectric, with a net generating capacity of more than 7,684 megawatts. In 2014, PG&E delivered approximately 86,303 gigawatt-hours of electricity to its 5.3 million electrical customers.

Natural Gas

PG&E provides natural gas to all or part of 39 counties in California comprising most of the northern and central portions of the State. PG&E obtains most of its natural gas supplies from western Canada and the balance from U.S. sources. PG&E operates approximately 49,100 miles of transmission and distribution pipelines, and three underground storage fields with a combined storage capacity of approximately 48.7 billion cubic feet (Bcf). In 2014, PG&E delivered approximately 269 Bcf of natural gas to its 4.4 million natural gas customers.

3.17.3 - Regulatory Framework

State

California Green Building Standards Code

The California Green Building Standard Code was adopted January 12, 2009. The purpose of this code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality

The Code addresses exterior envelope (exterior building walls), water efficiency, and material conservation components. The aim is to reduce energy usage in non-residential buildings by 20 percent by 2015 and help meet reductions contemplated in Assembly Bill (AB) 32. With the 2008 Building Code, a 15-percent energy reduction over 2007 edition is expected.

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare urban water management plans and update them every five years. The act requires that urban water management plans include a description of water management tools and options used by that entity to maximize resources and minimize the need to import water from other regions.

The City of Tracy's Urban Water Management Plan was last updated in 2016 and includes projections of water demand and supply through 2040.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of their review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into code requirements for landscaping. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update

the State's Model Water Efficient Landscape Ordinance (Ordinance) through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015.

New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. This applies to residential, commercial, industrial and institutional projects that require a permit, plan check or design review. The previous landscape size threshold for new development projects ranged from 2,500 square feet to 5,000 square feet. The size threshold for existing landscapes that are being rehabilitated has not changed, remaining at 2,500 square feet. Only rehabilitated landscapes that are associated with a building or landscape permit, plan check, or design review are subject to the Ordinance.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed AB 939, the California Integrated Waste Management Act of 1989. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, Senate Bill 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The 2016 Standards continue to improve upon the previous Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The effective date of the 2016 Standards is January 1, 2017. The 2016 Building Energy Efficiency Standards may reduce statewide annual electricity consumption by approximately 281 gigawatt-hours per year, electrical peak demand by 195 megawatts, and natural gas consumption by 16 million therms per year. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), indoor and outdoor lighting, and illuminated signs.

Local

City of Tracy

General Plan

The Tracy General Plan sets forth the following goals, policies, and programs related to utilities and service systems.

Public Facilities and Services Element

- **Goal PF-5**: Reduction in the volume of solid waste.
- **Objective PF-5.1:** Reduce volumes of solid waste generated in Tracy through recycling and resource conservation.
- **P1.** Promote redesign, reuse, composting and shared producer responsibility of discarded materials.
- **P2.** The City shall strive to meet or exceed the State's goal of diverting 50 percent of all solid waste from landfills.
- **P5.** Salvage and reuse of construction and demolition materials and debris is encouraged at all construction projects within the City.
- **P8.** Residential, industrial, commercial, and retail buildings should be designed or improved to accommodate an increase in the amount and type of recycled materials.
- **Objective PF-5.2:** Ensure adequate solid waste collection and disposal.
- **Goal PF-6**: Adequate supplies of water for all types of users.
- **Objective PF-6.1:** Ensure that reliable water supply can be provided within the City's service area, even during drought conditions, while protecting the natural environment.
- **P1.** The City shall promote water conservation by implementing the Best Management Practices contained in the Urban Water Management Plan.
- **P2.** The City shall continue to acquire additional sources of water supplies to meet the City's future demands.
- **P3.** To the extent feasible, the City shall use surface water supplies to meet daily water needs and reduce reliance on groundwater supplies.
- **P4**. The City shall establish water demand reduction standards for new development and redevelopment to reduce per capita and total demand for water.
- Objective PF-6.2 Provide adequate water infrastructure facilities to meet current and future populations.
- **P1.** The City shall maintain water storage, conveyance and treatment infrastructure in good working condition in order to supply domestic water to all users with adequate quantities, flows and pressures.
- **Objective PF-6.3:** Promote coordination between land use planning and water facilities and service.
- **P2.** New developments shall dedicate land for utility infrastructure such as treatment facilities, tanks, pump stations and wells as needed to support the development of their project.
- **P3.** The City shall be responsible for construction of new transmission water lines, as needed to meet future needs. Individual development project shall be responsible for the construction of all water transmission means.

- **P4.** All new water facilities shall be designed to accommodate expected capacity for buildout of areas served by these facilities but may be constructed in phases to reduce initial and overall costs.
- **P5.** The availability of sufficient, reliable water shall be taken into account when considering the approval of new development.
- **P6.** Costs for water service expansion shall be distributed among new water users fairly and equitably.
- Objective PF-6.5 Use recycled water to reduce non-potable water demands whenever practicable and feasible.
- **P2.** Recycled water piping systems ("purple pipe") shall be constructed as appropriate in all new development projects to facilitate the distribution and use of recycled water. The specific location and size of the recycled water systems shall be determined during the development review process.
- **P4.** The City shall plan for recycled water infrastructure in the City's Infrastructure Master Plans and, to the extent feasible, recycled water should be utilized for non-potable uses, such as landscape irrigation, dust control, industrial uses, cooling water and irrigation of agricultural lands.
- **Goal PF-**7: Meet all wastewater treatment demands and federal and State regulations.
- **Objective PF-7.1.** Collect, transmit, treat and dispose of wastewater in ways that are safe, sanitary and environmentally acceptable.
- **P1.** The City shall maintain wastewater conveyance, treatment and disposal infrastructure in good working condition in order to supply municipal sewer service to the City's residents and businesses.
- **P2.** The City shall expand the existing wastewater treatment plant to the extent possible or pursue a single new west side facility instead of building new facilities at multiple locations to meet future needs.
- **Objective PF-7.3**. Promote coordination between land use planning and wastewater conveyance, treatment and disposal.
- **P1.** Wastewater collection and treatment facilities shall be designed to serve expected buildout of the areas served by these facilities but constructed in phases to reduce initial and overall costs.
- **P2.** The City shall construct new wastewater trunk lines as needed. Individual development projects shall be responsible for construction of all collection lines other than trunk lines.
- **P3.** The approval of new development shall be conditioned on the availability of sufficient capacity in the wastewater collection and treatment system to serve the project.
- **P5.** New development shall fully fund the cost of new wastewater treatment and disposal facilities.
- **P6.** Prior to any development approvals within an Urban Reserve, the City shall complete new wastewater master planning and wastewater treatment and disposal studies, particularly for the west side of the city. These studies are to be funded by proponents of new development and must show how adequate wastewater treatment will be provided to the Urban Reserve in question.
- **Objective PF-7.4**. Pursue innovative solutions for wastewater treatment and disposal that are compatible with the environment.

- **P4.** The City shall establish wastewater treatment demand reduction standards for new development and redevelopment to reduce per capita and total demand for wastewater treatment.
- **Goal PF-**8: Protect property from flooding.
- **Objective PF-8.1**. Collect, convey, store and dispose of stormwater in ways that provide an appropriate level of protection against flooding, account for future development and address applicable environmental concerns.
- **P5.** The City shall ensure a fair and equitable distribution of costs for stormwater system upgrades, expansion and maintenance.
- **P6.** Design of storm drainage facilities shall be consistent with State and Federal requirements, including NPDES requirements.
- **Objective PF-8.2**. Provide effective storm drainage facilities for development projects.
- **P1**. To the extent feasible, new development projects shall incorporate methods of reducing storm runoff within the project to reduce the requirements for downstream storm drainage infrastructure and improve stormwater quality.
- **P3.** New development projects shall only be approved if necessary stormwater infrastructure is planned and is in compliance with environmental regulations.
- **P4.** If sufficient downstream stormwater infrastructure has not yet been constructed, new development projects shall be required to implement temporary on-site retention facilities in conformance with City standards.

3.17.4 - Methodology

The City of Tracy has prepared an Urban Water Management Plan to evaluate its ability to meet the water supply demand. WSAs are required to comply with water planning requirements of the California Water Code and Government Code. Much of the information required in the WSA is included in the City's 2015 Urban Water Management Plan. The complete WSA is provided in Appendix I.

FCS obtained information regarding wastewater, recycled water, and storm drainage from the General Plan, General Plan EIR, the 2015 Urban Water Management Plan, and the Storm Drainage Master Plan.

3.17.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, utilities and services impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

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

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

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

h) Result in the unnecessary, wasteful, or inefficient use of energy?

3.17.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Potable Water

Impact USS-1:	**Development and land use activities contemplated by the project would not result in a need for new or expanded potable water facilities that result in physical impacts on the environment.**

Impact Analysis

This analysis is based, among other things, on the WSA prepared for the project, as included in Appendix I of this DEIR. The information below is a summary of the analysis and conclusions presented therein.

Water Supply Assessment Water Use Factors

As part of the 2012 Citywide Water System Master Plan, the City adopted unit water use factors, which describe how much water a particular land use designation uses by dwelling unit or acre. These factors are used to calculate projected potable and recycled water demand based on the proposed future land uses within the City's General Plan. Table 3.17-1 summarizes the unit water use factors for the land use designations applicable to the proposed project. The WSA relied on the water factors below for its analysis.

Table 3.17-1: Water Use Factors

Land Use Designation	Water Use Factor
Age-Qualified Residential (2 people per DU)	200 gpd/du
Single Family Residential (Existing Lots in Annexation Areas) (3 people per DU)	300 gpd/du
Clubhouse (Commercial)	2.0 af/ac/yr[(a)]

Table 3.17-1 (cont.): Water Use Factors

Land Use Designation	Water Use Factor
Landscape Irrigation	see Section 2.3.2 of WSA
Lake Makeup Water	see Section 2.3.2 of WSA

Note:
(a) Based on unit water demand factors established in the 2012 Citywide Water System Master Plan.
Source: WSA for Tracy Village Specific Plan, February 2017, page 10.

Several factors were considered in the development of unit water demand factors for the project, ranging from the historical metered water use data for various land use types, reduced water use as a result of new building codes, improved water use efficiency, and water conservation measures. Additional discussion of water demand factors considered is provided in the WSA in Appendix I.

Tracy Village Development Project (TVDP)

For the purposes of CEQA analysis, this EIR assumes an Age-Qualified Residential Land Use for the evaluation of potable water.

The TVDP is planned to be an age-qualified community, which would have fewer residents per dwelling unit than conventional residential development and consequently have less demand for water. Therefore, the WSA assumed the number of residents per dwelling unit to be 2.0 (lower than for typical residential developments with young families) and the resulting water use would be 200 gpd/du.

For non-residential land uses for the proposed project (i.e., the proposed clubhouse), a commercial water use factor of 2.0 acre-feet per acre per year (af/ac/yr) has been assumed based on unit water demand factors established in the 2012 Citywide Water System Master Plan.

Residential Annexation Area

The WSA assumed under the worst-case scenario that all the existing lots would connect to the City's water system and that each residence has 3.0 residents per dwelling unit, with a resulting water use per dwelling unit of 300 gpd. The 2012 Citywide Water System Master Plan evaluated the TVDP and portions of the Residential Annexation Area labeled "#19 Keenan" as part of the Westside Residential Development. Therefore, the level of water use for the annexation area is already included in the 2012 Citywide Water System Master Plan, which identifies a number of future service areas within the City's sphere of influence (including the Residential Annexation Area). Projected water demands for these future areas were included as part of the future water demand projections for buildout of the City's General Plan. Therefore, the water demand from this area has already been previously analyzed and evaluated.

Project Area

Projected water demands for buildout of the proposed project (assuming an Age-Qualified Land Use Designation) total approximately 283 acre-feet per year (afy), of which about approximately 175 afy

is potable water demand and approximately 108 afy is recycled water demand for landscape irrigation and lake maintenance. The WSA concluded that the City's existing and additional planned future water supplies are sufficient to meet the future water demands associated with the proposed project, to the year 2040 under all hydrologic conditions (including normal years, single dry years, and multiple dry years). Water demand projections for the Age-Qualified Residential land use assumption are included in Table 3.17-2.

Water Demand Projections

Under the age-qualified land use assumption, the projected water demand at buildout of the proposed project is shown in Table 3.17-2. The total normal year water demand at buildout is projected to be approximately 283 afy. Of this total water demand, the potable water demand at buildout is projected to be approximately 175 afy and the recycled water demand at buildout is projected to be approximately 108 afy. During dry years, the recycled water demand at buildout is projected to be approximately 135 afy.

Table 3.17-2: Projected Water Demand for Buildout for Age-Qualified Residential

Land Use Designation	Gross Area, acres	Dwelling Units	Water Use Factor			Potable Water Demand, afy	Recycled Water Demand	
			Potable Water Use Factor	Recycled Water Use Factor	Units		Normal Year, afy	Dry Year, afy
Age-Qualified Residential (2 people per DU)	—	600	200	—	gpd/du	134	—	—
Single Family Residential (Existing Lots) (3 people per DU)	—	48	300	—	gpd/du	16	—	—
Clubhouse (Commercial)	4.0	—	2.0	—	af/ac/yr	8	—	—
Landscape Irrigation	21.3[b]	—	—	see footnote[b]		40	—	47
Lake Makeup Water	—	—	—	see footnote[c]		63	—	81
Subtotal						158	103	128
Unaccounted for Water (9.6% for potable water demands and 5% for recycled water demands)[a]	—	—	—	—	—	17	5	7
Total Demand						**175**	**108**	**135**

Table 3.17-2 (cont.): Projected Water Demand for Buildout for Age-Qualified Residential

Land Use Designation	Gross Area, acres	Dwelling Units	Water Use Factor			Potable Water Demand, afy	Recycled Water Demand	
			Potable Water Use Factor	Recycled Water Use Factor	Units		Normal Year, afy	Dry Year, afy

Notes:
[a] Consistent with assumptions used in the City's 2015 UWMP.
[b] Gross landscape area and estimated water use obtained from the proposed project developer (July 20, 2016). Detailed demand projections are included in Appendix A.
[c] Estimated water use obtained from proposed project developer (March 28, 2016). Detailed demand projections are included in Appendix A.
Source: West Yost Associates, 2017

Recycled Water Use Factors

According to the WSA, exterior recycled water use was assumed to be 400 af/ac/yr for irrigated landscape areas, including roadway medians and other landscape areas. For the proposed project, exterior landscaping will be designed for low water use. To account for this low water use, the proposed project developer has developed demand projections for the proposed project's irrigated landscaped areas. The detailed water demand projections for the proposed project are included in Appendix I of the WSA.

Recycled Water within Tracy Village

Once the City's recycled water system is complete, recycled water would be used to fill and maintain the water levels in the proposed project's lakes. Because the majority of the proposed project's common area landscape will be in proximity to the proposed lakes, the lakes will be used as a water supply for the common area and front yard landscaping. This will also facilitate the cycling of water through the lakes, which is important to prevent the buildup of nutrients, silt, and other contaminants that can reduce water quality. There are additional opportunities to irrigate landscaping proposed at the proposed project entry, along the Valpico Road frontage, as well as portions of the recreation site, other common area landscaping**,** and front yards.

Projected Water Supply

Water demands for the proposed project will be served using the City's existing and future portfolio of water supplies. In 2016, the City was awarded a Proposition 84 grant from the DWR to fund construction of recycled water distribution facilities. Until such recycled water infrastructure is constructed (currently anticipated to be completed by 2019), potable water supplies, if available, may be used in the interim to meet non-potable water demands within the proposed project consistent with the City's recycled water ordinance. Adherence to the City's Recycled Water Ordinance (1196) and implementation of Mitigation Measure USS-1 would lower impacts to potable water, if recycled water infrastructure is not ready upon project completion.

Table 3.17-3 shows the projected potable and recycled water demands based on the land use assumptions contained in the City's 2015 UWMP. However, the water demands currently calculated for the proposed project are different from those included in the City's 2015 UWMP due to changes in the proposed project land use. The WSA conducted an analysis of projected water usage under the two land uses: 2015 UWMP land use assumption in Table 3.17-3 and the age-qualified land use from Table 3.17-2. Conclusions about the City's ability to meet the projected water demands for the proposed project, as defined in the City's 2015 UWMP, are shown in Table 3.17-4.

Table 3.17-3: Projected Water Demand for Proposed Project Area Based on Previous Land Use Assumptions (as included in the City's Water System Master Plan and 2015 UWMP)

Land Use Designation	Gross Area, acres	Dwelling Units	Water Use Factor				Potable Water Demand, afy	Recycled Water Demand, afy
			Potable Water Use Factor(a)	Units	Recycled Water Use Factor	Units		
Low Density Residential (3.3 people per DU)	70	305	429	gpd/du	n/a	—	147	0
Medium Density Residential (2.7 people per DU)	43	387	310	gpd/du	4.0	af/ac/yr on 15% of acres	134	26
High Density Residential (2.2 people per DU)	17	319	150	gpd/du	4.0	af/ac/yr on 15% of acres	54	10
Subtotal	130	1,011	—	—	—	—	335	36
Unaccounted for Water (9.6% for potable water demands and 5% for recycled water demands)[(b)]	—	—	—	—	—	—	36	2
Total Demand	—	—	—	—	—	—	**371**	**38**

Notes:
[(a)] From Table 4-14 of the 2012 Citywide Water Master Plan.
[(b)] Consistent with assumptions used in the City's 2015 UWMP.
Source: West Yost Associates, 2017.

Table 3.17-4: Comparison of Water Demands for the proposed project with those included in the City's 2015 UWMP

Document	Potable Water Demand (includes UAW), afy	Recycled Water Demand (includes UAW), afy
Water Supply Assessment for the Tracy Village Specific Plan—Age Qualified	175[a]	108
City of Tracy 2015 UWMP	371[b]	38

[a] From Table 3.17-3 under the Age Qualified Land Use Assumption for the TVDP
[b] From Table 3.17-4 under the land use assumptions from the 2015 UWMP

The WSA[2] concluded that the City's existing and additional planned future water supplies are sufficient to meet the projected water demands of the proposed project, to the year 2040 under all hydrologic conditions (including normal years, single dry years, and multiple dry years). The City plans to expand its current recycled water infrastructure as noted in the 2015 UWMP. As previously mentioned, there are several infrastructure developments that would increase recycled water supply to the City. Although recycled water infrastructure may not be completed upon TVDP completion, project proponents would implement MM USS-1 as well as adhere to all applicable regulations including the City's Recycled Water Ordinance 1196. Furthermore, the City's Water System Master Plan, Wastewater Master Plan, and Urban Water Management Plan, use water-restricting methods in order to reduce the use of potable water wherever possible. This will offset the need for potable water until the recycled water infrastructure is completed, and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact with mitigation incorporated.

Mitigation Measures

MM USS-1 The developer will provide a proportional share of required funding to the City for the acquisition, treatment and delivery of treated potable and recycled water supplies to the proposed project area.

Level of Significance After Mitigation

Less than significant impact.

[2] West Yost Associates. 2017. Tracy Village Specific Plan Water Supply Assessment. February.

Recycled Water

Impact USS-2: Development and land use activities contemplated by the project would not require or result in the construction of recycled water facilities or expansion of offsite recycled facilities beyond what has been planned for.

Impact Analysis

As discussed earlier in Impact USS-1, recycled water would be used to fill and maintain the water levels in the proposed project's lakes. The City of Tracy was recently awarded a federal grant which will facilitate the construction of a recycled water main from the Wastewater Treatment Plant down Lammers Road to Valpico Road. From this junction, a recycled water mainline will be constructed to serve the TVDP and other properties in the future. A pump station is already planned that would pump recycled water to serve the TVDP and other planned projects within the TVDP vicinity. The exact connection to the TVDP is not known at this time. In the event that the Valpico Road pipeline does not extend to Corral Hollow Road as anticipated, the master developer of Tracy Village would construct it and enter a fee credit or reimbursement agreement with the City of Tracy. The Tracy Recycled Water Project Mitigated Negative Declaration was adopted by City Council on February 7, 2017 by resolution number 2017-020. This Recycled Water Project was already planned and is not being constructed because of the TVDP. If the recycled water facility is not operational by the time the TVDP is operational, the lakes would use potable water, as explained in Impact USS-1.[3] The proposed lakes would be used as a water supply for the common area and front yard landscaping due to its proximity to the majority of the common area landscape. This system would facilitate the cycling of water through the lakes, which prevents the buildup of nutrients, silt, and other contaminants which can reduce water quality in the lakes.

As shown in Table 3.17-2, recycled water demand for the proposed project is 70 afy more (108 afy - 38 afy) than originally anticipated in the 2015 UWMP. Although the projected recycled water demand is an increase from the City's 2015 UWMP, the proposed project's recycled water demand is still within the City's total projected recycled water supplies (963 af by 2020 and 4,814 af by 2040). Therefore impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

[3] As mentioned in Section 3.9, Hydrology there is enough potable water to serve the project site including the lakes.

Wastewater

Impact USS-3: Development and land use activities contemplated by the project would not require or result in the construction of wastewater treatment facilities or expansion of offsite existing facilities beyond what has been planned for.

Impact Analysis

This impact evaluates potential impacts to wastewater. This impact will evaluate the TVDP and the Residential Annexation Area separately.

Existing Facilities

There is an existing 18-inch sanitary sewer main in Corral Hollow Road near the intersection of Parkside Drive, which flows northerly in Corral Hollow Road increasing in size and eventually reaches the City of Tracy Wastewater Treatment Plant located near Holly Drive and West Larch Road north of Interstate 205. The WWTP has a future permitted average dry weather flow capacity of 16 mgd with a current influent design average dry weather flow capacity of 10.8 mgd.

City of Tracy Wastewater Master Plan Improvements

The City's Wastewater Master Plan (Master Plan)[4,5] identified infrastructure requirements for both wastewater treatment and conveyance based on wastewater flows from existing and future service areas. TVDP was included as a future service area in the Master Plan.

The Master Plan recommended a phased expansion of the existing wastewater treatment plant from its current capacity of 10.8 mgd to 21.0 mgd and also recommended conveyance improvements for the east and west catchment areas in the City. Tracy Village is located in the west catchment area, which will include an extension of the existing Corral Hollow Road Sewer from Parkside Drive to West Linne Road as well as upgrades to increase the capacity of the existing Corral Hollow Road sewer, a new Lammers Road sewer, and other downstream improvements.

The master developer will participate in the implementation of the Wastewater Master Plan through the payment of fees and/or the construction of Master Plan facilities with corresponding fee credits.

Tracy Village Development Project—Projected Wastewater Demand

The projected wastewater demand was calculated for Tracy Village using the wastewater generation factors contained in the City of Tracy Wastewater Master Plan. Those factors are based on a per capita flow of gallons per day/capita (gpd/capita) and the projected number of residents per dwelling unit of 2.0 for an Age-Qualified residential development.

At the time when the Wastewater Master Plan was approved, the City designated TVDP under "Urban Reserve 9—Keenan" which was included as part of the calculations for future residential service areas. At that time, the TVDP at full build out was expected to cover 130 acres and hold over 1,000 dwelling units.

[4] City of Tracy, 2012, Tracy Wastewater Master Plan, prepared for the City of Tracy, December.
[5] City of Tracy, 2012. City of Tracy Citywide Water System Master Plan/Tracy Wastewater Master Plan Initial Study, November.

As described above, the TVDP would be based on an age-qualified community rather than a conventional residential development. The homes in the TVDP are anticipated to have 2.0 residents per dwelling unit resulting with a wastewater generation factor of 160 gallons per day/dwelling unit (gpd/du). Therefore, wastewater generation is expected to be lower than for a conventional residential development. Table 3.17-5 shows a projected wastewater demand of 100,560 gpd under the Age-Qualified Residential land use.

Table 3.17-5: Projected Age-Qualified Wastewater Demand[6]

Land Use	Acres (ac)	Dwelling Units (du)	Generation Factor (gpd/du or ac)	Average Dry Weather Flow (gpd)
Age-Qualified Residential	109.9	600	160[1]	96,000
Clubhouse	4.0	—	1,140[2]	4,560
Total	113.9	—	—	100,560

Notes:
Based on Proposed Specific Plan Land Uses and Age-Qualified Generation Factor
(1) The wastewater generation factor for age-qualified residential is based on a per capita flow rate of 80 gpd/capita x 2 residents per dwelling unit.
(2) The Wastewater Generation Factor for the Clubhouse is assumed to be equal to the retail factor used in the Tracy Wastewater Master Plan.
Source: Tracy Village Specific Plan Wastewater Projections, page 4-15, August 2016.

The wastewater projections under the age-qualified land assumption produces less wastewater than what was previously analyzed in the City's Wastewater Master Plan. As a result, the WWTP would have adequate wastewater capacity to serve the project. Impacts would be less than significant.

Wastewater improvements for TVDP consist of a conventional on-site gravity sanitary sewer system with mains, manholes, and laterals designed in accordance with the City of Tracy Design Standards. The on-site sanitary sewer mains collect wastewater from the homes and flow towards the interior loop road and then flows north in the loop road towards Valpico Road. There is an off-site sanitary sewer main in Valpico Road that conveys wastewater from TVDP and connects to the extension of the proposed Corral Hollow Road sewer as described in the City of Tracy Wastewater Master Plan. In the event that the Corral Hollow Road sewer has not been extended from Parkside Drive to Valpico Road, the master developer of Tracy Village would construct it and enter a fee credit or reimbursement agreement with the City of Tracy.

Residential Annexation Area

The 42 residential properties along the northern and eastern portions of the TVSP are proposed to be annexed into the project in tandem with the adjacent TVDP. These residences are located eastern adjacent to Coral Hollow Road and the northern adjacent to Valpico Road. The 42 lots are planned for Residential Estate pre-zoning. The majority of these lots are developed with detached single-family residences and served by private wells and septic systems. Connection to City water and sewer systems would be voluntary, unless new residential development (building permits) is

[6] For Project Area based on Age Qualified Residential

proposed by the property owners. Assuming the wastewater generation rates of low-density residential flow of 300 gpd/unit from the Master Plan and that all 42 units would be occupied, the residential annexation area would generate 12,600 gpd.[7]

Project Area

In total with the TVDP and the Residential Annexation Area, the project would generate a wastewater demand of approximately 113,160 under the age-qualified land use assumption. This demand is significantly less than what was originally projected in the City's Wastewater Master Plan. The Tracy WWTP would have adequate capacity to accept all wastewater generation from the Project Area. No expansion of existing wastewater treatment facilities would be required. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact

Mitigation Measures

No mitigation necessary.

Level of Significance After Mitigation

Less than significant impact.

Stormwater

Impact USS-4:	**Development and land use activities contemplated by the project would not result in a need for new or expanded offsite storm drainage facilities.**

Impact Analysis

Currently, there is a small basin/impoundment adjacent to Valpico Road that may be a former irrigation return pond, and a relatively shallow roadside swale adjacent to Valpico Road. There are no other improved storm drain facilities located on the site. There is an existing 15-inch storm drain located approximately 450 feet to the east in Valpico Road that flows easterly to the West Side Channel at the intersection of Valpico Road and Sycamore Parkway.

Storm Drain Master Plan Improvements

The City of Tracy completed the Citywide Storm Drainage Master Plan Mitigated Negative Declaration in November 2012.[8] The Master Plan identified new storm drainage infrastructure needed to serve new development included in the City's General Plan as well as to correct existing deficiencies. The City's General Plan includes future service areas within its sphere of influence. Tracy Village was included as a future service area in the Master Plan.

The City comprises a number of watersheds. Tracy Village lies within the Westside Channel Watershed which includes a portion of the WSID main channel, the Westside Open Channel, several

[7] City of Tracy Wastewater Master Plan Section 2: Existing and Future Flows and Loadings, Table 2-2 Wastewater Flow Generation Factors

[8] City of Tracy, 2012. City of Tracy Citywide Water System Master Plan/Tracy Wastewater Master Plan Initial Study, November.

large diameter pipes, and a number of detention basins. The Master Plan identifies a 36-inch storm drain main in Valpico Road from TVDP to the Westside Channel to serve the Project Area, as well as other improvements related to the development of specific properties. The proposed project would participate in the implementation of the storm drainage Master Plan through the payment of fees and/or the construction of Master Plan facilities with corresponding credits.

Projected Stormwater Runoff

The Master Plan identified a projected stormwater flow for TVDP of 34 cubic feet per second for a 10-year storm and 52 cubic feet per second for a 100-year storm. All stormwater within the TVDP will drain into the lake system. The proposed storm drain system for the TVDP consists of conventional on-site stormdrain system with mains, catch basins, and manholes that conveys stormwater runoff from the development to a lake system.

The central location of the lake system reduces the length and size of storm drain mains and provides an opportunity to reduce peak stormwater flows before leaving the TVDP by functioning as a detention basin. If a high flow event occurs, the low shoreline and grades around the lake system allow water to overflow to the street for drainage. If the pump station is needed, backup power would be provided for the pump.

Storm Water Quality

The State Water Board adopted Order No. 2013-0001-DWQ in 2013, which requires that agencies regulate post-construction development (Provision E.12) through a number of different program elements. In response to this order, five cities, including Tracy, and San Joaquin County collaborated together to develop a "Multi Agency Post-Construction Stormwater Standards Manual," dated June 2015.

The TVDP would include two types of BMPs: treatment and source control. Treatment measures may include biofilters, wetlands, drain inserts, entry strips, infiltration basins, or media filters and are designed to remove pollutants from the stormwater. The 2013 Board Order and 2015 Multi Agency Manual identify bioretention as the standard, or baseline, stormwater quality treatment measure, but allow for alternative treatment measures if they treat the required design volume/flow and are as effective as bioretention. Source control measures include things such as street sweeping, public education, or hazardous substance/recycling centers and are preventative measures intended to control the source of pollutants.

The primary treatment control measure at the TVDP will be the on-site lake system. All stormwater runoff from Tracy Village will drain to the lake system, where it will be circulated on a continuous basis with pumps. The new City of Tracy stormwater manual includes Wet Ponds as one of the approved stormwater treatment BMPs. The lakes at TVDP can be designed to meet the requirements of the City of Tracy Stormwater Manual for Wet Ponds with little to no impact on the appearance or aesthetic function of the lakes.

Requirements of the Stormwater Permit include:

- The lakes must temporarily detain the stormwater quality volume, which is equivalent to approximately 0.75 inch of runoff from the portion of the site tributary to the lakes. Thus, the lake's water level will rise after a rainfall event. Water level can return to normal in 12 hours, and detention is typically achieved through an orifice or weir at the outlet.
- The lakes must include a vehicle access ramp to allow access to the bottom of the lake. This can typically be incorporated into the lake shoreline with minimal impact on aesthetics.

Source control measures to be used at the TVDP will include an ongoing street sweeping program as a part of the maintenance of the private streets, a public education package to be distributed to homeowners, upon purchase of their home, and catch basins stenciled with the words "No Dumping—Drains to River."

Water Harvesting and Replacement

The lake system receives 100 percent of the runoff from the Tracy Village residential watershed area. Therefore, any nuisance water generated by the homes through over-irrigation, washing driveways, etc., is collected through the storm drain system and conveyed to pre-treatment areas of the lake system for treatment. These pretreatment areas or water quality filters are an aesthetic part of the lake system and conduct an important function in pre-treatment prior to the water mixing with the main lake system water body. There is a potential for a 25 to 40 percent decrease in water usage due to the conveyance of dry weather flows to the lake system.

Because of the continual and daily nutrient loading that will occur in the lake system (from various sources, including birds, landscaping, urban runoff, etc.) and the subsequent difficulty in maintaining low concentrations of nutrients which contribute to poor water quality, irrigation water for the common areas will be taken out of the lake system to be replaced with makeup water with higher-water quality.

Construction of the on-site stormwater system has been considered throughout this Draft EIR and would be subject to all applicable policies and regulations from the General Plan, Wastewater Master Plan, and Tracy Village Specific Plan. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Solid Waste

Impact USS-5: Development and land use activities contemplated by the project would not generate substantial amounts of solid waste that may result in the unnecessary use of regional landfill capacity.

Impact Analysis

Tracy Village Development Project

Tracy Delta Solid Waste Management, Inc. serves as the solid waste collector for the TVDP. Solid waste from Tracy Village will be accommodated at the Tracy MRF and Transfer Station, which is planned to accommodate a City of Tracy population that includes Tracy Village, in accordance with the County Solid Waste Master Plan. Solid waste will eventually be hauled from the MRF transfer facility to the County Foothill landfill east of Tracy.

The County Foothill landfill covers 800 acres, of which 674 acres are permitted for disposal. The landfill has a maximum throughput of 1,500 tons per day and a remaining capacity of 125,000,000 cubic yards.

Short-Term Construction Impacts

The United States Environmental Protection Agency estimates a residential construction waste generation rate of 4.39 pounds per square foot. The proposed 600 residential units cover 133.2 acres or 5,802,192 square feet. Project construction is projected to generate over 25,471,622.88 pounds or 12,735.8 tons of waste. The estimated project construction schedule expects full build out around 2033, with roughly 4,000 total number of working days. Spread over the 4,000-working day demolition and construction schedule, this equates to approximately 3.18 tons per day. The Foothill Landfill is permitted to receive 1,500 tons of waste per day. As such, the 3.18 tons per day of construction/demolition debris generated by the project represents a nominal percent of the quantity of solid waste that the landfill currently accepts on a daily basis. Therefore, short-term construction impacts associated with permitted landfill capacity would be less than significant.

Long-Term Operational Impacts

Based on solid waste residential generation rates of 12.23 pounds per house per day published by the CalRecycle, the project's estimated waste generation is approximately 7,338 pounds per day (3.67 tons). As previously addressed, the Foothill Landfill is permitted to receive 1,500 tons of waste per day. As such, the 7338 pounds per day (3.67 tons) of solid waste per day that the project would generate equates to less than 1 percent of what the landfill presently receives on a daily basis. Thus, the project's solid waste generation would represent only a nominal increase in the total daily amounts of solid waste received at the landfill.

Residential Annexation Area

The majority of these lots are developed with detached single-family residences and served by the existing waste disposal services. Therefore, long-term operational impacts are analyzed. Assuming the same residential waste generation rated discussed above, the 42 units in the residential annexation area would generate 513.6 pounds of waste per day. The residential annexation area generates less than 1 percent of what the landfill presently receives on a daily basis. Thus, the

project's solid waste generation would represent only a nominal increase in the total daily amounts of solid waste received at the landfill.

The Project Area

The Foothill Landfill would have more than sufficient capacity to serve the project. Moreover, the values are not adjusted to account for recycling and waste reduction activities that would further divert waste from landfills to help meet the City's goal of 75 percent diversion by 2018. The above-referenced figures are conservative and may over estimate the amount of solid waste to be generated by operation of the project. Therefore, long-term operational impacts on landfill capacity would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Energy

Impact USS-6:	**Development and land use activities contemplated by the project would not result in the unnecessary, wasteful, or inefficient use of energy.**

Impact Analysis

PG&E would provide electricity and natural gas service to the project. All on-site energy connections would be located underground in public rights-of-way or public-utility easements.

Tracy Village Development Project

All homes within the TVDP would meet the requirements of Title 24 of the California Code of Regulations to reduce energy use and encourage the preservation of natural resources. The following additional elements are required:

- All homes shall have photovoltaics on their roofs.
- Provide photovoltaics and/or solar water heaters on community buildings.
- Use of recycled water when available.
- Wood-burning fireplaces are prohibited

The estimated building electricity and natural gas consumption of the proposed 600 residential units is summarized in Table 3.17-6. Consumption was estimated using figures provided by the U.S. Energy Information Administration.

Table 3.17-6: Operational Energy Consumption Estimate

Use	Energy Source	Approximate Annual Consumption Rate	Unit	Estimated Annual Consumption
Residential	Electricity	6,888 kWh/per household	600 households	4,132,800 kWh
	Natural Gas	40,000 cubic feet/per household		24 million cubic feet

Note:
kWh = kilowatt-hours
Source: U.S. Energy Information Administration, CE 2.5 Fuel Consumption West Homes, 2009.

As shown in Table 3.17-6, the project is estimated to demand a net total of approximately 4,132,800 kWh of electricity and 24 million cubic feet of natural gas annually after completion of construction. Further discussion of project energy use and conservation is provided in Section 6.4 of this Draft EIR. All new development would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the United States. As such, the proposed project would not result in the unnecessary, wasteful, or inefficient use of energy. Impacts would be less than significant.

Residential Annexation Area

Assuming all the 42 lots of the residential annexation area are occupied, the consumption rates for electricity and natural gas would be 289,296 kWh and 1.68 million cubic feet respectfully. Further discussion of project energy use and conservation is provided in Section 6.4 of this Draft EIR.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

SECTION 4: CUMULATIVE IMPACT ANALYSIS

4.1 - Introduction

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that ". . . the incremental effects of an individual 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." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those which are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), ". . . the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone." The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

The Tracy Village Specific Plan's (TVSP's) cumulative impacts were considered in conjunction with other proposed and approved projects in the City of Tracy and in San Joaquin County. The City of Tracy's General Plan EIR was used to assess future growth throughout the City with planned development, ultimately reflecting planned growth. The TVSP is within the City of Tracy's Sphere of Influence, and the development was contemplated in the General Plan EIR. The analyses in this section consider impacts of both the General Plan buildout and projects in the vicinity of the TVSP that could be cumulatively considerable. Table 4-1 provides a list of the other projects considered in the cumulative analysis.

Table 4-1: Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
City of Tracy	Muirfield VII, Phase 4	61 dwelling units	Starflower Drive and Hummingbird Way	Approved and under construction
	Primrose/Kagehiro Phase III	252 dwelling units	Southwest corner of Corral Hollow Road and Kagehiro Drive	Approved and under construction
	Brookview	80 dwelling units	Brookview/Perennial	Approved and not yet under construction
	Sycamore Village conversion to condominiums	324 dwelling units	400 West Central Avenue	Approved and not yet under construction

Table 4-1 (cont.): Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
	Ellis Specific Plan	1,000–2,250 dwelling units; 60,000 square feet of retail and office use; 120,000 square feet of ancillary commercial uses	Between Lammers Road and Corral Hollow Road along the north side of the Union Pacific rail line	Adopted; partially implemented
	Rocking Horse	226 units	25380 and 25376 South Lammers Road	Approved; not yet under construction
	Tracy Hills Specific Plan Phase 1A	1,600 dwelling units	West of the California Aqueduct and North of Corral Hollow Road	Adopted; not yet implemented
Unincorporated San Joaquin County	Cordes Ranch Phase 1	1 million square feet of General Commercial; 25 million square feet of Business Park Industrial[1]	Eastern slope of Altamont Pass	Adopted; partially implemented

Note:
[1] These values are approximate total square footage of building area.
Source: City of Tracy, 2017.

4.2 - Cumulative Impact Analysis

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact only occurs from impacts caused by the proposed project and other projects. An EIR should not discuss impacts that do not result from the proposed project.
- When the combined cumulative impact from the increment associated with the proposed project and other projects is not significant, an EIR need only briefly explain why the impact is not significant; detailed explanation is not required.
- An EIR may determine that a project's contribution to a cumulative effect impact would be rendered less than cumulatively considerable if a project is required to implement or fund its fair share of mitigation intended to alleviate the cumulative impact.

The cumulative impact analysis that follows relies on these principles as the basis for determining the significance of the TVSP's cumulative contribution to various impacts. This EIR includes analysis of the potential impacts of the development of the Tracy Village Development Project (TVDP), and also includes, where applicable, a separate analysis covering the Residential Annexation Area. This

cumulative impact analysis is evaluating the TVSP as a whole, as both components of the plan in aggregate would contribute to cumulative impacts.

4.2.1 - Aesthetics, Light, and Glare

The geographic scope of the cumulative aesthetics, light, and glare analysis is the area surrounding the TVSP site. This is the area within view of the project and, therefore, the area most likely to experience changes in visual character or experience light and glare impacts.

Several of the projects listed in Table 4-1 are immediately adjacent to or within 0.25 mile of the TVSP site (specifically, the Ellis Specific Plan and Rockinghorse projects). The TVSP Area consists of the development of 600 single-family detached homes on approximately 134 acres and annexation of an additional 42 residential lots. The TVSP Area is characterized by open space and single-family residential development. Much of the surrounding area has been developed in compliance with the City of Tracy General Plan, the San Joaquin County General Plan, and the City's and County's current municipal code requirements related to design and visual character. According to the City of Tracy General Plan, "the overall growth trends in San Joaquin County would contribute to the cumulative conversion of the County's visual character from a rural, agricultural character to a more urban feel and thus, would result in a cumulative significant, unavoidable aesthetics impact" (City of Tracy General Plan, page 6-6). The General Plan EIR found that General Plan Buildout would result in a significant impact to Tracy's visual identity and scenic resources (City of Tracy General Plan EIR, page 4.3-10 and 11). This is an existing cumulatively significant impact that would exist even without development of the TVSP. As mentioned above, buildout of the TVSP was anticipated in the General Plan, so no further analysis is required.

The area surrounding the TVSP is generally undergoing a transition from rural and agricultural open spaces to an urban environment. While over time the area would be fully developed with urban land uses, the project area is currently in a transitional state and provides representative views of typical agricultural and urban environments. Although the TVSP proposes to change the existing visual character of the project site, the residential uses would allow the project site to become more consistent with the existing visual character of the surrounding area. The maximum height of the proposed residences would be 35 feet tall. This height would be consistent with the surrounding residential uses to the south and east. Each roof would be equipped with solar panels, and no visual impact is anticipated from the solar panels on the new roofs. In addition to the Design Guidelines contained within the TVSP, the TVDP would have to adhere to the City of Tracy's Citywide Design Goals and Standards. These design standards would ensure that the proposed TVDP would be built to high-quality design standards while adhering to the City's General Plan and Municipal Code. As such, the TVSP's characteristics would reduce impacts to a level of less than significant. As stated previously, several of the projects listed in Table 4-1 are within 0.25 mile of the project site. Those projects would also have to undergo design review to ensure they are compatible with the surroundings. Therefore, the TVSP, in conjunction with other planned or approved projects, would not result in a cumulatively significant aesthetics impact beyond that which was already identified by the City of Tracy General Plan EIR.

Mitigation Measure AES-4 requires new exterior lighting fixtures to employ full cut-off fixtures to direct light downward and eliminate spillage. Other projects that involve the installation of new exterior lighting fixtures would be required to implement similar measures to prevent light spillage. The proposed impacts would be less than significant with mitigation.

Therefore, the TVSP, in conjunction with other planned and approved projects, would have a cumulatively significant impact relating to aesthetics, light, and glare; however this cumulatively significant impact was fully analyzed in the General Plan EIR and a Statement of Overriding considerations was adopted.

4.2.2 - Agriculture Resources and Forest Resources

The geographic scope of the cumulative agriculture analysis includes the agricultural areas to the north, northwest, and southwest of the project site. The project development will result in the loss of 126.4 acres of Farmland of Local Importance, 0.3 acre of Rural Residential Land, and 5.8 acres of Urban and Build-Up Land.

The EIR prepared for the City of Tracy's General Plan acknowledged a significant and unavoidable impact related to the loss of farmland that would occur with General Plan buildout. This is an existing cumulatively significant impact that would exist even without the TVSP. The County of San Joaquin General Plan designates the project site "Resource Conservation (OS/RC)." The County of San Joaquin Zoning Ordinance designates the project site "Agriculture-Urban Reserve (AU-20)." These designations indicate that the County has contemplated the conversion of this agricultural land to urban uses over the planning horizon of the General Plan and, therefore, does not view the project area as a preferred location for permanent agricultural uses. Therefore, the TVSP would not make a cumulatively considerable contribution to the loss of farmland that was not already accounted for by the General Plan EIR.

4.2.3 - Air Quality and Greenhouse Gas Emissions

The geographic scope of the cumulative air quality emissions analysis is the San Joaquin Valley Air Basin, which covers the existing air quality conditions in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley Air Basin portion of Kern County. Air quality is impacted by topography, dominant air flows, atmospheric inversions, location, and season; therefore, using the Air Basin represents the area most likely to be impacted by air emissions.

All of the projects listed in Table 4-1 would result in new air emissions, during construction or operations (or both). The Air Basin is currently in non-attainment of the federal standards for ozone and $PM_{2.5}$, and is in nonattainment of the state standards for ozone, PM_{10} and $PM_{2.5}$. Therefore, there is an existing cumulatively significant air quality impact in the Air Basin with respect to these pollutants.

The TVSP would not emit construction and operational criteria pollutant emissions at levels that would exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds. The SJVAPCD thresholds are designed to capture nearly all sources of emissions in the air basin, and thus

are not only very conservative, but are intended to address a cumulative scenario. Because the proposed project's operational emissions would not exceed any SJVAPCD thresholds, its air emissions would be within the regional air emissions budget and, therefore, can assumed not to be cumulatively considerable.

Other projects that exceed SJVAPCD thresholds would be required to mitigate their impacts. Therefore, the TVSP will not make a considerable contribution to the existing cumulatively significant air quality impact when taken into consideration with other projects in the area.

As discussed in Section 3.3, Air Quality, cumulative cancer, non-cancer, chronic, and acute health impacts, and $PM_{2.5}$ concentration were not evaluated because the SJVAPCD's latest threshold of significance for TAC emissions is an increase in cancer risk for the maximally exposed individual of 20 in a million (formerly 10 in a million). The SJVAPCD's 2015 GAMAQI does not currently recommend analysis of TAC emissions from project construction activities, but instead focuses on projects with operational emissions that would expose sensitive receptors over a typical lifetime of 70 years. Residential projects produce limited amounts of TAC emissions during operation and thus have not been subject to project TAC analysis. Greenhouse gas emissions are inherently cumulative in nature, and the appropriate scope of analysis is the global climate. The TVSP and other projects would emit new greenhouse gas emissions. The City of Tracy has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, and goal-setting process required to identify a reduction target and to take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for Senate Bill 97. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to development projects. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project was assessed for its consistency with ARB's adopted Scoping Plan, and found to be consistent. The project was analyzed for compliance with the BAAQMD threshold of 4.6 MR CO_2. The project would generate approximately 3.6 MT CO_2e per service person at year 2020. Therefore, the project would not exceed the BAAQMD's 2017 Air Quality Threshold of 4.6 MT CO_2e for greenhouse gases, and would not have a significant generation of greenhouse gases.

Other than those specifically addressed above, there are no other existing cumulatively significant air quality impacts. All other project-related air quality impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the TVSP can mitigate all of these remaining air quality impacts to a level of less than significant, the TVSP would not have a related cumulatively significant impact with respect to these impact areas.

4.2.4 - Biological Resources

The geographic scope of the cumulative biological resources analysis is the region surrounding the TVSP site. The TVSP site is located in area characterized by residential and agricultural development and infrastructure; accordingly, habitats in these areas tend to be characterized as highly disturbed, and impacts would be localized. Recent development patterns and growth in the area have resulted

in an existing cumulatively significant impact to biological resources due to the loss of potential habitat for rare, endangered, and threatened species.

Four special-status birds were determined to have potential to occur on the TVDP site. The tricolored blackbird (*Agelaius tricolor*), has potential to occur in a foraging capacity only, while the burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and loggerhead shrike (*Lanius ludovicianus*), were determined to have potential to occur in a foraging and nesting capacity. The Project Area contains marginal habitat for several bat species, including three special-status bat species: the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*) and the western mastiff bat (*Eumops perotis californicus*), all three of which are California species of special concern. . Several ornamental shrubs and trees adjacent (respectively) to the TVDP project site, or in the vicinity could also provide nesting habitat for other birds and raptors protected by the Migratory Bird Treaty Act (MBTA). There is also potential for loggershrike to be found on or near the site. Mitigation Measures BIO-1a and BIO-1b are proposed, requiring pre-construction surveys for these species and implementation of protection measures if they are found to be present. Some of the other projects listed in Table 4-1 are located on sites with similar biological attributes and, therefore, would be required to mitigate for impacts on special-status wildlife species in a manner similar to the proposed project. Mitigation measures would include, but would not be limited to, preconstruction surveys, construction setbacks, and the implementation of worker environmental awareness training programs. The required mitigation would reduce the TVSP's contribution to any significant cumulative impact on special-status wildlife species to less than cumulatively significant.

All other project-related biological resource impacts (e.g., wildlife movement and local biological ordinances) were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the TVSP's impact on all of these remaining biological resources is less than significant, it would not have a cumulatively considerable contribution to any significant cumulative impact.

4.2.5 - Cultural Resources

The geographic scope of the cumulative cultural resources analysis is the project vicinity. Cultural resource impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils; therefore, in addition to the project site itself, the area near the project site would be the area most affected by project activities (generally within a 500-foot radius). No known impacts to historic, archaeological, or paleontological resources have occurred in the project vicinity as a result of past or current projects, and there is no existing cumulatively significant impact related to cultural resources.

Construction activities associated with the development projects in the project vicinity may have the potential to encounter undiscovered cultural resources. These projects would be required to mitigate for impacts through compliance with applicable federal and state laws governing cultural resources. Mitigation Measures CUL-1 through CUL-4 are recommended to ensure that the TVSP would not disturb, damage or destroy previously undiscovered historic, archaeological, paleontological resources, or human burial sites. Even if a significant cumulative impact existed, the proposed project would not make a cumulatively considerable impact with required mitigation. The

likelihood of any significant cultural resources on the project site is very low, given previous disruptions to its ground and the lack of any known resource within its boundaries. Although there is the possibility that previously undiscovered resources could be encountered by subsurface earthwork activities, the implementation of standard construction mitigation measures would ensure that undiscovered cultural resources are not adversely affected by the project-related construction activities, which would prevent the destruction or degradation of potentially significant cultural resources in the project vicinity. Given the low potential for disruption, and the comprehensiveness of mitigation measures that would apply to the TVSP and those in the vicinity, the residual, insignificant impacts of the projects would not combine to make a significant cumulative impact.

4.2.6 - Geology and Soils

The geographic scope of the cumulative geology, soils, and seismicity analysis is the project vicinity. Adverse effects associated with geologic, soil, and seismic hazards tend to be localized, and the area near the project site would be the area most affected by project activities (generally within a 0.25-mile radius). Development in the project vicinity has not included any uses or activities that would result in geology, soils, or seismicity impacts (such as mining or other extraction activities), and there is no existing, related cumulatively significant impact.

Development projects in the project vicinity may have the potential to be exposed to seismic hazards. However, there is a less than significant potential for the projects, in combination, to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death in the event of a major earthquake; fault rupture; ground shaking; seismic-related ground failure; landslide; or liquefaction. The TVSP site is in proximity to several active earthquake faults, and, thus, the proposed project may be susceptible to strong ground shaking during a seismic event. Therefore, Mitigation Measure GEO-1 requires the project applicant to retain a qualified geotechnical consultant to prepare a design-level geotechnical study and implement all applicable requirements from the California Building Standards Code into project plans. Some or all of the other projects listed in Table 4-1 would be exposed to similar seismic hazards and therefore would be expected to implement similar regulatory requirements and mitigation measures. Mitigation would include, but would not be limited to, retaining a certified geotechnical engineer to evaluate subgrade soil, soil stabilization techniques, and laying special foundations (post-tension, piles, etc.). As such, the TVSP with mitigation, in conjunction with other projects, would not have a cumulatively significant impact associated with seismic hazards.

Regarding soil erosion, development activities could lead to increased erosion rates on site soils, which could cause unstable ground surfaces and increased sedimentation in nearby streams and drainage channels. Mitigation Measures HYD-1a and HYD-1b require implementation of standard stormwater pollution prevention measures to ensure that earthwork activities do not result in substantial erosion off-site. This mitigation, in turn, would have to comply with the National Pollution Discharge Elimination System (NPDES) stormwater permitting program, which regulates water quality originating from construction sites. The NPDES program, which governs projects statewide (and nationwide), requires the preparation and implementation of Stormwater Pollution Prevention Programs for construction activities that disturb more than 1 acre, and the

implementation of Best Management Practices that ensure the reduction of pollutants during stormwater discharges, as well as compliance with all applicable water quality requirements. Thus, since the TVSP would have to comply with federal and state regulations and required mitigation that are designed to minimize impacts to projects on a wide geographic scale, the TVSP's contribution to any significant cumulative erosion impact would be less than cumulatively significant.

Finally, the project site contains native soils that have shrink-swell characteristics, which may expose project structures to expansive soil hazards. Mitigation Measure GEO-1 requires the project applicant to retain a qualified geotechnical consultant to prepare a design-level geotechnical study and implement all applicable requirements from the California Building Standards Code into project plans. Some or all of the other projects listed in Table 4-1 would be exposed to expansive soil hazards and, therefore, would be expected to implement similar mitigation measures including, but not limited to, those mentioned above. The required mitigation would reduce the project's contribution to any significant cumulative impact due to expansive soils to less than cumulatively significant.

Therefore, with mitigation and compliance with regulatory requirements, the TVSP, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to geology, soils, and seismicity.

4.2.7 - Hazards and Hazardous Materials

The geographic scope of the cumulative hazards and hazardous materials analysis is the project area. Adverse effects of hazards and hazardous materials tend to be localized; therefore, the area near the project area would be most affected by project activities. Hazards and hazardous materials are extensively regulated at the federal, state, and local levels. There are no land uses in the project vicinity that are known to utilize large quantities of hazardous materials or involve hazardous activities, and there is no existing, related cumulatively significant impact.

The TVSP would not have significant impacts associated with hazards or hazardous materials, as there is no evidence of contamination from past uses or project characteristics that involve the routine handling of large quantities of hazardous materials. Additionally, the TVSP would be compatible with all relevant policies of the San Joaquin County Airport Land Use Compatibility Plan after mitigation. Accordingly, all project-related impacts associated with hazards and hazardous materials were found to be less than significant after mitigation. Other projects listed in Table 4-1 that have become contaminated from past uses, project characteristics that involve routine handling of large quantities of hazardous materials, or airport incompatibility issues would be required to mitigate for their impacts. Mitigation would include, but would not be limited to, preparing risk management plans for determination of risks to the community, conducting Environmental Site Assessments, and implementing on-site damage prevention plans. Because hazards and hazardous materials exposure is generally localized, and development activities associated with other projects listed in Table 4-1 may not coincide with the proposed project, this effectively precludes the possibility of cumulative exposure.

Because the proposed project's impacts from hazards and hazardous materials would be less than significant, it would not have a cumulatively considerable contribution to any significant cumulative impact.

4.2.8 - Hydrology and Water Quality

The geographic scope of the cumulative hydrology and water quality analysis is the project vicinity, generally areas within 0.5 mile of the project site for stormwater impacts due to natural drainage patterns, drainage infrastructure, and impervious surfaces, all of which contribute to limiting the distance of stormwater flows. Hydrologic and water quality impacts tend to be localized; therefore, the area near the project site would be most affected by project activities. The nature and types of surrounding development, existing stormwater infrastructure and regulatory requirements have ensured that no cumulatively significant impacts related to water pollutants or flooding exist within the project vicinity.

Cumulative impacts to groundwater can also occur on a regional basis. About 10 percent of the water supply in Tracy comes from groundwater. The City can sustainably extract up to 9,000 acre-feet per year of groundwater on a continuous basis. Assuming normal year hydrologic conditions, annual groundwater use is anticipated to be 2,500 acre-feet per year. This anticipated future groundwater pumpage is significantly below the City's maximum historical groundwater pumpage and the average annual operational yield of 9,000 acre-feet per year (Water Supply Assessment, page 37). Therefore, there are no existing cumulatively significant hydrological and water quality impacts in the project vicinity.

The TVSP would involve short-term construction and long-term operational activities that would have the potential to degrade water quality in downstream water bodies. Mitigation Measures HYD-1a and HYD-1b are proposed, and they would require implementation of various construction and operational water quality control measures that would prevent the release of pollutants into downstream waterways. Other projects that propose new development would be required to implement similar mitigation measures in accordance with adopted regulations. Mitigation would include, but would not be limited to, preparing Storm Water Pollution Prevention Plans (SWPPPs), obtaining City approval of drainage plans, and implementing Integrated Pest Management principles. The required mitigation would reduce the project's contribution to any significant cumulative water quality impact to less than cumulatively considerable.

There is a potentially significant impact to drainage patterns, but with the implementation of Mitigation Measure HYD-1b the impact would be reduced to less than significant. All other project-related hydrology impacts (e.g., drainage and 100-year flood hazards) were found to be less than significant and did not require mitigation. Because all other related hydrology impacts would be less than significant, the project would not have a cumulatively considerable contribution to any significant cumulative hydrology and water quality impact.

4.2.9 - Land Use and Planning

The geographic scope of the cumulative land use analysis is the City of Tracy and San Joaquin County. Land use decisions are made at the city and county level and there are no other jurisdictional boundaries adjacent to the project site; therefore, Tracy and San Joaquin County are an appropriate geographic scope. Development within Tracy is governed by the City's General Plan and Municipal Code, and development within San Joaquin County is governed by the County's General Plan and Development Code. These guiding regulations ensure logical and orderly development and require discretionary review to ensure that projects do not result in land use impacts due to inconsistency with the General Plan and other regulations. As a result, there is no existing cumulatively significant land use impact.

Development projects in the Tracy area would continue to be required to demonstrate consistency with all applicable City of Tracy General Plan and San Joaquin County General Plan requirements. This would ensure that these projects comply with applicable planning regulations. Those projects listed in Table 4-1 that have been previously approved have been deemed consistent with all applicable General Plan requirements. For pending projects, the lead agency would be required to issue findings demonstrating consistency with the applicable General Plan and Municipal Code requirements if they are ultimately approved.

The southern half of the TVSP is within the boundaries of the Tracy Municipal Airport Land Use Compatibility Zone. The TVSP was found to be consistent with all applicable land use compatibility criteria after mitigation. Other projects listed in Table 4-1 that are within the boundaries of the Tracy Municipal Airport Land Use Compatibility Zone would be required to demonstrate consistency with the applicable airport land use compatibility criteria.

Therefore, the TVSP, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to land use.

4.2.10 - Mineral Resources

The geographic scope of the cumulative mineral resource analysis is San Joaquin County. This region was defined by the California State Mining and Geology Board for the purposes of identifying mineral resource zones.

As the General Plan explains, "the 50-year aggregate demand in San Joaquin County is estimated at more than 200 to 500 million tons, which would utilize 25 percent of the available supply. In 1999, the CGS recorded 5 to 10 million tons of aggregate production in the area . . . . Tracy will continue to contribute valuable aggregate resources to other cities throughout the region" (General Plan, page 4.8-4). The closest mineral resource recovery site is the Pereira mine, which is currently idle and is operating under an Interim Management Plan (IMP) with the intent to resume mining. As discussed in Section 3.11, the City of Tracy General Plan EIR states that the City "has an agreement with the State Division of Mines and Geology that the area north of Linne Road would allow for urban development, while the area south of Linne Road would be protected for aggregate mining" (General Plan EIR p. 4.8-4). The TVSP is located to the north of Linne Road, and the City has set aside this land for urban development. The TVSP is located in a residential area and would not result in

the loss of minerals of local importance. All of the projects listed in Table 4-1 are north of Linne Road except for the Tracy Hills Specific Plan, and impacts to mineral resources in this area were evaluated and determined to be less than significant in the General Plan EIR (General Plan EIR at 4.8-6 to 4.8-7). Accordingly, the conversion of the project site to residential use would not cumulatively contribute to the loss of mineral resources of value to the State or region because the City of Tracy has a supply well above the demand.

4.2.11 - Noise

The geographic scope of the cumulative noise analysis is the project vicinity, including surrounding sensitive receptors. Noise impacts tend to be localized; therefore, the area near the project site (approximately 0.25 mile) would be the area most affected by the project activities. Typically, project-related noise would not combine with other sources further away. Outdoor noise measurements taken at the project site indicate that the average ambient noise levels are within the "normally acceptable" or "conditionally acceptable" range for all land uses. Therefore, there are no existing cumulatively significant noise impacts in the project vicinity.

The TVSP's construction noise levels may cause a temporary substantial increase in noise levels at nearby receptors. Mitigation is proposed that would require implementation of construction noise attenuation measures to reduce noise levels. Other projects listed in Table 4-1 that would expose nearby sensitive receptors to excessive construction noise would be required to implement similar mitigation.

It is highly unlikely that a substantial number of the cumulative projects would be constructed simultaneously, since the projects are at widely varying stages of approval and development. Even if some of the construction schedules were to overlap with the project, all of the cumulative project sites are located a sufficient distance from the project, and that distance would diminish any additive effects. Pursuant to the Tracy Municipal Code, construction activities on the TVDP would be restricted to the hours of 7:00 a.m. to 10:00 p.m., daily. Therefore, it is reasonable to conclude that construction noise from the TVSP would not combine with noise from other development projects to cause cumulatively significant noise impacts.

The TVSP's construction and operational vibration levels would not exceed annoyance thresholds and is a less than significant impact. Because vibration is a highly localized phenomenon, there would be no possibility for vibration associated with the project to combine with vibration from other projects because of their distances from the project site. Therefore, the proposed project would not contribute to a cumulatively significant vibration impact.

The TVSP's contribution to vehicular noise levels would not exceed the applicable thresholds of significance, which take into account existing noise levels as well as noise from trips associated with other planned or approved projects. Thus, the TVSP would not combine with other projects to cause a cumulatively considerable increase in ambient roadway noise.

Other projects listed in Table 4-1 would be required to evaluate noise and vibration impacts and implement mitigation, if necessary, to minimize noise impacts pursuant to local regulations. Mitigation would include, but would not be limited to, specifying in contracts that all construction

equipment shall be equipped with properly operating and maintained mufflers, designation of a construction staff member as a Noise Disturbance Coordinator, and ensuring construction activities occur between the hours of 7:00 AM and 10:00 PM. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to noise.

4.2.12 - Population and Housing

The geographic scope of the cumulative population and housing analysis is the San Joaquin region. Population and housing needs are estimated at the regional level; therefore, the San Joaquin region is an appropriate geographic scope.

The TVSP is consistent with regional growth projections outlined by the San Joaquin Council of Governments and regional housing needs allocations. Other projects within this region were required to demonstrate consistency with population projections and residential land use designations as a standard requirement of the development review process. The effects of population growth are analyzed throughout the General Plan EIR and each specific impact area, and mitigation measures were adopted to address any impacts. Therefore, the TVSP, in conjunction with other future development projects, would not result in a cumulatively considerable contribution or a cumulatively significant impact on population and housing.

4.2.13 - Public Services

The geographic scope of the cumulative public service analysis is the service area of each of the providers serving the proposed project. Because of differences in the nature of the public service topical areas, they are discussed separately. No existing cumulatively significant impacts have been identified for any of these areas, as all service providers are able to achieve the requisite level of service, capacity, or response time.

Fire protection and Emergency Medical Services

The geographic scope of the cumulative fire protection and emergency medical services analysis is the South County Fire Authority area, which is located within the San Joaquin Emergency Medical Services Agency Zone C.

The TVSP site is located within 1.6 miles of the nearest fire station and is within an acceptable response time for fire protection. The TVSP does not add additional demand for services that was not already anticipated by the General Plan EIR. As such, the TVSP would not create a need for new or expanded fire protection facilities beyond what was already analyzed in the General Plan EIR and would not result in new physical impacts on the environment. Additionally, the TVSP would comply with all applicable requirements of the California Fire Code, including provision of adequate emergency access points, and it would be accessible to fire apparatus. The projects listed in Table 4-1 were also anticipated by the General Plan EIR, so the construction of any new facilities necessary to serve these projects was already analyzed. Therefore, the TVSP, in conjunction with other future projects, would not have a cumulatively significant impact related to fire protection and emergency medical services.

Police Protection

The geographic scope of the cumulative police protection analysis is the local service area of the Tracy Police Department, which consists of the Tracy city limits and adjoining unincorporated areas.

The Tracy Police Department indicated that once the project is within the Tracy city limits, the department would not need to expand police facilities solely because of development of the TVSP. The TVSP does not add additional demand for services that was not already anticipated by the General Plan EIR. The projects listed in Table 4-1 were also anticipated by the General Plan EIR, so the construction of any new facilities necessary to serve the projects was already analyzed. As such, the TVSP would not create a need for new or expanded police protection facilities beyond what was analyzed in the General Plan EIR and, therefore, would not result in new physical impacts on the environment.

School, Libraries, and Parks

The proposed project and future development projects would increase demands for schools, libraries, and parks. These individual projects would be required to provide development fees to help finance capital improvements to these facilities in order to maintain acceptable service ratios and performance standards. The TVSP would provide approximately 22.3 acres of open space for project residents. This open space would be sized to accommodate increased demands resulting from planned growth, and, therefore, the TVSP would not have a cumulatively significant impact related to parks.

Therefore, the TVSP, in conjunction with other future development projects, would not result in a cumulatively considerable contribution or a cumulative significant impact on public services.

4.2.14 - Recreation

The geographic scope of the cumulative recreation analysis is the Tracy area. The service area of the respective recreation facilities encompasses Tracy and surrounding communities and therefore would be most affected by project activities.

The proposed residential project would increase demands for regional parks and recreational facilities. As a result of cumulative growth, the City will likely need to expand and construct additional recreational facilities to meet increased demand. Project applicants for the individual residential projects listed in Table 4-1 would be required to dedicate land or pay for fees per Section 13.12.080 of the Tracy Municipal Code to maintain the City's park standards. Therefore, while there would be a cumulative demand on recreational facilities because of future growth in the City, the City has planned for this cumulative demand through the imposition of impact fees and implementation of the Parks Master Plan. The TVSP, in conjunction with other future residential development projects, would not have a less than significant impact.

4.2.15 - Transportation and Traffic

Section 3.16, Transportation and Traffic contains a cumulative impacts analysis for the project traffic impacts on intersection operations and roadway segments under year 2016 and year 2035

conditions, which includes the combined effects of traffic from cumulative development under these scenarios. As indicated in Section 3.16, development of the TVSP would not result in significant impacts under these scenarios, with implementation of mitigation and necessary roadway improvements except for at the intersection of Corral Hollow Road and Linne Road, where the addition of project traffic causes the intersection to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. Mitigation is available to address this, but because it is subject to approval by the UPRR and the California Public Utilities Commission, it cannot be required at a date certain so until the improvement is installed, the impact will remain significant and unavoidable. This is cumulative impact because other projects cause the underlying condition at this intersection to be LOS F. Please refer to Section 3.16 for a more detailed discussion of cumulative traffic impacts.

For other transportation-related areas (air traffic patterns, emergency access and roadway safety hazards, and public transit, bicycles, and pedestrians), the proposed project would have potentially significant impacts related to roadway hazards and alternative transportation, but after the implementation of mitigation, these impacts would be reduced to a level of less than significant. Because the TVSP can mitigate all other transportation impacts to a level of less than significant, it would not have a cumulatively considerable contribution to any significant cumulative impact relative to these other topics. Other projects that result in similar impacts would be required to mitigate for their impacts. Mitigation would include, but would not be limited to, constructing necessary intersection improvements, contributing to capacity improvements in San Joaquin County through payment of a Regional Traffic Impact Fee, and paying any applicable Transportation Management Plan Program Fees. However, as stated above, the impact at Corral Hollow and Linne Road will remain significant and unavoidable until the mitigation proposed can be implemented. Therefore, the TVSP, in conjunction with other future projects, would have a cumulatively significant and unavoidable impact related to transportation and traffic.

4.2.16 - Utilities and Service Systems

The proposed project's cumulative impacts to various utility systems are discussed separately below.

Potable Water

The geographic scope of the cumulative potable water analysis is the City of Tracy service area, which encompasses the Tracy city limits, as well as the Larch Clover County Services District, a small community outside the city limits but served by the City. Water supply impacts are analyzed in Section 3.17, Utilities and Service Systems, as well as in the Water Supply Assessment (WSA) (Appendix I) prepared for the project, which concluded that the City of Tracy has adequate potable and recycled water supplies to serve the proposed project as well as other existing and future users. Therefore, there is no existing cumulatively significant impact related to potable water supply.

Based on the WSA prepared for the TVSP, the project would utilize approximately 283 acre-feet of water per year (afy) of water for normal year conditions. Of this total water demand, the potable water demand at buildout is projected to be approximately 175 afy (indoor uses) and the recycled water demand at buildout is projected to be approximately 108 afy (outdoor uses) for normal year conditions. During dry years, the recycled water demand at buildout is projected to be

approximately 135 afy (outdoor uses). The City of Tracy 2015 Urban Water Management Plan (UWMP) indicates that in 2015, potable water supply was 36,050 acre feet and recycled water supplies consisted of 7,696 acre feet. The proposed project's demands would represent less than 2 percent of potable water supplies and recycled water supplies. Furthermore, the City of Tracy's 2015 UWMP estimates that sufficient water is available to meet the needs of the service area through the year 2040, which accounts for the City of Tracy's long-term growth assumptions.

All projects listed in Table 4-1 are located within the City of Tracy service area. The 2015 UWMP anticipates adequate water supplies for all water scenarios through 2040. These projects were required to demonstrate that they would be served with potable water service as a standard requirement of the development review process, and these projects may be required to implement water conservation measures to the extent they are required. Therefore, the TVSP, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to water supply.

Wastewater

The geographic scope of the cumulative wastewater analysis is the City of Tracy Wastewater Treatment Plant (WTTP), which treats effluent from Tracy.

All projects listed in Table 4-1 were required to demonstrate that sewer service is available to ensure that adequate sanitation can be provided, as a standard requirement of the development review process. The TVSP is estimated to generate 100,5600 gallons of wastewater on a daily basis (0.10 million gallons per day [mgd]). The TVSP site is served by the WWTP in the City of Tracy, which has a treatment capacity of 10.8 mgd and currently treats an average of 9 mgd of treated wastewater.

Thus, 1.8 mgd of treatment capacity is available for new development. The TVSP's 0.10 mgd of daily effluent would represent 5.56 percent of available treatment capacity at the WWTP. As such, the WWTP would be expected to accept the proposed project's increase in effluent without needing to expand existing or construct new facilities, as the treatment capacity is sufficient to serve both the project and planned future development in the area. Therefore, the TVSP, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to wastewater.

Storm Drainage

The geographic scope of the cumulative storm drainage analysis is municipal storm drainage in the project vicinity, as these are the facilities that would receive the project's runoff.

All future development projects in the project vicinity would be required under existing regulations to provide drainage facilities that collect and detain runoff such that off-site releases are controlled and do not create flooding. The TVSP would install an on-site drainage system consisting of street gutters, inlets, basins, and underground piping that would ultimately convey runoff to the municipal storm drainage system. The drainage system would be designed to reduce the peak flows generated in the developed condition to the peak flows in the predevelopment condition. This would ensure that the proposed project would not contribute to downstream flooding conditions during peak

storm events. As such, the TVSP would ensure that no net increase in stormwater would leave the project site during a peak storm event and would avoid cumulatively significant stormwater impacts to downstream waterways at times when capacity is most constrained. The TVSP would implement standard pollution prevention measures during construction to ensure that downstream water quality impacts are minimized to the greatest extent possible. In addition, the TVSP would provide water quality measures to prevent pollution during project operations. Stormwater facilities in the project vicinity either have or will be required to have capacity to serve both the project and planned future development in the service area. Increases in runoff flow and volume from future development must be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, in accordance with Municipal Regional Permit Provision C.3.g. Therefore, the TVSP, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to storm drainage.

Solid Waste

The geographic scope of the cumulative solid waste analysis is the City of Tracy. Tracy Disposal Services provides solid waste and recycling collection services to commercial customers in the City of Tracy.

All projects listed in Table 4-1 would generate construction and operational solid waste and depending on the volumes and end uses, would be required to implement recycling and waste reduction measures. The proposed project is anticipated to generate 12,735.8 tons of solid waste during construction and 1,339.55 tons annually during operations. For comparison purposes, the California Department of Resources Recycling and Recovery indicates the Foothill Landfill has a total of 1.56 million tons of remaining capacity available. The TVSP's construction and operational solid waste generation would represent less than 0.09 percent of the remaining capacity at these facilities. As such, sufficient capacity is available to serve the TVSP as well as existing and planned land uses in the City of Tracy for the foreseeable future, as quantified in the City's Wastewater Master Plan. Accordingly, the TVSP, in conjunction with other future projects, would not have a cumulatively significant impact related to solid waste.

Energy

The TVSP, in conjunction with other future development in the Pacific Gas and Electric (PG&E) service area, would increase demand for electricity and natural gas. PG&E has adequate existing energy supplies to meet existing demand and has access to other energy supplies necessary to meet future demand. In addition, new construction proposed within the proposed project and other future projects would be required to implement energy-efficient measures in accordance with the most current Title 24 standards to reduce energy demand. Therefore, the TVSP, in conjunction with other future development projects, would not have a cumulatively considerable contribution or a cumulatively significant impact on energy.

SECTION 5: ALTERNATIVES TO THE PROPOSED PROJECT

5.1 - Introduction

In accordance with CEQA Guidelines Section 15126.6, this Environmental Impact Report (EIR) contains a comparative impact assessment of alternatives to the Tracy Village Specific Plan (TVSP). The primary purpose of this section is to provide decision makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the TVSP's significant adverse environmental effects. Please note that, as discussed throughout Section 3.0, the implementation of the TVSP would result in only one significant unavoidable impact, at the intersection of Corral Hollow Road and Linne Road, which is not mitigable until such time as the California Public Utilities Commission approves the City's mitigation measure at that intersection.

Findings rejecting alternatives are required only if one or more significant environmental effects will not be avoided or substantially lessened by mitigation measures. Accordingly, the City need not make findings rejecting alternatives described in the EIR where all of the TVSP's significant impacts will be avoided or substantially lessened by mitigation measures. (See *Laurel Hills Homeowners Ass'n v City Council* (1978) 83 Cal.App.3d 515 [if mitigation measures substantially lessen a project's significant environmental effects, the lead agency may approve the project without making findings on the feasibility of the EIR's project alternatives]). Thus, if the City finds that significant adverse effects will be avoided or substantially lessened by mitigation measures, it need not make findings that environmentally superior alternatives are infeasible.

Analysis of three alternatives to the TVSP is provided for informational purposes and to allow decision-makers to consider the TVSP in light of hypothetical alternative development scenarios, thereby promoting CEQA's purpose as an information disclosure statute. This analysis is guided by the following considerations set forth under CEQA Guidelines Section 15126.6:

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

5.1.1 - Significant Unavoidable Impacts

The implementation of the TVSP would result in one significant unavoidable impact: at the intersection of Corral Hollow Road and Linne Road, where the addition of project traffic causes the intersection to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. Mitigation is available to address this, but because it is subject to approval by the UPRR

and the California Public Utilities Commission, it cannot be required at a date certain so until the improvement is installed, the impact will remain significant and unavoidable. All other impacts are less than significant with implementation of mitigation.

5.1.2 - Alternatives to the Proposed Project

CEQA Guidelines Section 15126.6(c) provides the following guidance in selecting a range of reasonable alternatives for the project. The range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR (In re *Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165-1167).

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a).

Although EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body (see Pub. Resources Code, § 21081(a)(3)). At the time of action on the project, the decision-making body may consider evidence beyond that found in this EIR in addressing such determinations. The decision-making body, for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that ground provided that the decision-making body adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 998).

The three alternatives to the TVSP analyzed in this section are as follows:

- **No Project/No Build Alternative:** The Tracy Village Development Project (TVDP) would not be constructed and the annexation of the Residential Annexation Area would not be pursued. The Residential Annexation Area would remain in unincorporated San Joaquin County, with no changes in land use or land use designations.
- **Reduced Density Alternative:** The TVDP would be designated residential low in accordance with the land use designation of surrounding properties. This designation allows densities from 0.1 to 2.0 dwelling units per gross acre. Assuming a density of 0.4 dwelling unit per acre, approximately 300 single-family homes would be built on the approximately 134-acre site (with inclusion of 22.3 acres of open space and the three man-made lakes). The Residential Annexation Area would be annexed into the City of Tracy with a prezoning of Residential Estate.
- **Tracy Village Development Project-Only Alternative:** The TVDP would be built as described in this EIR and the annexation of the Residential Annexation Area would not be pursued. The Residential Annexation Area would remain in unincorporated San Joaquin County, with no changes in land use or land use designations.

The following analyses compare the TVSP and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the TVSP and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

5.2 - Project Objectives

5.2.1 - Applicant Objectives

As stated in Section 2, Project Description, the objectives of the project proponent are to:

- Create a cohesive enclave through architectural and landscape design.
- Provide a desirable community where people will want to live.
- Create a secure environment for Tracy's active adults to live and recreate.
- Promote local residents supporting Tracy businesses and social programs.
- Design a quality community resulting in a distinctive identity and strong sense of place.
- Provide a mix of architectural styles, elements, and attributes that are compatible and reflect the heritage of the region.
- Encourage quality home design.
- Utilize technologies and solar roofs to achieve cost-effective energy use.
- Integrate resource-efficient design, climate-appropriate landscaping, stormwater quality treatment, and products that conserve resources and improve air quality.
- Reduce waste, reinvest back into the community, and minimize impacts on local services.
- Promote a sense of place in the community.
- Promote indoor/outdoor living as a central feature of the neighborhoods and homes.

5.2.2 - City Objectives

- Provide housing opportunities responsive to the needs of the City of Tracy’s active adults (age-qualified as defined in the California Civil Code).
- Allow for a cohesive development pattern in this area by the annexation of adjacent existing residential lots with a prezoning of Residential Estates, which would ensure orderly development of the annexation lands based on applicable City development standards and zoning.
- Ensure ability to provide necessary City services to the annexation lands.

5.3 - Alternative 1—No Project/No Build Alternative

CEQA Guidelines Section 15126.6(e) requires EIRs to evaluate a "No Project Alternative," which is defined as the "circumstance under which the project does not proceed." The TVDP site is designated "Resource Conservation (OS/RC)" by the County of San Joaquin General Plan and zoned "Agriculture-Urban Reserve (AU)" by the San Joaquin County Zoning Ordinance. The TVDP site is designated "Active Adult Residential" by the City of Tracy General Plan, which is a non-binding designation. The Residential Annexation Area is designated Low Density Residential (R/L) by both the San Joaquin and City of Tracy General Plan, as well as the San Joaquin County zoning code. There are no approved entitlements for the TVDP site, so there is no project that could be constructed without first rezoning the property. Because the TVDP site currently has no planning approvals, the No Project Alternative consists of the TVDP site remaining undeveloped and the Residential Annexation Area remaining in its current state, and not being annexed.

5.3.1 - Impact Analysis

Aesthetics, Light, and Glare

This alternative would have no impacts to scenic vistas, visual character, light, or glare because there would be no additional development. Therefore, this alternative would have fewer impacts on aesthetics, light, and glare than the TVSP.

Agriculture

This alternative would have no impacts to agriculture and forest resources because there would be no development. Therefore, this alternative would have fewer impacts on agriculture and forest resources than the TVSP.

Air Quality

This alternative would not result in emissions related to demolition or construction of commercial or residential buildings. This alternative would also not result in operational emissions. No residential development would occur; therefore, no impacts associated with exposure of sensitive receptors to air pollutants generated by industrial uses and vehicle traffic would occur. In summary, this alternative would have fewer impacts on air quality than the TVSP.

Biological Resources

This alternative would not have the potential to impact biological resources and would not require mitigation similar to the TVSP.

Cultural Resources

This alternative would not have the potential to impact previously undiscovered buried cultural resources and would not require mitigation similar to the TVSP. Therefore, this alternative would have fewer impacts on cultural resources than the TVSP.

Geology and Soils

This alternative would not have the potential to expose people or structure to seismic hazards, unstable soils, or expansive soils, nor would it create erosion during construction. Therefore, this alternative would have fewer impacts related to geology, soils, and seismicity than the TVSP.

Greenhouse Gas Emissions

This alternative would not result in emissions related to demolition or construction of commercial or residential buildings. This alternative would also not result in operational greenhouse gas emissions. Therefore, this alternative would have fewer impacts on greenhouse gases than the TVSP.

Hazards and Hazardous Material

This alternative would not include any residences and therefore would not expose any people or structures to existing contamination. Therefore, this alternative would have fewer impacts on hazards and hazardous materials compared with the TVSP.

Hydrology and Water Quality

This alternative would not result in additional development, and, therefore, would not have the potential to create hydrology or water quality impacts. As such, this alternative would have fewer impacts on hydrology and water quality than the TVSP.

Land Use and Planning

Under this alternative, no additional development would occur within the TVDP area for the foreseeable future. Because the General Plan for San Joaquin County already designates the TVDP as Resource Conservation and zones it Agriculture-Urban Reserve, the No Project/No Build Alternative would conform to the current zoning and land use designations. Therefore, this alternative would have fewer impacts on land use than the TVSP.

Mineral Resources

As explained in Section 3.11, Mineral Resources, the City of Tracy has an agreement with the State Division of Mines and Geology and will reserve the land north of Linne Road for development. Therefore, this area would not support mining operations under the No Project/No Build Alternative. The TVSP's impacts on Mineral Resources were found to be less than significant. Therefore, impacts of this alternative would be similar to the TVSP.

Noise

This alternative would not result in construction or operational activities that would increase existing noise levels. In addition, because this alternative would not generate any additional traffic trips, it would not contribute to noise levels on local roadways. Therefore, this alternative would have fewer impacts on noise than the TVSP.

Population and Housing

Under this alternative population and employment growth would not occur. As such, this alternative would have fewer impacts on population and housing than the TVSP.

Public Services

Under this alternative, no increase in dwelling units or employment opportunities would occur, and, therefore, no increased public services would be needed. Therefore, this alternative would have fewer impacts on public services than the TVSP.

Recreation

Under this alternative, no increase in dwelling units or employment opportunities would occur, and, therefore, no increase in recreational facilities would be needed. Therefore, this alternative would have fewer impacts on recreation than the TVSP.

Transportation and Traffic

This alternative would not generate any additional daily trips and no additional transportation facilities would be required. This alternative would not require the mitigation required by the TVSP. Therefore, this alternative would have fewer impacts on transportation than the TVSP.

Utilities and Service Systems

Under this alternative, no increase in demand for potable water, or increased generation of wastewater and stormwater would occur. In addition, this alternative would not generate additional solid waste beyond what is already produced within the TVSP. This alternative would not result in increased energy demand. As such, this alternative would have fewer impacts on utility systems than the TVSP.

5.3.2 - Conclusion

The No Project/No Build Alternative would not result in additional development and would thus result in fewer impacts than the TVSP in all impact categories, and similar impacts to mineral resources. However, this alternative would not advance any of the TVSP's objectives.

5.4 - Alternative 2—Reduced Density Alternative

The Reduced Density Alternative consists of reducing the TVDP units by 300 units. The units would be built on bigger lots with more open space between units. All uses would be identical to those proposed by the TVSP; however, half as many units would be built. Additional landscaping, pedestrian facilities, and open space would be developed in place of the eliminated building square footage. The Residential Annexation Area would be annexed into the City of Tracy with a prezoning of Residential Estate. This alternative would require the same discretionary approvals as the TVSP.[1]

[1] Proposed project refers to the Tracy Village Specific Plan.

The purpose of the Reduced Density Alternative is to evaluate a project alternative that develops the same end uses but with less square footage in order to lessen the severity of impacts associated with air quality/greenhouse gases, noise, public services and utilities, and transportation.

5.4.1 - Impact Analysis

Aesthetics

The Reduced Density Alternative would develop 300 units,[2] which is half as many as the TVSP. Buildings would employ similar architecture and design elements, be located in generally the same locations, and be used for land use activities similar to those of the TVSP. The alternative's buildings would have height and massing characteristics that would be similar to the TVSP and therefore would yield similar impacts in terms of scenic vistas and visual character. Similar exterior light fixtures would be installed. As part of the unit reduction, this alternative would result in less outdoor illuminated area that the TVSP, since there would be half as many units illuminated. In addition, the lighting would be more spread out and diffuse. Therefore, the Reduced Density Alternative would have aesthetics, light, and glare impacts that would be less than the TVSP.

Air Quality

The Reduced Density Alternative would result in fewer construction emissions than the TVSP because of the reduction in overall units being constructed. The Reduced Density Alternative would generate 141 fewer daily vehicle trips than the TVSP and therefore would decrease operational emissions of criteria pollutants and toxic air contaminants.[3] The decrease in daily trip generation would result in less severe air quality impacts than would occur under the TVSP. Therefore, the Reduced Density Alternative would have fewer impacts on air quality than the TVSP.

Agriculture

The TVSP was found to have a less than significant impact on the conversion of Important Farmland to non-agricultural use. All other TVSP agricultural impacts were found to be less than significant and did not require mitigation. Therefore, this alternative would have similar impacts in relation to conversion of Important Farmland to non-agricultural use.

Biological Resources

Similar ground-disturbing activities would occur, and, therefore, mitigation identical to the TVSP for special-status species would be implemented. Therefore, the Reduced Density Alternative would have biological resources impacts similar to the TVSP.

Cultural Resources

Similar ground-disturbing activities would occur, and, therefore, mitigation identical to the TVSP for undiscovered historic resources, archaeological resources, paleontological resources, and burial sites

[2] Project site refers to the same approximately 134-acre lot that the Tracy Village Development Plan would be built upon.
[3] This analysis utilizes the trip generation rates stated in the Transportation Impact Analysis (Appendix H). The trip generation rates are 0.55 for the AM peak hour and 1.05 for the PM peak hour.

would be implemented. Therefore, the Reduced Density Alternative would have cultural resources impacts similar to the TVSP.

Geology and Soils

Similar development activities would occur, and, therefore, mitigation identical to the TVSP for seismic hazards, erosion, unstable geologic location, and expansive soils would be implemented. Therefore, the Reduced Density Alternative would have geology, soils, and seismicity impacts similar to the TVSP.

Greenhouse Gas Emissions

This alternative would result in less construction emissions than the TVSP because of the reduction in overall units being constructed. The Reduced Density Alternative would generate 141 fewer daily vehicle trips than the TVSP and therefore would decrease operational emissions of greenhouse gases. The decrease in daily trip generation would result in less severe greenhouse gas emissions than would occur under the TVSP. Therefore, the Reduced Density Alternative would have fewer impacts on greenhouse gas emissions than the TVSP.

Hazards and Hazardous Material

As with the TVSP, no hazardous conditions exist on-site and the project's end uses would not expose surrounding receptors to hazardous materials; therefore, impacts would be less than significant. The Reduced Density Alternative would have hazards and hazardous materials impacts similar to the TVSP.

Hydrology and Water Quality

Similar development activities would occur, and, therefore, mitigation identical to the TVSP for water quality, drainage, and flood hazards would be implemented. There would be less impervious surface cover, so the Reduced Density Alternative would have fewer overall hydrology and water quality impacts than the TVSP. Therefore, the Reduced Density Alternative would have fewer impacts to hydrology and water quality than the TVSP.

Land Use and Planning

The uses developed under the Reduced Density Alternative would have physical characteristics and end uses similar to the TVSP and, therefore, would yield a similar compatibility finding with the San Joaquin County Airport Land Use Compatibility Plan. Therefore, the Reduced Density Alternative would have land use impacts similar to the TVSP.

Mineral Resources

As explained in Section 3.11, Mineral Resources, the City of Tracy has an agreement with the State Division of Mines and Geology and will reserve the land north of Linne Road for development. This area would not support mining operations under the Reduced Density Alternative. The TVSP's impacts on Mineral Resources were found to be less than significant. Therefore, impacts of this alternative would be similar to the TVSP.

Noise

The Reduced Density Alternative would result in less construction and operational noise emissions than the TVSP because of the reduction in overall units being constructed, although these impacts can be mitigated to a level of less than significant for both the TVSP and this alternative. The Reduced Density Alternative would generate 141 fewer daily vehicle trips (AM peak and PM peak) than the TVSP. The Reduced Density Alternative would cause fewer noise impacts than the TVSP.

Population and Housing

As discussed in Section 3.13, Population and Housing the TVSP's population growth would be within the City of Tracy's growth forecast. Since the Reduced Density Alternative would have half as many units, the alternative's population growth would also be within the City of Tracy's growth forecast. There were no significant population and housing impacts found with the TVSP. Therefore, the Reduced Density Alternative would have population and housing impacts similar to the TVSP.

Public Services

The Reduced Density Alternative would result in fewer impacts on public services because there would be less demand for fire protection, police protection, schools, parks, and other public facilities, due to reduced occupancy and traffic. Therefore, the Reduced Density Alternative would have fewer impacts to public services than the TVSP.

Recreation

The Reduced Density Alternative would result in fewer impacts on recreational facilities because there would be less demand for neighborhood and regional parks because of reduced occupancy. Therefore, the Reduced Density Alternative would have fewer impacts to recreation than the TVSP.

Transportation and Traffic

Table 5-1 summarizes the peak-hour trip generation of the Reduced Density Alternative.

Table 5-1: Reduced Density Alternative Peak Hour Trip Generation Comparison

Scenario	Trip Generation	
	AM Peak	PM Peak
Proposed Project	131	170
Reduced Density Alternative	66	87
Difference	**65**	**83**
Source: Kimley-Horn and Associates, Inc., 2017.		

As shown in Table 5-1, the Reduced Density Alternative would result in a net decrease of 65 AM peak-hour trips and 83 PM peak-hour trips. The decrease in peak-hour trips would decrease the severity of significant impacts at several intersections and roadway segments. The Reduced Density

Alternative would also generate 148 fewer daily vehicle trips overall than the TVSP. Therefore, the Reduced Density Alternative would have fewer impacts on Transportation and Traffic than the TVSP.

Tribal Cultural Resources

No Tribal Cultural Resources (TCRs) listed in the historical resource databases were identified on-site, nor were any identified pursuant to AB-52. Therefore, the Reduced Density Alternative would cause no impacts to TCRs. The Reduced Density Alternative would be constructed on the same site and would also have no impacts to TCRs.

Utilities and Service Systems

End uses would be similar to the TVSP, and, therefore, similar mitigation measures would be implemented. There would be fewer residents because of the reduction in units. Therefore, this alternative would have fewer impacts on utilities and service systems because there would be less demand for water and energy and less generation of wastewater and solid waste. Therefore, the Reduced Density Alternative would have fewer impacts on utilities and service systems than the TVSP.

5.4.2 - Conclusion

The Reduced Density Alternative would not increase the severity of any impacts. It would lessen the severity of impacts to air quality, greenhouse gas emissions, hydrology and water quality, noise, public services, recreation, transportation and traffic, and utilities and service systems.

The Reduced Density Alternative would advance all of the TVSP objectives, such as providing housing opportunities responsive to the needs to the Tracy's active adults, and providing a desirable community where people will want to live. However, this alternative would advance these project objectives to a lesser degree than the TVSP. This alternative would only be able to serve half as many residents and would not be able to meet project objectives as effectively as the TVSP.

5.5 - Alternative 3—Tracy Village Development Project-Only Alternative

The TVDP-Only Alternative consists of developing 600 units. All uses would be identical to those proposed by the TVSP. The Residential Annexation Area would not be annexed by the City of Tracy, and the Residential Annexation Area would remain in unincorporated San Joaquin County, with no changes in land use or land use designations. This alternative would require the same discretionary approvals as the TVSP except for annexation and pre-zoning of the Residential Annexation Area. Final approval action on the annexation of the TVDP-only would be required by the San Joaquin Local Agency Formation Commission.

The purpose of the TVDP-Only Alternative is to evaluate a project alternative that develops the same end uses for the TVDP, but without the annexation of the Residential Annexation Area to assess the potential impacts associated with annexation.

5.5.1 - Impact Analysis

Aesthetics

The TVDP-Only Alternative would develop 600 units as proposed in the TVSP, and the approximately 134-acre TVDP would be annexed to the City of Tracy but the Residential Annexation Area would not. Buildings would employ similar architecture and design elements, be located in generally the same locations, and be used for land use activities similar to those of the TVSP. This alternative's buildings would have height and massing characteristics that would be similar to the TVSP and therefore would yield similar impacts in terms of scenic vistas and visual character. Similar exterior light fixtures would be installed. This alternative would result in the same amount of outdoor illuminated area as the TVSP, since there would be the same amount of units illuminated. Therefore, the TVDP-Only Alternative would have aesthetics, light, and glare impacts that would be similar to the TVSP.

Air Quality

This alternative would result in the same construction emissions as the TVSP because the same number of new units would be constructed. The TVDP-Only Alternative would generate the same daily vehicle trips as the TVSP, and, therefore, the amount of operational emissions of criteria pollutants and toxic air contaminants would be the same. Therefore, the TVDP-Only Alternative would have impacts on air quality similar to the TVSP.

Agriculture

The TVSP was found to have a less than significant impact on the conversion of Important Farmland to non-agricultural use. All other TVSP agricultural impacts were found to be less than significant and did not require mitigation. Therefore, this alternative would have similar impacts in relation to conversion of Important Farmland to non-agricultural use.

Biological Resources

Similar ground-disturbing activities would occur, and, therefore, mitigation identical to the TVSP for special-status species would be implemented. Therefore, the TVDP-Only Alternative would have biological resources impacts similar to the TVSP.

Cultural Resources

Similar ground-disturbing activities would occur, and, therefore, mitigation identical to the TVSP for undiscovered historic resources, archaeological resources, paleontological resources, and burial sites would be implemented. Therefore, the TVDP-Only Alternative would have cultural resources impacts similar to the TVSP.

Geology and Soils

Similar development activities would occur, and, therefore, mitigation identical to the TVSP for seismic hazards, erosion, unstable geologic location, and expansive soils would be implemented. Therefore, the TVDP-Only Alternative would have geology, soils, and seismicity impacts similar to the TVSP.

Greenhouse Gas Emissions

This alternative would result in the same construction emissions as the TVSP because the same number of units would be constructed. The TVDP-Only Alternative would generate the same number of daily vehicle trips as the TVSP and therefore would result in the same amount of operational emissions of greenhouse gases. Therefore, the TVDP-Only Alternative would have impacts on greenhouse gas emissions similar to the TVSP.

Hazards and Hazardous Material

As with the TVSP, no hazardous conditions exist on-site and the project's end uses would not expose surrounding receptors to hazardous materials; therefore, impacts would be less than significant. The TVDP-Only Alternative would have hazards and hazardous materials impacts similar to the TVSP.

Hydrology and Water Quality

Similar development activities would occur, and, therefore, mitigation identical to the TVSP for water quality, drainage, and flood hazards would be implemented. There would be the same amount of impervious surface cover with the TVDP-Only Alternative; therefore, this alternative would have overall hydrology and water quality impacts similar to the TVSP.

Land Use and Planning

The uses developed under this alternative would have physical characteristics and end uses similar to the TVSP and, therefore, would yield a similar compatibility finding with the San Joaquin County Airport Land Use Compatibility Plan. There are developments planned for the land directly to the west of the Residential Annexation Area, and that land would be annexed into the City of Tracy. Therefore, not annexing the Residential Annexation area would create an island of unincorporated territory, which is against San Joaquin County Local Agency Formation Commission policy. The TVDP-Only Alternative would have land use impacts greater than the TVSP.

Mineral Resources

As explained in Section 3.11, Mineral Resources, the City of Tracy has an agreement with the State Division of Mines and Geology and will reserve the land north of Linne Road for development. This area would not support mining operations under the TVDP-Only Alternative. The TVSP's impacts on mineral resources were found to be less than significant. Therefore, impacts of this alternative would be similar to the TVSP.

Noise

This alternative would result in construction and operational noise emissions similar to the TVSP because the same number of units would be constructed. These impacts can be mitigated to a level of less than significant for both the TVSP and this alternative. The TVDP-Only Alternative would generate the same number of daily vehicle trips (AM peak and PM peak) as the TVSP. The TVDP-Only Alternative would cause noise impacts similar to the TVSP.

Population and Housing

As discussed in Section 3.13, Population and Housing the TVSP's population growth would be within the City of Tracy's growth forecast. The TVDP-Only Alternative would have the same number of units

as the TVSP, so the alternative's population growth would also be within the City of Tracy's growth forecast. There were no significant population and housing impacts found with the TVSP. Therefore, the TVDP-Only Alternative would have population and housing impacts similar to the TVSP.

Public Services

This alternative would result in similar impacts on public services because there would be a similar demand for fire protection, police protection, schools, parks, and other public facilities, due to similar occupancy and traffic. Though the Residential Annexation Area would not be annexed into the City of Tracy, the City of Tracy is already providing public services to the residents of the Residential Annexation Area and would continue to do so. Therefore, the TVDP-Only Alternative would have impacts to public services similar to the TVSP.

Recreation

This alternative would result in similar impacts on recreational facilities, since there would be the same demand for neighborhood and regional parks because of similar occupancy. Though the Residential Annexation Area would not be annexed into the City of Tracy, the City of Tracy is already providing recreational facilities to the residents of the Residential Annexation Area and would continue to do so. Therefore, the TVDP-Only Alternative would have impacts to recreation similar to the TVSP.

Transportation and Traffic

The TVDP-Only Alternative would result in a number of peak-hour trips similar to the TVSP. A similar number of peak-hour trips would have similar impacts at several intersections and roadway segments. Therefore, the TVDP-Only Alternative would have impacts on Transportation and Traffic similar to the TVSP.

Tribal Cultural Resources

No Tribal Cultural Resources (TCRs) listed in the historical resource databases were identified on-site, nor were any identified pursuant to AB-52. Therefore, the TVSP would cause no impacts to TCRs. The TVDP-Only Alternative would be constructed on the same site and would also have no impacts to TCRs.

Utilities and Service Systems

End uses would be similar to the TVSP, and, therefore, similar mitigation measures would be implemented. Assuming that under the TVSP the 42 residential lots would all connect to the City's water system, under the TVDP-Only Alternative, fewer residents would connect to the City's water system. Therefore, this alternative would have fewer impacts on utilities and service systems because there would be less demand for water and energy and less generation of wastewater and solid waste. Therefore, the TVDP-Only Alternative would have fewer impacts on utilities and service systems than the TVSP.

5.5.2 - Conclusion

The TVDP-Only Alternative would not increase the severity of any impacts. It would lessen the severity of impacts to utilities and service systems.

The TVDP-Only Alternative would advance all of the TVSP objectives, such as providing housing opportunities responsive to the needs to the Tracy's active adults, and providing a desirable community where people will want to live. However, it would not advance the objective that would allow for the annexation of adjacent existing residential lots with a prezoning of Residential Estate.

5.6 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the TVSP are summarized in Table 5-2.

Table 5-2: Summary of Alternatives

Environmental Topic Area	TVSP	No Project/No Build	Reduced Density Alternative	Tracy Village Development Project-Only Alternative
Aesthetics	Less than significant	Less impact	Less impact	Similar impact
Agriculture	Less than significant	Less impact	Similar impact	Similar impact
Air Quality	LTS after mitigation	Less impact	Less impact	Similar impact
Biological Resources	LTS after mitigation	Less impact	Similar impact	Similar impact
Cultural Resources	LTS after mitigation	Less impact	Similar impact	Similar impact
Geology/Soils	LTS after mitigation	Less impact	Similar impact	Similar impact
Greenhouse Gas Emissions	LTS after mitigation	Less impact	Less impact	Similar impact
Hazards and Hazardous Materials	LTS after mitigation	Less impact	Similar impact	Similar impact
Hydrology and Water Quality	LTS after mitigation	Less impact	Less impact	Similar impact
Land Use and Planning	Less than significant	Less impact	Similar impact	Greater impact
Mineral Resources	Less than significant	Similar impact	Similar impact	Similar impact
Noise	LTS after mitigation	Less impact	Less impact	Similar impact
Population and Housing	Less than significant	Less impact	Similar impact	Similar impact
Public Services	Less than significant	Less impact	Less impact	Similar impact
Recreation	Less than significant	Less impact	Less impact	Similar impact
Transportation and Traffic	LTS after mitigation	Less impact	Less impact	Similar impact
Tribal Cultural Resources	No Impact	Less impact	Similar impact	Similar impact
Utilities and Service Systems	LTS after mitigation	Less impact	Less impact	Less impact

Note:
LTS = Less than significant
Source: FirstCarbon Solutions, 2017.

As shown in Table 5-2, the No Project Alternative is the environmentally superior alternative, as it avoids or substantially lessens the TVSP's significant impacts.

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

Though there are no significant and unavoidable impacts associated with the TVSP, the Reduced Density Alternative would lessen the severity of impacts to air quality, greenhouse gas emissions, hydrology and water quality, noise, public services, recreation, transportation and traffic, and utilities and service systems. It would generate 480 fewer daily vehicle trips than the TVSP. Therefore, the Reduced Density Alternative is the environmentally superior alternative.

5.7 - Alternatives Rejected From Further Consideration

The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination. The following alternatives were initially considered, but were rejected from further consideration for the reason described below.

5.7.1 - Low Density Residential

Under the Low Density Residential Alternative, Tracy Village would include up to 600 single-family detached homes without the age-qualified restriction for residents of the community. The Residential Annexation Area would be annexed into the City of Tracy. Assuming the 2016 persons per household for single-family residential units in the City of Tracy and that all the lots would be occupied, the TVDP and the Residential Annexation Area would add 2,208 to the City of Tracy as shown in Table 5-3.

Table 5-3: Project Population for Tracy Village Specific Plan

Dwelling Units	Average Household Size Age-Restricted	Population Growth
600	3.44	2,064
42	3.44	144
Source: Table 2: E-5 City/County Population and Housing Estimates, January 2016. Website: http://www.dof.ca.gov /Forecasting/Demographics/Estimates/E-5/. Accessed March 30, 2017. Employment Growth.		

Such an alternative would be expected to significantly increase daily and peak-hour trip generation, which would create significant and unavoidable impacts associated with air quality and greenhouse gas emissions, noise, and transportation. Table 5-4 summarizes the trip generation of the Low Density Residential Alternative. The Residential Annexation Area is not included in the trip generation because those trips are already occurring and no additional trips would result.

Table 5-4: Low Density Residential Trip Generation Comparison

Land Use	Dwelling Units	Trip Generation	
		AM Peak Hour	PM Peak Hour
Low Density Residential	600	330	630
Proposed Project[1]	600	131	170
Difference	**—**	**199**	**460**

Note:
[1] Age Qualified Residential
Source: Kimley-Horn and Associates, Inc., 2017.

Additionally, this alternative would increase the demand for public services, consumption of water and energy, and generation of wastewater and solid waste. In this sense, it would yield no fewer environmental impacts than any of the alternatives discussed above. For these reasons, a Low Density Residential alternative was eliminated from further consideration.

5.7.2 - Mixed Use with Residential

A Mixed Use with Residential Alternative was initially considered, which would develop an age-qualified community with 400 single-family detached homes, a 60,000-square-foot grocery store, and a 100,000-square-foot shopping center. The Residential Annexation Area would be annexed into the City of Tracy. Such an alternative would be expected to increase daily and peak-hour trip generation, which could create significant and unavoidable impacts associated with air quality and greenhouse gas emission, noise, and transportation. Table 5-5 summarizes the trip generation of the Mixed Use with Residential Alternative. The Residential Annexation Area is not included in the trip generation because those trips are already occurring and no additional trips would result.

Table 5-5: Mixed Use with Residential Trip Generation Comparison

Land Use	Dwelling Units	Square Feet	Trip Generation	
			AM Peak Hour	PM Peak Hour
Age Qualified Residential	400	—	131	170
Grocery Store	—	60,000	421	1,013
Shopping Center	—	100,000	96	371
Total	**—**	**—**	**648**	**1,554**
Proposed Project[1]	600	—	131	170
Difference	**—**	**—**	**517**	**1,384**

Note:
[1] Age Qualified Residential
Source: Kimley-Horn and Associates, Inc., 2017; Institute of Transportation Engineers Trip Generation Manual, 9th Edition.

Additionally, this alternative would increase the demand for public services, consumption of water and energy, and generation of wastewater and solid waste. It would also result in greater impacts to land use, as the current zoning would have to change to accommodate the mix of uses. In this sense, it would yield no fewer environmental impacts than any of the alternatives discussed above. For these reasons, a Mixed Use with Residential alternative was eliminated from further consideration.

5.7.3 - Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations to be used in evaluating an alternative location. The section states that the "key question" is whether any of the significant effects of the project would be avoided or substantially lessened by relocating the project. The CEQA Guidelines identify the following factors that may be taken into account when addressing the feasibility of an alternative location:

1) Site suitability
2) Economic viability
3) Availability of infrastructure
4) General Plan consistency
5) Other plans or regulatory limitations
6) Jurisdictional boundaries
7) Whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site.

The CEQA Guidelines establishes that only locations that can avoid or substantially lessen the proposed project's significant impacts should be considered. As discussed, all impacts of the TVSP can be reduced to less than significant with mitigation. Annexation of the TVSP in its current location would rationalize the city limits of Tracy. Annexation of other land in the vicinity of the project site would conflict with jurisdictional boundaries. Development of this land could necessitate the expansion or construction of public services and utilities, which would cause other environmental impacts.

The approximately 134 acres of the TVDP would provide many of Tracy's Active Adults the opportunity to age in place, and this type of development does not exist elsewhere within the City of Tracy. Much of the undeveloped land within the City of Tracy is already slated for development, and the acreage necessary with zoned for residential development does not exist elsewhere. In summary, the applicant is not aware of—and does not own or control—any alternative location within the City of Tracy that could adequately accommodate the proposed use without creating greater environmental impacts.

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 6: OTHER CEQA MANDATED SECTIONS

6.1 - Effects Found not to be Significant

This section is based on the Notice of Preparation (NOP), dated November 4, 2016, and contained in Appendix A of this Environmental Impact Report (EIR). The NOP was prepared to identify the potentially significant effects of the TVSP and was circulated for public review between November 4 and December 5, 2016. In the course of this evaluation, certain impacts were found to be less than significant because the proposed project's characteristics would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process. Note that a number of impacts that are found to be less than significant are addressed in the various EIR topical sections (Sections 3.1 through 3.17) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision makers and the general public.

6.1.1 - Aesthetics

Scenic Resources

There are numerous scenic resources mentioned throughout the City of Tracy's General Plan. According to the California Department of Transportation Scenic Highway Mapping System, the portion of I-580 located on the southwestern edge of the City is an Officially Designated State Scenic Highway. However, the project site is located approximately 2 miles northeast of I-580, and would not affect foreground or mid-ground views from the highway. Moreover, the proposed development would be of a character that is similar to adjoining development and would not interrupt the existing pattern of low-density residential uses. This condition precludes the possibility of adverse impacts to a state scenic highway. As such, the project would no impact on scenic highways.

6.1.2 - Forest Zoning

The project site does not contain forest and is zoned "Agricultural Urban Reserve" by the San Joaquin Zoning Ordinance, which is a non-forest zoning. Additionally, the TVDP is proposed to be rezoned to "Tracy Village Specific Plan," which is also a non-forest zoning designation. This condition precludes the possibility of the proposed project conflicting with forest zoning. No impact would occur.

6.1.3 - Conversion of Forestland

The project site exists within an urbanized setting and no forest land exists on-site. This condition precludes the possibility of the proposed project converting forest land to non-forest use. Therefore, no impacts would occur.

6.1.4 - Geology and Soils

Septic or Alternative Wastewater Disposal Systems

The development contemplated by the TVDP would be served by sanitary sewer service provided by the City of Tracy. No septic or alternative wastewater disposal systems would be installed as part of the proposed project. No impacts would occur.

Currently, many if not all of the properties in the Residential Annexation Area use septic systems. These existing facilities would be maintained and no changes would occur. No new septic or alternative wastewater disposal systems would be installed. No impacts would occur.

6.1.5 - Hazards and Hazardous Materials

Exposure of Schools to Hazardous Materials or Emissions

The closest school is Anthony Traina Elementary School, located approximately 0.5 mile south. This condition precludes the proposed project from exposing schools located within 0.25 miles to hazardous materials or emissions. No impacts would occur.

Private Airstrips

There are no private airstrips in the vicinity of the TVSP. This condition precludes the possibility of the proposed project exposing persons residing or working in the project vicinity to aviation hazards associated with private airstrips. No impacts would occur.

Wildland Fires

The TVDP is surrounded on three sides by urban development or infrastructure. The closest areas that could potentially be exposed to wildland fires are in the southwest corner of the City of Tracy Sphere of Influence over 2 miles away. This condition precludes the possibility of the TVSP exposing people or structures to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

6.1.6 - Hydrology and Water Quality

100-Year Flood Hazards

The TVSP is not located within a FEMA-designated Special Flood Hazard Area subject to inundation in the event of a 100-year flood event. As such, the TVSP would not locate housing or other structures within a 100-year flood hazard area, and the structures would not impede or redirect flood floors. No impacts would occur.

Levee or Dam Failure

Exhibit 8-3 of the City of Tracy General Plan indicates that none of the TVSP is within the dam failure inundation area for any of the dams within the City of Tracy. Additionally, the TVSP is not protected by any levees, which precludes the potential for inundation by levee failure. No impacts would occur.

Seiches, Tsunamis, or Mudflows

There are no inland water bodies that could be potentially susceptible to a seiche in the TVSP. This precludes the possibility of a seiche inundating the project site.

The Association of Bay Area Government's interactive tsunami mapping feature indicates that only the coastal portion of Sonoma, Marin, San Francisco, and San Mateo Counties are susceptible to tsunamis. The TVSP is approximately 60 miles from the Pacific Ocean, a condition that precludes the possibility of tsunami inundation.

There are no steep slopes that would be susceptible to a mudflow near the TVSP, nor are there any volcanically active features that could produce a mudflow in the City of Tracy. This precludes the possibility of a mudflow inundating the TVSP. No impacts would occur.

6.1.7 - Mineral Resources

Loss of Mineral Resources of Local Importance

The TVSP is located in a residential area, with no known active mineral extraction sites. The closest mineral resource recovery site is Pereira mine, which is no longer in use and was sealed in 2008. The TVSP would not result in the loss of minerals of local importance. No impact would occur.

6.1.8 - Noise

Private Airstrips Noise Levels

There are no private airstrips near the TVSP. The closest private airstrip is the 33 Strip Airport, located approximately 7 miles southeast of the project site. This condition precludes the possibility of exposure of persons residing near the TVSP to excessive aviation noise. No impacts would occur.

6.1.9 - Public Services

Schools

The age-restricted housing would not generate any new students, as people under the age of 55 would not be eligible for residence in the TVDP. The Jefferson Elementary Unified School District and Tracy Unified School District would continue to provide education for the Residential Annexation Area. It is reasonably foreseeable that no new students will be added to these school districts because of the annexation. Therefore, the annexation would not result in the need for new or expanded school facilities. No impacts would occur.

6.1.10 - Tribal Cultural Resources

A review of the California Register of Historical Resources, local registers of historic resources, and the NAHC's Sacred Lands file failed to identify any listed Tribal Cultural Resources (TCRs) that may be adversely affected by the proposed project. As such, no recorded TCRs will be adversely affected by the proposed project.

Tribal consultation efforts conducted by the City of Tracy and FCS failed to identify additional significant TCRs meeting the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. As such, no additional significant TCRs will be adversely affected by the proposed project. No impacts would occur.

6.2 - Growth-Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2(d)).

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

The Project would develop up to 600 residential units and would be expected to result in a population of 1,200 persons (at 2.00 persons per household for an Age-Qualified Residential Land Use). Since the project TVDP's projected growth would be within the growth forecast projected by the General Plan, as discussed in Section 3-13, Population and Housing, it can be concluded that the proposed project would be considered planned growth, and therefore, not "growth inducing". Additionally, while urban infrastructure would be extended to the Residential Annexation Area, these extensions have already been considered in the City's General Plan**.** As such, development of the Project would not remove a physical barrier to growth. No impacts would occur.

6.3 - Significant Unavoidable Adverse Impacts

CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, is described. With implementation of the proposed project, the following significant effect that cannot be avoided would occur:

At the intersection of Corral Hollow Road and Linne Road, the addition of project traffic to the intersection would add delay and cause the intersection condition to continue to deteriorate and operate at LOS F in both the AM and PM peak hours. Mitigation is available to address this, but because it is subject to approval by the UPRR and the California Public Utilities Commission, it cannot be required at a date certain so until the improvement is installed, the impact will remain significant and unavoidable. All other impacts are less than significant with implementation of mitigation.

6.4 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB 1575), which created the California Energy Commission (CEC). The statutory

mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the TVSP will not result in the wasteful, inefficient, and unnecessary consumption of energy, will not cause the need for additional natural gas or electrical energy-producing facilities, and, therefore, will not create a significant impact on energy resources.

6.4.1 - Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. At the state level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting state fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and state energy-related laws and plans are discussed below.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicle miles traveled, and accommodating pedestrian and bicycle access.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, since the energy efficiency standards went into effect in 1978, it is estimated that California residential and

nonresidential consumers have reduced their utility bills by at least $15.8 billion. The CEC further estimated that by 2011, residential and nonresidential consumers will have saved an additional $43 billion in energy costs.

In 2013, the CEC adopted new energy efficiency standards. Effective July 1, 2014, all projects that apply for a building permit must adhere to the new 2013 standards. Like the previous standards, the 2013 standards reflect the greenhouse gas reduction requirements of the California Global Warming Solutions Act of 2006 (AB 32).

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the presumption throughout the State that compliance with Title 24 (as well as compliance with the federal and state regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features. For the vast majority of residential and nonresidential projects, adherence to Title 24 is deemed necessary to ensure that no significant impacts occur from the inefficient, wasteful, and unnecessary consumption of energy. As a further example, the adoption of federal vehicle fuel standards in 1975, have also protected against the inefficient, wasteful, and unnecessary use of energy.

Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the City will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

6.4.2 - Energy Requirements of the Proposed Project

Short-term construction and long-term operational energy consumption are discussed below.

Short-Term Construction

Development land use activities contemplated by the TVSP include short-term construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). It is not possible to reasonably estimate the amount of energy consumed by construction activities, as a number of hard-to-predict variables influence energy consumption (length of activities, size of buildings, equipment fleet, management practices, etc.).

Construction taking place within the TVSP would be required to monitor air quality emissions using applicable regulatory guidance such as the Bay Area Air Quality Management District CEQA Guidelines. These guidelines indirectly relate to construction energy consumption because construction air pollutant emissions are reduced through a function of energy consumption. As such, evaluation of air quality emissions on a project-by-project basis would likely utilize energy-reducing activities such as anti-idling measures, limits on duration of activities, and the use of alternative fuels, thereby reducing energy consumption.

Finally, there are no aspects of the TVSP that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities to be any less efficient that would otherwise occur elsewhere (restriction on equipment, labor, types of activities, etc.).

In summary, the TVSP would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities.

Long-Term Operations

Transportation Energy Demand

Development and land use activities contemplated by the TVSP would include long-term operational activities that would consume energy, both in the form of transportation fuel and building/equipment energy (e.g., electricity and natural gas). It is not possible to reasonably estimate the amount of energy consumed by operational activities, as a number of hard-to-predict variables influence energy consumption.

A key aspect of the TVSP is to reduce vehicle miles traveled (which reduces transportation fuel consumption) through the development of pedestrian-and transit-oriented residential uses. In order to create pedestrian- and bike-friendly streets the design of TVSP includes paseos, sidewalks, and a pedestrian promenade. Such uses would be well-positioned to allow residents to use transit, ride bicycles, and walk rather than travel by single-occupant vehicle.

In summary, the TVSP would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy during operational activities.

Building Energy Demand

The TVSP uses are estimated to demand 4.1 million kilowatt-hours of electricity and 24 million cubic feet of natural gas on an annual basis. These figures were derived from energy consumption rates provided by the United States Energy Information Administration. Refer to Section 3.17, Utilities and Service System for further discussion about the calculations used to arrive at these consumption estimates.

New residential development within the TVSP would be required to comply with the City of Tracy Sustainability Action Plan's applicable energy conservation and reduction measures as well as the applicable measures of the General Plan's Air Quality Element. In addition, the TVSP uses would be subject to the most recently adopted edition of the Title 24 energy efficiency standards at the time building permits are sought. All the homes would have photovoltaic (PV) systems, further reducing energy use. Title 24 standards include a number of requirements associated with energy conservation, and therefore ensure that the TVSP uses would not result in the inefficient, wasteful, or unnecessary use of energy.

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 7: PERSONS AND ORGANIZATIONS CONSULTED

7.1 - Lead Agency

7.1.1 - City of Tracy

City Attorney's Office

City Attorney..... Bill Sartor

Tracy Utilities Department

Utilities Director .....Kuldepp Sharma

Fire Department

Fire Chief ..... Randall Bradley

Police Department

Captain..... Jeremy Watney

Development Services Department

Senior Planner .....Victoria Lombardo

7.1.2 - Public Agencies

State Agency

Native American Heritage Commission

Staff Services Analyst..... Sharaya Souza

Local Agencies

Tracy Utilities Department

Utilities Director .....Kuldepp Sharma

San Joaquin County Council of Governments

Assistant Regional Planner .....Travis Yokoyama

Central Valley Regional Water Quality Control Board

Chair .....Karl E. Longley ScD, P.E.
Executive Officer..... Pamela C. Creedon P.E., BCEE
Environmental Scientist.....Stephanie Tadlock

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 8: LIST OF PREPARERS

8.1 - Lead Agency

8.1.1 - City of Tracy

Development Services Department

Senior Planner ..... Victoria Lombardo

8.2 - Lead Consultant

8.2.1 - FirstCarbon Solutions

Project Director ..... Mary Bean
Project Manager ..... Elizabeth Johnson
Senior Noise and Air Quality Scientist ..... Philip Ault
Senior Air Quality Scientist ..... George Lu
Air Quality Analyst ..... Kimberly Johnson
Air Quality Analyst ..... Maya Tjahjadi
Senior Archaeologist ..... Dana DePietro
Biological Resource Specialist ..... Brian Mayerle
Associate Biologist ..... Ashley Laor
Environmental Analyst ..... Liza Baskir
Environmental Analyst ..... Paul Smallman
Environmental Analyst ..... Connor Tindall
Environmental Analyst ..... Robert Carroll
Environmental Analyst ..... Brian Leung
Technical Editor ..... Ed Livingston
GIS ..... John De Martino
Word Processor ..... Ericka Rodriguez
Reprographics ..... Octavio Perez

8.2.2 - Technical Subconsultants

InContext

Principal ..... Trish Fernandez

Kimley-Horn

Transportation Manager ..... Frederik Venter

8.2.3 - Additional Technical Consultants

Live Oak Associates, Inc.

Principal, Senior Ecologist ..... Rick Hopkins, PhD
Senior Ecologist ..... Anna Kopitov, M.E.M.
Senior Plant and Wetland Ecologist ..... Pamela Peterson, BS
Senior Plant and Wildlife Ecologist ..... Davinna Ohlson, MS

ENGEO Incorporated

Principal ..... Shawn Munger, CHG, PG, REA II, EM
Project Engineer ..... Matthew E. Swanson
Associate ..... Steve Harris
Project Manager ..... Richard Gandolfo

West Yost Associates

Project Manager ..... Elizabeth Drayer, PE

SECTION 9: REFERENCES

Association of Bay Area Governments. 1958. Modified Mercalli Intensity Scale (MMI). Website: http://resilience.abag.ca.gov/shaking/mmi/. Accessed February 2, 2017.

Beardsley, R.K. 1948. "Cultural Sequences in Central California Archaeology." American Antiquity 14:1–28.

Beardsley, R.K. 1954. Temporal and Areal Relationships in Central California Archaeology. Berkeley: University of California Archaeological Survey Reports 25.

Bennyhoff, J. 1950. Californian Fish Spears and Harpoons. University of California Anthropological Records 9(4):295–338.

CalAdapt. 2016. Local Climate Snapshots. Website: http://cal-adapt.org/tools/factsheet/. Accessed December 29, 2016.

California Air Resources Board (ARB). 2013c. Area Designation Maps/State and National. 2012 State Area Designations. Page last reviewed August 22, 2014. Website: www.arb.ca.gov/desig /adm/adm.htm. Accessed August 21, 2016.

California Air Resources Board (ARB). 2015. ARB Emissions Trading Program. Website: http://www.arb.ca.gov/cc/capandtrade/guidance/cap_trade_overview.pdf. Accessed April 25, 2016.

California Air Resources Board (ARB). 2015. Low Carbon Fuel Standard Regulation. Website: http://www.arb.ca.gov/regact/2015/lcfs2015/lcfs2015.htm. Accessed April 25, 2016.

California Air Resources Board (ARB). 2015. On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. Website: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed April 19, 2016.

California Air Resources Board (ARB). 2015. Short-Lived Climate Pollutant Reduction Strategy, Concept Paper. May. Website: http://www.arb.ca.gov/cc/shortlived/concept_paper.pdf. Accessed April 28, 2016.

California Air Resources Board (ARB). 2016. Proposed Short-Lived Climate Pollutant Reduction Strategy. Website: http://www.arb.ca.gov/cc/shortlived/shortlived.htm. Accessed April 3, 2017.

California Air Resources Board. 2014. In-Use Off-Road Diesel Vehicle Regulation. Website: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.

California Air Resources Board. 2014. The California Almanac of Emissions and Air Quality – 2013. Website: http://www.arb.ca.gov/aqd/almanac/almanac13/almanac2013all.pdf.

California Air Resources Board. 2016. iADAM: Air Quality Data Statistics. Website: https://www.arb.ca.gov/adam/. Accessed December 29, 2016.

California Building Standards Commission. 2013. Current 2013 Codes. Website: http://www.bsc.ca.gov/Home/Current2013Codes.aspx. Accessed January 30, 2017.

California Building Standards Commission. 2016. California Code of Regulations, Title 24 (California Building Standards Code) summary page. Website: http://www.bsc.ca.gov/codes.aspx, accessed February 3, 2017.

California Code of Regulations. 2015. Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance. September 18.

California Department of Conservation, Division of Mines and Geology. 1991. Geologic Map of the San Francisco-San Jose Quadrangle. Compiled by D.L. Wagner, E.J. Bortugno, and R.D. McJunkin.

California Department of Conservation. 2015. San Joaquin County Important Farmland 2014.

California Department of Conservation. 2016. San Joaquin County Williamson Act FY 2015/2016.

California Department of Finance. 2015. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011–2020. January 1.

California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency.

California Department of Fish and Wildlife (CDFW). 2017. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov /rarefind/view/RareFind.aspx.

California Department of Resources Recycling and Recovery (CalRecycle). 2016. California's 75 Percent Initiative: Defining the Future. Website http://www.calrecycle.ca.gov/75percent/. Accessed February 1, 2017.

California Department of Toxic Substances Control. 2010. California Code of Regulation, Title 22, Division 4.5 summary page. Website: http://www.dtsc.ca.gov/LawsRegsPolicies/Title22/. Accessed February 3, 2017.

California Department of Transportation. 2011. Officially Designated State Scenic Highways. Website: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed February 1, 2017.

California Department of Water Resources. 2010. California Water Code Division 6 Part 2.6 Urban Water Management Planning.

California Emissions Estimator Model (CalEEMod). Version 2013.2.2. Website: http://caleemod.com/. Accessed June 18, 2015.

California Emissions Estimator Model (CalEEMod). Version 2016.3.1. Website: http://caleemod.com/. Accessed May 23, 2016.

California Environmental Protection Agency State Water Resources Control Board. 2010. 2009-0009-DWQ Construction General Permit. Website: http://www.waterboards.ca.gov /water_issues/programs/stormwater/constpermits.shtml. Accessed February 3, 2017. July 1.

California Native Plant Society (CNPS). 2017. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/

CEC. 2015. California Energy Commission Adoption Hearing Presentation: 2016 Buildings Energy Efficiency Standards. June 10. Website: http://docketpublic.energy.ca.gov/PublicDocuments /Migration-12-22-2015/Non-Regulatory/15-BSTD-01/TN%2075942%2006-10-15%20Adoption%20Hearing%20Presentation/TN%2075942%2006-10-15%20Adoption%20Hearings-v10.ppt. Accessed March 20, 2017.

CH2MHill. 2012. Tracy Wastewater Master Plan, prepared for the City of Tracy. December.

City of Tracy. 2005. City of Tracy General Plan Draft Environmental Impact Report. October. Website: http://www.ceqamap.com/search.php?mode=view&action=view&id=942. Accessed January 20, 2017.

City of Tracy. 2008. Comprehensive Emergency Management Plan, Annex B.

City of Tracy. 2010. General Plan Recirculated Draft Supplemental EIR. July.

City of Tracy. 2011. 2009–2014 Draft Housing Element. October.

City of Tracy. 2011. City of Tracy General Plan. February 1. Website: http://www.ci.tracy.ca.us /?navid=790. Accessed December 5, 2016.

City of Tracy. 2011. City of Tracy Sustainability Plan. Website: http://www.ci.tracy.ca.us/documents /Sustainability_Action_Plan.pdf. Accessed February 28, 2017.

City of Tracy. 2012. City of Tracy Citywide Storm Drainage Master Plan. November.

City of Tracy. 2013. Parks Master Plan (New Development). April.

City of Tracy. 2015. Fire Department. Website: http://ci.tracy.ca.us/?navId=841. Accessed April 21, 2015.

City of Tracy. 2015. Measure K Initiative. December.

City of Tracy. 2015. Police Department. Website: http://www.ci.tracy.ca.us/?navId=1633. Accessed April 22, 2015.

City of Tracy. 2016. City of Tracy 2015 Urban Water Management Plan. July.

City of Tracy. 2016. City of Tracy Municipal Code. October 18. Updated through December 6, 2016. Website: https://www.municode.com/library/ca/tracy/codes/code_of_ordinances. Accessed February 1, 2017.

City of Tracy. 2016. Tracy Village Specific Plan Water Supply Assessment. August.

City of Tracy. 2017. Parks & Recreation Department. Website: http://www.ci.tracy.ca.us/?navid=52. Accessed January 30, 2017.

City of Tracy. 2017. Tracy Village Draft Specific Plan. April.

Cook, S.F. 1976. The Population of the California Indians 1769–1970. University of California Press. Berkeley, California.

Department of Toxic Substances Control. 2015. EnviroStor Website: http://www.envirostor.dtsc.ca.gov/public/. Accessed January 27, 2017.

Dibble, T.W. 2006 (edited by John A. Minch, 2006). Geologic map of the Midway & Tracy quadrangles, Alameda & San Joaquin counties, California. Santa Barbara Museum of Natural History, DF-243. Scale 1:24,000.

Dickel, D.N., P. D. Schulz, and H.M. McHenry. 1984. "Central California: Prehistoric Subsistence Changes and Health." In Paleopathology at the Origins of Agriculture, edited by Mark Nathan Cohen and George J. Armelagos, pp. 439–462. Academic Press, Inc., Orlando, FL.

ENGEO Incorporated. 2013. Modified Phase I Environmental Site Assessment Report. April 4.

ENGEO Incorporated. 2013. Preliminary Geotechnical Report. April 24.

Federal Aviation Administration. 2007. Advisory Circular, Subject: Hazardous Wildlife Attractants on or Near Airports. Website: https://www.faa.gov/airports/airport_safety/wildlife /management/.

Federal Emergency Management Agency. 2016. Flood Insurance Rate Map.

Federal Highway Administration. 2006. Highway Construction Noise Handbook. August

Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment. May

FirstCarbon Solutions. 2015. Tracy Lakes Project—Biological Resources Evaluation Peer Review (Memorandum). May 27.

FirstCarbon Solutions. 2017. Tracy Village Project—Biological Resources Assessment of Additional Annexation Properties (Memorandum). March 30.

Frederickson, D.A. 1973. Early Cultures of the North Coast Ranges, California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis.

Gerow, B.A. 1954. The Problem of Cultural Sequences in Central California Archaeology. Paper presented at the Annual Meeting of the American Association for the Advancement of Sciences.

Gerow, B.A. 1974. "Comments on Fredrickson's Cultural Diversity." The Journal of California Anthropology 1(2):239–246.

Gerow, B.A., with R. Force. 1968. An Analysis of the University Village Complex with a Reappraisal of Central California Archaeology. Stanford University Press. Stanford., California.

Hughes, R.E. (editor). 1994. Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson. Assembled and edited by Richard E. Hughes. Contributions of the University of California No. 52, Archaeological Research Facility, Berkeley, CA.

Johnson, J.J. 1976. Archaeological Investigations at the Blodgett Site (CA-SAC-267), Sloughhouse Locality, California. Report to the U.S. National Parks Service, Western Regional Office, Tucson, AZ.

Kimley-Horn. 2017. Tracy Village, Transportation Impact Analysis. March 14.

Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.

Larry Walker Associates. 2015. Multi-Agency Post-Construction Stormwater Standards Manual. June.

Lillard, J.B. and W.K. Purves. 1936. "The Archaeology of the Deer Creek-Cosumnes Area, Sacramento Co., California." Sacramento. Sacramento Junior College, Department of Anthropology Bulletin 1.

Lillard, J.B., R.F. Heizer, and F. Fenenga. 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College, Department of Anthropology, Bulletin 2. Sacramento.

Live Oak Associates, Inc. 2013. Biological Resources Evaluation West Valpico Property. August 11.

Moratto, M.J. 1984. California Archaeology. San Diego. Academic Press. Online mapping program. Website: http://crithab.fws.gov/.

Ragir, S.R. 1972. The Early Horizon in Central California Prehistory. Contributions of the University of California Archaeological Research Facility 15. Berkeley, CA.

San Joaquin Council of Governments (SCJOG). 2009. Airport Land Use Compatibility Plan (addresses airports other than Stockton Metropolitan Airport).

San Joaquin Council of Governments (SJCOG). 1993. Airport Land Use Compatibility Plan for the Stockton Metropolitan Airport.

San Joaquin Council of Governments (SJCOG). 2000. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

San Joaquin County Council of Governments (SJCOG). 2014. 2014–2023 Final Draft Regional Housing Needs Plan. August 4.

San Joaquin County LAFCO. Amended 2012. Policies and Procedures. Website: https://www.sjgov.org/lafco/policies/lafco%20policies%20and%20procedures%20.pdf. Accessed March 22, 2017.

San Joaquin County Multi-species Habitat Conservation and Open-Space Plan, Information Packet, n.d. Stockton, CA.

San Joaquin County. 1992. San Joaquin County General Plan 2010. July 29. Website: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=generalplan. Accessed: July 28, 2015.

San Joaquin County. 1995. San Joaquin County Municipal Code. Updated through Dec 7, 2016. Website: https://www.municode.com/library/ca/san_joaquin_county/codes/code_of_ordinances?nodeId=ORCOSAJOCO1995. Accessed February 1, 2017.

San Joaquin County. 2010. San Joaquin County General Plan 2010 Draft Environmental Impact Report. January.

San Joaquin Valley Air Pollution Control District. 2006. Guidance for Air Dispersion Modeling. Website: http://www.valleyair.org/busind/pto/Tox_Resources/Modeling%20Guidance.pdf.

San Joaquin Valley Air Pollution Control District. 2007. 2007 Ozone Plan. Website: www.valleyair.org/Air_Quality_Plans/AQ_Final_Adopted_Ozone2007.htm. Accessed March 16, 2015 and April 26, 2016.

San Joaquin Valley Air Pollution Control District. 2008. Climate Action Plan. Website: http://www.valleyair.org/programs/CCAP/CCAP_menu.htm. Accessed March 9, 2015 and May 26, 2016.

San Joaquin Valley Air Pollution Control District. 2009a. Guidance for Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. Website: www.valleyair.org/programs/CCAP/11-05-09/3_CCAP_FINAL_LU_Guidance_Nov_05_2009.pdf. Accessed March 11, 2015 and June 2, 2016.

San Joaquin Valley Air Pollution Control District. 2009b. "Final Staff Report, Addressing Greenhouse Gas Emissions Impacts under the California Environmental Quality Act." December 2009. Accessed March 11, 2015.

San Joaquin Valley Air Pollution Control District. 2009c. Indirect Source Review (ISR) Construction – Detailed Fleet Template. Website: http://www.valleyair.org/ISR/Documents/Updates09-29-09/R_NR_M_Detailed_Fleet_Template_9-29-09.pdf. Accessed January 10, 2017.

San Joaquin Valley Air Pollution Control District. 2012. 2012 $PM_{2.5}$ Plan. Website: http://www.valleyair.org/Air_Quality_Plans/PM25Plan2012/CompletedPlanbookmarked.pdf. Accessed September 28, 2015 and April 26, 2016.

San Joaquin Valley Air Pollution Control District. 2015a. Guide for Assessing and Mitigated Air Quality Impacts. March. Website: http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf. Accessed June 2, 2016 and February 1, 2017.

San Joaquin Valley Air Pollution Control District. 2015b. 2015 Plan for the 1997 $PM_{2.5}$ Standard. Website: http://www.valleyair.org/Air_Quality_Plans/PM25Plans2015.htm. Accessed January 19, 2017.

Schenck, W.E. and E.J. Dawson. 1929. "Archaeology of the Northern San Joaquin Valley." American Archaeology and Ethnology 25:286–413.

Shoup, L.H. and R.T. Milliken. 1999. Inigo of Rancho Posolmi: the Life and Times of a Mission Indian. Novato. Ballena Press.

Sorenson, S.K. 1981. Chemical Quality of Ground Water in San Joaquin and Part of Contra Costa Counties, California. Water-Resources Investigation 81-26. U.S. Geological Survey.

South County Fire Authority. 2014. South County Fire Authority Annual Response Performance Report Fiscal Year 2013/2014 (July 1, 2013 through June 30, 2014). October.

Structural Engineers Association of California (SEAOC). 1996. Recommended Lateral Force Requirements and Commentary. Sixth Edition. Structural Engineers Association of California. Sacramento, California.

Trip Generation, 9th Edition, Institute of Transportation Engineers. 2012.

U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). September.

U.S. Environmental Protection Agency (EPA). 2016b. Final Rule for San Joaquin Valley Determination of Attainment of the 1-Hour Ozone National Ambient Air Quality Standards. Website: https://www3.epa.gov/region9/air/actions/pdf/ca/sjv/epa-r09-oar-2016-0164-sjv-1hr-o2-determin-attain-factsheet-2016-06-30.pdf. Accessed: February 16, 2017.

U.S. Fish and Wildlife Service (USFWS). 2017. Critical Habitat Data Portal. Website: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Accessed: May 16, 2017.

United Nations Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Website: www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed July 17, 2015.

United Nations Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team: R.K. Pachauri and A. Reisinger (eds.)]. IPCC, Geneva, Switzerland. Website: www.ipcc.ch/publications_and_data/ar4/syr/en/contents.html. Accessed July 17, 2015.

United States Department of Agriculture, Natural Resources Conservation Service. 2017. Web Soil Survey/. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed April 13, 2017.

United States Environmental Protection Agency (EPA). 2012b. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017–2025 Cars and Light Trucks. Website: http://www.epa.gov/otaq/climate/documents/420f12051.pdf. Accessed April 26, 2016.

United States Environmental Protection Agency (EPA). 2016a. Federal Register. National Ambient Air Quality Standards for Particulate Matter. Website: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed June 2, 2016.

United States Environmental Protection Agency (EPA). 2016b. Green Book Nonattainment Areas for Criteria Pollutants as of April 22, 2016. Website: https://www3.epa.gov/airquality /greenbook/Accessed: November 30, 2016.

United States Environmental Protection Agency. 1974. "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." March.

United States Environmental Protection Agency. 1998. Characterization of Building Related Construction and Demolition Debris in the United States. June.

Wagner, D.L. et al. 1991. Geologic Mao of the San Francisco-San Jose Quadrangle, California, 1:250,000.

Wallace, W.J. 1978. "Northern Valley Yokuts." In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, 448–461. Washington, DC. Smithsonian Institution.

West Yost Associates. 2017. Tracy Village Specific Plan Water Supply Assessment. February.

Western Regional Climate Center 2005. Website: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?catrac+nca. Accessed April 29, 2015.

Westrup, Laura. 2002. Planning Division, California Department of Parks and Recreation. Quimby Act 101: An abbreviated Overview. May 28.

FIRSTCARBONSOLUTIONS™

Final Environmental Impact Report
Tracy Village Project EIR
City of Tracy, San Joaquin County, California

State Clearinghouse Number 2016112016

Prepared for:

City of Tracy
333 Civic Center Dr.
Tracy, CA 95376
209.831.6000

Contact: Victoria Lombardo, Senior Planner

Prepared by:

FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597
925.357.2562

Contact: Mary Bean, Project Director
Elizabeth Johnson, Project Manager

Date: April 11, 2018

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

Section 1: Introduction 1-1

Section 2: Responses to Written Comments 2-1
2.1 - List of Authors 2-1
2.2 - Responses to Comments 2-1

Section 3: Errata 3-1
3.1 - Changes in Response to Specific Comments 3-1

Appendix L: SJVAPCD Regulation VIII

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 1: INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15088, the City of Tracy has evaluated the comments received on the Tracy Village Project Draft Environmental Impact Report (EIR). The Responses to Comments and Errata, which are included in this document, together with the Draft EIR, Draft EIR appendices, and the Mitigation Monitoring and Reporting Program, comprise the Final EIR for use by the City of Tracy in its review and consideration of the Tracy Village Project.

This document is organized into three sections:

- **Section 1—Introduction.**
- **Section 2—Responses to Written Comments:** Provides a list of the agencies, organizations, and individuals who commented on the Draft EIR. Copies of all of the letters received regarding the Draft EIR and responses thereto are included in this section.
- **Section 3—Errata:** Includes an addendum listing refinements and clarifications on the Draft EIR, which have been incorporated.

The Final EIR includes the following contents:

- Draft EIR (provided under separate cover)
- Draft EIR appendices (provided under separate cover)
- Responses to Written Comments and Errata (Sections 2 and 3 of this document)
- Mitigation Monitoring and Reporting Program (provided under separate cover)
- Appendix L: SVAPCD Air Quality Regulation VIII

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 2: RESPONSES TO WRITTEN COMMENTS

2.1 - List of Authors

A list of public agencies, organizations, and individuals that provided comments on the Draft EIR is presented below. Each comment has been assigned a code. Individual comments within each communication have been numbered so comments can be crossed-referenced with responses. Following this list, the text of the communication is reprinted and followed by the corresponding response.

Author **Author Code**

State Agencies

Governor's Office of Planning and Research ..... OPR

Local Agencies

San Joaquin Council of Governments ..... SJCOG
San Joaquin County Multi-Species Habitat Conservation & Open Space Plan ..... SJMSCP
San Joaquin Local Agency Formation Commission ..... SJLAFC
San Joaquin Valley Air Pollution Control District ..... SJVAPCD
City of Tracy Planning Commission ..... CTPC

Individuals

James Coltrell ..... COLT
Kathy Martinez ..... MART
Rick Sanders ..... SAND
Judy Houdeshell ..... HOUD
Ronnie Johal ..... JOHA
Joe Navejas ..... NAVE

2.2 - Responses to Comments

2.2.1 - Introduction

In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15088, the City of Tracy, as the lead agency, evaluated the comments received on the Draft EIR (State Clearinghouse No. 2016112016) for the Tracy Village Project, and has prepared the following responses to the comments received. This Response to Comments document becomes part of the Final EIR for the project in accordance with CEQA Guidelines Section 15132.

Section 15204(a) of the CEQA Guidelines states that reviewers of an EIR should focus on the sufficiency of the document. That section only requires lead agencies to respond to significant environmental issues, and it specifically states that lead agencies do not need to provide all information requested by the reviewers as long as a good faith effort at full disclosure is made in the EIR.

2.2.2 - Comment Letters and Responses

The comment letters reproduced in the following pages follow the same organization as used in the List of Authors.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

October 2, 2017

Victoria Lombardo
City of Tracy
333 Civic Center Plaza
Tracy, CA 95376

Subject: Tracy Village
SCH#: 2016112016

Dear Victoria Lombardo:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on September 29, 2017, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

RECEIVED
OCT 04 2017
CITY OF TRACY
DEVELOPMENT SERVICES

Document Details Report
State Clearinghouse Data Base

SCH# 2016112016
Project Title Tracy Village
Lead Agency Tracy, City of

Type **EIR** Draft EIR

Description The Tracy Village Project is a proposed gated community consisting of up to 600 single family detached residential homes. The project would include three man-made lakes totaling approximately ten acres, along with a community recreation center with pool, spa and bocce courts, open space, and trails/pathways. The following schools are located within a mile distance from the project site: Hirsch Elementary, Monticello Elementary, and Anthony Traina Elementary. The project site is within the City's Sphere of Influence. It includes annexation of the site and additional lots.

Lead Agency Contact

Name Victoria Lombardo
Agency City of Tracy
Phone 209-831-6428 **Fax**
email
Address 333 Civic Center Plaza
City Tracy **State** CA **Zip** 95376

Project Location

County San Joaquin
City Tracy
Region
Lat / Long 37° 42' 22" N / 121° 26' 59" W
Cross Streets Valpico Rd and Corral Hollow Rd
Parcel No. 244-04-001
Township 3S **Range** 5E **Section** 5 **Base** MD

Proximity to:

Highways 580
Airports Tracy Municipal
Railways ACE Rail line
Waterways Westside Irrigation District Canal
Schools Tracy USD
Land Use PLU: Ag; Z: Ag-urban reserve; GP: Resource conservation

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual

Reviewing Agencies Resources Agency; Central Valley Flood Protection Board; Department of Fish and Wildlife, Region 3; Department of Parks and Recreation; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 10; State Water Resources Control Board, Division of Drinking Water; State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Delta Protection Commission; Delta Stewardship Council; Native American Heritage Commission; Public Utilities Commission

Date Received 08/16/2017 **Start of Review** 08/16/2017 **End of Review** 09/29/2017

Note: Blanks in data fields result from insufficient information provided by lead agency.

State Agencies

Governor's Office of Planning and Research (OPR)

Response to OPR-1

OPR notes the receipt of the Draft EIR and states that the document was distributed to the state agencies listed. None responded directly to OPR.

THIS PAGE INTENTIONALLY LEFT BLANK

SAN JOAQUIN COUNCIL OF GOVERNMENTS

555 E. Weber Avenue • Stockton, California 95202 • P 209.235.0600 • F 209.235.0438 • www.sjcog.org

San Joaquin County Airport Land Use Commission/Congestion Management Agency

Katherine Miller
CHAIR
Robert Rickman
VICE CHAIR
Andrew T. Chesley
EXECUTIVE DIRECTOR
Member Agencies
CITIES OF
ESCALON,
LATHROP,
LODI,
MANTECA,
RIPON,
STOCKTON,
TRACY,
AND
THE COUNTY OF
SAN JOAQUIN

September 27, 2017

Victoria Lombardo
Development Services Department
333 Civic Center Drive
Tracy, CA 95376

Re: Tracy Village DEIR (Deadline: 9/27/17)

Dear Victoria Lombardo,

The San Joaquin Council of Governments (SJCOG), acting as the Airport Land Use Commission (ALUC) and Congestion Management Agency (CMA), has draft environmental impact report for 600-unit single-family detached home project with man-made lakes and community recreation area at Corral Hollow Road and Valpico Road, Tracy (APN: 244-030-001 & -021, 242-050-001 & -021).

CONGESTION MANAGEMENT AGENCY'S REVIEW

SJCOG adopted the 2016 Update to the Regional Congestion Management Program (RCMP) (http://www.sjcog-rcmp.org/_literature_231152/2016_RCMP_Update_Adopted_Report) on March 24, 2016). Chapter 6 of the RCMP describes the updated Land Use Analysis Program, including Tier 1 and Tier 2 review/analysis requirements, analysis methods, impact significance criteria, and mitigation.

SJCOG has reviewed the Tracy Village DEIR and had the following comments.

- After reviewing mitigation measures in ES-20 to ES-23, payment into the RTIF fund was not identified as a mitigation measure. SJCOG recommends the project be charged for single-family housing. RTIF fee schedule can be found in http:// www.sjcog.org/ 118/ Regional-Transportation-Impact-Fee-RTIF. 1
- SJCOG understands Corral Hollow Road & Linne Road improvements cannot be completed until approved by UPRR/PUC, as stated in Mitigation Measure Trans-2b.

"The addition of project traffic causes the intersection of Corral Hollow Road/Linne Road (Intersection #7) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS B and D with the following improvements: Add a southbound through lane, and add a northbound through lane, and add a separate westbound right-turn lane. Improvements shall be constructed at the railroad crossing gates. This project improvement will supplement background improvements previously identified for other approved projects (Ellis and Tracy Hills) which includes installation of a signal, the addition of one northbound channelized right-turn lane, and the addition of one southbound left-turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the 2

Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

This Project improvement is required by the Public Utilities Commission because vehicle queues will spill across the railroad tracks and will cause safety concerns for train traffic. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. Any costs related to non-TMP improvements are the responsibility of the applicant and other approved projects listed above.

2 CONT

The TVDP Applicant shall, in collaboration with the City Engineer and UPRR/PUC, commence with an engineering design process to install the improvements identified. This design process shall commence immediately following approval of this Project Application by the City of Tracy. Because approval by UPRR/PUC is required before this improvement can be installed, the project impact will remain significant and unavoidable." (pg. ES-21 to -22)

AIRPORT LAND USE COMMISION'S REVIEW

This project is located within Tracy Airport's influence area and Traffic Pattern Zone (TPZ), as identified in 2009 San Joaquin County Metropolitan Airport Land Use Compatibility Plan (ALUCP) (http://www.sjcog.org/DocumentCenter/View/ 17). Tracy Village DEIR (pg. 3.8-14) addresses the attraction of birds to three man-made lakes.

"Because the TVDP includes the creation of three man-made lakes totaling approximately 10.5 acres, there is a potential impact from flocks of birds attracted to the lakes. The Tracy Municipal Airport is authorized to implement wildlife management procedures within the land use impact area for the airport, if necessary. If large flocks of birds were attracted to the TVDP's lake features, a wildlife management plan could be authorized by the Federal Airport Administration to prevent aircraft safety impacts such as collisions with birds." (pg. 3.8-14)

Mitigation Measure HAZ-3 states the following:

"The lake system shall be designed and managed to avoid attracting waterfowl. Design measures that may be used to discourage waterfowl include:

3

- *Avoiding large turf areas.*
- *Managing aquatic vegetation to eliminate nesting places by cutting back foliage or using appropriate herbicides.*
- *Prohibiting the feeding of waterfowl.*
- *Constructing the lakes so that there are vertical edges.*
- *Providing low fencing at the water's edge, or a narrow band of tall plants, such as cattails.*
- *Signs posted prohibiting feeding of waterfowl in public areas of the lakefront.*
- *HOA rules to include prohibition of feeding waterfowl in private yards, and information campaign to make residents aware of the prohibition and the safety reason for it, explaining that encouraging waterfowl to return to the site increases the potential for conflicts with aircraft using Tracy Airport*
- *The lake system shall be monitored and inspected by the HOA once a month to enforce and ensure the effectiveness of the methods implemented to mitigate this impact. Inspection records will be available for the City or County to inspect as needed." (pg. ES-14)*

SJCOG assumes the man-made lakes and recreational area will encompass the required 10% open space requirement. 3 CONT

SJCOG requests the deed notice requirement be included within DEIR.

For new residential development within any airport's influence area (AIA), deed notices are required per the California Civil Code as well as the San Joaquin County's Airport Land Use Compatibility Plan. These notices are a form of buyer awareness measure whose objective is to ensure that prospective buyers of airport area property, particularly residential property, are informed about the airport's impact on the property. A statement similar to the following should be included on the deed for any real property subject to the deed notice requirements set forth in the San Joaquin County Airport Land Use Compatibility Plan. Such notice should be recorded by the county of San Joaquin. Also, this deed notice should be included on any parcel map, tentative map, or final map for subdivision approval. 4

> *Sample Deed Notice - The San Joaquin County Airport Land Use Commission's Airport Land Use Compatibility Plan identify the Tracy Municipal Airport's Airport Influence Area. Properties within this area are routinely subject to overflights by aircraft using this public-use airport and, as a result, residents may experience inconvenience, annoyance, or discomfort arising from the noise of such operations. State law (Public Utilities Code Section 21670 et seq.) establishes the importance of public-use airports to the public interest of the people of the state of California. Residents of property near such airports should therefore be prepared to accept the inconvenience, annoyance, or discomfort from normal aircraft operations. Residents also should be aware that the current volume of aircraft activity may increase in the future. Any subsequent deed conveying this parcel or subdivisions thereof shall contain a statement in substantially this form.*

SJCOG would like to provide standards and project design conditions that comply with the Airport Land Use Compatibility Plan as a reference guide.

1. New land uses that may cause visual, electronic, or increased bird strike hazards to aircraft in flight shall not be permitted within any airport's influence area. Specific characteristics to be avoided include:
    a. Glare or distracting lights which could be mistaken for airport lights. Reflective materials are not permitted to be used in structures or signs (excluding traffic directing signs).
    b. Sources of dust, steam, or smoke which may impair pilot visibility.
    c. Sources of electrical interference with aircraft communications or navigation. No transmissions which would interfere with aircraft radio communications or navigational signals are permitted.
    d. Occupied structures must be soundproofed to reduce interior noise to 45 decibel(dB) according to State guidelines.
    e. Within the airport's influence area, ALUC review is required for any proposed object taller than 100 feet above ground level (AGL). 5

2. Regardless of location within San Joaquin County, ALUC review is required in addition to Federal Aviation Administration (FAA) notification in accordance with Code of Federal Regulations, Part 77, (https://oeaaa.faa.gov/oeaaa/external/portal.jsp) for any proposal for construction or alteration under the following conditions: 6

    a. If requested by the FAA.
    b. Any construction or alteration that is more than 200 ft. AGL at its site.
    c. Any construction or alteration that exceeds an imaginary surface extending outward and

upward at any of the following slopes:

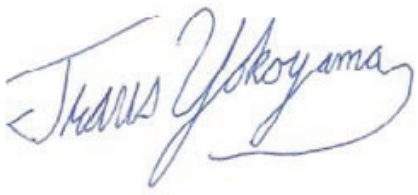
i. 100 to 1 for a horizontal distance of 20,000 ft. of a public use or military airport from any point on the runway of each airport with its longest runway more than 3,200 ft.
ii. 50 to 1 for a horizontal distance of 10,000 ft. of a public use or military airport from any point on the runway of each airport with its longest runway no more than 3,200 ft.
iii. 25 to 1 for a horizontal distance of 5,000 ft. of the nearest take off and landing area of a public use heliport

d. Any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards
e. Any construction or alteration located on a public use airport or heliport regardless of height or location.

6
CONT

Thank you again for the opportunity to comment. Please contact CMA and ALUC staff Travis Yokoyama (209-235-0451 or yokoyama@sjcog.org) if you have any questions or comments.

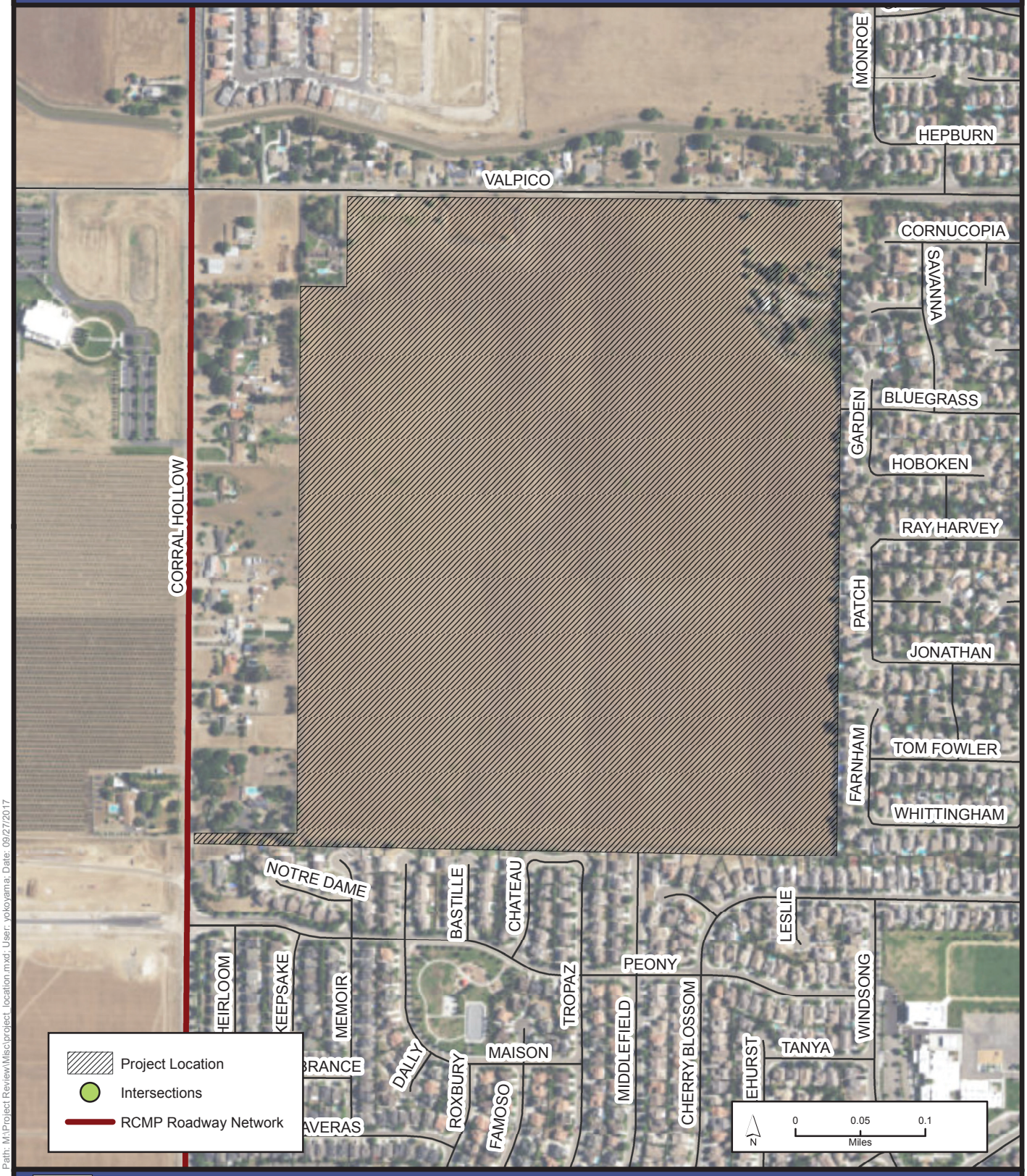
Sincerely,



Travis Yokoyama

ATTACHMENT A – Exhibit of Project Site Location in relation to RCMP Network
ATTACHMENT B – Exhibit of Project Site Location in relation to ALUC

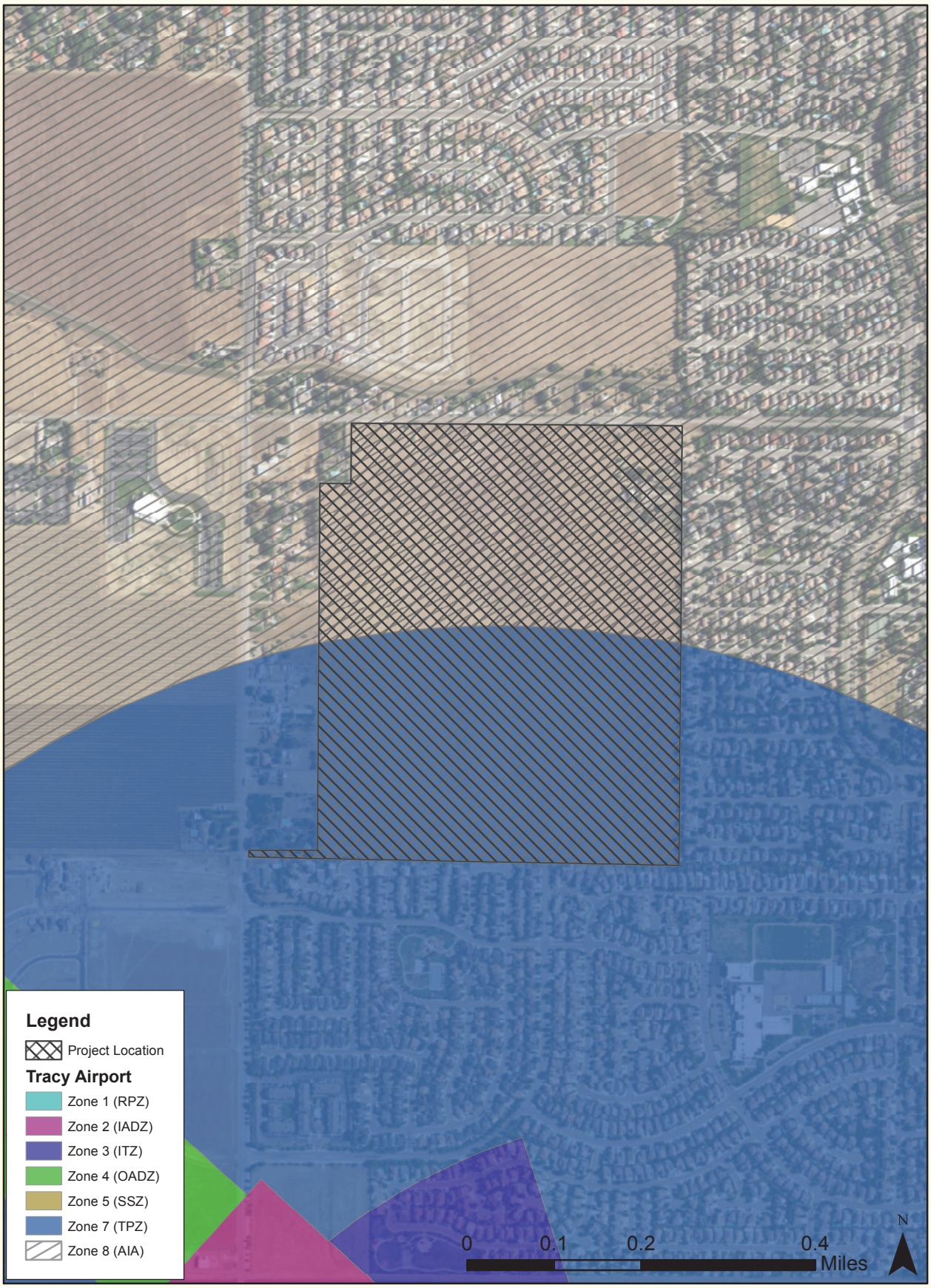
Tracy Village Draft EIR
Tracy, CA 95377
APN: 244-030-001 & -021, 242-050-001 & -021



Path: M:\Project Review\Misc\project_location.mxd; User: yokoyama; Date: 09/27/2017

REGIONAL CONGESTION MANAGEMENT PROGRAM

Tracy Village Draft EIR
Tracy, CA 95377
APN: 244-030-001 & -021, 242-050-001 & -021



AIRPORT LAND USE COMMISSION

Local Agencies

San Joaquin Council of Governments (SJCOG)

Response to SJCOG-1
The comment questions why the RTIF [Regional Transportation Impact Fee] fund was not identified as a mitigation measure.

The proposed project will be subject to all applicable development impact fees, including the RTIF. Tracy Municipal Code Chapter 13.32 specifically requires payment of the RTIF, and no separate mitigation measure is required to ensure compliance with the law. The DEIR states:

> Page 83 of the TIA indicates that the RTIF fees would be payable. These fees are updated from time to time and more information is available at: http://www.sjcog.org/118/Regional-Transportation-Impact-Fee-RTIF

Response to SJCOG-2
The commenter understands Corral Hollow and Linne Road improvements cannot be completed until approved by UPRR/PUC, as stated on pages 3.16-57 through 3.16-58.

Comment is noted. This comment is an observation regarding the Corral Hollow and Linne Road Improvements and is not related to the adequacy of the EIR, so no further response is required.

Response to SJCOG-3
The commenter states the project is located within Tracy Airport's influence area and Traffic Pattern Zone, and assumes the man-made lakes and recreational area will encompass the required 10% open space requirement, which would equal 13.4 acres for the 134-acre site.

The EIR provided the amount of open space proposed in the Specific Plan in Table 3.15-1: Nearby Park and Open Space Facilities, page 3.15-2 as shown. Counting the lakes, the project provides 21 acres of open space, which exceeds the 10% open space requirement. The DEIR address the potential that birds could be attracted to these man-made lakes and evaluates that impact on pages 3.14 through 3.17 in the Hazards section. The comment is noted.

Table 3.15-2: Open Space

Open Space Type	Acreage
Lake System	10.5
Recreation Facilities	4.0
Open Space System	2.4
Private Park	3.2
Dog Park	0.2
Pedestrian Connection	0.7
Total	**21.0**
Source: Tracy Village Specific Plan, p. 2–6	

Response to SJCOG-4
The commenter requests the deed notice requirements be included within DEIR.

The EIR has been revised in the Errata to clarify that General Plan Objective LU 6.3, Policy P.2 requires all new development near the Tracy Municipal Airport to record aviation easements or deed disclosures in compliance with the ALUCP and to provide the requested exemplar language. The proposed language addresses existing aircraft noise impacts on future residents of the project and is not related to safety or hazards.

Response to SJCOG-5
The commenter states land uses that may be hazards to aircraft in flight shall not be permitted within any airport's influence area and suggests certain project design conditions intended to serve as reference for the City's review.

These regulations are acknowledged and were included on page 3.10-7 of the DEIR. Upon final ALUC review of the project, no additional design conditions were found to be necessary.

Response to SJCOG-6
The commenter states Airport Land Use Compatibility review is required for any proposal for construction or alterations of the listed condition.

These regulations are acknowledged and are found on pages 3.10-7 of the DEIR. As stated on that page of the DEIR, ALUC review is required for proposal for construction or alteration if it meets the following conditions:

a) If requested by the FAA.

b) Any construction or alteration that is more than 200 ft. above ground level at its site.

c) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:
   - 100 to 1 for a horizontal distance of 20,000 ft. of a public use or military airport from any point on the runway of each airport with its longest runway more than 3,200 ft.
   - 50 to 1 for a horizontal distance of 10,000 ft. of a public use or military airport from any point on the runway of each airport with its longest runway no more than 3,200 ft.
   - 25 to 1 for a horizontal distance of 5,000 ft. of the nearest take off and landing area of a public use heliport

d) Any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards

e) Any construction or alteration located on a public use airport or heliport regardless of height or location.

The TVDP does not meet these conditions and the ALUC staff agree that no further agency review is required.

S J C O G, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 235-0600 • FAX (209) 235-0438

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

SJMSCP RESPONSE TO LOCAL JURISDICTION (RTLJ)
ADVISORY AGENCY NOTICE TO SJCOG, Inc.

To: Victoria Lombard, City of Tracy, Community Development Department

From: Laurel Boyd, SJCOG, Inc.

Date: August 25, 2017

Local Jurisdiction Project Title: Notice of Completion of Draft EIR for the Tracy Village Project

Assessor Parcel Number(s): 244-040-01

Local Jurisdiction Project Number: State Clearinghouse No.: 2016112016

Total Acres to be converted from Open Space Use: Approximately 133.60 acres

Habitat Types to be Disturbed: Agricultural Habitat Land

Species Impact Findings: Findings to be determined by SJMSCP biologist.

Dear Ms. Lombardo:

SJCOG, Inc. has reviewed the Notice of completion of a Draft Environmental Impact Report (EIR) for the Tracy Village Project. The Tracy Village Project proposes a gated community consisting of up to 600 single-family detached residential homes, and would include 3 man-made lakes totaling approximately 10 acres, along with a community recreation center with pool, spa, and bocce courts, open space and trails/pathways. The Project also includes the proposed annexation into the City of an additional 42 residential properties fronting Corral Hollow Road and Valpico Road, and an adjoining drainage canal north of Valpico Road. The project sites is located south of Valpico Road and east of Corral Hollow Road, Tracy (APN: 244-040-01). 1

The City of Tracy is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measure are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP. Although participation in the SJMSCP is voluntary, Local Jurisdiction/Lead Agencies should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP.

This Project is subject to the SJMSCP. This can be up to a 30 day process and it is recommended that the project applicant contact SJMSCP staff as early as possible. It is also recommended that the project applicant obtain an information package. http://www.sjcog.org

Please contact SJMSCP staff regarding completing the following steps to satisfy SJMSCP requirements:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- SJMSCP Incidental take Minimization Measures and mitigation requirement: 2

1. Incidental Take Minimization Measures (ITMMs) will be issued to the project and must be signed by the project applicant prior to any ground disturbance but no later than six (6) months from receipt of the ITMMs. If ITMMs are not signed within six months, the applicant must reapply for SJMSCP Coverage. Upon receipt of signed ITMMs from project applicant, SJCOG, Inc. staff will sign the ITMMs. This is the effective date of the ITMMs.
2. Under no circumstance shall ground disturbance occur without compliance and satisfaction of the ITMMs.
3. Upon issuance of fully executed ITMMs and prior to any ground disturbance, the project applicant must:
    a. Post a bond for payment of the applicable SJMSCP fee covering the entirety of the project acreage being covered (the bond should be valid for no longer than a 6 month period); or
    b. Pay the appropriate SJMSCP fee for the entirety of the project acreage being covered; or
    c. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
    d. Purchase approved mitigation bank credits.
4. Within 6 months from the effective date of the ITMMs or issuance of a building permit, whichever occurs first, the project applicant must:

a. Pay the appropriate SJMSCP for the entirety of the project acreage being covered; or
b. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
c. Purchase approved mitigation bank credits.

Failure to satisfy the obligations of the mitigation fee shall subject the bond to be called.

2 CONT

- Receive your Certificate of Payment and release the required permit

It should be noted that if this project has any potential impacts to waters of the United States [pursuant to Section 404 Clean Water Act], it would require the project to seek voluntary coverage through the unmapped process under the SJMSCP which could take up to 90 days. It may be prudent to obtain a preliminary wetlands map from a qualified consultant. If waters of the United States are confirmed on the project site, the Corps and the Regional Water Quality Control Board (RWQCB) would have regulatory authority over those mapped areas [pursuant to Section 404 and 401 of the Clean Water Act respectively] and permits would be required from each of these resource agencies prior to grading the project site.

3

If you have any questions, please call (209) 235-0600.

San Joaquin Multi-Species Conservation Plan (SJMSCP)

Response to SJMSCP-1
The commenter indicates that the City of Tracy is a signatory to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which makes the City responsible for ensuring the project complies with the SJMSCP.

As stated on page 3.4-19 of the DEIR, the project applicant will participate in the SJMSCP.

Response to SJMSCP-2
The commenter indicates that the City of Tracy is a signatory to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, which makes the City responsible for ensuring that the project applicant takes the steps required to comply with the SJMSCP.

The applicant will begin the process with SJMSCP if the project is approved by the City of Tracy.

Response to SJMSCP-3
The commenter notes that if the project has potential impact on waters of the United States pursuant to the Clean Water Act, then the applicant would be required to seek voluntary coverage of the SJMSCP.

As reported in the DEIR on page 3.4-17, there is no potential impact to the waters of the United States. Two field surveys by qualified biologists and a review of the literature conclude that the site does not contain vernal pools, seasonal wetlands, marshes, ponds, lakes, or riparian wetlands of any type. No aquatic features with the potential of being subject to USACE, RWQCB, or CDFW jurisdiction were observed within the TVDP site.

THIS PAGE INTENTIONALLY LEFT BLANK

SAN JOAQUIN
LOCAL AGENCY FORMATION COMMISSION

LAFCo

509 W. WEBER AVENUE SUITE 420 STOCKTON, CA 95203

CHAIR
DOUG KUEHNE
LODI CITY COUNCIL

MIGUEL VILLAPUDUA
COUNTY BOARD OF SUPERVISORS

DANNY FOX
ESCALON CITY COUNCIL

BOB ELLIOTT
COUNTY BOARD OF SUPERVISORS

PETER JOHNSON
PUBLIC MEMBER

ALTERNATE MEMBERS

Vice-Chair
TOM PATTI
COUNTY BOARD OF SUPERVISORS

JESÚS ANDRADE
STOCKTON CITY COUNCIL

CHARLES MANNE
PUBLIC MEMBER

EXECUTIVE OFFICER
JAMES E. GLASER

COUNSEL
ROD ATTEBERY

LAFCO ANALYST
ELIZABETH CONTRERAS

COMMISSION CLERK
MITZI STITES

September 28, 2017

Victoria Lombardo, AICP, Senior Planner
City of Tracy
Development and Engineering Services
333 Civic Center Plaza
Tracy, CA 95376

RE: Tracy Village Project EIR
State Clearinghouse # 2016112016

Dear Ms. Lombardo:

San Joaquin Local Agency Formation Commission (LAFCo) has reviewed the Draft Environmental Impact Report for the Tracy Village Project EIR and have the following comments to offer:

Fire Protection Discussion

There are two separate fire agencies that provide fire services to the Tracy Area. Tracy Rural Fire Protection District (Tracy Rural) is a special independent district which formed in 1942 and whose fire district boundary is approximately 200 square miles and includes the unincorporated territory surrounding the City of Tracy and the territory that annexed to the City after 2002. The other fire service provider is the City of Tracy. These fire providers did not merged as the EIR states. These two agencies did execute a Joint Powers Agreement in 1999 and formed the South County Fire Authority (SCFA) to provide fire services to both agencies. They remain two separate agencies. The EIR does not state if the City will request detachment from Tracy Rural. Since 2002, the City has not requested detachment and therefore the EIR must evaluate the ability of Tracy Rural to provide fire protection. 1

The EIR states that SCFA responded to 6,443 calls for assistance in FY 2013/2014. According to data received from the City of Stockton Dispatch Center for calendar year 2016, the City of Tracy responded to 713 calls and Tracy Rural responded to 204 calls for service that included fire, fire alarm, grass fire, medical, and vehicle calls. Tracy Rural had a reflex time in 2016 of 15 minutes 45 seconds for fire calls and 12minutes 38 seconds for medical calls including vehicles. City of Tracy had a reflex time in 2016 of 9 minutes 30 2

seconds for fire calls and 7 minutes and 29 seconds for medical calls including vehicles. These numbers exceed the established response goals for each department. 2 CONT

The EIR fails to state the emergency response time to the proposed development. Furthermore, it states that the station that would provide service is scheduled to be moved two miles east of the project site. Once again, the EIR does not state the response time to the site from the new location and does not state with clarity if a new station is needed. The EIR states *if* construction is necessary the station would be funded by new development including the TVDP's development fees. The EIR must determine if sufficient funding would be available to construct the station and if adequate funding is available to staff the station. It should be noted that development fees could only be used for capital improvements. While economic and social changes resulting from a project shall not be treated as significant effects on the environment, economic and social changes may be used to determine that a physical change shall be regarded as a significant effect on the environment. In this case, the subdivision would have the effect of attracting people to the location and exposing them to the hazards found there (§15065 and §15126.2). 3 4 5

Fire Governance Plan

In 2011 the City of Tracy committed to completion of a plan regarding the governance for the Tracy City Fire Department and Tracy Rural Fire Protection District subject to the approval of LAFCo and that all subsequent annexation requests must be consistent with that Plan. This plan was due by October 2013. Since this plan has not been completed, the annexation request addressed in the EIR cannot be successfully processed. As evidence by the Municipal Service Review for Rural Fire Protection Districts prepared by LAFCO in 2011, there are significant shortcomings with Tracy Rural and there is no evidence that they have the ability to provide the service. The EIR should address this issue in the Land Use and Planning section. 6

Sphere of Influence

In accordance with §56425 (g) of the California Government Code, the Commission shall review and update each sphere of influence every five years. The Commission last considered the City of Tracy's sphere of influence on January 20, 2012. Annexation requests must be consistent with an updated sphere of influence, therefore, an update to the sphere of influence is also required before an application for annexation can be processed. The EIR should address this issue in the Land Use and Planning section 7

Municipal Service Review

In accordance with §56430 of the California Government Code, a service review must be conducted in order to update sphere of influences in accordance with §56425. As such, a Municipal Service Review is also needed prior to processing an annexation application. The EIR should address this issue in the Land Use and Planning section. 8

Agricultural Resources

The EIR concludes that the conversion of agricultural land to urban use is less than significant and no mitigation measures are required. LAFCo disagrees with this conclusion. While the General Plan may have adopted a Statement of Overriding Consideration, that does not make this a less than significant impact for this project. In fact, this supports the finding of significant and unavoidable, which requires mitigation. The City of Tracy adopted an Agricultural Mitigation 9

Fee ordinance. This project needs to find that this impact is significant and unavoidable and that feasible mitigation measures exist. 9 CONT

Respectfully submitted,

James E. Glaser
Executive Officer

THIS PAGE INTENTIONALLY LEFT BLANK

San Joaquin Local Agency Formation Commission (SJLAFC)

Response to SJLAFC-1

The commenter states there are two separate fire agencies that provide fire service to the Tracy Area, the South County Fire Authority and the City of Tracy, that the two did not merge as stated in the EIR.

The distinction is acknowledged and the following explanation will be added to the Draft EIR, as indicated in the Errata. Since September 16, 1999, the Tracy Rural Fire Protection District and the City of Tracy have been parties to the "Agreement between South County Fire Authority and the City of Tracy for Provision of Fire Services to Authority's Jurisdictional Area." Section 1.5, Jurisdictional Area states the following:

> Jurisdictional area means and includes both the area within the corporate limits of the City of Tracy and the area within the Tracy Rural Fire Protection District as both such limits now exist or may hereafter exist and not within the jurisdictional area of any other fire protection district.

From a service delivery perspective, first response fire service is provided to the jurisdictional area from the closest fire station regardless of station ownership. Although the South County Fire Authority (SCFA) Joint Powers Agreement (JPA) comprises two member agencies, operationally it provides service to one combined jurisdictional area.

The new South San Joaquin County Fire Authority (SSJCFA) JPA also consists of two member agencies, providing service to one jurisdictional area. The City of Tracy and the Tracy Rural Fire District are now member agencies of the "Joint Powers Agreement of the South San Joaquin County Fire Authority." Section 1.4. Specified Powers states the following:

> The Authority is hereby authorized, in its own name, to do all acts necessary for the exercise of the foregoing powers, including but not limited to, any of the following: (a) Initiate, alter and otherwise exercise the common powers of its Members in providing fire suppression, protection, prevention, and related services, and those powers that may be conferred upon it by subsequently enacted legislation, and to be the exclusive body to make policy concerning the administration of the provision of fire service by the Authority for Member Agencies including determining if, when and where to place facilities and staff said facilities within the Authority's jurisdiction for services.

The agreement further states in Section 3. Level Of Service, 3.1 Basic Services, A. List of Services, that "The Authority shall provide a uniform, minimum set of basic services to each Member Agency, which shall consist of the following: 1. Responding to fire and emergency calls to provide fire suppression, rescue, emergency medical, and hazardous materials response service." From a service delivery perspective, first response fire service is provided to the jurisdictional area of the SSJCFA from the closest fire station regardless of ownership.

As stated above, since 2002, annexations into the City have not detached from Tracy Rural. It is important to note that when annexed into the City, the performance measures that apply to the City (not the Tracy Rural performance measure) are then applicable to the "annexed but not detached area."

Response to SJLAFC-2
The commenter questions the reflex times reported in the DEIR, and provides alternate reporting from the City of Stockton Dispatch Center for the calendar year 2016.

The data obtained by the Local Agency Formation Commission (LAFCO) from the City of Stockton Dispatch Center for calendar year 2016 is a partial data set representative of a partial year of dispatch services. Previously, SCFA resources were dispatched by the Valley Regional Emergency Communications Center (VRECC) operated by American Medical Response. On April 26, 2016, the SCFA switched dispatch providers from VRECC to the City of Stockton through the San Joaquin County Regional Fire Dispatch Authority (SJCRFDA). The data set obtained by LAFCO reflects only 66 days of service received from SJCRFDA. This explains why the number of calls for the City of Tracy and Tracy Rural emergency services reported by the City of Stockton Dispatch Center is much lower than those reported in the DEIR.

In Fiscal Year 2016–2017, the SCFA responded to 7,351 calls for assistance. These calls for service included fires of all type, fire alarms, emergency medical, vehicle accidents, hazardous conditions, and service calls. The 2016–2017 South County Fire Authority Annual Report indicates the reflex time in the City was 6:59 minutes for EMS incidents, 8:30 minutes for structure fires, and 9:17 minutes for all other incident types. Tracy Rural shows 11:41 minutes for EMS incidents, 13:49 minutes for structure fires, and 13:18 minutes for all other incident types. Further information can be found in the 2016–2017 South County Fire Authority Annual Report.

Response to SJLAFC-3
The commenter states that the DEIR fails to state the emergency response time to the proposed development, and whether a new station would be needed.

According to the City of Tracy GIS Viewer, the majority of the proposed development can be reached within 1.5 miles of existing SCFA Fire Station 97. Typically, a 1.5-mile distance is equivalent to an approximate 4-minute travel time. As mentioned, this station will likely be relocated within the next 5 years. The proposed relocation site remains approximately 1.5 miles from the proposed development.

In 2017, the SCFA completed a Standards of Cover Study with Citygate Associates, LLC. The May 2, 2017 SCFA report identifies the need for an additional fire station on Valpico Road between Corral Hollow Road to the east and Lammers Road to the west. The addition of this station (also known as "Proposed 4") will provide a second fire station in proximity of the proposed project. This station is anticipated to be constructed within the next 2 to 3 years in response to development of the Ellis project. This station will be located within 1.5 miles of the entire proposed project. The proposed project remains within approximately 4 minutes of travel times from the existing SCFA Station 97, a potentially relocated Station 97, and a proposed additional fire station on Valpico Road. The City has

identified funding for the potential relocation of SCFA Fire Station 97. Further, the construction of the additional station identified as Proposed 4 will be funded through development fees as indicated in the Citywide Public Safety Master Plan (CPSMP).

Response to SJLAFC-4
The commenter raises a question related to funding available to construct the station and if adequate funding is available to staff the station.

The SCFA has concluded the funding source for the capital needs will be sufficiently provided through development impact fees as indicated in the CPSMP. Understanding that development impact fees do not provide funding for operations, the SCFA analyzed projected revenue outside of capital improvements. A forecast of revenue from development projects currently in process and on the development horizon within areas annexed by the City but not detached from Tracy Rural indicates that sufficient operating revenues will be generated by January 2020. This forecast projects revenues as a result of both residential and commercial growth. Projected operating expenditures are based upon maintaining current SCFA staffing levels.

Response to SJLAFC-5
The commenter states that economic and social changes may be used to determine that a physical change shall be regarded as a significant effect of the environment, and, in this case, the subdivision would have the effect of attracting people to the location and exposing them to the hazards found there.

CEQA is generally concerned with impacts of a project on the environment and not the impacts of the existing environment on a project. The language relied on by the commenter from the CEQA Guidelines related to attracting people to existing hazards has been found by the California Supreme Court to be inconsistent with the CEQA statute (*California Bldg. Industry Assn. v. Bay Area Air Quality Management Dist*. (2015) 62 Cal.4th 369, 390). The proposed project will add residential housing inventory contiguous with existing neighborhoods. The people attracted to the location by the proposed development would not be exposed to any unique hazards not already present with other developed residential areas. The City's General Plan and the Citywide Public Safety Master Plan have analyzed the impacts of allowing additional residential development in this location.

Response to SJLAFC-6
The commenter questions whether the EIR can be successfully processed if a previous governance plan for the Tracy City Fire Department and Tracy Fire Protection District has not been completed yet.

On February 20, 2018, both the City of Tracy and the Tracy Rural Fire District entered into the "Joint Powers Agreement of the South San Joaquin County Fire Authority." The SSJCFA is a new joint powers agreement that completes the new governance plan referenced by the commenter. Also on February 20, 2018, both member agencies approved the dissolution of the existing SCFA effective July 1, 2018. The SSJCFA is the new JPA allowing member agencies to exercise their powers for the purpose of improving the provision of fire service within the Authority's jurisdiction. The new SSJCFA JPA has an effective date of March 1, 2018 with an implementation of July 1, 2018.

The Municipal Service Review for Rural Fire Protection Districts prepared by LAFCO in 2011 views Tracy Rural as a stand-alone entity. As a member agency of the SSJCFA, Tracy Rural is entitled to the full strength of operational resources within the JPA. When considering the ability of local fire stations to serve the proposed project, the jurisdictional area of the SSJCFA and fire stations within it should be the determining factor. That said, the location of the existing SSJCFA Fire Station 97 or its proposed relocation site on Valpico Road will still serve the proposed project within response time objectives. In addition, the completion of a second future station on Valpico Road will provide not one but two facilities in proximity to the proposed project.

Response to SJLAFC-7
The commenter states that the project must be consistent with an updated sphere of influences.

The Project Description identifies San Joaquin LAFCO as a responsible agency related to the annexation of the project site. The Errata expands the discussion of the steps required to annex the project site, including an update to the City's Sphere of Influence (SOI) and Municipal Service Review (MSR). The update to the SOI and MSR must be completed every 5 years. The City will submit the latest MSR to LAFCO in the spring of 2018, and is working with LAFCO to revise its Sphere of Influence.

Response to SJLAFC-8
The commenter notes that a Municipal Service Review is needed prior to processing and an annexation application.

See Response to SJLAFC-7. The City is currently working with LAFCO to revise its Sphere of Influence and Municipal Service Review in order to complete the process to their satisfaction and allow LAFCO to approve the annexation. In accordance with the guidance found in Appendix G to the CEQA Guidelines, the Land Use and Planning Chapter focuses on plans and regulations adopted for the purpose of avoiding or mitigating an environmental effect. As such, no further discussion of the MSR process is required beyond that found in the Errata.

Response to SJLAFC-9
The commenter questions the DEIR's conclusion that the conversion of agricultural land to urban use is less than significant and no mitigation measures are required.

This concern is addressed on page 3.2-13 of the DEIR. The conversion of the TVDP from agricultural land to residential is consistent with the City's long-term planning vision. The City's General Plan EIR (Section 4.7, Agriculture) found that the effects of converting agricultural land such as the proposed TVDP site to urban uses would be significant and unavoidable. As noted in the DEIR, the TVDP is surrounded by urban uses on all sides. These existing conditions make long-term agricultural use of the project site not viable because of compatibility issues and the inability to undertake large-scale agricultural production. Because of the island nature of the TVDP, the conversion of the TVDP is considered a less than significant impact.

October 2, 2017

Victoria Lombardo
City of Tracy
Development & Engineering Services
333 Civic Center Plaza
Tracy, CA 95376

Project: Draft Environmental Impact Report (EIR) for the Tracy Village Project

District CEQA Reference No: 20170954

Dear Ms. Lombardo:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Draft Environmental Impact Report (EIR) for the Tracy Village Project. Per the EIR, the proposed project consists of two components: 1. Tracy Village Development Project (TVDP) consists of annexing 134 acres of land in San Joaquin County to the City of Tracy and constructing up to 600 single family detached residential lots for an active adult, gated, and age-restricted community; and 2. Residential Annexation Area consists of annexing 42 existing lots in San Joaquin County to the City of Tracy (Project). The proposed Project is located in San Joaquin County adjacent to the Tracy city limits. The District offers the following comments:

1) **Rule 9510 Indirect Source Review**

District Rule 9510 Indirect Source Review (ISR) requires an Air Impact Assessment (AIA) application be submitted to the District no later than applying for final discretionary approval with the public agency.

The Project will exceed District Rule 9510 Indirect Source Review (ISR) applicability threshold of 50 dwelling units. Therefore, the Project is subject to Rule 9510 ISR. Rule 9510 ISR is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site mitigation fees. Rule 9510 ISR requires the submittal of an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval with the public agency. Information about how to comply with Rule 9510 ISR can be found online at: http://www.valleyair.org/ISR/ISRHome.htm. The AIA application can be found online at: http://www.valleyair.org/ISR/ISRFormsAndApplications.htm. 1

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

Printed on recycled paper.

2) Other District Rules and Regulations

The Project may be subject to the following District rules and regulations.

The Project may be subject to District Rules and Regulations, including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants). The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. 2

3) Risk Assessment

The District recommends that a risk assessment be performed to determine if toxic air containments (TACs) during construction would have an impact on nearby sensitive receptors.

On Page 3.3-37, the EIR states,

> *"Construction phase risks would be considered acute health risks as opposed to cancer risks, which are long-term. The Office of Environmental Health Hazard Assessment has yet to define acute risk factors for diesel particulates that would allow the calculation of hazards risk index; thus, evaluation of this impact would be speculative and no further discussion is necessary."* 3

Although it is true that the state has not yet established an acute risk factor for diesel particulate matter, in the their new risk assessment model cancer risks can be calculated for exposures of as little as one year. Since this is a multi-year construction Project, the District recommends the Project be evaluated for potential health impacts to sensitive receptors (on-site and off-site). The exposure duration can be selected to match the length of the construction period.

The District recommends conducting a screening analysis that includes all sources of emissions to determine if it is necessary to conduct a health risk assessment (HRA). A screening analysis is used to identify projects that may have a significant health impact. A prioritization, using CAPCOA's updated methodology, is a recommended screening method. A prioritization score of 10 or more is considered to be potentially significant and an HRA should be performed. The prioritization calculator can be found at: http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS. 4

If an HRA is to be performed, it is recommended that the Project proponent contact the District to review the proposed modeling protocol. The Project would be considered to have a significant health risk if the HRA demonstrates that Project related health impacts would exceed the District's significance threshold of 20 in a million for carcinogenic risk and 1.0 for Acute and Chronic Hazard Indices.

More information on toxic emission factors, prioritizations and HRAs can be obtained by: 5

- Calling Technical Services staff at (559) 230-6000.
- E-mailing inquiries to: hramodeler@valleyair.org; or
- Visiting the District's website at (modeling information): http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm

If you have any questions or require further information, please call Sharla Yang at (559) 230-5934.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Brian Clements
Program Manager

AM: sy

THIS PAGE INTENTIONALLY LEFT BLANK

San Joaquin Valley Air Pollution Control District (SJVAPCD)

Response to SJVAPCD-1
The commenter notes that in accordance with District Rule 9510 Indirect Source Review, an Air Impact Assessment is required.

Comment acknowledged. The SJVAPCD's rules and regulations that could apply to the project, including District Rule 9510—Indirect Source Review, are listed on pages 3.3-18 through 3.3-19 of the DEIR. Page 3.3-19 of the DEIR states that this project must comply with Rule 9510 because it would develop more than 50 residential dwelling units.

Response to SJVAPCD-2
The commenter states that the Project may be subject to the San Joaquin Valley Air Pollution Control District's rules and regulations.

Comment acknowledged. The SJVAPCD's rules and regulations that could apply to the project are listed on page 3.3-18 of the DEIR.

Response to SJVAPCD-3
The commenter recommends that a risk assessment be performed to determine if toxic air contaminants during construction would have an impact on nearby sensitive receptors.

Please refer to Response to SJVAPCD-4.

Response to SJVAPCD-4
The commenter recommends conducting a screening analysis to determine if it is necessary to conduct a health risk assessment (HRA).

A localized pollutant analysis is included in the impact analysis for Impact AIR-2. The SJVAPCD's 2015 GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with regulations and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. As shown in Table 3.37: Maximum Daily Air Pollutant Emissions, the project would not exceed the SVAPCD's screening level for either construction or operations, and, therefore, an HRA would not be necessary, which is consistent with SVAPCD's guidance. This analysis specifically examined a multi-year scenario as the SJVAPCD suggests.

Response to SJVAPCD-5
In the case than a health risk assessment is performed, the commenter recommends that the San Joaquin Valley Air pollution Control District is contacted to review the proposed modeling protocol.

An HRA was not required, based on the SJVAPCD 2015 GAMAQI screening threshold discussed above. The project emissions do not meet the 100-pound-per-day screening threshold for pollutants concern, as discussed in the DEIR on page 3.3-30.

THIS PAGE INTENTIONALLY LEFT BLANK

MINUTES
TRACY CITY PLANNING COMMISSION
SEPTEMBER 27, 2017, 7:00 P.M.
CITY OF TRACY COUNCIL CHAMBERS
333 CIVIC CENTER PLAZA

CALL TO ORDER

Chair Orcutt called the meeting to order at 7:00 p.m.

PLEDGE OF ALLEGIANCE

Chair Orcutt led the pledge of allegiance.

ROLL CALL

Roll Call found Chair Orcutt, Vice Chair Sangha, and Commissioners Hudson, Krogh, and Tanner present. Also present were: Bill Dean, Assistant Director of Development Services; Leticia Ramirez, Assistant City Attorney; Scott Claar, Senior Planner; Vicki Lombardo, Senior Planner; Cris Mina, Senior Civil Engineer; and Peggy Abundiz, Recording Secretary.

MINUTES

It was moved by Commissioner Tanner, and seconded by Vice Chair Sangha, that the Planning Commission meeting Minutes of September 13, 2017, be approved. Voice vote found all in favor; passed and so ordered.

DIRECTOR'S REPORT REGARDING THIS AGENDA

Bill Dean thanked the Commission for their service on this night, adding that there is a full agenda for the meeting. Mr. Dean pointed out that Agenda Item 1-A, regarding the Pereira Mine, will be re-noticed for a later meeting, as stated on the agenda. He further announced that Item 1-E, involving determination of consistency with the General Plan for the vacation of a small piece of right-of-way, needs further review and thus is being postponed to a future meeting as well.

ITEMS FROM THE AUDIENCE

None.

1. NEW BUSINESS

A. PUBLIC HEARING TO CONSIDER APPROVAL OF A CONDITIONAL USE PERMIT AND RECLAMATION PLAN AMENDMENT TO DEFINE AND EXTEND THE EXPIRATION DATES FOR MINING UNTIL DECEMBER 31, 2036 AND RECLAMATION UNTIL DECEMBER 31, 2039 WITH NO CHANGES TO MINING OR RECLAMATION ACTIVITIES (REQUEST IS ONLY TO EXTEND TIME), AND APPROVAL OF THE RENEWAL OF THE INTERIM MANAGEMENT PLAN FOR AN ADDITIONAL FIVE YEAR PERIOD FOR THE PEREIRA MINE, LOCATED AT THE SOUTHWEST CORNER OF LINNE ROAD AND SOUTH TRACY BOULEVARD

(ASSESSOR'S PARCEL NUMBER 253-110-09) – APPLICANT IS TEICHERT AGGREGATES; OWNER IS TRIANGLE PROPERTIES; APPLICATION NUMBER CUP16-0010

As stated on the Agenda, this item will be re-noticed for a future Planning Commission meeting.

B. PUBLIC HEARING TO CONSIDER RECOMMENDATIONS TO THE CITY COUNCIL REGARDING APPROVAL OF A GENERAL PLAN AMENDMENT TO CHANGE THE GENERAL PLAN LAND USE DESIGNATION FROM RESIDENTIAL HIGH TO COMMERCIAL AND APPROVAL OF A REZONE FROM HIGH DENSITY RESIDENTIAL ZONE TO GENERAL HIGHWAY COMMERCIAL ZONE FOR A 6,000 SQUARE FOOT PARCEL LOCATED AT 2461 HOLLY DRIVE AND A 7,402 SQUARE FOOT PARCEL LOCATED AT 2441 HOLLY DRIVE. THE APPLICANT IS MIKE SOUZA. THE PROPERTY OWNERS ARE GEMELOS FAMILY PARTNERSHIP AND TRACY UNIFIED SCHOOL DISTRICT. APPLICATION NUMBERS GPA17-0002 AND R17-0002

Scott Claar presented the staff report. Chair Orcutt opened the public hearing at 7:03 p.m. Applicant Mike Souza spoke and addressed questions from the Commission. As there was no other testimony to be heard, Chair Orcutt closed the public hearing at 7:08 p.m. Scott Claar addressed questions from the Commission.

ACTION It was moved by Commissioner Hudson, and seconded by Commissioner Tanner, that the Planning Commission recommend that the City Council take the following actions, as stated in the Planning Commission Resolution dated September 27, 2017:

- Approve a General Plan Amendment to change the General Plan Land Use Designation from Residential High to Commercial for an approximately 6,000 square foot parcel located at 2461 Holly Drive, Assessor's Parcel Number 214-520-17, and an approximately 7,402 square foot parcel located at 2441 Holly Drive, Assessor's Parcel Number 214-520-18, Application Number GPA17-0002; and

- Introduce and adopt an ordinance to rezone an approximately 6,000 square foot parcel located at 2461 Holly Drive, Assessor's Parcel Number 214-520-17, and an approximately 7,402 square foot parcel located at 2441 Holly Drive, Assessor's Parcel Number 214-520-18, from High Density Residential Zone to General Highway Commercial Zone, Application Number R17-0002.

A voice vote found all in favor; 5-0-0, passed and so ordered.

C. PRESENTATION AND QUESTION/ANSWER DISCUSSION ON THE PROPOSED TRACY VILLAGE DEVELOPMENT PROJECT

Vicki Lombardo presented the staff report, then requested that the Commission turn it over to Jeff Schroeder of Ponderosa Homes II, Inc., for a brief PowerPoint presentation. Mr. Schroeder made the presentation and addressed general questions

from the Commission relative to the development. Other questions from the Commission are listed below, with the Applicant's response following:

- Why wasn't the southwest walking strip made a road or access point for ingress, egress, emergency vehicles, etc.?
  APPLICANT: The strip sits between two residential lots and is 25 feet in width, which is not wide enough for vehicular access. We see it as a pedestrian access out to Corral Hollow Road.

- Citizens may not see a manmade lake as beneficial.
  APPLICANT: Lakes are well received in terms of an amenity. The original vision was four lakes, then the drought came, then it was two lakes or no lakes. We designated three lakes once the City informed us they had received a grant to extend the recycled water line down close enough to where we could afford to bring it over. We haven't finalized that location yet, or how long it will take to get there. We'll be using that recycled water, but it's really integrated into the entire project from a storm drain and water treatment standpoint. The lake will also provide irrigation for all of the common areas, which will help circulate the water in the lake as well. Additionally, the lake has filtration and pumping systems, as well as oxygen emitters, to prevent eutrophication. It's a manmade system run pretty efficiently, and it seems the homeowners association would want to protect that to the greatest extent possible because it is an amenity to the community. Another benefit is that it can provide a place for the City to send its recycled water.

At 7:34 p.m., Chair Orcutt invited the public to share any questions or comments they had on the development project.

Perpetua Comstock-Fritchie spoke and openly discussed her questions with Mr. Schroeder regarding the project, including future dedication of property for the widening of Valpico Road, as well as traffic concerns. Cris Mina addressed questions from the Commission and Ms. Comstock-Fritchie relative to future traffic improvements at the intersection of Corral Hollow and Valpico Roads.

Suzanne Shaw spoke, and echoed Ms. Comstock-Fritchie's concerns regarding traffic congestion. Ms. Shaw also asked questions with regard to: entrances to the development, future improvements on Corral Hollow Road, who will pay for the sidewalks, future dedication of property, and whether or not current residents will be allowed to continue using well water and propane. Chair Orcutt, Jeff Schroeder, Bill Dean, and Vicki Lombardo addressed these questions.

Perpetua Comstock-Fritchie asked questions regarding the annexation process, addressed by Bill Dean.

Judy Houdeshell inquired as to how long construction is expected to last. Discussion ensued regarding the active adult residential allocation system, and the approval processes required in order for this project to be completed.

As no one else came forward, Chair Orcutt closed the public question/comment session at 8:00 p.m.

Mr. Schroeder addressed additional general questions from the Commission relative to the project.

D. PUBLIC MEETING TO SOLICIT COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE TRACY VILLAGE DEVELOPMENT PROJECT

Vicki Lombardo presented the staff report, pointed out that the public comment period for the Draft Environmental Impact Report (DEIR) ends on October 2, and introduced Elizabeth Johnson, Senior Project Manager with First Carbon Solutions. Ms. Johnson pointed out that Mary Bean, Project Director, was present as well. Ms. Johnson gave a PowerPoint presentation, providing an overview of the environmental process and summarizing the findings contained in the DEIR, then invited questions from the Commission.

Bill Dean pointed out that the environmental process requires that staff note down questions at this point, rather than provide answers. Mr. Dean further explained that any questions raised, whether from an agency or a homeowner, will be answered through this process. Thus, tonight's purpose is simply to provide an opportunity for people to ask questions. Answers to these questions will be provided once technical staff has been consulted. In response to a question from Chair Orcutt, Mr. Dean stated that the DEIR is posted on the City's website, and a hard copy is also available for review at City Hall.

Elizabeth Johnson provided an overview of the EIR process.

The Commissioners raised the following questions regarding the DEIR:

- In terms of the improvements to Valpico Road, what is the viability of access for the existing lots that front onto that road in its ultimate configuration? (Cris Mina pointed out that if this question is not addressable in the EIR, then it can be addressed in the Tentative Map stage, when Engineering will write conditions of approval specifying the location of access points and construction detail of those access points.) | 1

- Is the issue of birds a major problem? (Bill Dean pointed out that some possible mitigation measures are listed in the DEIR, but that, if possible, the final document will elaborate on that.) | 2

- Page 3.16-5 – Discusses intersection studies. A number of these do not have pedestrian crosswalks. If it becomes City property, will pedestrian crosswalks be installed? | 3

- Page 3.16-14 – Discusses Tracer. I would hope that the City is planning to do more with Tracer and/or para-transit in that area. If not, why not? | 4

- Parking occupancy at the Ace Tracy Station—why wasn't this based on a more current study? The study was completed three years ago and the occupancy has got to be greater than 73.5%. Why isn't it current? | 5

- Page 3.16-17 – Cumulative plus intersection level of service – Lammers and Valpico Roads are already at Level F. With the project included, the level remains at F. Why? | 6

- Two areas of Corral Hollow and Valpico go from a Level C to E. Why? | 7

- Tracy Boulevard and Valpico also go from Level C to E. Why? Can't these be improved? | 8

- Pages 5-2 and 5-10 discuss alternatives. It seems like the project may really be going for Alternative 3, which is just the project. What about the option that the 42 properties not be a part of the City? (Bill Dean pointed out that a determination on this is not a part of the DEIR process—the process simply lists alternatives, but the ultimate decision rests with the City, and the Planning Commission has full discretion to make whatever recommendation it so chooses to City Council.) | 9

- Page 5-16, Table 5-4 – there seems to be a big difference between a.m. and p.m in terms of travel. Why is there such a big difference between the two? | 10

- Is there going to be a traffic signal at the intersection of Valpico and Corral Hollow? | 11

- The current fire station which would service that community is on Central Avenue and Tracy Boulevard. It is slated to be moved to the east, to Valpico. Is moving that station going to diminish response times to this project and other neighborhoods in that area? Can the next closest station (believed to be Eleventh Street) handle backup call volume if those resources are deployed to other locations in the city? Will we still be within the level of service that's required? | 12

- The City just acquired a tractor drawn aerial ladder truck apparatus that seems a lot bigger than what we had before. Do the turning radiuses inside of this development meet the requirements for that ladder truck, and do the turning radiuses meet the requirement for turning off of the city streets into the development? | 13

- Page ES-2 – Under Applicant Objectives, third from the bottom it lists as one of the objectives: *"Reduce waste, reinvest back into the community, and minimize impacts on local services."* What is meant by the term "reinvest back into the community?" | 14

- Page ES-18 – In the Executive Summary Matrix, one of the mitigation measures, NOI-1b, discusses the 6-foot-high sound wall proposed, and then later that the project might implement an 8-foot-high sound wall. There is a comment related to that on Page 1-5, Comment 10: *"The resident on the east side of the property currently enjoys views across the project site. She has a 3-foot fence, and is concerned about the proposed 8-foot wall."* Is it 6-foot or 8-foot? Is it going to be built? Aesthetics is a concern. How is it going to be perceived? Are we going to put vegetation on it? Are we going to tree line it? Stones? Etc. It would obviously be a sound wall, but would it be a decorative type wall? 15

- Would the southwest walking strip be best used as a one-way exit to minimize or potentially lessen the impacts on Valpico Road? 16

An audience member asked when the answers to these questions would be provided. Bill Dean stated that response time will depend on how many questions are posed.

At 8:34 p.m., Chair Orcutt opened the public comment period for the Tracy Village DEIR.

Judy Houdeshell spoke, expressing the following concerns:

- Page 3.3.40 – Discusses valley fever and references District Regulation VIII in terms of how the soil disturbance and dust would be handled during a project. The wind is 99% of the time going from west to east, and I get a lot of dust at my house every windy day. When they excavate they will be causing dust. It would be nice to be able to see what District Regulation VIII says, in particular with regard to dust control. It would be nice if that was delineated a little more thoroughly in the Report as the public document in order to understand what that would mean so that if we start getting a lot of dust there's something I can fall back onto, and for the contractor to look at and understand they need to follow. It was interesting that it was noted that out of 8,652 people that were hospitalized between the years 2001 and 2007, 752 of them died. It is very serious. The report did find that this particular plot of land is probably not at a high risk for it, but you cannot be certain. So I am really concerned about the dust. (Joe Orcutt added a question here regarding the watering of construction sites for dust prevention, asking whether or not that would help keep the valley fever molecules settled as well.) Once the water dries, the dust picks back up again and with the wind it would make it worse, so hopefully there are other mitigation measures.

- The wall that will be built behind my house—I don't think it's a sound wall, but I am concerned about what that wall is going to look like and at what stage in the project it will be built. Also, with our 3-foot fence we have a built-in pond. My husband built part of the pond into the fence line. So there's a lot of concern about what that wall is going to do to our pond, and to the look of our backyard.

City of Tracy Planning Commission (CTPC)

Response to CTPC-1
The commenter questions the viability of access, in terms of improvements to Valpico Road, for the existing lots that front onto that road in its ultimate configuration.

The existing driveways will remain functional, and if any of those lots redevelops in the future, the City will review and require the improvement to meet all City standards.

Response to CTPC-2
The commenter raises a question in relation to birds being a problem (because of the project's location near the Tracy Municipal Airport).

The Airport Land Use Compatibility Plan for San Joaquin County established compatibility zones around the Tracy Airport, which lies approximately 0.85 mile south of the project site. The lower portion of the TVDP falls within Zone 7. The following restrictions apply to this zone:

1. New land uses that may cause visual, electronic, or increased bird strike hazards to aircraft in flight shall not be permitted within any airport's influence area. Specific characteristics to be avoided include:
    a. Glare or distracting lights which could be mistaken for airport lights. Reflective materials are not permitted to be used in structures or signs (excluding traffic directing signs).
    b. Sources of dust, steam, or smoke which may impair pilot visibility.
    c. Sources of electrical interference with aircraft communications or navigation. No transmissions which would interfere with aircraft radio communications or navigational signals are permitted.
    d. Occupied structures must be soundproofed to reduce interior noise to 45 decibel(dB) according to State guidelines.

The Errata to this FEIR clarifies in Section 3.8, Hazards, that such restrictions are applicable to the project. The DEIR found that the proposed lakes on the project site could create an aviation hazard if flocks of birds were attracted to the lakes, increasing the possibility of bird strikes. Mitigation Measure (MM) HAZ-3 on page 3.8-14 provides methods that are intended to prevent the use of the lakes by waterfowl that, if they formed large flocks, could pose collision risk for aircraft using the Tracy Airport.

Response to CTPC-3
The commenter raises a question in relation to the installation of crosswalks at intersections in the project vicinity.

All signalized intersections within the project, both currently located within the City and those planned for annexation, will contain pedestrian crosswalks.

Response to CTPC-4
The commenter questions the City's plans with TRACER and para-transit in the area.

The comment does not relate to the adequacy of the EIR or an impact on the environment, so no further response is required. The comment is being forwarded to decision-makers for their consideration.

Response to CTPC-5
The commenter questions if the parking occupancy study at the ACE Tracy Station parking lot used in the DEIR is current enough.

The 2014 study summarized on DEIR page 3.16-15 reflected ACE's most current study available on the date the NOP was published. In response to the comment, KHA held a telephone conference with ACE staff on October 11, 2017. ACE stated that parking occupancy peaks on Tuesdays and Wednesday mornings at approximately 90 percent. Though some residents of the projects may utilize the lot because the project is an active adult community that will consist primarily of retirees, the project-generated parking demand will not be significant. In addition, ACE staff indicated that increased parking enforcement against improperly parked vehicles generate additional capacity at the lot. ACE agreed that the project would not interfere with ACE's operations. These clarifications do not alter the impact conclusions of the DEIR. It is possible that Active Adults would not ride the train in the same numbers as commuters.

Response to CTPC-6
The commenter questions why the level of service (LOS) at the intersection of Lammers and Valpico Roads, which is already at LOS F, remains at F with addition of project traffic in the cumulative scenario.

Table 3.16-17 of the DEIR provides the results of the Cumulative Plus Project Intersection Level of Service calculations. Cumulative AM and PM delays are 123.9 and 110.0 seconds per vehicle (LOS F). Cumulative Plus Project delays are 135.1 and 116.3 with single family and 128.1 and 111.8 with Active Adult (which also falls to LOS F). The LOS at this intersection would improve to LOS B in the AM peak hour and LOS D in the PM peak hour with the implementation of MM TRANS-3b. MM TRANS-3b was inadvertently omitted in the Draft EIR, although it is presented in the Traffic Study (Appendix H). The full mitigation measure is presented in the Errata section of this FEIR.

Response to CTPC-7
The commenter asks why the level of service on segments of Valpico and Corral Hollow Roads decreases to LOS E with the addition of project traffic.

As shown in Table 3.16-19, the volume-to-capacity (V/C) ratio on the segment of Corral Hollow Road from Middlefield Drive to Linne Road would be 1.04, which corresponds to LOS F, with the addition of the project traffic to the cumulative scenario for the PM peak hour. The V/C on Valpico Road from Corral Hollow Road to Project driveway #1 would be 0.94, which corresponds to LOS E. However, the traffic analysis concludes that these roadway segments would operate acceptably. The rationale for assuming that the LOS shown for Roadway segments in Tables 3.16-17 and 3.16-19 would improve to acceptable levels of service is provided on page 3.16-66 of the DEIR:

> Cumulative conditions, when the full road network is built out, the intersection would govern capacity on the City urban street network, and not the segments. All

> the intersections analyzed would operate at or better than the City LOS standards and, as such, the segments can also be expected to operate at acceptable conditions. The TVDP project will pay the City Transportation Improvement Fee, implemented as a mitigation measure, as its fair share contribution towards the potential incremental cumulative roadway impacts. As such, with the implementation of Mitigation Measure TRANS-3, cumulative project impacts would be reduced to less than significant levels.

For further clarification, the segment V/C shown in Table 3.16-19 for roadway segments is considered a conservative evaluation, based on the assumed volume and capacity on each segment. However, since the traffic study also analyzed effects on the intersections adjacent to these segments, and the intersections were either already operating acceptably or the project mitigated to operate acceptably, the segments would also operate acceptably. Road segments and intersections operate as a system.

Response to CTPC-8
The commenter raises the same question related to the level of service on Tracy Boulevard and Valpico Road roadway segments with the project.

Tracy/Valpico changes from LOS D in Cumulative PM peak to LOS E in Cumulative Plus Project PM peak. AM peak changes from LOS C in Cumulative to LOS D in Cumulative Plus Project conditions. The analysis shows the deterioration of operating conditions without any roadway improvements, which is the purpose of the analysis. Mitigation is then identified to mitigate project impacts, which would yield a better LOS. With mitigation, the LOS would improve to LOS D in AM and PM Mitigated Cumulative Plus Project.

Response to CTPC-9
The commenter raises a question related to the alternatives listed.

CEQA requires an EIR to include a reasonable range of alternatives. Alternatives should generally be designed to potentially reduce the significant impacts of the project. The proposed alternative would not reduce any of the physical impacts of the project on the environment but would instead shift the local agency with land use control over the project from the City to the County. Because this alternative would not reduce the significant impacts of the project on the environment, it has not been considered further in the EIR.

Response to CTPC-10
The commenter raises a question related to the difference in traffic times between AM and PM travel times in Table 5-4.

This table compares the “Low-density alternative,” which is the same as the surrounding land use designation, to the proposed project, which is “age-qualified,” that is, limited to people over 55-years old. Age-qualified communities typically make fewer daily trips than single-family. Age qualified communities’ morning and evening commutes also typically occur during off-peak hours (not during the adjacent network peak), whereas single-family units’ morning and evening commutes more closely align with the adjacent network peaks.

Response to CTPC-11
The commenter questions whether there will be a traffic signal at the intersection of Valpico Road and Corral Hollow.

The City recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection.

Response to CTPC-12
The commenter questions the fire service response time if the current fire station is moved, as is stated in the DEIR.

The majority of the proposed development is within 1.5 miles of existing SCFA Fire Station 97. Typically, a 1.5-mile distance is equivalent to an approximate 4-minute travel time. As mentioned, this station will likely be relocated within the next 5 years. The proposed relocation site remains approximately 1.5 miles away from the proposed development.

In 2017, the SCFA completed a Standards of Cover Study with Citygate Associates, LLC. The May 2, 2017 SCFA report identifies the need for an additional fire station on Valpico Road between Corral Hollow Road to the east and Lammers Road to the west. The addition of this station (Proposed 4) will provide a second fire station in proximity of the proposed project. This station is anticipated to be constructed within the next 2 to 3 years in response to development of the Ellis project. This station will be located within 1.5 miles of the entire proposed project. The proposed project remains within approximately 4-minute travel times from the existing SCFA Station 97, a potentially relocated Station 97, and a proposed additional fire station on Valpico Road. The City has identified funding for the potential relocation of SCFA Fire Station 97. Further, the construction of the additional station identified as Proposed 4 will be funded through development fees as indicated in the CPSMP.

Response to CTPC-13
The commenter raises concern whether the turning radius inside the new development meet requirements for the fire service ladder truck.

The map review of the proposed project by City agencies included an analysis of fire truck templates to ensure conformance with City requirements.

Response to CTPC-14
The commenter raises a question related to the phrase “reinvest back into the community” in the Applicant Objectives section of the DEIR.

The comment does not relate to the adequacy of the EIR, so no further response is required. That said, the comment is being forwarded to decision-makers for their consideration.

Response to CTPC-15
The commenter raises a question related to the sound wall proposed and the aesthetics of the sound wall.

The proposed sound wall along Valpico Road will comply with the design guidelines in the Specific Plan and is subject to design review by the City of Tracy to ensure it meets the City of Tracy Streetscape Design guidelines. The Specific Plan design guidelines specify a maximum height of 8 feet for the Valpico Road sound wall. Page 3.10 of the DEIR discloses that the soundwall could be a maximum of 8 feet in height, and the Aesthetics chapter considered the maximum height of the wall in its impact analyses. As discussed on page 3.12-21 of the Noise Section of the EIR, the project will either require an 8-foot-high soundwall along Valpico Road, or could use a 6-foot-high wall with the implementation of MM NOI-1b:

MM NOI-1b Assuming implementation of only a 6-foot-high soundwall along the project's northern property line bordering Valpico Road, all proposed residences located within 180 feet of the centerline of Valpico Road shall include an alternate form of ventilation, such as an air conditioning system, in order to ensure that windows can remain closed for a prolonged period of time. The building plans approved by the City shall reflect this requirement. Alternatively, if the project will implement construction of an 8-foot-high soundwall along the project's northern property line bordering Valpico Road, then no additional mitigation such as an alternate form of ventilation would be required.

Response to CTPC-16

The commenter questions if a one-way exit on the southwest walking strip would be a beneficial way to minimize the impacts on Valpico Road.

Corral Hollow Road is an arterial in the City street system with minimum major driveway spacing requirements. It is not recommended to have another driveway at this location because adding another intersection would impact the ability of cars to move through the corridor in an efficient and coordinated manner.

THIS PAGE INTENTIONALLY LEFT BLANK

Victoria Lombardo

From: jcoltrellfam@comcast.net
Sent: Thursday, August 24, 2017 11:10 AM
To: Victoria Lombardo
Subject: Tracy Village Project

Please add James & Lesley Coltrell jcoltrellfam@comcast.net to the notification list for the Tracy Village Project. 1

We have serious concerns regarding the Airborne pollution from the soil. As Lesley is suffering from Coccidioidomicosis (Valley Fever) which is very prevelent in the field behind us and the entire San Joaquin Valley. Lesley has already had a portion of her Lung removed and we have had Three (3) neighbors die from this!! 2

It is also very important to keep the soil moist to reduce the dust, due to the fact many of us have swimming pools, that back up to the field. The time for upkeep and cost will rise during this project.

Thank you,
James & Lesley Coltrell
3621 Farnham Court
Tracy, CA 95377
(209) 836-4386

THIS PAGE INTENTIONALLY LEFT BLANK

Victoria Lombardo

From: Martinez, Kathy M <KMartinez@ortc.com>
Sent: Monday, August 28, 2017 2:35 PM
To: Victoria Lombardo
Subject: Tracy Village Project

Hello Victoria my home is on Corral hollow Road and I have a question regarding the annexation . So if that happens we will be in the City ? Is that correct not county. Do we have to hook up to city water ? or can we not be annexed and stay the way we are? I prefer to stay the way we are I have no problem being on a septic and well water. Also will there be a map provided regarding the property line referring to the back of my property so I know they will not take any of my property . Please let me know thank you 1 2

Kathy Martinez
Escrow Officer

T: (209) 835.1331 | F: (209) 835.5331 | Shoretel 43010
KMartinez@ortc.com
Old Republic Title Company
150 W. 10th Street, Tracy Ca 95376
ortc.com

Marna Aguirre
Escrow Assistant
maguirre@ortc.com

** NOTE: Email fraud is on the rise. Call your escrow officer to verify WIRE TRANSFER INSTRUCTIONS before sending funds. **

PLEASE KEEP THE FOLLOWING TIME FRAMES IN MIND WHEN SETTING CLOSING EXPECTATIONS WITH YOUR CLIENTS: - DOCS FOR SIGNING SHOULD BE RECEIVED IN OUR OFFICE A MINIMUM OF 4 BUSINESS HOURS PRIOR TO THEIR ANTICIPATED SIGNING TIME. - "SPECIAL" OR AFTERNOON RECORDINGS MUST BE SIGNED THE DAY BEFORE IN ORDER TO HAVE ORIGINAL DOCUMENTS DELIVERED FOR RECORDING. UNFORTUNATELY THERE IS NO GUARANTY OF SAME DAY SIGNINGS/RECORDINGS.*
**Business hours are 8:00 AM to 5:00 PM PST Monday through Friday*

THIS PAGE INTENTIONALLY LEFT BLANK

From: Victoria Lombardo
Sent: Monday, October 02, 2017 3:33 PM
To: Elizabeth Johnson (ejohnson@fcs-intl.com); brian@landlogistics.com
Subject: FW: Active Senior

-----Original Message-----
From: hiitsrick.sanders@gmail.com [mailto:hiitsrick.sanders@gmail.com]
Sent: Friday, September 29, 2017 1:39 PM
To: Victoria Lombardo
Subject: Active Senior

Good Afternoon,
I read with interest about the Tracy Village project and think it would be a great asset to Tracy! However, I also live 1 mile north of the site, Corral Hollow/Golden Leaf, and along with the traffic concerns the Valley Fever concern is real. This past year we had to put down a pet due to valley fever contracted most likely from within our yard as the animal never left our home. The vet said it was most likely airborne. It was very concerning because of my own compromised immune system and I'm sure there are others who could be at risk within our city! Would love to see this project move forward! We just need to find good solutions, for which I only have my voiced concerns! Thanks for all you do for our great city! 1 2

Regards,
Rick Sanders
170 Portico Lane
Tracy, Ca
935.457.4442

Sent from my iPhone

THIS PAGE INTENTIONALLY LEFT BLANK

- Page ES-18 – In the Executive Summary Matrix, one of the mitigation measures, NOI-1b, discusses the 6-foot-high sound wall proposed, and then later that the project might implement an 8-foot-high sound wall. There is a comment related to that on Page 1-5, Comment 10: *"The resident on the east side of the property currently enjoys views across the project site. She has a 3-foot fence, and is concerned about the proposed 8-foot wall."* Is it 6-foot or 8-foot? Is it going to be built? Aesthetics is a concern. How is it going to be perceived? Are we going to put vegetation on it? Are we going to tree line it? Stones? Etc. It would obviously be a sound wall, but would it be a decorative type wall?

- Would the southwest walking strip be best used as a one-way exit to minimize or potentially lessen the impacts on Valpico Road?

An audience member asked when the answers to these questions would be provided. Bill Dean stated that response time will depend on how many questions are posed.

At 8:34 p.m., Chair Orcutt opened the public comment period for the Tracy Village DEIR.

Judy Houdeshell spoke, expressing the following concerns:

- Page 3.3.40 – Discusses valley fever and references District Regulation VIII in terms of how the soil disturbance and dust would be handled during a project. The wind is 99% of the time going from west to east, and I get a lot of dust at my house every windy day. When they excavate they will be causing dust. It would be nice to be able to see what District Regulation VIII says, in particular with regard to dust control. It would be nice if that was delineated a little more thoroughly in the Report as the public document in order to understand what that would mean so that if we start getting a lot of dust there's something I can fall back onto, and for the contractor to look at and understand they need to follow. It was interesting that it was noted that out of 8,652 people that were hospitalized between the years 2001 and 2007, 752 of them died. It is very serious. The report did find that this particular plot of land is probably not at a high risk for it, but you cannot be certain. So I am really concerned about the dust. (Joe Orcutt added a question here regarding the watering of construction sites for dust prevention, asking whether or not that would help keep the valley fever molecules settled as well.) Once the water dries, the dust picks back up again and with the wind it would make it worse, so hopefully there are other mitigation measures. 1

- The wall that will be built behind my house—I don't think it's a sound wall, but I am concerned about what that wall is going to look like and at what stage in the project it will be built. Also, with our 3-foot fence we have a built-in pond. My husband built part of the pond into the fence line. So there's a lot of concern about what that wall is going to do to our pond, and to the look of our backyard. 2

- Ponderosa has stated to me that the houses along the back of our homes would all be single story, so that we would not have a 1 ½- or 2-story home directly behind us. I don't know if that's in the Report in terms of the visual impacts for the existing homeowners. 3

- Page 3.16-72 – There's a map. At the dead end that's adjacent to my house it references an emergency vehicle access, but yet in the drawing I only see a pedestrian access way and a house. I don't understand what that emergency vehicle access is. Is it going around the outside perimeter of the whole thing? Inside the wall? Within the new development? Or is it from the dead end going in, and they're going to need to move the housing footprints to make an emergency vehicle access? I couldn't figure out the map. It would be nice to see a blow-up of that area and what that reference to an emergency vehicle access really looks like. 4

- Valpico Road, Middlefield, and Linne all have traffic congestion problems. If there's any consideration possible for the multiplicity of construction projects happening at the same time and making things worse, or changing a regular red light to a blinking red light, which seems to happen quite often and slows traffic down tremendously, it would be nice for the City to look at those kinds of issues. I've had friends who have had to turn around and go home and not go into work. Traffic has been terrible. 5

- Regarding solar panels, it would be interesting to know what percentage of use the panels will have to cover. Is it a certain percentage of the homes are to have solar, or is it a certain percentage of solar power on each home? I would love to see Tracy become a zero net energy city. To put two solar panels on a house does almost nothing. You really need to have something that's significant enough to make a difference to the homeowner and really to look at the amount of power that's going to be consumed and see if the panels are going to be doing more than saving them a few dollars. (Chair Orcutt interjected here that, based on the Tentative Map and how they have the elevations and the directional faces of the different houses and the roofs, the engineers will be looking at all of that for where to optimally place all of the solar usage for the rooftops.) The layout and design of the homes should allow for more south facing rooflines to better accommodate more solar panels. 6

- Noise – I see in the Report that the construction hours allowable for the project are from 7:00 a.m. until 10:00 p.m. It seems like, for every waking hour of my life for the next 11 years, they could rightfully be out there making noise until 10:00 at night. In the report, the noise level was compared to that of the airport. Tracy's airport does not run planes until 10:00 at night. They run very small planes. I don't hear the airport from my house. I do hear on occasion the pounding of the gravel pit companies across Linne Road and that travels across the empty field pretty easily, but the airport noise is really almost nonexistent. (Chair Orcutt pointed out here that, as we move closer with the Tentative Map and having another public hearing this will be addressed. 7

Additionally, we have many developers here who love to work with the individual residents and talk with them separately outside of our meetings to help mitigate different impacts. He added that he has seen this quite a few times through different developments that have come through our City, and it's usually a pretty amicable type of relationship that grows from that.) People across the street from Ellis have made lots of comments to me that the noise starts at 5:00 a.m. when the crews show up and play their radios loud and start mobilizing to start their day. But with this being a binding legal document, 7:00 a.m. to 10:00 p.m., if they're hammering and sawing and making noise until 10:00 p.m. I don't have a legal leg to stand on. If that's going to go on for 10 years I'm moving away. The noise and dust are my two largest concerns. 7 CONT

- I've had a wonderful view across the field for 27 years, since 1990. Many people come to the dead end next to my house with their kids. They ride their bicycles out there, they stop and stare at the sunset, and it's a lovers' lane viewpoint of Mount Diablo and the windmills and all of that. I know that's not going to keep progress from moving forward, but I just want it on record that there are a lot of people that enjoy that view across the field, more than just myself. 8

- Light is also a little concern. I have a hot tub in my backyard, right in the corner where there's going to be a pedestrian gate. I'm sure there's going to be a light right over our hot tub, which is not going to be a good thing for us. (Chair Orcutt pointed out here that this is part of the Tentative Map process, and offered to Ms. Houdeshell that she is welcome to come to that and as she takes a look and gauges where her house is and where the lighting is, etc., she can make recommendations, and perhaps the applicant would be willing to look at that and possibly meet somewhere in the middle where that may be. Chair Orcutt added that this is all a part of the public process.) I'm hoping for a little street lamp, rather than a regular street light. 9

As no one else come forward, Chair Orcutt closed the public comment period at 8:49 p.m.

Bill Dean thanked everyone for coming out, pointing out that the whole city improves when we engage in this process, and reiterating that there will be answers provided to the questions posed tonight through this process. Chair Orcutt echoed Mr. Dean's sentiments with regard to improvement of the city through this process.

E. DETERMINATION OF CONSISTENCY WITH THE CITY OF TRACY GENERAL PLAN FOR A VACATION OF PUBLIC RIGHT-OF-WAY AFFECTING THE SOUTHEAST CORNER OF GRANT LINE AND PARADISE ROADS. APPLICANT IS PROLOGIS. APPLICATION NUMBER DET17-0003

This item was postponed to a future meeting (refer to "Director's Report Regarding This Agenda" on Page 1).

2. ITEMS FROM THE AUDIENCE

None.

3. DIRECTOR'S REPORT

Bill Dean thanked those Commissioners who were able to attend the recent California American Planning Association (APA) Conference, pointing out that it was great to be able to be together and attend some sessions. Mr. Dean added that hopefully, as schedules allow, there will be even more participation next year. Mr. Dean stated his intention to add an agenda item for a Commission meeting in the near future, under Director's Report, to share what attendees experienced at the Conference, pointing out that it would be an opportunity for the Commission members who were not able to attend to hear from fellow Commissioners, and staff, about what was experienced and perhaps how it relates to the work they do. Chair Orcutt expressed his agreement.

4. ITEMS FROM THE COMMISSION

Chair Orcutt invited the Commission to share any items they would like to discuss. Vice Chair Jass Sangha expressed concerns relative to criticisms recently expressed about the Planning Commission in terms of the appropriateness of what they say, their actions, and the direction they should be going. Vice Chair Sangha further shared her understanding of the Planning Commission as an independent Commission under the State of California, and any other state. She added that City staff have always encouraged the Commissioners to speak their minds and share their views, and have always pointed out that the Commission has the authority to do so.

In response to Ms. Sangha's concerns, Bill Dean stressed that the Planning Commission is an independent Commission appointed by the City Council which serves at their will to advise them on planning matters that come before them. Mr. Dean further stated that he strongly supports and thinks that the Commissioners should interact with one another at these meetings, fully evaluate the items staff brings forward, express opinions, challenge one another, further the dialogue, express concerns, listen to one another, and conduct the open public hearing so that people have a chance to participate in this community. Mr. Dean added that Tracy is a growing community with a lot at stake if this process is not followed, and that he is going to continue to do everything he can to encourage it from his office. Mr. Dean asked the Commissioners to inform him if any staff member dissuades them from participating in this way.

Vice Chair Sangha reiterated that the issue does not involve staff, adding that she wants it on record that staff have all been very supportive. Ms. Sangha shared that what drove her comments tonight was what she is hearing from citizens based upon their observations of the City Council meetings.

Mr. Dean thanked Ms. Sangha for raising this issue, and suggested that when the APA Conference item is discussed at a future meeting the role of the Planning Commission also be discussed, as that was the topic of some of the Conference sessions. Mr. Dean further suggested that perhaps in that discussion the Commissioners can share some of

the stories they heard from other jurisdictions about how to deal with sticky issues. Mr. Dean pointed out that it is not unique to Tracy that we are faced with issues that bring out passions in people, and that perhaps in that dialogue the Commissioners can share with each other what they may have gleaned from some of those sessions.

Vice Chair Sangha expressed that it is a blessing that all five Commissioners get along so well, adding that even when they disagree with each other they do not disrespect one another.

Jacy Krogh suggested that if any Commissioners have an issue involving the City Council they reach out to the Mayor or other appropriate person, and have the right to do so. Commissioner Krogh added that, although appointed by the City Council, the Commissioners are constituents of the Council, and that Council is responsible for answering questions from the electorate.

5. ADJOURNMENT

It was moved by Commissioner Orcutt, and seconded by Commissioner Hudson, to adjourn.

Time: 8:58 p.m.

_____
CHAIR

_____
STAFF LIAISON

THIS PAGE INTENTIONALLY LEFT BLANK

Victoria Lombardo

From: RONNIE JOHAL <safetysupervisor@gmail.com>
Sent: Friday, September 08, 2017 8:59 AM
To: Victoria Lombardo
Subject: Tracy Village Project

Dear:
Victoria Lombardo

I am interested in the Tracy Village Project. I received a letter dated August 17, 2017. I am looking for a home. I am a first time buyer. How would I be able to purchase and proceed with the low density age related home. Will you be able to send me further information as to how I may be able to go on the list. Also please include prices of the homes. 1

Thank You
Ronnie Johal
Phone: 209 640-5451

THIS PAGE INTENTIONALLY LEFT BLANK

Victoria Lombardo

From: Joe L Navejas <navejas@pacbell.net>
Sent: Saturday, August 26, 2017 7:24 AM
To: Victoria Lombardo
Subject: Tracy Village

Hello Victoria,

I am in receipt of the notification of the DEIR for the Tracy Village Project.

Please keep notifications coming to me. My wife and I have been looking for a 55+ Adult Community and have looked in Elk Grove, El Dorado and West Sacramento, but we do not want to leave Tracy. 1

Thank you.

Joe and Estela Navejas
1451 Hepburn Street
Tracy, CA 95376

THIS PAGE INTENTIONALLY LEFT BLANK

Individuals

James Coltrell (COLT)

Response to COLT-1
The commenter would like to be added to the notification list for the Tracy Village Project.

The comment does not relate to the adequacy of the EIR, so no further response is required. The city has added the commenter to the notification list.

Response to COLT-2
The commenter raises a concern regarding the Valley Fever and its potential increase from fugitive dust caused by construction.

As discussed on the DEIR pages 3.3-38 through 3.3-40, Valley Fever, or coccidiodomycosis, is an acknowledged hazard in the San Joaquin Valley geographic region. The project site is at a low risk for Valley Fever because of the surrounding vicinity consists of urbanized development or cultivated fields with buildings, pavement and landscaped areas, all of which are characteristics of sites less favorable for the growth of fungal spores that cause Valley fever. The impact of fugitive dust during construction, which may contain fungal spores, is considered less than significant because the Tracy Village Project will comply with Regulation VIII of the SJVAPCD. The purpose of this regulation is to prevent, minimize or mitigate the generation of fugitive dust.

Kathy Martinez (MART)

Response to MART-1
The commenter raises a question related to the annexation and the water utility service to her home.

The comment does not relate to the adequacy of the EIR, so no further response is required. The comment is being forwarded to decision-makers for their consideration. The San Joaquin County Local Agency Formation Commission reviews annexation proposals. Landowners owning land within the proposed annexation site and registered voters living within the proposed territory and within 300 feet of the annexation site are provided a Notice of Public Hearing. Proposals are then considered by the Commission at a public hearing during a regular LAFCO meeting.

Response to MART-2
The commenter raises a question related to the annexation and if there will be a map provided regarding the property line.

The comment does not relate to the adequacy of the EIR, so no further response is required. The comment is being forwarded to decision-makers for their consideration.

Rick Sanders (SAND)

Response to SAND-1
The commenter raises concern with the project's impact on traffic.

The City recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection. This will improve the background traffic conditions. The Transportation and Traffic

section of the DEIR analyzed the effects of the proposed project on traffic and circulation and provided mitigation measures for each of the impacts found. The impact to the intersection of Lammers Road/Valpico Road would be considered mitigable except for the inability of the City to determine the timing of the required improvements because of required approvals from the Union Pacific Railroad and the California Public Utilities Commission.

Response to SAND-2
The commenter raises a concern regarding the Valley Fever and its potential increase from fugitive dust caused by construction.

As discussed on the DEIR pages 3.3-38 through 3.3-40, Valley Fever, or coccidiodomycosis, is an acknowledged hazard in the San Joaquin Valley geographic region. The project site is at a low risk for Valley Fever because of the surrounding vicinity consists of urbanized development or cultivated fields with buildings, pavement and landscaped areas, all of which are characteristics of sites less favorable for the growth of fungal spores that cause Valley fever. The impact of fugitive dust during construction, which may contain fungal spores, is considered less than significant because the Tracy Village Project will comply with Regulation VIII of the SJVAPCD. The purpose of this regulation is to prevent, minimize or mitigate the generation of fugitive dust.

Judy Houdeshell (HOUD)

Response to HOUD-1
The commenter raises a concern regarding the Valley Fever and its potential increase from fugitive dust caused by construction and asks for more detailed information about SJVAPCD Regulation VIII.

As discussed on the DEIR pages 3.3-38 through 3.3-40, Valley Fever, or coccidiodomycosis, is an acknowledged hazard in the San Joaquin Valley geographic region. The project site is at a low risk for Valley Fever because of the surrounding vicinity consists of urbanized development or cultivated fields with buildings, pavement and landscaped areas, all of which are characteristics of sites less favorable for the growth of fungal spores that cause Valley fever. The impact of fugitive dust during construction, which may contain fungal spores, is considered less than significant because the Tracy Village Project will comply with Regulation VIII of the SJVAPCD. The purpose of this regulation is to prevent, minimize or mitigate the generation of fugitive dust.

The Errata to this document presents the full wording of all the pertinent section of Regulation VIII and appends it to the EIR.

Response to HOUD-2
The commenter is concerned with the aesthetics of the wall and if it will interfere with the commenter's backyard.

Concerns regarding private aesthetic impacts versus the impacts to the public at large are generally beyond the scope of CEQA, but the commenter's concern will be provided to decision-makers for consideration. The proposed sound walls around the development and along Valpico will comply with the design guidelines in the Specific Plan and is subject to design review by the City of Tracy to ensure it meets the City of Tracy Streetscape Design guidelines.

Response to HOUD-3
The commenter raises a question related to the height of the homes to be built behind her home.

The Specific plan as analyzed in the EIR looked at the various types of houses and heights proposed. The maximum height of houses would be 30 feet, which would not allow for a full second story. No visual impacts were found by the EIR analysis, as discussed in Section 3.1, Aesthetics. The Specific Plan provides for varying designs from lot to lot to prevent excessive massing.

Response to HOUD-4
The commenter raises a question related to the emergency vehicle access to her house.

The pedestrian pathway will also accommodate emergency vehicle access, if required. The roadway will be controlled via a pedestrian or vehicular gate for EV access only.

Response to HOUD-5
The commenter raises a concern regarding the project's impact on traffic.

City's roadways Master Plan and the EIR have analyzed these intersections. Existing plus approved project analysis assumes traffic from approved projects on the network and analyzes operations with effects from these projects. The DEIR identified Intersection #2 as having unacceptable LOS in cumulative conditions. The Errata clarifies that, as stated on page 3.16-60, the applicant will be required to install certain improvements at the applicant's expense as part of MM TRANS-3. The following is the complete list of the proposed traffic mitigation measures:

MM TRANS-1a Install a signal, optimize cycle lengths and splits, add a separate northbound left-turn pocket, add a separate right-turn pocket, and add a separate eastbound left-turn pocket at the Lammers Road/Old Schulte Road (Intersection #1). The City has recently approved the installation of this interim improvement at the intersection and the intersection would operate acceptable at LOS A in the AM peak hour and LOS A in the PM peak hour. Because this improvement was previously identified for other approved projects (Ellis and Cordes Ranch), this background improvement is already funded. As a result, the project would not contribute funding to this improvement. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Project Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. Under this scenario, the TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

MM TRANS-1b The City has recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection. The improvements are identified in the City TMP. Prior to issuance of a building permit, the project would pay the City Traffic Impact Fees. With these improvements, the intersection would operate at an acceptable LOS A in the AM and in the PM peak hour.

MM TRANS-2a The addition of project traffic causes the intersection of Lammers Road/Valpico Road (Intersection #2) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS C and D with the following improvement: Add a separate westbound right-turn lane, and a shared westbound left-turn and through lane. The westbound right-turn phase will be overlapped with the southbound left-turn phase. The TVDP Applicant shall install this improvement with prior to the issuance of the first building permit.

Because this improvement is identified in the Tracy TMP, this improvement is eligible to receive fee credits via the City's TIF upon completion of construction and acceptance by the City. This project improvement will supplement background improvements previously identified for another approved project (Cordes Ranch) which includes installation of a signal and a southbound left turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

MM TRANS-2b The addition of project traffic causes the intersection of Corral Hollow Road/Linne Road (Intersection #7) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS B and D with the following improvements: Add a southbound through lane, and add a northbound through lane, and add a separate westbound right-turn lane. Improvements shall be constructed at the railroad crossing gates. This project improvement will supplement background improvements previously identified for other approved projects (Ellis and Tracy Hills) which includes installation of a signal, the addition of one northbound channelized right-turn lane, and the addition of one southbound left-turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.

This Project improvement is required by the Public Utilities Commission because vehicle queues will spill across the railroad tracks and will cause safety concerns for train traffic. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. Any costs related to non-TMP improvements are the responsibility of the applicant and other approved projects listed above.

The TVDP Applicant shall, in collaboration with the City Engineer and UPRR/PUC, commence with an engineering design process to install the improvements identified. This design process shall commence immediately following approval of this Project Application by the City of Tracy. Because approval by UPRR/PUC is required before this improvement can be installed, the project impact will remain significant and unavoidable.

MM TRANS-3 Prior to the issuance of a building permit, the Applicant shall pay Traffic Impact Fees to the City of Tracy to account for the Cumulative Traffic Impacts.

To address cumulative impacts to Intersection #2, the applicant shall install a channelized westbound right turn lane, a second southbound left turn pocket, an eastbound right turn overlap phase, and a northbound right turn overlap phase. These improvements are in addition to the TMP improvements. The applicant shall fund these improvements.

Response to HOUD-6
The commenter raises a question related to solar panels and their impact on residential homes.

The DEIR concludes that the project will not result in the wasteful energy on pages 6.6 and 6.7. The building plans will be reviewed by the City to ensure that solar panels are appropriately located on the houses, and the developer will select an amount of solar panels that produce enough power to be cost-effective/air quality baseline.

Response to HOUD-7
The commenter raises a concern regarding the noise and dust caused by the project's construction.

The DEIR erroneously stated the hours limiting construction, regulated by the City's Municipal code and General Plan. The correct hours of allowed construction are from 7 a.m. to 7 p.m. The text of the DEIR is corrected in the Errata of this document. For a discussion of construction noise impacts, please see DEIR pages 3.12-3 through 3.12-5 and 3.12-18 through 3.12-19. The EIR concludes that compliance with the City's permissible hours of construction, as well as compliance with best management practices (BMPs) construction noise reduction measures outlined in MM NOI-1a, would ensure that construction noise would not result in sleep disturbance of sensitive receptors or exposure of persons to noise levels in excess of established standards. With the incorporation of mitigation, short-term construction impacts associated with applicable noise standards established by the City of Tracy would be less than significant. DEIR pages 3.3-36 through 3.3-40 address impacts related to dust generation and conclude that such impacts would be less than significant, due to the project's compliance with SJVAPCD Title VIII regulations. Please also see Response to HOUD-1.

Response to HOUD-8
The commenter raises a concern regarding the project's impact on the scenic viewpoint from her home.

The project's aesthetic impacts are discussed on DEIR pages 3.1-8 through 3.1-12. The EIR explains that the project would change the TVDP site to become more consistent with the existing visual

character of the surrounding area, which is single-family residential on all sides and that the project's aesthetic impacts would be less than significant. Distant views, including those of Mt. Diablo, from the site surrounding areas will not be affected.

However, the City understands that this development represents a change from the existing condition. Specific design features that this project includes to better integrate with existing neighbors include:

1. Single-story Homes
2. Perimeter Wall
3. Design Standards

Response to HOUD-9
The commenter raises a question regarding lighting near her home.

Pages 3.1-11 and 3.1-12 of the DEIR conclude that MM AES-3, which would require an outdoor lighting plan, would reduce the project's impacts related to lighting to a less than significant level. Concerns regarding private lighting impacts versus impacts to the public at large are generally beyond the scope of CEQA, but the commenter's concerns will be provided to decision-makers for considerations.

Ronnie Johal (JOHA)

Response to JOHA-1
The commenter requests information related to the age-limitation on purchasing a home in the proposed development

Information on purchasing homes from the developer, a private entity, will be advertised if the project is approved by the City and constructed. This is not a CEQA-related question. The commenter will receive any future mailings regarding the approval of the project sent to interested parties by the City. The City is not involved in the process to age-verify future residents. The City has provided the commenter the contact information for the project proponents to discuss further.

Joe Navejas (NAVE)

Response to NAVE-1
The commenter states that he received the notification of the availability of the EIR and requests that he continue to receive notifications from the City regarding the proposed project.

The comment does not relate to the adequacy of the EIR, so no further response is required. That said, the comment is being forwarded to decision-makers for consideration.

SECTION 3: ERRATA

The following are revisions to the Draft EIR for the Tracy Village Project EIR. These revisions are minor modifications and clarifications to the document, and do not change the significance of any of the environmental issue conclusions within the Draft EIR. The revisions are listed by page number. All additions to the text are underlined (underlined) and all deletions from the text are stricken (~~stricken~~).

3.1 - Changes in Response to Specific Comments

3.2: Project Description

Page 2-22, section 2.6.1, at the end of the second bullet point, add the words:

- Annexation and pre-zoning. Final approval action on the annexation would be required by San Joaquin Local Agency Formation Commission~~.~~ ~~,~~The annexation request would be pursuant to the agency's review and approval of the Municipal Services review and an update to the City's Sphere of Influence. The City is in the process of working with LAFCO to revise its Sphere of Influence.

3.3: Air Quality

Page 3.3-19

At the end of paragraph one, add the words:

Regulation VIII is presented in Appendix L.

Appendix L, Air Quality Regulations

The full text of the SJVAPCD Regulation 9 has been added to the EIR as Appendix L: Air Quality Regulations. The new appendix follows this page.

3.10: Land Use

The following General Plan Policy is added to General Plan Objective LU 6.3 in DEIR Table 3.10 on page 3.10-14:

P2. All development near the Tracy Municipal Airport shall file deed notices for real estate disclosure, or record aviation easements on properties with new development in compliance with the 2009 San Joaquin County Airport Land Use Compatibility Plan.

The consistency determination is added in the next column:

Consistent: The project developer is required to record aviation easement or deed disclosures in compliance with the ALUCP.

The following paragraph is added to the General Plan Goals and Policies discussion on page 3.10-11:

The SJCOG suggested the following language for deed notices, parcel maps, tentative maps, or final map for subdivision approval as required by General Plan Objective LU-6.3, Policy P.2:

> The San Joaquin County Airport Land Use Commission's Airport Land Use Compatibility Plan identifies the Tracy Municipal Airport's Airport Influence Area. Properties within this area are routinely subject to overflights by aircraft using this public-use airport and, as a result, residents may experience inconvenience, annoyance, or discomfort arising from the noise of such operations. State law (Public Utilities Code Section 21670 et seq.) establishes the importance of public-use airports to the public interest of the people of the state of California. Residents of the property near such airports should therefore be prepared to accept the inconvenience, annoyance or discomfort from normal aircraft operations. Residents also should be aware that the current volume of aircraft activity may increase in the future. Any subsequent deed conveying this parcel or subdivisions thereof shall contain a statement in substantially this form.

3.12: Noise

Page 3.12-13, third paragraph

The following Objective and Policies of the Tracy General Plan were missing from the DEIR and are added here as follows:

- **Objective N-1.2:** Control sources of excessive noise.
- **P1.** The City's Noise Ordinance, as revised from time to time, shall prohibit the generation of excessive noise.
- **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.
- **P3.** Pavement surfaces that reduce noise from roadways should be considered as paving or repavement opportunities arise.
- **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.

Page 3.12-13, third paragraph

The municipal code was incorrectly cited here. This paragraph is replaced as follows:

Tracy, California Municipal Code

Title 4, Chapter 12, Article 9 of the Tracy, California Municipal Code also contains guidance with the intent to control noise and vibration to promote and maintain the health, safety, and welfare of its residents. Section 4.12.720 of the Municipal Code generally prohibits certain activities that have the potential to result in loud, excessive, or unreasonable noise levels. According to the general sound level limits for residential districts, no person shall 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 on which the sound is produced to exceed 55 dBA for any one-hour average period. Specific activities enumerated in the municipal code that could potentially pertain to the proposed project include minor maintenance to or improvement of real property. ~~This limitation prohibits the generation of construction noise, other than between the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays.~~ The noise ordinance also specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam or electric hoist, parking lot cleaning equipment, or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m.

Page 3.12-13, fourth paragraph

The second sentence is corrected as follows to provide the correct citation of the Municipal Code: The noise ordinance of the Municipal code prohibits the generation of construction noise, other than between the hours of 7:00 a.m. and ~~10:00 p.m.~~ 7:00 p.m.

3.14: Public Services

Page 3.14-1, first paragraph

The City of Tracy Fire Department did not merge with the Tracy Rural Fire Protection District as was incorrectly stated in the DEIR. Although two separate agencies, they did execute a Joint Powers Agreement to form the South County Fire Authority (SCFA). This paragraph is replaced as follows:

Fire Protection and Emergency Medical Services

The Tracy Fire Department (Fire Department) provides fire protection and emergency medical services to over 200 square miles and over 100,000 people, encompassing the City of Tracy as well as all of the surrounding rural areas from the Stanislaus County line to the Alameda County line, and the Mountain House Community Services District. ~~The City of Tracy Fire Department merged with the Tracy Rural Fire Protection District forming the South County Fire Authority (SCFA) in 1999. The SCFA was created to provide fire protection~~

~~services to the entire jurisdictional area of both the corporate city limits and surrounding rural community (City of Tracy 2015a). Both Tracy Rural 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 Fire Department Administration is headquartered at 835 Central Avenue.~~ Since September 16, 1999, the Tracy Rural Fire Protection District and the City of Tracy have been parties to the "Agreement between South County Fire Authority and the City of Tracy for Provision of Fire Services to Authority's Jurisdictional Area." Section 1.5 *Jurisdictional Area*, states: "Jurisdictional area means and includes both the area within the corporate limits of the City of Tracy and the area within the Tracy Rural Fire Protection District as both such limits now exist or may hereafter exist and not within the jurisdictional area of any other fire protection district." From a service delivery perspective, first response fire service is provided to the jurisdictional area from the closest fire station regardless of station ownership. Although the South County Fire Authority (SCFA) JPA comprises two member agencies, operationally it provides service to one combined jurisdictional area. The new South San Joaquin County Fire Authority (SSJCFA) JPA also consists of two member agencies, providing service to one jurisdictional area. The City of Tracy and the Tracy Rural Fire District are now member agencies of the "Joint Powers Agreement of the South San Joaquin County Fire Authority." Section 1.4 Specified Powers states the following: "The Authority is hereby authorized, in its own name, to do all acts necessary for the exercise of the foregoing powers, including but not limited to, any of the following: (a) Initiate, alter and otherwise exercise the common powers of its Members in providing fire suppression, protection, prevention, and related services, and those powers that may be conferred upon it by subsequently enacted legislation, and to be the exclusive body to make policy concerning the administration of the provision of fire service by the Authority for Member Agencies including determining if, when and where to place facilities and staff said facilities within the Authority's jurisdiction for services." The agreement further states in Section 3. Level Of Service, 3.1 Basic Services, A. List of Services, states that: "The Authority shall provide a uniform, minimum set of basic services to each Member Agency, which shall consist of the following: 1. Responding to fire and emergency calls to provide fire suppression, rescue, emergency medical, and hazardous materials response service." From a service delivery perspective, first response fire service is provided to the jurisdictional area of the SSJCFA from the closest fire station regardless of ownership.

As stated above, since 2002 annexations into the City have not detached from Tracy Rural. It is important to note that when annexed into the City, the performance measures that apply to the City (not the Tracy Rural performance measures) are then applicable to the "annexed but not detached area."

3.16: Transportation

Page 3.16-6

A mitigation measure for Impact TRANS-3 pertaining to the intersection of Lammers Road/Valpico Road (Intersection #2) under the cumulative with project conditions was incorrectly presented. The clarified language does not change the conclusion of less than significant after mitigation. The following language is added to MM TRANS-3:

Mitigation Measures

MM TRANS-3 Prior to the issuance of a building permit, the Applicant shall pay Traffic Impact Fees to the City of Tracy to account for the Cumulative Traffic Impacts.

To address cumulative impacts to Intersection #2, the applicant shall install a channelized westbound right-turn lane, a second southbound left-turn pocket, an eastbound right-turn overlap phase, and a northbound right-turn overlap phase. These improvements are in addition to the TMP improvements. The applicant shall fund these improvements.

3.17: Utilities and Service Systems

Page 3.17-13, first paragraph

The first sentence is corrected as follows to provide the correct assumed exterior recycled water use rate (4.0 af/ac/yr) for the irrigated landscape areas.

According to the WSA, exterior recycled water use was assumed to be 4.0~~0~~ af/ac/yr for irrigated landscape areas, including roadway medians and other landscape areas.

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix L:
SJVAPCD Regulation VIII

THIS PAGE INTENTIONALLY LEFT BLANK

RULE 8011 GENERAL REQUIREMENTS (Adopted November 15, 2001; Amended August 19, 2004)

1.0 Purpose

The purpose of Regulation VIII (Fugitive PM10 Prohibitions) is to reduce ambient concentrations of fine particulate matter (PM10) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions.

The Rules contained in this Regulation have been developed pursuant to United States Environmental Protection Agency guidance for Serious PM10 Nonattainment Areas. The rules are applicable to specified anthropogenic fugitive dust sources. Fugitive dust contains PM10 and particles larger than PM10. Controlling fugitive dust emissions when visible emissions are detected will not prevent all PM10 emissions, but will substantially reduce PM10 emissions.

2.0 Applicability

The provisions of this rule are applicable to specified outdoor fugitive dust sources. The definitions, exemptions, requirements, administrative requirements, recordkeeping requirements, and test methods set forth in this rule are applicable to all Rules under Regulation VIII (Fugitive PM10 Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The following definitions shall be applicable to rules contained in Regulation VIII.

3.1 Agricultural Source: any activity or portion of land associated with the commercial growing of crops or the raising of fowl or animals.

3.2 Annual Average Daily Vehicle Trips (AADT): annual average 24-hour total of all vehicles counted on a road.

3.3 Anthropogenic: sources of pollution of, relating to, or resulting from the influence of human beings on nature.

3.4 APCO: the Air Pollution Control Officer of the San Joaquin Valley Unified Air Pollution Control District or his designee.

3.5 Blasting: any excavation or demolition conducted with the use of explosives.

3.6 Bulk Material: any unpackaged material with a silt content of more than 5%.

3.7 Bulk Material Handling, Storage, and/or Transporting Operation: includes but is not limited to the use of equipment, haul trucks, and/or motor vehicles for the loading, unloading, conveying, transporting, piling, stacking, screening, grading, or moving of bulk materials at an industrial, institutional, commercial and/or governmental owned or operated site or facility.

3.8 Carryout and Trackout: any and all materials that adheres to and agglomerates on vehicles, haul trucks, and/or equipment (including trailers, tires, etc.) and falls onto a paved public road or the paved shoulder of a paved public road.

3.9 Chemical/Organic Stabilization/Suppression: means controlling PM10 emissions from fugitive dust by applying any non-toxic chemical or organic dust suppressant, other than water, which meets any specifications, criteria, or tests required by any federal, state, or local water agency and is not prohibited for use by any applicable law, rule, or regulations.

3.10 Construction: any on-site mechanical activities preparatory to or related to the building, alteration, rehabilitation, or demolition of an improvement on real property, including, but not limited to, land clearing, excavation related to construction, land leveling, grading, cut and fill grading, and the erection or demolition of any structure. As used in Regulation VIII, a construction site may encompass several contiguous parcels, or may encompass only a portion of one parcel, depending on the relationship of the property boundaries to the actual construction activities.

3.11 Disturbed Surface Area: an area in which naturally occurring soils, or soils or other materials placed thereon, have been physically moved, uncovered, destabilized, or otherwise modified by grading, land leveling, scraping, cut and fill activities, excavation, brush and timber clearing, or grubbing, and soils on which vehicle traffic and/or equipment operation has occurred. An area is considered to be disturbed until the activity that caused the disturbance has been completed, and the disturbed area meets the stabilized surface conditions specified in this rule.

3.12 Dust Suppressants: includes water, hygroscopic materials and, chemical/organic stabilization/suppression materials.

3.13 Earthmoving Activities: The use of any equipment for an activity that may generate fugitive dust emissions, including, but not limited to, cutting and filling, grading, leveling, excavating, trenching, loading or unloading of bulk materials, demolishing, blasting, drilling, adding to or removing bulk of

materials from open storage piles, weed abatement through disking, and back-filling.

3.14 Emergency: any situation where immediate action on the part of a federal, state or local agency involved is needed and where the timing of such federal, state or local activities makes it impractical to meet the requirements of this Regulation, such as natural disasters, civil disturbances, or hazardous materials spills. Only an authorized official of a federal, state or local agency may declare an emergency when deemed necessary to protect the general public.

3.15 Enclosed Structure: a building with walls on all sides covered with a roof.

3.16 Event material: wind, storm, or water erosion and runoff resulting in the accumulation of mud, soil, or other material onto a public paved road surface travel lane or shoulder.

3.17 Excavation: any digging, trenching, quarrying, extraction, or tunneling.

3.18 Extraction: removal of minerals, aggregate, or fossil fuels from the earth by excavation; including mining, surface stripping, open pit excavation, or tunneling.

3.19 Fallow Land: agriculturally productive land which has been developed and used for agricultural purposes in the past that is allowed to lie idle during the growing season, including agricultural land that has been plowed, harrowed, and broken up without seeding.

3.20 Freeboard: the vertical distance between the top edge of a cargo container area and the highest point at which the bulk material contacts the sides, front, or back of a cargo container area.

3.21 Fueling and Service: an activity that involves the transfer of fuel into a vehicle/equipment fuel tank, and/or the repair and maintenance activity performed on vehicles/equipment.

3.22 Fugitive Dust: any solid particulate matter entrained in the ambient air which is caused by anthropogenic or natural activities which is emitted into the air without first passing through a stack or duct designed to control flow, including, but not limited to, emissions caused by movement of soil, vehicles, equipment, and windblown dust. This excludes particulate matter emitted directly in the exhaust of motor vehicles, from other fuel combustion devices, portable brazing, soldering, or welding equipment, and from pile drivers.

3.23 Gravel Pad: a layer of washed gravel, rock, or crushed rock located at the point of intersection of a paved public roadway and an unpaved work site exit, and maintained to dislodge mud, dirt, and/or debris from the tires of motor vehicles and/or haul trucks, prior to exiting the work site.

3.24 Grizzly: a device (i.e., rails, pipes, or grates) used to dislodge mud, dirt, and/or debris from the tires and undercarriage of motor vehicles or haul truck prior to leaving the work site.

3.25 Haul Truck: any fully or partially open-bodied, self-propelled vehicle including any non-motorized attachments used for transporting bulk materials, including, but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.

3.26 Hygroscopic Materials: any material that is readily capable of absorbing moisture from the air.

3.27 Landfill Daily Cover: soil excavated and stockpiled from a landfill borrow site that is used for daily operations to cover solid waste, trash, garbage, or other waste at a landfill disposal site.

3.28 Landfill Disposal Site: a site where solid waste, trash, garbage, or other waste is disposed of by burying between layers of earth.

3.29 Land Preparation: any activity that disturbs the natural condition of land, including, but not limited to, brush or timber clearing, grubbing, scraping, ground excavation, land leveling, or grading.

3.30 Limit Visible Dust Emissions to 20% Opacity: Visible Dust Emissions (VDE) of such opacity to obscure a certified observer's view to a degree less than an opacity of 20 percent in accordance with the test methods in Appendix A, Sections 1 and 2 of this rule.

3.31 Local Agency: a city, county, or special district with jurisdiction over public roads or having land use authority.

3.32 Modified Road: any road that is widened or improved so as to increase traffic capacity or that has been reconstructed. This term does not include road maintenance, repair, chip seal, pavement or roadbed rehabilitation that does not affect roadway geometrics, or surface overlay work.

3.33 New Paved Road: any paved road segment constructed or modified after May 15, 2002. (See the definition of paved road in this rule).

3.34 Off-field Agricultural Source: any agricultural source that meets the definition of: outdoor handling, storage and transport of bulk material; paved road; unpaved road; or unpaved vehicle/equipment traffic area

3.35 On-field Agricultural Source: any agricultural source that is not an off-field agricultural source, including:

3.35.1 activities conducted solely for the purpose of preparing land for the growing of crops or the raising of fowl or animals, such as brush or timber clearing, grubbing, scraping, ground excavation, land leveling, grading, turning under stalks, disking, or tilling;

3.35.2 drying or pre-cleaning of agricultural crop material on the field where it was harvested;

3.35.3 handling or storage of agricultural crop material that is baled, cubed, pelletized, or long-stemmed, on the field where it was harvested, and the handling of fowl or animal feed materials at sites where animals or fowl are raised;

3.35.4 disturbances of cultivated land as a result of fallowing, planting, fertilizing or harvesting.

3.36 Open Area: any of the following described in subsection 3.36.1 through subsection 3.36.3 of this rule. For the purpose of this rule, vacant portions of residential or commercial lots and contiguous parcels that are immediately adjacent to and owned and/or operated by the same individual or entity are considered one open area. An open area does not include any unpaved vehicle/equipment traffic area as defined in this rule.

3.36.1 an unsubdivided or undeveloped land adjoining a developed or a partially developed residential, industrial, institutional, governmental, or commercial area.

3.36.2 a subdivided residential, industrial, institutional, governmental, or commercial lot, which contains no approved or permitted building or structures of a temporary or permanent nature.

3.36.3 a partially developed residential, industrial, institutional, governmental, or commercial lot and contiguous lots under common ownership.

3.37 Open Storage Pile: any accumulation of bulk material, stored outside a building or warehouse.

3.38 Open-Pit Mine: an excavation for a mining operation which, excluding entrances and egresses, is encircled by a “high-wall” at least 10 feet high. A “high wall” is a berm or cut having a slope of at least 1:1.

3.39 Operation: any activity, process, or project described in the applicability sections of the Rules under Regulation VIII.

3.40 Outdoor Handling, Storage, and Transport: handling (including loading and unloading), storage, and transport, and any accumulation of bulk material, temporarily or permanently stored outside of an enclosed structure.

3.41 Owner/Operator: includes, but is not limited to, any person who leases, supervises, or operates equipment, or owns/operates a fugitive dust source, in addition to the normal meaning of owner or operator.

3.42 Particulate matter: any material emitted or entrained into the air as liquid or solid particles, with the exception of uncombined water.

3.43 Paved Road/Area: any road/area that is covered by concrete, asphaltic concrete, asphalt, or other materials which provides structural support for vehicles.

3.44 Person: any individual, public and private corporation, government agency, partnership, association, firm, trust, estate, or any other legal entity which is recognized by law as the subject of rights and duties.

3.45 PM10: particulate matter with an aerodynamic diameter smaller than or equal to a nominal ten (10) microns as measured by the applicable State and Federal reference test methods.

3.46 PM10-Efficient Street Sweeper: a street sweeper which has been certified by the South Coast Air Quality Management District (SCAQMD) to comply with the District's performance standards set forth in SCAQMD Rule 1186 utilizing the test methods set forth in SCAQMD Rule 1186, Appendix A.

3.47 Private Road: any road not defined as public.

3.48 Public Road: any road operated by a public road agency and maintained for unrestricted legal vehicle access.

3.49 Road: any road or street, highway, freeway, alley, way, access easement or driveway.

3.50 Road Length: the total centerline distance of all contiguous (connected) segments of an owner's road, regardless of change of direction, road name, or surface, or intersection with a road not owned or operated by the owner.

3.51 Road Segment: the portion of a road between two intersections, or between an intersection and the road's terminus.

3.52 Roadmix: a mixture of tank bottoms from crude oil storage tanks, material from crude oil spills, or other crude-oil-containing soil mixed with aggregates and soils, that is used as a base or cover material for roads, parking lots, berms, tank and well locations, or similar applications.

3.53 Rural: areas not classified as urban constitute "rural."

3.54 Shipping, Receiving, and Transfer: an activity that involves handling, processing, and movement of materials, supplies or equipment.

3.55 Silt: any aggregate material with a particle size of less than 75 micrometers in diameter, which passes through a No. 200 Sieve. For the purpose of all Rules under Regulation VIII, the silt content level is assumed to be 5 percent or greater, unless a person can show, by sampling and analysis, using the test method in Section 6.1.4 of this rule, that the silt content is less than 5 percent.

3.56 Site: real property or land used or set aside for any specific use.

3.57 Soil Stabilization: the process used to control PM10 emissions from fugitive dust for an extended period of time by applying dust suppressants or planting vegetative cover.

3.58 Stabilized Surface: any disturbed surface area or open bulk material storage pile that is resistant to wind blown fugitive dust emissions. A surface is considered to be stabilized if it meets at least one of the following conditions specified in this Section and as determined by the test methods specified in Appendix B of this rule:

3.58.1 A visible crust; or

3.58.2 A threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 centimeters per second or greater; or

3.58.3 A flat vegetative cover of at least 50 percent that is attached or rooted vegetation; or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind; or

3.58.4 A standing vegetative cover of at least 30 percent that is attached or rooted vegetation with a predominant vertical orientation; or

3.58.5 A standing vegetative cover that is attached or rooted vegetation with a predominant vertical orientation that is at least 10 percent and where the TFV is at least 43 centimeters per second when corrected for non-erodible elements; or

3.58.6 A surface that is greater than or equal to 10 percent of non-erodible elements such as rocks, stones, or hard-packed clumps of soil.

3.59 Stabilized Unpaved Road/Unpaved shoulder: any unpaved road, unpaved shoulder, or unpaved vehicle/equipment traffic area surface which meets the definition of stabilized surface as determined by the test methods in Appendix B, Section 3 of this rule, and where VDE is limited to 20% opacity.

3.60 Temporary Unpaved Road: any unpaved road surface which is created to support a temporary or periodic activity, and the use of such road surface is limited to vehicle access for a period of not more than six months during any consecutive three-year period. Temporary unpaved roads must also comply with the definition of section 3.59.

3.61 Three-sided Structure: A building with walls on three sides with or without a roof. 3.62 Threshold Friction Velocity (TFV): is the corrected velocity necessary to initiate soil erosion as determined by the test method specified in Section 6.0 of this rule. The lower the TFV, the greater the propensity for fine particles to be lifted at relatively low wind speeds.

3.63 Trackout Control Device: a gravel pad, grizzly, wheel wash system, or a paved area located at the point of intersection of an unpaved area and a paved road that prevents or controls trackout.

3.64 Unpaved Road: any road that is not covered by one of the materials described in the paved road definition.

3.65 Unpaved Access/Haul Road: any road or path that is not covered by one of the materials described in the paved road definition that is associated with any construction, demolition, excavation, extraction, and other earthmoving activity and used by vehicles, equipment, haul trucks, or any conveyances to travel within a site, to move materials from one part of a site to another part within the same site, or to provide temporary access to a site.

3.66 Unpaved Vehicle/Equipment Traffic Area: any nonresidential area that is not covered by asphalt, recycled asphalt, asphaltic concrete, concrete, or concrete

pavement that is used for fueling and servicing; shipping, receiving and transfer; or parking or storing equipment, haul trucks, vehicles, and any conveyances.

3.67 Urban Area: an area within an incorporated city boundary or within unincorporated areas completely surrounded by an incorporated city

3.68 Vehicle: A device by which any person or property may be propelled, moved, or drawn, including mobile equipment, excepting aircraft or watercraft or devices moved exclusively by human or animal power or used exclusively upon rails or tracks.

3.69 Vehicle Daily Trips (VDT): The 24-hour total (midnight to midnight) count of all vehicles traveling over a survey point on a road segment or unpaved vehicle/equipment traffic area. The survey point must represent the most heavily traveled portion of the road segment or unpaved vehicle/equipment traffic area.

3.70 Visible Dust Emissions (VDE): dust emissions that are visible to an observer.

3.71 Wind Barrier: a fence or structure constructed, or row of trees planted, to reduce the shearing effects caused by wind thereby reducing or eliminating the amount of entrained fugitive dust.

3.72 Wind Generated Fugitive Dust: visible emissions from any disturbed surface area which are generated by wind action alone.

3.73 Wheel Wash System: a system that uses water to dislodge mud, dirt and/or other debris from the tires and undercarriage of vehicles and/or haul trucks, prior to exiting the work site.

3.74 Workday: a day on which work is performed as distinguished from a day off. For the purposes of this Regulation, a workday may be any period of hours or shift within a 24-hour period.

4.0 Exemptions

4.1 Emergency activities performed to ensure public health and safety are exempt from Regulation VIII. Emergency activities lasting more than 30 days shall be subject to this regulation, except where compliance would limit the effectiveness of the emergency activity performed to ensure public health and safety.

4.2 Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions. Within one hour of completion of active operations, a

person/owner must immediately comply with the requirements of Regulation VIII.

4.3 Activities conducted at an elevation of 3,000 feet or higher above sea level.

4.4 On-field agricultural sources.

5.0 General Requirements

5.1 Materials used for chemical/organic stabilization of soils, including petroleum resins, asphaltic emulsions, acrylics, and adhesives shall not violate State Water Quality Control Board standards for use as a soil stabilizer. Materials accepted by the California Air Resources Board (ARB) and the United States Environmental Agency (EPA), and which meet State water quality standards, shall be considered acceptable to the APCO.

5.2 Any material prohibited for use as dust suppressant by EPA, the ARB, or other applicable law, rule, or regulation is also prohibited under Regulation VIII.

5.3 Use of hygroscopic materials may be prohibited by the APCO in areas lacking sufficient atmospheric moisture of soil for such materials to effectively reduce fugitive dust emissions. The atmospheric moisture of soil is considered to be sufficient if it meets the application specifications of the hygroscopic product manufacturer. Use of such materials may be approved in conjunction with sufficient wetting of the controlled area.

5.4 Any use of dust suppressants or gravel pads, and paving materials such as asphalt or concrete for paving, shall comply with other applicable District Rules.

6.0 Administrative Requirements

6.1 Test Methods

The test methods specified in this section shall be used to determine compliance with the requirements of all rules under Regulation VIII.

6.1.1 Determination of VDE Opacity

Opacity observations to determine compliance with VDE standards shall be conducted in accordance with the test procedures for "Visual Determination of Opacity" as described in Appendix A of this rule. Opacity observations for sources other than unpaved traffic areas (e.g.,

roads, parking areas) shall be conducted per Section 2 of Appendix A and shall require 12 readings at 15-second intervals.

6.1.2 Determination of Stabilized Surface

Observations to determine compliance with the conditions specified for a stabilized surface, in any inactive disturbed surface area, whether at a work site that is under construction, at a work site that is temporarily or permanently inactive, or on an open area and vacant lot, shall be conducted in accordance with the test methods described in Appendix B of this rule. If a disturbed surface area fails all of the specified tests, then the surface shall not be considered stabilized.

6.1.3 Determination of Soil Moisture Content

Soil moisture content shall be determined by using ASTM Method D2216-98 (Standard Test Method For Laboratory Determination Of Water [Moisture] Content of Soil and Rock By Mass), or other equivalent test methods approved by the EPA, ARB, and the APCO.

6.1.4 Determination of Silt Content for Bulk Materials

Silt content of a bulk material shall be determined by ASTM Method C 136a (Standard Test Method For Sieve Analysis Of Fine and Coarse Aggregates), or other equivalent test methods approved by EPA, ARB, and the APCO.

6.1.5 Determination of Silt Content for Unpaved Roads and Unpaved Vehicle/Equipment Traffic Areas

Silt Content for unpaved roads and unpaved vehicle/equipment traffic areas shall be determined by using Section 3 of Appendix B of this Rule or other equivalent test methods approved by EPA, ARB, and the APCO.

6.1.6 Determination of Threshold Friction Velocity (TFV)

TFV shall be determined according to the sieving field procedure contained in “Determination of Threshold Friction Velocity (TFV),” as described in Appendix B of this rule.

6.2 Recordkeeping Requirements

A person or owner/operator shall maintain records and any other supporting documents to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. An owner/operator subject to Rule 2520 (Federally Mandated Operating Permits) shall keep the records for five years. Records shall be made available to the APCO upon request.

7.0 Fugitive PM10 Management Plan for Unpaved Roads and Unpaved Vehicle/Equipment Traffic Areas

As a compliance alternative for Rule 8061 section 5.2 and Rule 8071 section 5.1, an operator may implement a Fugitive PM10 Management Plan (FPMP) that is designed to achieve 50% control efficiency and has been approved by the APCO. The FPMP shall be implemented on all days that traffic exceeds, or is expected to exceed, the number of annual average daily vehicle trips or vehicle trips per day as specified in Rules 8061, 8071, and 8081. The owner/operator remains subject to all requirements of the applicable rules of Regulation VIII that are not addressed by the FPMP. It should be noted that the FPMP is not a compliance option for any requirement for a stabilized surface as defined in Rule 8011. The requirements for FPMPs for agricultural sources are specified in Rule 8081 (Agricultural Sources) section 7.0.

7.1 An owner/operator shall provide the proposed FPMP to the APCO or his/her designee via fax, mail, or in person. The APCO shall approve, disapprove, or conditionally approve each proposed FPMP. An FPMP shall not be considered APCO-approved until the operator has received written approval from the APCO.

7.2 An owner/operator may submit one FPMP covering multiple unpaved roads and unpaved vehicle/equipment traffic areas.

7.3 An owner/operator shall retain a copy of an APCO-approved FPMP at the operators place of business and make it available for inspection by the APCO or his designee during normal business hours. The APCO-approved FPMP shall remain valid until notification by the APCO that it is no longer valid, or until the owner/operator notifies the APCO that the owner/operator has permanently discontinued implementing the FPMP.

7.4 Failure to comply with the provisions of an APCO-approved FPMP is deemed to be a violation of this rule.

7.5 A FPMP shall contain all of the following information:

7.5.1 Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submittal, and implementation of the FPMP, and of person(s) responsible for the unpaved road or traffic area.

7.5.2 A plot plan or map which shows the location of each unpaved road or traffic area to be covered by the FPMP, and the total length (miles) of unpaved roads, and the total area (acres) of the unpaved traffic areas.

7.5.3 The months (and weeks, if known) of the year that vehicle traffic is expected to reach or exceed the number of vehicle trips as specified in Rules 8061, 8071, and 8081, and the types of vehicles (e.g., passenger vehicles, trucks, mobile equipment) expected on each road or traffic area. As stated above, the FPMP shall be implemented on all days that traffic exceeds, or is expected to exceed, the number of vehicle trips as specified in Rules 8061, 8071, and 8081.

7.5.4 Dust suppressants, gravel, and/or vegetative materials to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and capacity of application equipment; and information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

7.5.5 A description of the condition of the treated surfaces to be achieved as a result of the use of the suppressant or other dust control material.

APPENDIX A
Visual Determination of Opacity

SECTION 1 Test Method For Unpaved Roads and Unpaved Traffic Areas
SECTION 2 Test Method For Time-Averaged Regulations
SECTION 3 Qualification and Testing

SECTION 1 TEST METHOD FOR UNPAVED ROADS AND UNPAVED TRAFFIC AREAS

1.0 Opacity Test Method. The purpose of this test method is to estimate the percent opacity of fugitive dust plumes caused by vehicle movement on unpaved roads and unpaved traffic areas. This method can only be conducted by an individual who has received certification as a qualified observer. Qualification and testing requirements can be found in Section 3. of this appendix.

a. Step 1: Stand at least 16.5 feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Following the above requirements, make opacity observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.

b. Step 2: Record the fugitive dust source location, source type, method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position to the fugitive dust source, and color of the plume and type of background on the visible emission observation form both when opacity readings are initiated and completed.

c. Step 3: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make opacity observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.

d. Step 4: Record the opacity observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a 5-second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles which generate dust plumes for which readings are taken (e.g. mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.

e. Step 5: Repeat Step 3 (Section 1 c) of this appendix) and Step 4 (Section 1 (d) of this appendix) until you have recorded a total of 12 consecutive opacity readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

f. Step 6: Average the 12 opacity readings together. If the average opacity reading equals 20% or lower, the source is in compliance with the opacity standard described in Rule 8011 of this rule.

SECTION 2 TEST METHOD FOR VISUAL DETERMINATION OF OPACITY OF EMISSIONS FROM SOURCES FOR TIME-AVERAGED REGULATIONS

2.0 Applicability. This method is applicable for the determination of the opacity of emissions from sources of visible emissions for time-averaged regulations. A time-averaged regulation is any regulation that requires averaging visible emission data to determine the opacity of visible emissions over a specific time period.

2.1 Principle. The opacity of emissions from sources of visible emissions is determined visually by an observer qualified according to the procedures of Section 3 of this appendix.

2.2 Procedures. An observer qualified, in accordance with Section 3 of this appendix, shall use the following procedures for visually determining the opacity of emissions.

a. Position. Stand at a position at least 5 meters from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the fugitive dust plume generated by mobile

earthmoving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, if multiple plumes are involved, do not include more than one plume in the line of sight at one time.

b. Field Records. Record the name of the site, fugitive dust source type (i.e., pile, material handling (i.e., transfer, loading, sorting)), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation from when opacity readings are initiated and completed.

c. Observations. Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. For storage piles, make opacity observations approximately 1 meter above the surface from which the plume is generated. For extraction operations and the loading of haul trucks in open-pit mines, make opacity observations approximately one meter above the rim of the pit. The initial observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume, but instead observe the plume momentarily at 15-second intervals. For fugitive dust from earthmoving equipment, make opacity observations approximately 1 meter above the mechanical equipment generating the plume.

d. Recording Observations. Record the opacity observations to the nearest 5% every 15 seconds on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a 15-second period. If a multiple plume exists at the time of an observation, do not record an opacity reading. Mark an "x" for that reading. If the equipment generating the plume travels outside of the field of observation, resulting in the inability to maintain the orientation of the sun within the 140° sector or if the equipment ceases operating, mark an "x" for the 15- second interval reading. Readings identified as "x" shall be considered interrupted readings.

e. Data Reduction For Time-Averaged Regulations. For each set of 12 or 24 consecutive readings, calculate the appropriate average opacity. Sets must consist of consecutive observations, however, readings

immediately preceding and following interrupted readings shall be deemed consecutive and in no case shall two sets overlap, resulting in multiple violations.

SECTION 3 QUALIFICATION AND TESTING.

3.1 Certification Requirements. To receive certification as a qualified observer, a candidate must be tested and demonstrate the ability to assign opacity readings in 5% increments to 25 different black plumes and 25 different white plumes, with an error not to exceed 15% opacity on any one reading and an average error not to exceed 7.5% opacity in each category. Candidates shall be tested according to the procedures described in section 3.2 of this appendix. Any smoke generator used pursuant to section 3.3 of this appendix shall be equipped with a smoke meter, which meets the requirements of section 3.1 of this appendix. Certification tests that do not meet the requirements of sections 3.2 and 3.3 of this appendix are not valid. The certification shall be valid for a period of 6 months, and after each 6-month period the qualification procedures must be repeated by an observer in order to retain certification.

3.2 Certification Procedure. The certification test consists of showing the candidate a complete run of 50 plumes, 25 black plumes and 25 white plumes, generated by a smoke generator. Plumes shall be presented in random order within each set of 25 black and 25 white plumes. The candidate assigns an opacity value to each plume and records the observation on a suitable form. At the completion of each run of 50 readings, the score of the candidate is determined. If a candidate fails to qualify, the complete run of 50 readings must be repeated in any retest. The smoke test may be administered as Section of a smoke school or training program, and may be preceded by training or familiarization runs of the smoke generator, during which candidates are shown black and white plumes of known opacity.

3.3 Smoke Generator Specifications. Any smoke generator used for the purpose of section 3.2 of this appendix shall be equipped with a smoke meter installed to measure opacity across the diameter of the smoke generator stack. The smoke meter output shall display in-stack opacity, based upon a path length equal to the stack exit diameter on a full 0% to 100% chart recorder scale. The smoke meter optical design and performance shall meet the specifications shown in Table A of this appendix. The smoke meter shall be calibrated as prescribed in section 3.3.a of this appendix prior to conducting each smoke reading test. At the completion of each test, the zero and span drift shall be checked, and if the drift exceeds plus or minus 1% opacity, the condition shall be corrected prior to conducting any subsequent test runs.

The smoke meter shall be demonstrated, at the time of installation, to meet the specifications listed in Table A of this appendix. This demonstration shall be repeated following any subsequent repair or replacement of the photocell or associated electronic circuitry, including the chart recorder or output meter, or every 6 months, whichever occurs first.

a. Calibration. The smoke meter is calibrated after allowing a minimum of 30 minutes warm-up by alternately producing simulated opacity of 0% and 100%. When stable response at 0% or 100% is noted, the smoke meter is adjusted to produce an output of 0% or 100%, as appropriate. This calibration shall be repeated until stable 0% and 100% readings are produced without adjustment. Simulated 0% and 100% opacity values may be produced by alternately switching the power to the light source on and off while the smoke generator is not producing smoke.

b. Smoke Meter Evaluation. The smoke meter design and performance are to be evaluated as follows:

(1) Light Source. Verify, from manufacturer's data and from voltage measurements made at the lamp, as installed, that the lamp is operated within plus or minus 5% of the nominal rated voltage.

(2) Spectral Response Of Photocell. Verify from manufacturer's data that the photocell has a photopic response (i.e., the spectral sensitivity of the cell shall closely approximate the standard spectral-luminosity curve for photopic vision which is referenced in (b) of Table A of this appendix).

(3) Angle Of View. Check construction geometry to ensure that the total angle of view of the smoke plume, as seen by the photocell, does not exceed 15°. Calculate the total angle of view as follows:

$$\text{Total Angle Of View} = 2\tan^{-1} d/2L$$

Where:

d = The photocell diameter + the diameter of the limiting aperture; and

L = The distance from the photocell to the limiting aperture.

The limiting aperture is the point in the path between the photocell and the smoke plume where the angle of view is most restricted. In smoke generator smoke meters, this is normally an orifice plate.

(4) Angle Of Projection. Check construction geometry to ensure that the total angle of projection of the lamp on the smoke plume does not exceed 15°. Calculate the total angle of projection as follows:

$$\text{Total Angle Of Projection} = 2\tan^{-1} d/2L$$

Where:

d = The sum of the length of the lamp filament + the diameter of the limiting aperture; and

L = The distance from the lamp to the limiting aperture.

(5) Calibration Error. Using neutral-density filters of known opacity, check the error between the actual response and the theoretical linear response of the smoke meter. This check is accomplished by first calibrating the smoke meter, according to section 3.3(a) of this appendix, and then inserting a series of three neutral-density filters of nominal opacity of 20%, 50%, and 75% in the smoke meter path length. Use filters calibrated within plus or minus 2%. Care should be taken when inserting the filters to prevent stray light from affecting the meter. Make a total of five nonconsecutive readings for each filter. The maximum opacity error on any one reading shall be plus or minus 3%.

(6) Zero And Span Drift. Determine the zero and span drift by calibrating and operating the smoke generator in a normal manner over a 1-hour period. The drift is measured by checking the zero and span at the end of this period.

(7) Response Time. Determine the response time by producing the series of five simulated 0% and 100% opacity values and observing the time required to reach stable response. Opacity values of 0% and 100% may be simulated by alternately switching the power to the lightsource off and on while the smoke generator is not operating.

Table A. Smoke Meter Design And Performance Specifications

Parameter Specification

a. Light Source: Incandescent lamp operated at nominal rated voltage.
b. Spectral response of photocell: Photopic (daylight spectral response of the human eye).
c. Angle of view: 15° maximum total angle.
d. Angle of projection : 15° maximum total angle.
e. Calibration error: Plus or minus3% opacity, maximum.
f. Zero and span drift: Plus or minus 1% opacity, 30 minutes.
g. Response time: Less than or equal to 5 seconds

APPENDIX B
Determination of Stabilization

SECTION 1 Test Methods for Determining Stabilization

SECTION 2 Visible Crust Determination

SECTION 3 Determination of Silt Content for Unpaved Roads and Unpaved Vehicle/Equipment Traffic Areas

SECTION 4 Determination of Threshold Friction Velocity

SECTION 5 Determination of Flat Vegetative Cover

SECTION 6 Determination of Standing Vegetative Cover

SECTION 7 Rock Test Method

---

1. Test Methods For Determining Stabilization.

The test methods described in Section 2 through Section 7 of this appendix shall be used to determine whether an area has a stabilized surface. Should a disturbed area contain more than one type of disturbance, soil, vegetation, or other characteristics, which are visibly distinguishable, test each representative surface separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, according to the appropriate test methods in Section 2 through Section 7 of this appendix, and include or eliminate it from the total size assessment of disturbed surface area(s) depending upon test method results.

2. Visible Crust Determination.

2.1 Where a visible crust exists, drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16-17 grams from a distance of 30 centimeters (one foot) directly above (at a 90° angle perpendicular to) the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the visible crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of a site which have not originated from the representative site surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in Section 4 of this appendix to the loose material to determine whether the surface is stabilized.

2.2 A sufficient crust is defined under the following conditions: once a ball has been dropped according to section 2.1. of this appendix, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removing the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.

2.3 Drop the ball three times within a survey area that measures 1 foot by 1 foot and that represents a random portion of the overall disturbed conditions of the site. The survey area shall be considered to have passed the Visible Crust Determination Test if at least two out of the three times that the ball was dropped, the results met the criteria in section 2.2 of this appendix. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of section 2.2 of this appendix for all of the survey areas tested, then the site shall be considered to have passed the Visible Crust Determination Test and shall be considered sufficiently crusted.

2.4 At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the visible crust test as often as necessary on each random portion of the overall conditions of the site for an accurate assessment.

3. Determination of Silt Content for Unpaved Roads and Unpaved Vehicle/Equipment Traffic Areas

The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads and unpaved vehicle/equipment traffic areas. The higher the silt content, the more fine dust particles that are released when vehicles travel on unpaved roads and unpaved vehicle/equipment traffic areas.

3.1 Equipment:

a. A set of sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm, a lid, and collector pan.
b. A small whisk broom or paintbrush with stiff bristles and dustpan 1ft. in width (the broom/brush should preferable have one, thin row of bristles no longer than 1.5 inches in length).
c. A spatula without holes.
d. A small scale with half-ounce increments (e.g., postal/package scale).
e. A shallow, lightweight container (e.g., plastic storage container).
f. A sturdy cardboard box or other rigid object with a level surface.
g. A basic calculator.
h. Cloth gloves (optional for handling metal sieves on hot, sunny days).
i. Sealable plastic bags (if sending samples to a laboratory).
j. A pencil/pen and paper.

3.2 Step 1: Look for a routinely traveled surface, as evidenced by tire tracks [Only collect samples from surfaces that are not damp due to precipitation or dew. This statement is not meant to be a standard in itself for dampness where watering is being used as a control measure. It is only intended to ensure that

surface testing is done in a representative manner.] Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is < 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1cm. In order to confirm that samples are collected to a 1cm depth, a wooden dowel or other similar narrow object a least one-foot in length can be laid horizontally across the survey area while a metric rule is held perpendicular to the dowel. (Optional: At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section)

3.3 Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weight the sample and record its weight.

3.4 Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

3.5 Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush. (On windy days, use the trunk or door of a vehicle as a wind barrier.) Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up and down and sideways for at least 1 minute.

3.6 Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass (e.g., material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size). If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute. (You only need to reassemble the sieve(s) that contain material, which requires further sifting.)

3.7 Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weight the entire sample. Take care to minimize escape of dust

particles. You do not need to do anything with material captured in the sieves – only the collector pan. Weigh the container with the materials from the collector pan and record its weight.

3.8 Step 7: If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an unpaved vehicle/equipment traffic area, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 (section 3.3) and multiply by 100 to estimate the percent silt content.

3.9 Step 8: Select another two routinely traveled portions of the unpaved road or unpaved vehicle/equipment traffic area and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.

3.10 Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft^2, the surface is STABLE. If the average silt loading is greater than or equal to 0.33 oz/ft^2, then proceed to examine the average percent silt content. If the source is an unpaved road and the average percent silt content is 6% or less, the surface is STABLE. If the source is an unpaved parking lot and the average percent silt content is 8% or less, the surface is STABLE. If your field test results are within 2% of the standard (for example, 4%-8% silt content on an unpaved road) it is recommended that you collect 3 additional samples from the source according to Step 1 (section 3.2) and take them to an independent laboratory for silt content analysis.

3.11 Independent Laboratory Analysis: You may choose to collect samples from the source, according to Step 1 (section 3.2) and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is:
"Procedures For Laboratory Analysis for Surface/Bulk Dust Loading Samples", (Fifth Edition, Volume 1, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina.

4. Determination Of Threshold Friction Velocity (TFV).

For disturbed surface areas that are not crusted or vegetated, determine threshold friction velocity (TFV) according to the following sieving field procedure (based on a 1952 laboratory procedure published by W. S. Chepil).

4.1 Obtain and stack a set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm or obtain and stack a set of standard/commonly available sieves. Place the sieves in order according to size

openings, beginning with the largest size opening at the top. Place a collector pan underneath the bottom (0.25 mm) sieve. Collect a sample of loose surface material from an area at least 30 cm by 30 cm in size to a depth of approximately 1 cm using a brush and dustpan or other similar device. Only collect soil samples from dry surfaces (i.e. when the surface is not damp to the touch). Remove any rocks larger than 1 cm in diameter from the sample. Pour the sample into the top sieve (4 mm opening) and cover the sieve/collector pan unit with a lid. Minimize escape of particles into the air when transferring surface soil into the sieve/collector pan unit. Move the covered sieve/collector pan unit by hand using a broad, circular arm motion in the horizontal plane. Complete twenty circular arm movements, ten clockwise and ten counterclockwise, at a speed just necessary to achieve some relative horizontal motion between the sieves and the particles. Remove the lid from the sieve/collector pan unit and disassemble each sieve separately beginning with the largest sieve. As each sieve is removed, examine it for loose particles. If loose particles have not been sifted to the finest sieve through which they can pass, reassemble and cover the sieve/collector pan unit and gently rotate it an additional ten times. After disassembling the sieve/collector pan unit, slightly tilt and gently tap each sieve and the collector pan so that material aligns along one side. In doing so, minimize escape of particles into the air. Line up the sieves and collector pan in a row and visibly inspect the relative quantities of catch in order to determine which sieve (or whether the collector pan) contains the greatest volume of material. If a visual determination of relative volumes of catch among sieves is difficult, use a graduated cylinder to measure the volume. Estimate TFV for the sieve catch with the greatest volume using Table 1 of this appendix, which provides a correlation between sieve opening size and TFV.

Table 1. Determination Of Threshold Friction Velocity

Tyler Sieve No.	ASTM 11 Sieve No.	Opening (mm)	TFV (cm/s)
5	5	4	135
9	10	2	100
16	18	1	76
32	35	0.5	58
60	60	0.25	43
Collector Pan	---	--	30

4.2 Collect at least three soil samples which represent random portions of the overall conditions of the site, repeat the above TFV test method for each sample and average the resulting TFVs together to determine the TFV uncorrected for non-erodible elements. Non-erodible elements are distinct elements, in the random portion of the overall conditions of the site, that are larger than 1 cm in diameter, remain firmly in place during a wind episode, and inhibit soil loss by

consuming Section of the shear stress of the wind. Non-erodible elements include stones and bulk surface material but do not include flat or standing vegetation. For surfaces with non-erodible elements, determine corrections to the TFV by identifying the fraction of the survey area, as viewed from directly overhead, that is occupied by non-erodible elements using the following procedure. For a more detailed description of this procedure, see Section 6 (Test Methods For Stabilization-Rock Test Method) of this appendix. Select a survey area of 1 meter by 1 meter that represents a random portion of the overall conditions of the site. Where many non-erodible elements lie within the survey area, separate the non-erodible elements into groups according to size. For each group, calculate the overhead area for the non-erodible elements according to the following equations:

$$\text{Average Dimensions} = \text{(Average Length)} \times \text{(Average Width)} \qquad \text{Eq. 1}$$

$$\text{Overhead Area} = \text{(Average Dimensions)} \times \text{(Number Of Elements)} \qquad \text{Eq. 2}$$

$$\text{Total Overhead Area} = \text{Overhead Area Of Group 1} + \text{Overhead Area Of Group 2 (etc.)} \qquad \text{Eq. 3}$$

$$\text{Total Frontal Area} = \frac{\text{Total Overhead Area}}{2} \qquad \text{Eq. 4}$$

$$\text{Percent Cover Of Non-Erodible Elements} = \frac{\text{Total Frontal Area}}{\text{Survey Area}} \times 100 \qquad \text{Eq. 5}$$

Note: Ensure consistent units of measurement (e.g., square meters or square inches when calculating percent cover).

Repeat this procedure on an additional two distinct survey areas that represent a random portion of the overall conditions of the site and average the results. Use Table 2 of this appendix to identify the correction factor for the percent cover of non-erodible elements. Multiply the TFV by the corresponding correction factor to calculate the TFV corrected for non-erodible elements.

Table 2. Correction Factors For Threshold Friction Velocity

Percent Cover Of Non-Erodible Elements	Correction Factor
Greater than or equal to 10%	5
Greater than or equal to 5% and less than 10%	3
Less than 5% and greater than or equal to 1%	2
Less than 1%	None

5. Determination Of Flat Vegetative Cover.

Flat vegetation includes attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind. Flat vegetation, which is dead but firmly attached, shall be considered equally protective as live vegetation. Stones or other aggregate larger than 1 centimeter in diameter shall be considered protective cover in the course of conducting the line transect test method. Where flat vegetation exists, conduct the following line transect test method.

5.1 Line Transect Test Method. Stretch a 100 foot measuring tape across a survey area that represents a random portion of the overall conditions of the site. Firmly anchor both ends of the measuring tape into the surface using a tool such as a screwdriver, with the tape stretched taut and close to the soil surface. If vegetation exists in regular rows, place the tape diagonally (at approximately a 45° angle) away from a parallel or perpendicular position to the vegetated rows. Pinpoint an area the size of a 3/32 inch diameter brazing rod or wooden dowel centered above each 1 foot interval mark along one edge of the tape. Count the number of times that flat vegetation lies directly underneath the pinpointed area at 1 foot intervals. Consistently observe the underlying surface from a 90° angle directly above each pinpoint on one side of the tape. Do not count the underlying surface as vegetated if any portion of the pinpoint extends beyond the edge of the vegetation underneath in any direction. If clumps of vegetation or vegetative debris lie underneath the pinpointed area, count the surface as vegetated, unless bare soil is visible directly below the pinpointed area. When 100 observations have been made, add together the number of times a surface was counted as vegetated. This total represents the percent of flat vegetation cover (e.g., if 35 positive counts were made, then vegetation cover is 35%). If the survey area that represents a random portion of the overall conditions of the site is too small for 100 observations, make as many observations as possible. Then multiply the count of vegetated surface areas by the appropriate conversion factor to obtain percent cover. For example, if vegetation was counted 20 times within a total of 50 observations, divide 20 by 50 and multiply by 100 to obtain a flat vegetation cover of 40%.

5.2 Conduct the line transect test method, as described in section 5.1 of this appendix, an additional two times on areas that represent a random portion of the overall conditions of the site and average results.

6. Determination Of Standing Vegetative Cover.

Standing vegetation includes vegetation that is attached (rooted) with a predominant vertical orientation. Standing vegetation, which is dead but firmly rooted, shall be

considered equally protective as live vegetation. Conduct the following standing vegetation test method to determine if 30% cover or more exists. If the resulting percent cover is less than 30% but equal to or greater than 10%, then conduct the test in Section 4 (Determination Of Threshold Friction Velocity (TFV)) of this appendix in order to determine if the site is stabilized, such that the standing vegetation cover is equal to or greater than 10%, where threshold friction velocity, corrected for non-erodible elements, is equal to or greater than 43 cm/second.

6.1 For standing vegetation that consists of large, separate vegetative structures (e.g., shrubs and sagebrush), select a survey area that represents a random portion of the overall conditions of the site that is the shape of a square with sides equal to at least 10 times the average height of the vegetative structures. For smaller standing vegetation, select a survey area of three feet by three feet.

6.2 Count the number of standing vegetative structures within the survey area. Count vegetation, which grows in clumps as a single unit. Where different types of vegetation exist and/or vegetation of different height and width exists, separate the vegetative structures with similar dimensions into groups. Count the number of vegetative structures in each group within the survey area. Select an individual structure within each group that represents the average height and width of the vegetation in the group. If the structure is dense (e.g., when looking at it vertically from base to top there is little or zero open air space within its perimeter), calculate and record its frontal silhouette area, according to Equation 6 of this appendix. Also, use Equation 6 of this appendix to estimate the average height and width of the vegetation if the survey area is larger than nine square feet. Otherwise, use the procedure in section 6.3 of this appendix to calculate the frontal silhouette area. Then calculate the percent cover of standing vegetation according to Equations 7, 8, and 9 of this appendix.

$$\text{Frontal Silhouette Area} = (\text{Average Height}) \times (\text{Average Width}) \quad \text{Eq. 6}$$

$$\text{Frontal Silhouette Area Of Group} = (\text{Frontal Silhouette Area Of Individual Vegetative Structure}) \times (\text{Number Of Vegetation Structures Per Group}) \quad \text{Eq. 7}$$

$$\text{Total Frontal Silhouette Area} = \text{Frontal Silhouette Area Of Group 1} + \text{Frontal Silhouette Area Of Group 2 (etc.)} \quad \text{Eq. 8}$$

$$\text{Percent Cover Of Standing Vegetation} = (\text{Total Frontal Silhouette Area}/\text{Survey Area}) \times 100 \quad \text{Eq. 9}$$

Percent Open Space = [(Number Of Circled Gridlines Within The Outlined Area Counted That Are Not Covered By Vegetation/Total Number Of Gridline Intersections Within The Outlined Area) x 100] Eq. 10

Percent Vegetative Density = 100 - Percent Open Space Eq. 11

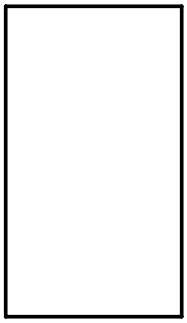
Vegetative Density = Percent Vegetative Density/100 Eq. 12

Frontal Silhouette Area = [Max. Height x Max. Width] x [Vegetative Density/0.4]0.5 Eq. 13

Note: Ensure consistent units of measurement (e.g., square meters or square inches when calculating percent cover).

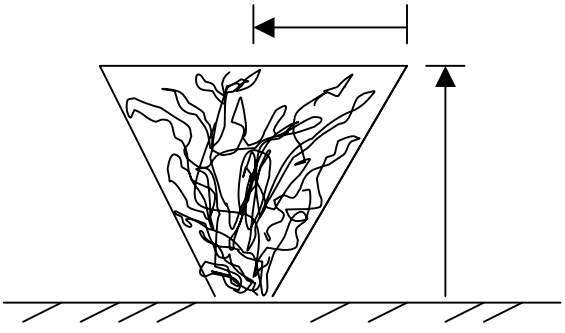
6.3 Vegetative Density Factor. Cut a single, representative piece of vegetation (or consolidated vegetative structure) to within 1 cm of surface soil. Using a white paper grid or transparent grid over white paper, lay the vegetation flat on top of the grid (but do not apply pressure to flatten the structure). Grid boxes of 1 inch or 1/2 inch squares are sufficient for most vegetation when conducting this procedure. Using a marker or pencil, outline the shape of the vegetation along its outer perimeter, according to Figure B, C, or D of this appendix, as appropriate. (Note: Figure C differs from Figure D primarily in that the width of vegetation in Figure C is narrow at its base and gradually broadens to its tallest height. In Figure D, the width of the vegetation generally becomes narrower from its midpoint to its tallest height.) Remove the vegetation, count and record the total number of gridline intersections within the outlined area, but do not count gridline intersections that connect with the outlined shape. There must be at least 10 gridline intersections within the outlined area and preferably more than 20, otherwise, use smaller grid boxes. Draw small circles (no greater than a 3/32 inch diameter) at each gridline intersection counted within the outlined area. Replace the vegetation on the grid within its outlined shape. From a distance of approximately 2 feet directly above the grid, observe each circled gridline intersection. Count and record the number of circled gridline intersections that are not covered by any piece of the vegetation. To calculate percent vegetative density, use Equations 10 and 11 of this appendix. If percent vegetative density is equal to or greater than 30, use an equation (one of the equations-Equations 16, 17, or 18 of this appendix) that matches the outline used to trace the vegetation (Figure B, C, or D) to calculate its frontal silhouette area. If percent vegetative density is less than 30, use Equations 12 and 13 of this appendix to calculate the frontal silhouette area.

Figure B. Cylinder



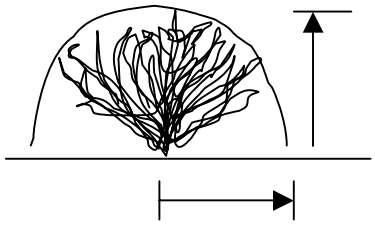
Frontal Silhouette Area = Maximum Height x Maximum Width Eq. 16

Figure C. Inverted Cone



Frontal Silhouette Area = Maximum Height x 1/2 Maximum Width Eq. 17

Figure D. Upper Sphere



Frontal Silhouette Area = (3.14 x Maximum Height x 1/2 Maximum Width)/2 Eq. 18

7. Rock Test Method.

The Rock Test Method, which is similar to Section 4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) of this appendix, examines the wind-resistance effects of rocks and other non-erodible elements on disturbed surfaces. Non-erodible elements are objects larger than 1 centimeter (cm) in diameter that remain firmly in place even on windy days. Typically, non-erodible elements include rocks, stones, glass fragments, and hardpacked clumps of soil lying on or embedded in the surface. Vegetation does not count as a non-erodible element in this method. The purpose of this test method is to estimate the percent cover of non-erodible elements on a given surface to see whether such elements take up enough space to offer protection against windblown dust. For simplification, the following test method refers to all non-erodible elements as "rocks".

7.1 Select a 1 meter by 1 meter survey area that represents the general rock distribution on the surface. (A 1 meter by 1 meter area is slightly greater than a 3 foot by 3 foot area.) Mark-off the survey area by tracing a straight, visible line in the dirt along the edge of a measuring tape or by placing short ropes, yard sticks, or other straight objects in a square around the survey area.

7.2 Without moving any of the rocks or other elements, examine the survey area. Since rocks > 3/8 inch (1 cm) in diameter are of interest, measure the diameter of some of the smaller rocks to a get a sense for which rocks need to be considered.

7.3 Mentally group the rocks > 3/8 inch (1 cm) diameter lying in the survey area into small, medium, and large size categories. Or, if the rocks are all approximately the same size, simply select a rock of average size and typical shape. Without removing any of the rocks from the ground, count the number of rocks in the survey area in each group and write down the resulting number.

7.4 Without removing rocks, select one or two average-size rocks in each group and measure the length and width. Use either metric units or standard units. Using a calculator, multiply the length times the width of the rocks to get the average dimensions of the rocks in each group. Write down the results for each rock group.

7.5 For each rock group, multiply the average dimensions (length times width) by the number of rocks counted in the group. Add the results from each rock group to get the total rock area within the survey area.

7.6 Divide the total rock area, calculated in section 7.5 of this appendix, by two (to get frontal area). Divide the resulting number by the size of the survey area (make sure the units of measurement match), and multiply by 100 for percent rock cover. For example, the total rock area is 1,400 square centimeters, divide 1,400 by 2 to get 700. Divide 700 by 10,000 (the survey area is 1 meter by 1 meter, which is 100 centimeters by 100 centimeters or 10,000 centimeters) and multiply by 100. The result is 7% rock cover. If rock measurements are made in inches, convert the survey area from meters to inches (1 inch = 2.54 centimeters).

7.7 Select and mark-off two additional survey areas and repeat the procedures described in section 7.1 through section 7.6 of this appendix. Make sure the additional survey areas also represent the general rock distribution on the site. Average the percent cover results from all three survey areas to estimate the average percent of rock cover.

7.8 If the average rock cover is greater than or equal to 10%, the surface is stable. If the average rock cover is less than 10%, follow the procedures in section 7.9 of this appendix.

7.9 If the average rock cover is less than 10%, the surface may or may not be stable. Follow the procedures in Section 1.3 (Determination Of Threshold Friction Velocity (TFV)) of this rule and use the results from the rock test method as a correction (i.e., multiplication) factor. If the rock cover is at least 1%, such rock cover helps to limit windblown dust. However, depending on the soil's ability to release fine dust particles into the air, the percent rock cover

may or may not be sufficient enough to stabilize the surface. It is also possible that the soil itself has a high enough TFV to be stable without even accounting for rock cover.

7.10 After completing the procedures described in section 7.9 of this appendix, use Table 2 of this appendix to identify the appropriate correction factor to the TFV, depending on the percent rock cover.

RULE 8021 CONSTRUCTION, DEMOLITION, EXCAVATION, EXTRACTION, AND OTHER EARTHMOVING ACTIVITIES (Adopted November 15, 2001; Amended August 19, 2004)

1.0 Purpose

The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities.

2.0 Applicability

This rule applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site. This rule also applies to the construction of new landfill disposal sites or modification to existing landfill disposal sites prior to commencement of landfilling activities. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The definitions of terms in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

In addition to the exemptions established in Rule 8011, the activities listed in Sections 4.1 through 4.5 are exempt from this rule. However, carryout and trackout materials as a result of activities exempted in Sections 4.1 through 4.5 of this rule must be removed from any paved public roads pursuant to Rule 8041 (Carryout and Trackout):

4.1 Blasting activities that have been permitted by the California Division of Industrial Safety. Other activities performed in conjunction with blasting are not exempt from complying with the provisions of other applicable rules under Regulation VIII (Fugitive PM10 Prohibitions).

4.2 Maintenance or remodeling of existing buildings and additions to existing buildings where total building area is not increased by more than fifty percent, or 10,000 square feet, whichever is less; but not including ancillary construction such as expanding parking lots.

4.3 All additions to existing single family residential buildings.

4.4 Diskingof weeds and dried vegetation related to fire prevention required by a Federal, State or local agency on a site less than one-half (½) acre. Activities

performed in conjunction with disking are not exempt from complying with the provisions of other applicable rules under Regulation VIII.

4.5 The spreading of landfill daily cover necessary to cover garbage/rubbish in order to preserve public health and safety and to comply with the requirements of the California Integrated Waste Management Board during wind conditions which would generate fugitive dust.

5.0 Requirements

No person shall perform any construction, demolition, excavation, extraction, or other earthmoving activities unless the appropriate requirements in sections 5.1 through 5.5 are sufficiently implemented to limit VDE to 20% opacity and comply with the conditions for a stabilized surface area when applicable. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

5.1 A person shall implement the requirements specified below when using wrecking balls or other wrecking equipment to raze or demolish buildings.

5.1.1 Apply sufficient water to building exterior surfaces, unpaved surface areas where equipment will operate, and razed building materials to limit VDE to 20% opacity throughout the duration of razing and demolition activities.

5.1.2 Apply sufficient dust suppressants to unpaved surface areas within 100 feet where materials from razing or demolition activities will fall in order to limit VDE to 20% opacity.

5.1.3 Apply sufficient dust suppressants to unpaved surface areas where wrecking or hauling equipment will be operated in order to limit VDE to 20% opacity

5.1.4 Handling, storage, and transport of bulk materials on-site or off-site resulting from the demolition or razing of buildings shall comply with the requirements specified in Rule 8031 (Bulk Materials)

5.1.5 Apply water within 1 hour of demolition to unpaved surfaces within 100 feet of the demolished structure.

5.1.6 Prevention and removal of carryout or trackout on paved public access roads from demolition operations shall be performed in accordance with Rule 8041 (Carryout and Trackout).

5.2 A person shall control the fugitive dust emissions to meet the requirements in Table 8021-1.

Table 8021-1 – CONTROL MEASURE OPTIONS FOR CONSTRUCTION, EXCAVATION, EXTRACTION, AND OTHER EARTHMOVING ACTIVITIES	
A.	PRE-ACTIVITY:
	A1 Pre-water site sufficient to limit VDE to 20% opacity, and
	A2 Phase work to reduce the amount of disturbed surface area at any one time.
B.	DURING ACTIVE OPERATIONS:
	B1 Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity; or
	B2 Construct and maintain wind barriers sufficient to limit VDE to 20% opacity. If utilizing wind barriers, control measure B1 above shall also be implemented.
	B3 Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.
C.	TEMPORARY STABILIZATION DURING PERIODS OF INACTIVITY:
	C1 Restrict vehicular access to the area; and
	C2 Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.58 of Rule 8011.

5.3 Speed Limitations and Posting of Speed Limit Signs on Uncontrolled Unpaved Access/Haul Roads on Construction Sites

5.3.1. An owner/operator shall limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.

5.3.2. An owner/operator shall post speed limit signs that meet State and Federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.

5.4 Wind Generated Fugitive Dust Requirements

5.4.1 Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20% opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.

5.4.2 Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping

An owner/operator shall comply with the recordkeeping requirements specified in Rule 8011.

6.3 Dust Control Plan

6.3.1 An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the APCO within 10 days prior to the commencement of earthmoving activities via fax or mail. The requirement to submit a dust control plan shall apply to all such activities conducted for residential and non-residential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity.

6.3.2 An owner/operator may submit one Dust Control Plan covering multiple projects at different sites where construction will commence within the next 12 months provided the plan includes each project size and location, types of activities to be performed. The Dust Control Plan shall specify the expected start and completion date of each project.

6.3.3 The Dust Control Plan shall describe all fugitive dust control measures to be implemented before, during, and after any dust generating activity.

6.3.4 A Dust Control Plan shall contain all the information described in Section 6.3.6 of this rule. The APCO shall approve, disapprove, or conditionally approve the Dust Control Plan within 30 days of plan submittal. A Dust Control Plan is deemed automatically approved if, after 30 days following receipt by the District, the District does not provide any comments to the owner/operator regarding the Dust Control Plan.

6.3.5 An owner/operator shall retain a copy of an approved Dust Control Plan at the project site. The approved Dust Control Plan shall remain valid until the termination of all dust generating activities. Failure to comply with the provisions of an approved Dust Control Plan is deemed to be a violation of this rule. Regardless of whether an approved Dust Control Plan is in place or not, or even when the owner/operator responsible for the plan is complying with an approved Dust Control Plan, the owner/operator is still subject to comply with all requirements of the applicable rules under Regulation VIII at all times.

6.3.6 A Dust Control Plan shall contain all of the following information:

6.3.6.1 Name(s), address(es), and phone number(s) of person(s) and owner(s)/operator(s) responsible for the preparation, submittal, and implementation of the Dust Control Plan and responsible for the dust generating operation and the application of dust control measures.

6.3.6.2 A plot plan which shows the type and location of each project.

6.3.6.3 The total area of land surface to be disturbed, daily throughput volume of earthmoving in cubic yards, and total area in acres of the entire project site.

6.3.6.4 The expected start and completion dates of dust generating and soil disturbance activities to be performed on the site.

6.3.6.5 The actual and potential sources of fugitive dust emissions on the site and the location of bulk material handling and storage areas, paved and unpaved roads; entrances and exits where carryout/trackout may occur; and traffic areas.

6.3.6.6 Dust suppressants to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and

capacity of application equipment; and information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

6.3.6.7 Specific surface treatment(s) and/or control measures utilized to control material carryout, trackout, and sedimentation where unpaved and/or access points join paved public access roads.

6.3.6.8 At least one key individual representing the owner/operator or any person who prepares a Dust Control Plan must complete a Dust Control Training Class conducted by the District. The District will conduct Dust Control Training Classes on an as needed basis.

6.4 District Notification of Earthmoving Activities on Smaller Construction Sites

6.4.1 On residential development construction sites ranging from 1.0 to less than 10.0 acres in area, an owner/operator shall provide written notification to the District at least 48 hours prior to his/her intent to commence any earthmoving activities.

6.4.2 On non-residential development construction sites ranging from 1.0 to less than 5.0 acres in area, an owner/operator shall provide written notification to the District at least 48 hours prior to his/her intent to commence any earthmoving activities.

RULE 8031 BULK MATERIALS (Adopted November 15, 2001; Amended August 19, 2004)

1.0 Purpose

The purpose of this rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials.

2.0 Applicability

This rule applies to the outdoor handling, storage, and transport of any bulk material. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The definitions of terms in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

In addition to the exemptions established in Rule 8011 the following exemptions are established for this Rule:

4.1 Any outdoor storage, handling, or transport of bulk materials which would be damaged by wetting with water or by the application of chemical/organic dust suppressants, provided owners/operators demonstrate to the satisfaction of the APCO and USEPA that none of the control measures specified in Table 8031-1 of this rule can be implemented to limit visible dust emissions (VDE) to 20% opacity or provide a stabilized surface as defined in Rule 8011.

4.2 The spreading of landfill daily cover.

4.3 Transport of a bulk material in an outdoor area for a distance of twelve feet or less with the use of a chute or conveyor device.

4.4 Outdoor storage of any bulk material at a single site where no material is actively being added or removed at the end of the workday or overnight and where the total material stored is less than 100 cubic yards.

4.5 Agricultural sources subject to, or specifically exempt from, the requirements of Rule 8081 (Agricultural Sources).

5.0 Requirements

No person shall perform any outdoor handling, storage, and transport of bulk materials unless the appropriate requirements in Table 8031-1 of this rule are sufficiently implemented to limit VDE to 20% opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

TABLE 8031-1 – CONTROL MEASURES FOR BULK MATERIALS
A. HANDLING OF BULK MATERIALS: A1 When handling bulk materials, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity or; A2 Construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, control measure A1 shall also be implemented
B. STORAGE OF BULK MATERIALS: B1 When storing bulk materials, comply with the conditions for a stabilized surface as defined in Rule 8011; or B2 Cover bulk materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action; or B3 Construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, apply water or chemical/organic stabilizers/suppressants to limit VDE to 20% opacity or; B4 Utilize a 3-sided structure with a height at least equal to the height of the storage pile and with less than 50% porosity.
C. ON-SITE TRANSPORTING OF BULK MATERIALS: C1 Limit vehicular speed while traveling on the work site sufficient to limit VDE to 20% opacity; or C2 Load all haul trucks such that the freeboard is not less than six (6) inches when material is transported across any paved public access road sufficient to limit VDE to 20% opacity, or C3 Apply water to the top of the load sufficient to limit VDE to 20% opacity, or C4 Cover haul trucks with a tarp or other suitable cover.
D. OFF-SITE TRANSPORTING OF BULK MATERIALS: D1 Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site; and D2 Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and D3 Load all haul trucks such that the freeboard is not less than six (6) inches when material is transported on any paved public access road, and apply water to the top of the load sufficient to limit VDE to 20% opacity; or cover haul trucks with a tarp or other suitable cover.

TABLE 8031-1 – CONTROL MEASURES FOR BULK MATERIALS
E. OUTDOOR TRANSPORT OF BULK MATERIALS WITH A CHUTE OR CONVEYOR: E1 Fully enclose the chute or conveyor; or E2 Operate water spray equipment that sufficiently wets materials to limit VDE to 20% opacity; or E3 Wash separated or screened materials to remove conveyed materials having an aerodynamic diameter of 10 microns or less sufficient to limit VDE to 20% opacity.

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping

An owner/operator shall comply with the recordkeeping requirements specified in Rule 8011.

This page intentionally blank.

RULE 8041 CARRYOUT AND TRACKOUT (Adopted November 15, 2001; Amended August 19, 2004)

1.0 Purpose

The purpose of this rule is to prevent or limit fugitive dust emissions from carryout and trackout.

2.0 Applicability

This rule applies to all sites that are subject to any of the following rules where carryout or trackout has occurred or may occur on paved public roads or the paved shoulders of a paved public road: Rules 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), 8031 (Bulk Materials), 8061 (Paved and Unpaved Roads), and 8071 (Unpaved Vehicle and Equipment Traffic Areas) The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The definitions of terms in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

In addition to the exemptions established in Rule 8011, the following exemption is also established for this rule.

4.1 Carryout and trackout caused by an Agricultural Source.

5.0 Requirements

An owner/operator shall sufficiently prevent or cleanup carryout and trackout as specified in sections 5.1 through 5.9. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII. The use of blower devices, or dry rotary brushes or brooms, for removal of carryout and trackout on public roads is expressly prohibited. The removal of carryout and trackout from paved public roads does not exempt an owner/operator from obtaining state or local agency permits which may be required for the cleanup of mud and dirt on paved public roads.

5.1 Owners/operators shall remove all visible carryout and trackout at the end of each workday.

5.2 An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall take the actions for carryout and trackout as specified in Section 5.8.

5.3 An owner/operator subject to the requirements of a Dust Control Plan as specified in Rule 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities) shall take the actions for carryout and trackout as specified in Section 5.8.

5.4 Within urban areas, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site.

5.5 Within rural areas, construction projects 10 acres or more in size, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site.

5.6 For sites with paved interior roads, an owner/operator shall prevent and mitigate carryout and trackout as specified in Section 5.8.

5.7 Cleanup of carryout and trackout shall be accomplished by:

5.7.1 Manually sweeping and picking-up; or

5.7.2 Operating a rotary brush or broom accompanied or preceded by sufficient wetting to limit VDE to 20% opacity; or

5.7.3 Operating a PM10-efficient street sweeper that has a pick-up efficiency of at least 80 percent as defined in Rule 8011 (General Requirements).

5.7.4 Flushing with water, if curbs or gutters are not present and where the use of water will not result as a source of trackout material or result in adverse impacts on storm water drainage systems or violate any National Pollutant Discharge Elimination System permit program.

5.8 Carryout and trackout shall be prevented and mitigated as specified in sections 5.8.1 and 5.8.2:

5.8.1 Prevented by:

5.8.1.1 Installing and maintaining a trackout control device meeting the specifications contained in Section 5.9 at all access points to paved public roads; or

5.8.1.2 Utilizing a carryout and trackout prevention procedure which has been demonstrated to the satisfaction of the APCO and US EPA as achieving an equivalent or greater level of control than specified in Section 5.8.1.1.

5.8.2 Mitigated by:

In the event that measures specified in Section 5.8.1 are insufficient to prevent carryout and trackout, removal of any carryout and trackout must be accomplished within one-half hour of the generation of such carryout and trackout.

5.9 Specifications for Section 5.8.1 shall meet the following conditions or combination of conditions:

5.9.1 For use of grizzlies or other similar devices designed to removed dirt/mud from tires, the devices shall extend from the intersection with the public paved road surface for a distance of at least 25 feet, and cover the full width of the unpaved exit surface for at least 25 feet.

5.9.2 For use of gravel pads, coverage with gravel shall be at least one inch or larger in diameter and at least 3 inches deep, shall extend from the intersection with the public paved road surface for a distance of at least 50 feet, and cover the full width of the unpaved exit surface for at least 50 feet. Any gravel deposited onto a public paved road travel lane or shoulder must be removed at the end of the workday or immediately following the last vehicle using the gravel pad, or at least once every 24 hours, whichever occurs first.

5.9.3 For use of paving, paved surfaces shall extend from the intersection with the public paved road surface for a distance of at least 100 feet, and cover the full width of the unpaved access road for that distance to allow mud and dirt to drop off of vehicles before exiting the site. Mud and dirt deposits accumulating on paved interior roads shall be removed with sufficient frequency, but not less frequently than once per workday, to prevent carryout and trackout onto paved public roads

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping

An owner/operator shall comply with the recordkeeping requirements specified in Rule 8011.

RULE 8051 OPEN AREAS (Adopted November 15, 2001; Amended August 19, 2004)

1.0 Purpose

The purpose of this rule is to limit fugitive dust emissions from open areas.

2.0 Applicability

This rule applies to any open area having 0.5 acres or more within urban areas, or 3.0 acres or more within rural areas; and contains at least 1000 square feet of disturbed surface area. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The definitions of terms in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

The exemptions established in Rule 8011 are also established for this rule.

4.1. Any weed abatement activity utilizing mowing and/or cutting, and which leaves at least three inches of stubble immediately after such mowing/cutting has occurred.

5.0 Requirements

Whenever open areas are disturbed or vehicles are used in open areas, an owner/operator shall implement one or a combination of control measures indicated in Table 8051-1 to comply with the conditions of a stabilized surface at all times and to limit VDE to 20% opacity. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII

TABLE 8051-1 SOURCE TYPE AND CONTROL MEASURES FOR OPEN AREAS	
A.	OPEN AREAS: Implement, apply, maintain, and reapply if necessary, at least one or a combination of the following control measures to comply at all times with the conditions for a stabilized surface and limit VDE to 20% opacity as defined in Rule 8011: A1 Apply and maintain water or dust suppressant(s) to all unvegetated areas; or A2 Establish vegetation on all previously disturbed areas; or A3 Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants.
B.	VEHICLE USE IN OPEN AREAS: Upon evidence of trespass, prevent unauthorized vehicle access by: Posting "No Trespassing" signs or installing physical barriers such as fences, gates, posts, and/or other appropriate barriers to effectively prevent access to the area.

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping

An owner/operator shall comply with the recordkeeping requirements specified in Rule 8011.

RULE 8061 PAVED AND UNPAVED ROADS (Adopted November 15, 2001; Amended August 19, 2004)

1.0 Purpose

The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria.

2.0 Applicability

This rule applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The definitions of terms in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

In addition to the exemptions established in Rule 8011, the following exemptions are established for this Rule:

4.1 Any unpaved road segment with less than 26 annual average daily vehicle trips (AADT).

4.1.1 This exemption shall not apply to Section 5.2.3 of this rule.

4.1.2 An owner/operator of any unpaved road segment with 26 or more AADT must provide estimated or actual vehicle trip data to the APCO by July 1, 2005.

4.2 Maintenance and resurfacing of existing paved roads does not apply to section 5.2 of this rule.

4.3 Agricultural sources subject to, or specifically exempt from, Rule 8081 (Agricultural Sources)

4.4 Emergency activities performed to ensure public health and safety as specified in Rule 8011, section 4.1.

4.5 Equipment used to remove debris beyond the capabilities of PM10-efficient street sweepers.

5.0 Requirements

In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

5.1 Paved Roads

5.1.1 New or Modified Paved Roads:

5.1.1.1 An owner/operator having jurisdiction over, or ownership of, public or private paved roads shall construct, or require to be constructed, all new or modified paved roads in conformance with the American Association of State Highway and Transportation Officials (AASHTO) guidelines for width of shoulders and for median shoulders as specified in section 5.1.1.2 of this rule as specified below:

5.1.1.1.1 New paved roads or modifications to existing paved roads with projected annual average daily vehicle trips of 500 vehicles or more shall be constructed with paved shoulders that meet following widths:

Annual Average Daily Vehicle Trips (AADT)	Minimum Paved or Stabilized Shoulder Width
500-3000	4 feet or limit of right-of-way, whichever is the lesser
Greater than 3000	8 feet or limit of right-of-way, whichever is the lesser

5.1.1.1.2 A curbing adjacent to and contiguous with the travel lane or paved shoulder of a road may be constructed, in lieu of meeting the paved shoulder width standard in Section 5.1.1.1.1

5.1.1.1.3 Intersections, auxiliary entry lanes, and auxiliary exit lanes may be constructed adjacent to and contiguous with the roadway, in lieu of meeting the paved shoulder width standard in Section 5.1.1.1.1

5.1.1.1.4 Where the requirements specified in Section 5.1.1.1.1 are shown to conflict with the requirements of the California Environmental

Quality Act (CEQA) and National Environmental Policy Act (NEPA) with respect to determinations regarding environmental, cultural, archaeological, historical, or other considerations addressed in such documents, an owner/operator is exempt from the paved shoulder width requirements specified in Section 5.1.1.1.1 of this rule.

5.1.1.2 Whenever any paved road which has projected annual average daily vehicle trips of 500 or more is constructed, or modified with medians, the medians shall be constructed in conformance with the AASHTO guidelines for width of median shoulders, with paved shoulders having a minimum width of four feet adjacent to the traffic lanes unless:

5.1.1.2.1 The medians of roads having speed limits set at or below 45 miles per hour are constructed with curbing; or

5.1.1.2.2 The medians are landscaped and maintained with grass or other vegetative ground cover or chemical/organic dust suppressants/stabilizers to comply with the definition of stabilized surface in Rule 8011.

5.1.2 PM10-Efficient Street Sweepers:

Each city, county, or state agency with primary responsibility for any existing paved road within an urban area shall take the following actions:

5.1.2.1 Effective July 1, 2005, all purchases of street sweeper equipment by such agency or their contractor(s) shall be only PM10-efficient street sweepers.

5.1.2.2 The utilization of PM10-efficient street sweepers by an agency or its contractor(s) shall be prioritized for use on routine street sweeper route(s) with paved curbs which have been determined by an agency to have the greatest actual or potential for dirt and silt loadings.

5.1.2.3 Any agency which conducts or contracts for routine street sweeping activities or services shall purchase, or require their contractor(s) to purchase and place into service, at least one PM10-efficient street sweeper not later than July 1, 2008.

5.1.2.4 Any street sweeping routes with paved curbs covered by PM10-efficient street sweepers pursuant to Section 5.1.2.2 shall conduct routine street sweeping operations over such routes at a frequency of not less than once per month.

5.1.2.5 All PM10-efficient street sweepers shall be operated and maintained according to manufacturer specifications.

5.1.2.6 If the provisions of Sections 5.1.2.1 or 5.1.2.3 cannot be met due to budgetary constraints, the agency may submit a statement of financial hardship to, and approved by, the APCO and US EPA.

5.1.3 Post-Event Clean-Up

Each city, county, or state agency with primary responsibility for any existing paved road shall take the following actions upon discovery by the city, county or state agency of accumulations of mud/dirt [event material] of at least 1 inch thickness over an area of at least 50 square feet on road surface travel lanes as a result of wind/storm/water erosion and runoff:

5.1.3.1 Within 24 hours of discovery by the city, county or state agency of such condition, remove the mud/dirt from the travel lanes or restrict vehicles from traveling over said mud/dirt until such time as the material can be removed from the travel lanes.

5.1.3.2 Follow dust minimizing practices during the removal of such mud/dirt from the travel lanes.

5.1.3.3 In the event unsafe travel conditions would result from restricting vehicle traffic pursuant to Section 5.1.3.1, and removal of such material is not possible within 72 hours due to weekend or holiday conditions, the provisions of Section 5.1.3.1 can be extended upon notification to and approval by the APCO.

5.1.3.4 As soon a practicable, removal of mud/dirt from paved shoulders should also occur through the use of dust minimizing practices.

5.2 Unpaved Road Segment

5.2.1. On any unpaved road segment with 26 or more AADT, the owner/operator shall limit VDE to 20% opacity and comply with the

requirements of a stabilized unpaved road by application and/or re-application/maintenance of at least one of the following control measures, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements):

5.2.1.1 Watering;

5.2.1.2 Uniform layer of washed gravel;

5.2.1.3 Chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications;

5.2.1.4 Roadmix;

5.2.1.5 Paving;

5.2.1.6 Any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

5.2.2 Within an urban area, the construction of any new unpaved road is prohibited unless the road meets the definition of a temporary unpaved road as specified in section 3.60 of Rule 8011.

5.2.3 Requirements for Existing Unpaved Public Roads in Urban and Rural Areas:

5.2.3.1 Each city, county, or state agency with primary responsibility for any existing unpaved road within urban and rural areas shall take the following actions:

5.2.3.1.1 By January 1, 2005 provide the District with a list of all unpaved roads under its jurisdiction in any urban area(s), including data on length of, and AADT on, each unpaved road segment.

5.2.3.1.2 By July 1, 2005 provide the District with a list of all unpaved roads under its jurisdiction in any rural area, including data on length of, and AADT on, each unpaved road segment.

5.2.3.1.3 By January 1, 2010, pave an average of 20% annually of all unpaved roads identified in Section 5.2.3.1.1 up to a maximum of 5 cumulative miles within any one

urban area, with priority given to roads with the highest AADT levels. In meeting this requirement, each jurisdiction must show incremental progress.

5.2.3.1.4 By April 1 of each year, 2006 through 2010, submit to the District the total number of unpaved road miles which were paved during the previous calendar year, and the percentage of cumulative miles paved relative to the list provided pursuant to Section 5.2.3.1.1.

5.2.3.1.5 If the provisions of Section 5.2.3.1.3 cannot be met due to budgetary constraints, the agency may submit a statement of financial hardship to, and approved by, the APCO and US EPA.

5.2.4 Requirements for Existing Paved Public Roads with Unpaved Shoulders in Urban and Rural Areas:

5.2.4.1 Each city, county, or state agency with primary responsibility for any existing paved public road with unpaved shoulders in urban and rural areas shall take the following actions:

5.2.4.1.1 By January 1, 2005 provide the District with a list of all paved public roads with unpaved shoulders in any urban and rural area, including data on length of, and AADT on, each segment of paved public road with unpaved shoulders.

5.2.4.1.2 In Urban areas, by January 1, 2010, pave or stabilize 4-foot shoulders on 50% of existing paved public roads with the highest AADT in urban areas identified in Section 5.2.4.1.1. In meeting this requirement, each jurisdiction must show incremental progress.

5.2.4.1.3 In Rural areas, by January 1, 2010, pave or stabilize 4-foot shoulders on 25% of existing paved public roads with the highest AADT in rural areas identified in Section 5.2.4.1.1. In meeting this requirement, each jurisdiction must show incremental progress.

5.2.4.1.4 If the provisions of Sections 5.2.4.1.2 or 5.2.4.1.3 cannot be met due to budgetary constraints, the agency may submit a statement of financial hardship to, and approved by, the APCO and US EPA.

5.2.5 Requirements for Establishing and Posting Maximum Speed Limits on Unpaved Roads

Each owner/operator shall establish a maximum speed limit of 25 mph on each unpaved road with 26 AADT or more and shall post speed limit signs, one in each direction, per mile of road segment in urban areas, and per two miles of road segment in rural areas. This provision shall become effective one year from the date of adoption of this rule amendment.

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping and Reporting

In addition to complying with the recordkeeping requirements specified in Rule 8011 and Sections 5.2.3 and 5.2.4 of this rule, city, county and state agencies responsible for the maintenance and operation of public paved and unpaved roads, shall prepare and submit a written report to the District documenting compliance with the provisions of this rule. This report shall be prepared for the years 2003 and 2004, and no less frequently than each two (2) year period thereafter. The reports shall be transmitted to the District no later than 90 days after the end of the calendar year and shall include:

6.2.1 The total miles of paved and unpaved roads under the jurisdiction of the owner or agency and the miles of roads constructed or modified during the reporting period subject to the requirements of this regulation.

6.2.2 For newly constructed or modified roads, a summary of actions taken during the reporting period to prevent or mitigate PM10 emissions, with miles specified for each type of control measure used to reduce PM10 emissions.

6.2.3 For all roads under the agency's jurisdiction, a summary of actions taken to reduce PM10 emissions from roads during the reporting period. The total miles of roads for which these procedures were enforced and the estimated traffic volume on the affected roads shall be provided.

6.2.4 Other information that may be needed by the APCO for compliance with the United States Environmental Protection Agency's requirements.

RULE 8071 UNPAVED VEHICLE/EQUIPMENT TRAFFIC AREAS (Adopted November 15, 2001; Amended September 16, 2004)

1.0 Purpose

The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas.

2.0 Applicability

This rule applies to any unpaved vehicle/equipment traffic area. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on September 16, 2004 shall take effect.

3.0 Definitions

The definitions of terms in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

In addition to the exemptions established in Rule 8011, the following exemptions are also established for this rule:

4.1 Unpaved vehicle and equipment traffic areas with less than 50 Average Annual Daily Trips (AADT).

4.2 Agricultural sources subject to, or specifically exempt from, the requirements of Rule 8081 (Agricultural Sources).

5.0 Requirements

5.1 In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII to limit Visible Dust Emissions (VDE) to 20% opacity and comply with the requirements of a stabilized unpaved road. If vehicle activity originates from and remains exclusively within an unpaved vehicle/equipment traffic area, section 5.2 may be implemented to limit VDE to 20% opacity.

5.1.1 Where 50 or more Average Annual Daily Trips (AADT) will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or re-application/maintenance of at least one of the following control measures, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements):

5.1.1.1 Watering;
5.1.1.2 Uniform layer of washed gravel;
5.1.1.3 Chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications;
5.1.1.4 Vegetative materials;
5.1.1.5 Paving;
5.1.1.6 Roadmix;
5.1.1.-7 Any other method(s) that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

5.1.2 For unpaved vehicle/equipment traffic areas with 150 VDT, or 150 VDT that are utilized intermittently for a period of 30 days or less during the calendar year, the owner/operator shall implement the control options specified in 5.1.1.1 through 5.1.1.7, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements) during the period that the unpaved vehicle/equipment traffic area is utilized.

5.1.3 On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road by the application and/or re-application/maintenance of at least one of the control measures specified sections 5.1.1.1 through 5.1.1.6, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements).

5.1.4 On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator of the unpaved area to be traveled/parked upon must notify the District at least 48 hours in advance when such a special event will occur. During the duration of the special event vehicle travel/parking, the owner/operator shall limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road by the application and/or re-application/maintenance of water or chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications.

5.2 In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII to limit Visible Dust Emissions (VDE) to 20% opacity.

5.2.1 On each day that 50 or more VDT, or 25 or more VDT with 3 or more axles, originates from within and remains exclusively within an unpaved

vehicle/equipment traffic area, the owner/operator may apply/reapply water to limit VDE to 20% opacity.

5.3 An owner/operator shall restrict access and periodically stabilize a disturbed surface area whenever a site becomes inactive to comply with the conditions for a stabilized surface as defined in Rule 8011.

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping

An owner/operator shall comply with the recordkeeping requirements specified in Rule 8011.

This page intentionally blank.

RULE 8081 AGRICULTURAL SOURCES (Adopted November 15, 2001; Amended September 16, 2004)

1.0 Purpose

The purpose of this rule is to limit fugitive dust emissions from agricultural sources.

2.0 Applicability

This rule applies to off-field agricultural sources. The provisions of this rule adopted on November 15, 2001 shall remain in effect until October 1, 2004 at which time the amendments adopted on August 19, 2004 shall take effect.

3.0 Definitions

The definitions of terms established in Rule 8011 (General Requirements) shall apply to this rule.

4.0 Exemptions

In addition to the exemptions established in Rule 8011, the following exemptions are established for this rule:

4.1 On-field agricultural sources.

4.2 Off-field agricultural sources necessary to minimize or respond to adverse effects on agricultural crops caused during freezing temperatures as declared by the National Weather Service.

4.3 Any outdoor storage, handling, or transport of bulk materials which would be damaged by wetting with water or by the application of chemical/organic dust suppressants, provided owners/operators demonstrates to the satisfaction of the APCO and USEPA, that none of the control measures specified in Table 8081-1 of this rule can be implemented to limit visible dust emissions (VDE) to 20% opacity or provide a stabilized surface as defined in Rule 8011.

4.4 Any unpaved road segment with less than 75 vehicle trips for that day. If 75 vehicle trips for that day will be exceeded, an owner/operator shall comply with the requirements of this Rule. This threshold does not apply to unpaved road segments subject to the requirements of Rule 4550 (Conservation Management Practices). Equipment with loading forks employed in the act of loading or unloading harvested commodities in the harvest location and traveling at 3 miles per hour or less are not included in the trip counts.

4.5 The felling and removal of trees from forest stands. However, the rules of Regulation VIII will apply to other timber harvest activities such as site preparation of log storage and staging areas.

4.6 Outdoor storage of any bulk material at a single site where no material is actively being added or removed and where the total material stored is less than 100 cubic yards.

4.7 Any unpaved vehicle and equipment parking and traffic area less than 1.0 acre and more than one mile from an urban area, or with less than 50 Average Annual Daily Trips (AADT) or less than 150 VDT that are utilized intermittently for a period of 30 days or less during the calendar year.

4.8 Transport of a bulk material in an outdoor area for a distance of twelve feet or less with the use of a chute or conveyor device.

5.0 Requirements

An owner/operator shall comply with Sections 5.1 through 5.3 and sufficiently implement at least one of the control measures indicated in each section of Table 8081-1 to limit VDE to 20% opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

5.1 Requirements for Bulk Materials

No person shall undertake any outdoor handling, storage, and transport of bulk materials unless the appropriate requirements in Table 8081-1 of this rule are sufficiently implemented to limit VDE to 20% opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011.

5.2 Requirements for Paved Roads and Unpaved Road Segments

5.2.1 Paved Road Segment

An owner/operator shall comply with the requirements of Rule 8061 (Paved and Unpaved Roads) regarding the construction standards for shoulder width and medians when constructing new paved roads or modifying existing paved roads.

TABLE 8081-1 CONTROL MEASURES FOR BULK MATERIALS	
A.	HANDLING OF BULK MATERIALS:
	A1 When handling bulk materials, apply water or suitable chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity or;
	A2 Construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, control measure A1 shall also be implemented.
B.	STORAGE OF BULK MATERIALS:
	B1 When storing bulk materials, comply with the conditions for a stabilized surface as defined in Rule 8011; or
	B2 Cover bulk materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action; or
	B3 Construct and maintain fences or wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, apply water or suitable chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity or;
	B4 Utilize a 3-sided structure with a height at least equal to the height of the storage pile and with less than 50% porosity.
C.	ON-SITE TRANSPORTING OF BULK MATERIALS:
	C1 Limit vehicular speed while traveling on the work site sufficient to limit VDE to 20% opacity; or
	C2 Load all haul trucks such that the freeboard is not less than six (6) inches when material is transported across any paved public access road; or
	C3 Apply water to the top of the load sufficient to limit VDE to 20% opacity; or
	C4 Cover haul trucks with a tarp or other suitable cover.
D.	OFF-SITE TRANSPORTING OF BULK MATERIALS:
	D1 Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site; and
	D2 Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and
	D3 Load all haul trucks such that the freeboard is not less than six (6) inches when material is transported on any paved public access road and apply water to the top of the load sufficient to limit VDE to 20% opacity; or cover haul trucks with a tarp or other suitable closure.
E.	OUTDOOR TRANSPORT OF BULK MATERIALS WITH A CHUTE OR CONVEYOR:
	E1 Fully enclose the chute or conveyor; or
	E2 Operate water spray equipment that sufficiently wets materials to limit VDE to 20% opacity; or
	E3 Wash separated or screened materials to remove conveyed materials having an aerodynamic diameter of 10 microns or less sufficient to limit VDE to 20% opacity.

5.2.2 Unpaved Road Segments

5.2.2.1 On each day that 75 or more vehicle daily trips (VDT), or 25 or more VDT with 3 or more axles, will occur on an unpaved road segment, the owner/operator shall limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or re-application/maintenance of at least one of the following control measures, or shall implement an approved Fugitive PM10 Management Plan as specified in section 7.0.

5.2.2.1.1 Watering;
5.2.2.1.2 Uniform layer of washed gravel;
5.2.2.1.3 Chemical/organic dust suppressants;
5.2.2.1.4 Vegetative materials;
5.2.2.1.5 Paving;
5.2.2.1.6 Roadmix;
5.2.2.1.7 Any other method(s) that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

5.3 Requirements for Unpaved Vehicle/Equipment Parking and Traffic Areas

The control measures specified in Sections 5.3.1 through 5.3.5 shall be implemented on unpaved surface areas dedicated to any vehicle and equipment parking and traffic activity in order to limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road as specified in Rule 8011. If vehicle activity remains exclusively within an unpaved vehicle/equipment traffic area, section 5.3 may be implemented to limit VDE to 20% opacity.

5.3.1 Where 50 or more AADT will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road by the application and/or reapplication/maintenance of at least one of the following control measures, or shall implement an approved Fugitive PM10 Management Plan as specified in section 7.0:

5.3.1.1 Watering
5.3.1.2 Uniform layer of washed gravel;
5.3.1.3 Chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications;
5.3.1.4 Roadmix;

5.3.1.5 Paving;

5.3.1.6 Any other method(s) that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

5.3.2 For unpaved vehicle/equipment traffic areas with 150 or more VDT, or 150 or more VDT that are utilized intermittently for a period of 30 days or less during the calendar year, the owner/operator shall implement the control options specified in 5.3.1.1 through 5.3.1.6.

5.3.3 On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall limit VDE to 20% opacity and comply with the requirements of a stabilized unpaved road by the application and/or re-application/maintenance of at least one of the control measures specified section 5.3.1.1 through 5.3.1.6.

5.3.4 On each day that 75 or more VDT, or 26 or more VDT with 3 or more axles originates from within and remains exclusively within an unpaved vehicle/equipment traffic area, the owner/operator may apply/re-apply water to limit VDE to 20% opacity.

5.3.5 An owner/operator shall restrict access and periodically stabilize a disturbed surface area whenever a site becomes inactive at the end of the workday to comply with the conditions for a stabilized unpaved road as defined in Rule 8011.

5.4 Requirements for Carryout/Trackout

The District hereby incorporates by reference California Vehicle Code section 23112-23113. This section requires material, including dirt deposited on any public highway or street to be cleaned up as specified in California Vehicle Code 23112-23113.

6.0 Administrative Requirements

6.1 Test Methods

The applicable test methods specified in Rule 8011 shall be used to determine compliance with this rule.

6.2 Recordkeeping

An owner/operator shall comply with the recordkeeping requirements specified in Rule 8011.

7.0 Fugitive PM10 Management Plan for Unpaved Roads and Unpaved Vehicle/Equipment Traffic Areas

As a compliance alternative for sections 5.2.2, 5.3.1, and 5.3.2 of this rule, an operator may implement a Fugitive PM10 Management Plan (FPMP) that is designed to achieve 50% control efficiency and has been approved by the Fresno Regional office of the United States Department of Agriculture Natural Resource Conservation Service based on guidance and criteria established by the APCO. The FPMP shall be implemented on all days that traffic exceeds, or is expected to exceed, the number of annual average daily vehicle trips or vehicle trips per day as specified in sections 5.2.2, 5.3.1, and 5.3.2 of this rule. The owner/operator remains subject to all requirements of the applicable rules of Regulation VIII that are not addressed by the FPMP. It should be noted that the FPMP is not a compliance option for any requirement for a stabilized surface as defined in Rule 8011.

7.1 An owner/operator shall provide the proposed FPMP to the local office of the USDA Resource Conservation District (RCD) via fax, mail, or in person. The RCD shall submit the proposed FPMP to the Fresno Regional Office of the NRCS, who in turn shall evaluate and approve, disapprove, or conditionally approve each proposed FPMP based on guidance and criteria established by the APCO. An FPMP shall not be considered approved until the operator has received written approval from the NRCS. The NRCS and local RCDs shall make all approved FPMPs available to the APCO and the public.

7.2 An owner/operator may submit one FPMP covering multiple unpaved roads and unpaved vehicle/equipment traffic areas.

7.3 An owner/operator shall retain a copy of an approved FPMP at the operators place of business and make it available for inspection by the APCO or his designee during normal business hours. The approved FPMP shall remain valid until the APCO notifies the owner/operator or the NRCS that it needs to be revised, or until the owner/operator notifies the NRCS that the owner/operator has permanently discontinued implementing the FPMP. The NRCS shall notify the APCO as soon as possible in the event an operator notifies the NRCS the owner/operator has permanently discontinued implementing the FPMP.

7.4 Failure to comply with the provisions of an approved FPMP is deemed to be a violation of this rule.

7.5 A FPMP shall contain all of the following information:

7.5.1 Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submittal, and implementation of the FPMP, and of person(s) responsible for the unpaved road or traffic area.

7.5.2 A plot plan or map which shows the location of each unpaved road or traffic area to be covered by the FPMP, and the total length (miles) of unpaved roads, and the total area (acres) of the unpaved traffic areas.

7.5.3 The months (and weeks, if known) of the year that vehicle traffic is expected to exceed 75 vehicle trips per day, and the types of vehicles (e.g., passenger vehicles, trucks, mobile equipment) expected on each road or traffic area. As stated above, the FPMP shall be implemented on all days that traffic exceeds, or is expected to exceed, the number of annual average daily vehicle trips or vehicle trips per day as specified in sections 5.2.2, 5.3.1, and 5.3.2 of this rule.

7.5.4 Dust suppressants, gravel, and/or vegetative materials to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and capacity of application equipment; and information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

7.5.5 A description of the condition of the treated surfaces to be achieved as a result of the use of the suppressant or other dust control material.

This page intentionally blank.

FIRSTCARBONSOLUTIONS™

Mitigation Monitoring and Reporting Program for the Tracy Village Project EIR Environmental Impact Report City of Tracy, San Joaquin County, California

Prepared for:

City of Tracy
333 Civic Center Dr.
Tracy, CA 95376
209.831.6000

Contact: Victoria Lombardo, Senior Planner

Prepared by:

FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597
925.357.2562

Contact: Mary Bean, Project Director

Report Date: April 11, 2018

THIS PAGE INTENTIONALLY LEFT BLANK

Table 1: Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Section 3.1—Aesthetics					
MM AES-3: Prior to issuance of the first building permit, the applicant shall prepare and submit an outdoor lighting plan (which includes a photometric analysis) to the City of Tracy that includes a footcandle map illustrating the amount of light from the project site at adjacent light sensitive receptors. The lighting map shall comply with the City of Tracy General Plan policies and shall include minimal levels of street; parking, building, site, and public area lighting to meet safety standards and provide direction; directional shielding for all exterior lighting; and automatic shutoff or motion sensors and/or additional standards as determined by the Community Services Department.	Review and acceptance of lighting plan and photometric analysis	Prior to issuance of first building permit	City of Tracy		
Section 3.4—Biological Resources					
MM BIO-1a: Migratory nesting bird surveys. • If tree or vegetation removal, structure demolition or ground disturbance activities are scheduled to commence during the breeding season (February 1 through August 31), pre-construction nesting bird surveys will be conducted by a qualified biologist to identify possible nesting activity. (If trees are removed and structures demolished outside the breeding season [September 1st through January 31], then the following measures are not required.) • Pre-construction surveys shall be completed no more than 30 days prior to ground disturbance, structure demolition, or tree removal within the TVDP site and will include a 100-ft buffer area of the TVDP site to be surveyed. • A construction-free buffer of suitable dimensions must be established around any active raptor and migratory bird nests (up to 250 feet for raptors, depending on the location and species) for the duration of the TVDP construction or until it has been determined that the chicks have fledged and are independent of their parents.	City review of biologist bird survey results	No more than 30 days prior to initial ground disturbance	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
MM BIO-1b: Bats **BAT 1. Bat Habitat Assessment** • A bat habitat assessment by a qualified biologist shall be conducted for all mature trees and in all structures that will be removed as a result of the TVDP project to determine whether they provide suitable roosting or breeding habitat for bats and, to the extent possible, whether they are currently occupied. If the biologist determines that trees and structures on the site do not provide suitable habitat for bats, then no further mitigations would be required. However, if the biologist determines that bats are present or that trees and/or structures provide potentially suitable habitat for bats, and even if currently not occupied, they could be occupied in the future, the following additional mitigations will be implemented.	Habitat assessment review by City	Prior to initial ground disturbance	City of Tracy		
BAT 2. Tree Removal Monitoring • Should the habitat assessment conclude that any trees proposed for removal provide potential roosting, hibernation and/or maternity habitat for bats, tree removal shall only be conducted during seasonal periods of bat activity, i.e., September through mid-October and March through mid-April, under the supervision of a qualified biologist. Tree removals shall occur via a two-phased removal conducted over two consecutive days. In the afternoon of the first day, a tree cutter using chainsaws only shall remove limbs and branches. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree shall be removed.	Supervision by a qualified biologist	September through mid-October and March through mid-April	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
BAT 3. Preconstruction Survey • Should the habitat assessment survey confirm that structures to be demolished on the site provide potential roosting, hibernation and/or maternity habitat for bats, even if bats are not currently occupying them, then a preconstruction survey for bats will be conducted within 30 days prior to structure demolition. If no bats are found present, then structures may be demolished. If bats are found present, bats may be safely evicted during two seasonal periods of bat activity. In this area, generally bats can be evicted safely between approximately March 1st (or when evening temperatures are above 45°F and rainfall less than ½" in 24 hours occurs), and April 15th, prior to parturition of pups. The next acceptable period is after pups become self-sufficiently volant, generally accepted to be between September 1st through October 15th (or prior to evening temperatures dropping below 45°F and onset of rainfall greater than ½" in 24 hours). • There are two methods for evicting bats from occupied structures. The first, utilized mainly when the building is in good condition and the work is feasible, is "humane eviction," or "bat exclusion," which relies on the bats' own ability to fly out of the roost. In this method, all potential, but currently unused entry points into the structure are sealed. The active entry points are fitted with one-way exits, which are left in place 7-10 days to allow all bats to emerge normally during nightly feeding flights. The one-way exits are then removed and the remaining openings sealed until demolition if it will occur more than 30 days after demolition. If the interval between successful eviction and demolition will be short (less than 4 weeks), the one-way exits may often be left in place until demolition. This eviction work must be conducted by, or under direct supervision or instruction, of a qualified biologist.	Survey results; observation of on-site inspection/monitoring	No more than 30 days prior to structure demolition	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
• In some cases, the physical condition of the structure is so poor that humane eviction as described above is not possible. If that occurs, the building must be carefully, and selectively dismantled in such a way that the internal environment is altered to a degree sufficient to cause bats to abandon the roost and not return. This must occur under the guidance bat biologist qualified in partial dismantling of structures for bat eviction.					
Section 3.5—Cultural Resources					
MM CUL-1: If a potentially significant cultural resource is encountered during Tracy Village Development Plan (TVDP) construction, all construction activities within a 50-foot radius of the find shall cease until a qualified archaeologist determines whether the resource requires further study. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Cultural resources could consist of, but are not limited to, stone, wood, or shell artifacts, structural remains, privies, or historic dumpsites. Any previously undiscovered resources found during construction within the TVDP area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.	On-site inspection; provision of Section 15064.5 permit(s); copy of DPR 523 forms	During construction or in the event resources are found	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
MM CUL-3: Paleontological monitoring is recommended for any major excavations for the TVDP project that impact undisturbed sediments exceeding 10 feet in depth. In the event that fossils or fossil-bearing deposits are discovered during construction of the TVDP project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.	Review of construction specifications; on-site inspection/monitoring; provision of Section 15064.5 permit(s); review of data recovery plan	During construction or in the event resources are found	City of Tracy		
MM CUL-4: In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation	Notification of County Coroner; submittal of documentation of site inspection	In the event of discovery of any human remains during ground-disturbing activities	City of Tracy; Contra Costa County Coroner		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance: • The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission. • The descendant identified fails to make a recommendation. • The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.					
Section 3.6—Geology and Soils					
MM GEO-1: Prior to the issuance of building permits, the project applicant shall submit a soil report/geotechnical investigation to the City of Tracy for review and approval. The investigation shall be prepared by a qualified engineer and identify grading and building practices necessary to achieve compliance with the latest adopted edition of the California Building Standards Code's geologic, soils, and seismic requirements. The recommendation from the approved soil report/geotechnical investigation shall be incorporated into the project plans to ensure compliance with city and state building code standards. The City of the Tracy shall review and approve the plans, and the project applicant shall adhere to these approved plans in developing the project.	Review of site grading plan; on-site inspection	Prior to issuance of building permits	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
The types of mitigation that are anticipated for inclusion in the approval of the soil report/geotechnical investigation would include but are not limited to the following: • Remove all existing fill to competent native soil, as determined by the applicant's geologist. The geologist shall observe the fill removal to determining its extents during construction. • For grading in structural areas, perform subgrade compaction prior to fill placement, following cutting operations, and in areas left at grade as follows: - Scarify to a depth of at least 8 inches; - Moisture condition soil to at least 1 percentage point above the optimum moisture content for nonexpansive soils (PI less than 12) and 3 percentage points above the optimum moisture content for expansive soils (PI equal to or greater than 12); and - Compact the subgrade to at least 90 percent relative compaction. Compact the upper 6 inches of finish pavement subgrade to at least 95 percent relative compaction prior to aggregate base placement. • After the subgrade soil has been compacted, place and compact acceptable fill as follows: 1. Scarify to a depth of at least 8 inches; 2. Moisture condition soil to at least 1 percentage point above the optimum moisture content for nonexpansive soils (PI less than 12) and 3 percentage points above the optimum moisture content for expansive soils (PI equal to or greater than 12); and 3. Compact fill to a minimum of 90 percent relative compaction. Compact the upper 6 inches of fill in pavement areas to 95 percent relative compaction prior to aggregate base placement.					

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Section 3.8—Hazards and Hazardous Materials					
MM HAZ-3: The lake system shall be designed and managed to avoid attracting waterfowl. Design measures that may be used to discourage waterfowl include: • Avoiding large turf areas. • Managing aquatic vegetation to eliminate nesting places by cutting back foliage or using appropriate herbicides. • Prohibiting the feeding of waterfowl. • Constructing the lakes so that there are vertical edges. • Providing low fencing at the water's edge, or a narrow band of tall plants, such as cattails. • Signs posted prohibiting feeding of waterfowl in public areas of the lakefront. • HOA rules to include prohibition of feeding waterfowl in private yards, and information campaign to make residents aware of the prohibition and the safety reason for it, explaining that encouraging waterfowl to return to the site increases the potential for conflicts with aircraft using Tracy Airport. • The lake system shall be monitored and inspected by the HOA once a month to enforce and ensure the effectiveness of the methods implemented to mitigate this impact. Inspection records will be available for the City or County to inspect as needed.	Review of site and landscape plan; review of HOA inspection records	Prior to issuance of building permits; monthly inspections	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Section 3.9—Hydrology and Water Quality					
MM HYD-1a: Pursuant to the 2015 Multi-Agency Post-Construction Stormwater Standards Manual, prior to the issuance of a grading or building permit, the applicant shall submit a draft of the Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP). After City approval, the NOI and SWPPP shall be sent to the State Water Resources Control Board (SWRCB) for approval. Approval by the SWRCB is required to the issuance of a grading or building permit by the City of Tracy.	Approval of SWPPP	Prior to issuance of grading or building permits	City of Tracy		
MM HYD-1b: The City of Tracy shall verify that the applicant has filed an NOI with the SWRCB to obtain a Construction General Permit (CGP) and shall comply with all the requirements associated with the CGP to mitigate for impacts that would result from the development of the project. The SWPPP shall address stormwater management during each phase of construction. Best management practices (BMPs) shall be integrated into the SWPPP, which will be effective and result in the reduction or elimination of pollutants in stormwater discharges and the stabilization of BMPs to reduce or eliminate pollutants after construction is completed. The SWPPP shall be consistent with the applicable Regional Water Quality Control Board (RWQCB) standards and NPDES permit requirements to protect water quality over the period of construction.	Obtain CGP from the SWRCB	Prior to issuance of grading or building permits	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
MM HYD-5: The applicant is required to provide site-specific or project-specific storm drainage solutions that are consistent with the overall infrastructure approach presented in the City of Tracy's Citywide Storm Drainage Master Plan (SDMP). The City of Tracy is subject to the Phase II municipal program and has prepared a Storm Water Management Program (SWMP) to comply with the regulations (General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ). The City Department of Public Works will review the stormwater treatment plan within the TVSP to ensure compliance with the SDMP.	The City's Public Works Department will review and approve the storm drainage plan	Prior to issuance of building permits	City of Tracy's Public Works Department		
Section 3.12—Noise					
MM NOI-1a: To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project: • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. 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. • The construction contractor shall prohibit unnecessary idling of internal combustion engines. • The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise	Record in contract specifications; periodic on-site inspection and monitoring	Prior to and during construction	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
sources and noise-sensitive receptors nearest the project site during all project construction. • The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site. • The construction contractor shall ensure that all construction activities shall be limited to the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays.					
MM NOI-1b: Assuming implementation of only a 6-foot-high soundwall along the project's northern property line bordering Valpico Road, all proposed residences located within 180 feet of the centerline of Valpico Road shall include an alternate form of ventilation, such as an air conditioning system, in order to ensure that windows can remain closed for a prolonged period of time. The building plans approved by the City shall reflect this requirement. Alternatively, if the project will implement construction of an 8-foot-high soundwall along the project's northern property line bordering Valpico Road, then no additional mitigation such as an alternate form of ventilation would be required.	Review of building plans; construction of 8-foot-high soundwall	Prior to first occupancy	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Section 3.14—Public Services					
MM PS-1: Condition of Approval for the TVDP. *Tracy Village Development Project* As part of the approval process for the TVDP, the project applicant shall be required to pay the applicable development impact fee as a Condition of Approval for the TVDP. *Residential Annexation Area* No mitigation is necessary.	Payment of development impact fee	Prior to issuance of building permits	City of Tracy		
Section 3.16—Transportation and Traffic					
MM TRANS-1a: Install a signal, optimize cycle lengths and splits, add a separate northbound left-turn pocket, add a separate right-turn pocket, and add a separate eastbound left-turn pocket at the Lammers Road/Old Schulte Road (Intersection #1). The City has recently approved the installation of this interim improvement at the intersection and the intersection would operate acceptable at LOS A in the AM peak hour and LOS A in the PM peak hour. Because this improvement was previously identified for other approved projects (Ellis and Cordes Ranch), this background improvement is already funded. As a result, the project would not contribute funding to this improvement. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Project Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. Under this scenario, the TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.	Installation of traffic signal, optimization of cycle lengths and splits, addition of turn pockets	Prior to issuance of building permits	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
MM TRANS-1b: The City has recently approved the widening of Corral Hollow Road to four lanes from Parkside Drive to Linne Road, including the addition of turn lanes and signalization of the Corral Hollow/Valpico Road intersection. The improvements are identified in the City TMP. Prior to issuance of a building permit, the project would pay the City Traffic Impact Fees. With these improvements, the intersection would operate at an acceptable LOS A in the AM and in the PM peak hour.	Pay City of Tracy traffic impact fees	Prior to issuance of building permit	City of Tracy		
MM TRANS-2a: The addition of project traffic causes the intersection of Lammers Road/Valpico Road (Intersection #2) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS C and D with the following improvement: Add a separate westbound right-turn lane, and a shared westbound left-turn and through lane. The westbound right-turn phase will be overlapped with the southbound left-turn phase. The TVDP Applicant shall install this improvement with prior to the issuance of the first building permit. Because this improvement is identified in the Tracy TMP, this improvement is eligible to receive fee credits via the City's TIF upon completion of construction and acceptance by the City. This project improvement will supplement background improvements previously identified for another approved project (Cordes Ranch) which includes installation of a signal and a southbound left turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed.	Addition of separate westbound right-turn lane; addition of shared westbound left-turn and through lane	Prior to issuance of building permit	City of Tracy		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
MM TRANS-2b: The addition of project traffic causes the intersection of Corral Hollow Road/Linne Road (Intersection #7) to add delay and continue to deteriorate and operate at LOS F in both the AM and PM peak hours. The intersection would operate at acceptable LOS B and D with the following improvements: Add a southbound through lane, and add a northbound through lane, and add a separate westbound right-turn lane. Improvements shall be constructed at the railroad crossing gates. This project improvement will supplement background improvements previously identified for other approved projects (Ellis and Tracy Hills) which includes installation of a signal, the addition of one northbound channelized right-turn lane, and the addition of one southbound left-turn lane. However, if any of the previously approved projects do not develop or an application for a building permit is not submitted before the TVDP submits an application, the TVDP Applicant shall install the full Background Conditions Plus Project improvements, which will include the Background Base Line improvements. The TVDP Applicant will be reimbursed for such improvements through a Business Improvement District once the project is constructed. This Project improvement is required by the Public Utilities Commission because vehicle queues will spill across the railroad tracks and will cause safety concerns for train traffic. This improvement is a partial TMP improvement and shall be partially funded by the City TIF. The City Engineer shall, at the time the tentative map is prepared, identify the non-TMP improvements. Any costs related to non-TMP improvements are the responsibility of the applicant and other approved projects listed above.	Addition of a southbound through lane; addition of a northbound through lane; addition of a separate westbound right-turn lane	Prior to issuance of building permits	City of Tracy Public Utilities Commission		

Table 1 (cont.): Tracy Village Project EIR Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
The TVDP Applicant shall, in collaboration with the City Engineer and UPRR/PUC, commence with an engineering design process to install the improvements identified. This design process shall commence immediately following approval of this Project Application by the City of Tracy. Because approval by UPRR/PUC is required before this improvement can be installed, the project impact will remain significant and unavoidable.					
MM TRANS-3: Prior to the issuance of a building permit, the Applicant shall pay Traffic Impact Fees to the City of Tracy to account for the Cumulative Traffic Impacts. To address cumulative impacts to Intersection #2, the applicant shall install a channelized westbound right turn lane, a second southbound left turn pocket, an eastbound right turn overlap phase, and a northbound right turn overlap phase. These improvements are in addition to the TMP improvements. The applicant shall fund these improvements.	Payment of traffic impact fees Installation of a channelized westbound right turn lane; a second southbound left turn pocket; an eastbound right turn overlap phase; and a northbound right turn overlap phase	Prior to issuance of building permit	City of Tracy		
Section 3.17—Utilities and Service Systems					
MM USS-1: The developer will provide a proportional share of required funding to the City for the acquisition, treatment and delivery of treated potable and recycled water supplies to the proposed project area.	Pay proportional share of funding	Prior to issuance of building permit	City of Tracy		

THIS PAGE INTENTIONALLY LEFT BLANK

RESOLUTION 2018-_____

RECOMMENDING THAT THE CITY COUNCIL EXECUTE AN APPLICATION TO LAFCO FOR ANNEXATION/PREZONING OF THE 590 TRACY VILLAGE DEVELOPMENT PROJECT LOTS AND 42 ADJACENT LOTS (A/P13-0002), APPROVE THE TRACY VILLAGE SPECIFIC PLAN (SPA18-0001), APPROVE A TENTATIVE SUBDIVISION MAP (TSM17-0003) FOR THE TRACY VILLAGE DEVELOPMENT PROJECT, AND CERTIFY THE ENVIRONMENTAL IMPACT REPORT FOR THE TRACY VILLAGE DEVELOPMENT PROJECT

WHEREAS, Applications have been filed or initiated for development of a 135-acre gated, age-restricted residential community (Tracy Village) located on the south side of Valpico Road, East of Corral Hollow Road. The project proposes annexation/prezoning of the lands to the City, and includes a Specific Plan and Tentative Subdivision Map on Assessor's Parcel Numbers 244-040-01, and 244-030-01 and 02. Additionally, the project includes the annexation/prezoning to Residential Estate of 42 lots currently located in unincorporated San Joaquin County, situated immediately west of the Tracy Village project site along Corral Hollow Road and north of the Tracy Village project site along Valpico Road, consisting of Assessor's Parcel Numbers 244-030-03 through 244-030-022 and 242-050-01 through 242-050-021, and 242-040-29, and

WHEREAS, The subject Tracy Village property is designated Active Adult Residential by the City of Tracy General Plan, is well suited for residential development, and promotes a compact development pattern that includes up to 600 residential lots, a community center, and related open space and infrastructure improvements. The project will also include a man-made lake system to provide a focal aesthetic feature for the community, serve as the primary drainage conveyance and peak attenuation/storage facility, and provide water quality treatment for urban storm water runoff, and

WHEREAS, The annexation and prezoning to Residential Estate of the additional 42 lots of record to the City will provide for the logical, sequential extension of the City limits in conjunction with the annexation and prezoning of the Tracy Village project site. The majority of the lots are developed with single family residences. The proposed prezoning for the properties is Residential Estate, which reflects the type and intensity of residential development on the lots, and permits single family residential development on the undeveloped sites, and

WHEREAS, The Project is consistent with General Plan Land Use and Housing Goals and Policies, including: maintaining a Sphere of Influence that is consistent with the long-term land use vision of the General Plan; encouraging residential growth that follows an orderly pattern with initial expansion in Secondary Residential Growth Areas; provision of residential neighborhoods that contain a mix of housing types, including single family homes on a range of lot sizes; and promotion of efficient residential development patterns and orderly expansion of residential areas to maximize the use of existing public services and infrastructure, and

WHEREAS, The Project has been evaluated in accordance with California Environmental Quality Act (CEQA) Guidelines, and an Environmental Impact Report has been prepared and is proposed for certification, and

WHEREAS, The Planning Commission conducted a noticed public hearing to receive public input and review for the Project on April 11, 2018;

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission as follows:

1. Environmental Impact Report

   A. The project was evaluated under an Environmental Impact Report (EIR) which evaluated potential environmental impacts associated with project development. Based on the EIR analysis, a series of mitigation measures has been identified which would ensure mitigation of potentially significant environmental impacts to levels of insignificance. These include mitigation in the areas of air quality, geology, cultural resources, hydrology, land use, traffic/transportation, utilities and cumulative impacts. A statement of overriding considerations has been prepared to address air quality impacts.

   B. The Planning Commission recommends that the City Council certify the project EIR, attached to the staff report accompanying this resolution and incorporated herein by reference.

2. Annexation/Prezoning (Application Number A/P13-0001)

   A. The project proposes that the City Council apply to LAFCO for annexation and prezoning of the Tracy Village project site and the adjoining 42 lots of record.

   B. The Planning Commission recommends that the City Council execute Application Number A/P13-0001 for annexation/prezoning of the Tracy Village project site and the adjoining 42 lots of record.

3. Specific Plan (Application Number SPA18-001)

   A. The Specific Plan is consistent with the General Plan, because the permitted uses of the Specific Plan's Residential uses are allowed within the General Plan designation of Active Adult Residential and are consistent with the goals and policies of the Housing Element. Also, the Specific Plan's Design Standards and Guidelines, particularly related to siting requirements (site planning, architecture, and parking) and design standards (infrastructure, auxiliary site features, fencing and walls) are consistent with Land Use and Community Character Element goals and policies.

   B. The Specific Plan includes a finance and implementation chapter that addresses Tracy Village development costs and developer responsibilities for project maintenance. The project will also be subject to payment of applicable development impact fees and other infrastructure mitigation requirements to mitigate the Project's fair share of infrastructure costs required by the City's infrastructure master plans.

   C. The Specific Plan also addresses the annexation and zoning/prezoning of the 42 adjacent lots, utilizing the Residential Estate zone development standards of the Tracy Municipal Code.

D. The Planning Commission recommends that the City Council approve the Specific Plan for the project, Specific Plan application number 18-0001, contained in Attachment A, attached to the staff report accompanying this resolution and incorporated herein by reference.

4. Tentative Subdivision Map

A. The Project includes an initial Tentative Subdivision Map that provides for creation of a master lotting program that will facilitate phased development of the project site.

B. The Planning Commission recommends that the City Council approve the Tentative Subdivision Map, TSM17-0003, contained in Attachment B, attached to the staff report accompanying this resolution and incorporated herein by reference, based on the following findings:

1. The project is a Vesting Tentative Subdivision Map to create 590 single-family dwelling units and common area spaces on approximately 135 acres, with an overall density of approximately 4.4 dwelling units per gross acre, which is consistent with the amended General Plan land use and density requirements.

2. The proposed map amendment is consistent with the General Plan, and Title 12, the Subdivision Ordinance, of the Tracy Municipal Code. The General Plan designation of the property is Active Adult Residential.

3. The site is physically suitable for the type of development, as the site is virtually flat and the characteristically high clay content of Tracy's soils may require amendments and treatment for proposed landscaping, foundations, and other surface and utility work. The physical qualities of the property make it suitable for residential development and thre proposed recreational amenities in accordance with City standards.

4. The site is physically suitable for the proposed density of development. Traffic circulation is designed in accordance with City standards for the proposed density to ensure adequate traffic service levels are met.

5. The design of the subdivision or the proposed improvements will not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat. The Tracy Village EIR was completed to analyze the potential impacts of the project.

6. The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.

7. The project complies with all other applicable ordinances, regulations and guidelines of the City, including but not limited to, the local floodplain ordinance. The subject property is not located within any floodplain and the project, with conditions (attached hereto as Exhibit 1), will meet all applicable City design and improvement standards.

8. All the public facilities necessary to serve the subdivision will be in place prior to the issuance of building permits. All the public facilities necessary to serve the subdivision or mitigate the impacts created by the subdivision will be assured through a subdivision improvement agreement prior to the approval of a final map.

* * * * * * * * * * * * * * *

The foregoing Resolution 2018-_____ was adopted by the Planning Commission on the 11th day of April, 2018, by the following vote:

AYES: COMMISSION MEMBERS:
NOES: COMMISSION MEMBERS:
ABSENT: COMMISSION MEMBERS:
ABSTAIN: COMMISSION MEMBERS:

_____
CHAIR

ATTEST:

_____
STAFF LIAISON

City of Tracy
Conditions of Approval

Tracy Village
Application Number (Tract 3917)
April 11, 2018

These Conditions of Approval shall apply to the real property described as the Tracy Village Development. The Tracy Village Development Project is proposed as a gated community consisting of 590 single-family detached residential homes, and would include three man-made lakes totaling approximately 10 acres, along with a community recreation center with pool, spa and bocce courts, open space and trails/pathways (Assessor's Parcel Number 244-040-01 and 244-030-01 and 02), located on the south side of Valpico Road, east of Corral Hollow Road. The project also includes the proposed annexation into the City of an additional 42 residential properties (Residential Annexation Area) fronting Corral Hollow Road and Valpico Road, and an adjoining drainage canal north of Valpico Road (Parcel Numbers 244-030-03 through 22 and 242-050-01 through 21, and 242-040-29).

The following definitions shall apply to these Conditions of Approval:

1. "Applicant" means any person, or other legal entity, defined as a "Developer."

2. "City Engineer" means the City Engineer of the City of Tracy, or any other duly licensed engineer designated by the City Manager, or the Development Services Director, or the City Engineer to perform the duties set forth herein.

3. "City Regulations" means all written laws, rules and policies established by the City, including those set forth in the City of Tracy General Plan (also known as Urban Management Plan), the Tracy Municipal Code, ordinances, resolutions, policies, procedures, and the City's Design documents (the Streets and Utilities Standard Plans, Design Standards, Parks and Streetscape Standard Plans, Standard Specifications, and Manual of Storm Water Quality Control Standards for New Development and Redevelopment, and Relevant Public Facilities Master Plans).

4. "Conditions of Approval" shall mean the conditions of approval applicable to the Tracy Village Development project. The Conditions of Approval shall specifically include all Development Services Department, including Planning, Engineering, and Building Divisions, Finance Department, Fire Department, and Public Works conditions set forth herein.

5. "Development Services Director" means the Development Services Director of the City of Tracy, or any other person designated by the City Manager or the Development Services Director to perform the duties set forth herein.

6. "Project" means the real property consisting of approximately 135 acres located on the south side of Valpico Road, east of Corral Hollow Road, Assessor's Parcel Number 244-040-01, and 244-030-01 and 02, and 42 residential properties fronting Corral Hollow Road and Valpico Road (Parcel Numbers 244-030-03 through 22 and 242-050-01 through 21 and 242-040-29).

7. "Property" means the real property generally located on the south side of Valpico Road, east of Corral Hollow Road, Assessor's Parcel Number 244-040-01, 244-030-01 and 02, and 42 residential properties fronting Corral Hollow Road and Valpico Road (Parcel Numbers 244-030-03 through 22 and 242-050-01 through 21, and 242-040-29).

8. "Subdivider" means any person, or other legal entity, who applies to the City to divide or cause to be divided real property within the Project boundaries, or who applies to the City to develop or improve any portion of the real property within the Project boundaries. "Subdivider" also means Developer. The term "Developer" shall include all successors in interest.

B. Planning Division Conditions of Approval:

1. The Developer shall comply with all laws (federal, state, and local) related to the development of real property within the Project, including, but not limited to: the Planning and Zoning Law (Government Code sections 65000, *et seq*.), the Subdivision Map Act (Government Code sections 66410, *et seq*.), the California Environmental Quality Act (Public Resources Code sections 21000, *et seq*., "CEQA"), and the Guidelines for California Environmental Quality Act (California Administrative Code, title 14, sections 15000, *et seq*., "CEQA Guidelines").

2. Unless specifically modified by these Conditions of Approval, the Project shall comply with all City Regulations.

3. Unless specifically modified by these Conditions of Approval, the Developer shall comply with all mitigation measures identified in the Tracy Village Development Project Environmental Impact Report dated April 11, 2018.

4. Pursuant to Government Code section 66020, including section 66020(d)(1), the City HEREBY NOTIFIES the Developer that the 90-day approval period (in which the Developer may protest the imposition of any fees, dedications, reservations, or other exactions imposed on this Project by these Conditions of Approval) will begin on the date of the conditional approval of this Project. If the Developer fails to file a protest within this 90-day period, complying with all of the requirements of Government Code section 66020, the Developer will be legally barred from later challenging any such fees, dedications, reservations or other exactions.

5. Except as otherwise modified herein, all construction shall be consistent with the Vesting Tentative Subdivision Map received by the Development and Engineering Services Department on April 2, 2018 and as modified on the project site plan and Tracy Village Specific Plan dated March 2018.

6. Prior to the issuance of any building permits for the community buildings, the applicant shall provide a detailed landscape and irrigation plan consistent with City landscape and irrigation standards and the approved plan, including, but not limited to

Tracy Municipal Code Section 10.08.3560, the City's Design Goals and Standards, and the applicable Department of Water Resources Model Efficient Landscape Ordinance on private property, and the Parks and Parkways Design Manual for public property, to the satisfaction of the Development Services Director. Newly planted, on-site trees shall be a minimum size of 24-inch box and shrubs shall be a minimum size of five gallons.

7. No signs are approved as a part of this development application. Prior to the installation of any signs, the applicant shall submit a sign permit application and receive approval from the Development Services Director in accordance with City Regulations.

8. Prior to the issuance of any building permits, the developer shall document compliance with the City of Tracy Manual of Stormwater Quality Control Standards for New Development and Redevelopment (Manual) to the satisfaction of the Public Works Director, which includes the requirement for Site Design Control Measures, Source Control Measures and Treatment Control Measures under the guidelines in a project Stormwater Quality Control Plan (SWQCP). Compliance with the Manual includes, but is not limited to, addressing outdoor storage areas, trash enclosures, parking areas, any wash areas and maintenance areas. The SWQCP must conform to the content and format requirements indicated in Appendix D of the Manual and must be approved by the Public Works Director prior to issuance of grading or building permits. Stormwater treatment shall be consistent with the approved plans, subject to approval by the City's Utility Department.

9. The project shall comply with all applicable provisions of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, including Incidental Take Minimization Measures applicable at the time of permit and a pre-construction survey prior to ground disturbance, to the satisfaction of San Joaquin Council of Governments.

10. The developer shall design and construct all buildings with fire sprinklers in accordance with City Regulations to the satisfaction of the Fire Marshal.

11. Development of the 42 residential properties (Residential Annexation Area) shall be governed by the following: The majority of the 42 lots are developed with detached single-family residences, and are served by private wells and septic systems. Connection to city water and sewer systems shall be voluntary, unless new residential development (building permits for new construction) is proposed by the property owners.

12. The project shall utilize the building elevations as shown in the Tracy Village Specific Plan for the Tracy Village residential community, consistent with requirements of the City Design Standards and Guidelines and the project Planned Unit Development provisions. The final design plans shall be subject to review and approval of the Development services Director prior to first building permit issuance.

13. All of the houses that border existing developed lots on the west, east and south sides of the Tracy Village project shall be limited to a single-story in height.

14. All common area lots and open spaces, including landscaping, shall be maintained by the Project homeowner's association (HOA). Final covenants, conditions and restrictions (CC&Rs) shall be submitted to the City for review and approval prior to their recordation. The CC&Rs shall be recorded prior to City issuance of a grading plan or improvement plans for the Project.

15. All proposed Emergency Vehicle Access (EVA) points connecting the project to public streets shall be built subject to Fire Department and Engineering Division approval, including with respect to width, loads, turn radius, and use of gates or other barriers.

16. All vents, gutters, downspouts, flashing, electrical conduit, and other wall-mounted or building-attached utilities shall be painted to match the color of the adjacent surface or otherwise designed in harmony with the building exterior to the satisfaction of the Development Services Director.

17. All ground-mounted equipment, including, but not limited to air conditioning units, water heaters, gas meter and utility boxes shall be screened form view from common areas with decorative walls, fences or landscaping, to the satisfaction of the Development Services Director.

18. Prior to final inspection or certificate of occupancy, all exterior and parking area lighting shall be directed downward or shielded, to prevent glare or spray of light into any adjacent properties, to the satisfaction of the Development Services Director.

19. All PG&E transformers, phone company boxes, Fire Department connections, backflow preventers, irrigation controllers, and other on-site utilities, shall be vaulted or screened from view from any public right-of-way, behind structures or landscaping, to the satisfaction of the Development Services Director.

20. Prior to the issuance of a building permit, the Developer shall submit detailed trash and recycling enclosure plans which include the following, to the satisfaction of the Development Services Director: the walls shall be of masonry construction, at least eight feet in height, include solid metal doors, a solid roof, and an interior perimeter concrete curb. The enclosures shall include exterior color and material compatible with adjacent or nearby building exteriors of the project.

21. Prior to the issuance of a building permit, the developer shall design a recycling program consistent with State Assembly Bill 341, to the satisfaction of the Public Works Director. The program shall include or have access to enclosures with adequate space for both refuse and recycling and shall be incorporated with the trash and recycling enclosures. Each enclosure shall have signs that clearly indicate refuse and recycling locations as well as prohibition of scavenging. The program shall include recycling options or elements at the pool area and other common areas for the residents.

22. The developer shall be required to pay all applicable City impact fees, including park

fees. No fee credit shall be given for the developer private parks and facilities within the Tracy Village Development.

C. Finance Department Conditions of Approval

1. Before approval of the first building permit, the applicant shall do one of the following, subject to the approval of the Administrative Services Director:

a. CFD or other funding mechanism. The applicant shall enter into an agreement with the City, which shall be recorded against the property, which stipulates that prior to final inspection or certificate of occupancy, the applicant will form a Community Facilities District (CFD) or establish another lawful funding mechanism that is reasonably acceptable to the City for funding the on-going operational costs of providing Police services, Fire services, Public Works services and other City services to serve the Project area. Formation of the CFD shall include, but not be limited to, affirmative votes and the recordation of a Notice of Special Tax Lien. Upon successful formation, the parcels will be subject to the maximum special tax rates as outlined in the Rate and Method of Apportionment.

Or

b. Direct funding. The applicant shall enter into an agreement with the City, which shall be recorded against the property, which stipulates that prior to final inspection or certificate of occupancy, the applicant will fund a fiscal impact study to be conducted and approved by the City to determine the long term on-going operational costs of providing Police services, Fire services, Public Works services and other City services to serve the Project area, and deposit with the City an amount necessary, as reasonably determined by the City, to fund the full costs in perpetuity as identified by the approved study.

If the provisions for adequate funding of the on-going operational costs of providing Police services, Fire services, Public Works services and other City services are met prior to issuance of the first building permit for the project, subject to City Administrative Services Director review and approval, the terms of this condition shall be considered to have been met and this condition shall become null and void.

D. Building Division Conditions of Approval

1. The developer shall demonstrate that the proposed residential buildings are designed and constructed in conformance with all applicable City and State Regulations to the satisfaction of the Chief Building Official, including but not limited to CalGreen Building Standards and Title 24-11A accessibility standards.
2. The developer shall demonstrate that all improvements, in-tract and offsite, required to serve the Project Site described by the final map and Vesting Tentative Subdivision Map

are in accordance with the City Regulations. The Improvement Plans shall specifically include all the requirements specified below.

a. The Improvement Plans shall consist of the Grading and Storm Drainage Plans, Irrigation and Landscaping Plans, Composite / Joint Utility Plans, In-tract Civil and Utility Plans, Street Lighting Plans, Sewer Plans, Water Distribution Plans, Fire Hydrant distribution Plans, Signing and Striping Plans, Masonry Wall Plans, and Storm Water Plans, Curb, Sidewalk, Gutter, Fire Department EVA road and additional associated features, Road profiles and construction details, Handicap Accessibility Plans and construction details in accordance with City of Tracy Standards and Regulations.

b. Improvement plans shall also include Lake Construction plans to include but not limited to retaining walls, all applicable distribution features, piping, pumps, out-fall structures, inlets and connection to City storm water.

c. All supporting engineering calculations, soils reports, material and technical specifications, and reports related to the design of the subdivision improvements, and as required by the City Engineer shall be provided. The engineering calculations shall include calculations for determining the size and capacity of sewer, water and storm drainage facilities.

3. No Temporary or Final Building Certificate of Occupancy will be issued by the City (excluding model homes) until after the Subdivider provides reasonable documentation which demonstrates, to the satisfaction of the City Engineer, that the Subdivider has completed construction of all required public facilities for the building for which a certificate of occupancy is requested and all the improvements required in these Conditions of Approval.

4. All gates are to be accessible by the Fire Department in the case of an emergency, by means such as a Knox box, Knox padlock, Opticon sensors or other means to the satisfaction of the Fire Chief and Chief Building Official.

5. All hydrants, FDCs and DDCVs shall be provided with a minimum of three feet of clearance at all times. Therefore, landscaping shall be designed so that no adjacent plants can grow into and obscure these pieces of equipment.

E. Engineering Division Conditions of Approval

E.1.General Conditions

The Subdivider shall comply with the applicable requirements of the approved documents, technical analyses/ reports prepared for the Project listed as follows:

a) "Tracy Village Traffic Impact Impact Analysis", prepared by Kimley-Horn Associates, dated March 14, 2018, and Memorandum titled "Tracy-Village – Tentative Map Review" prepared by Kimley-Horn Associates, dated February 12, 2018 and any subsequent amendments and updates (Collectively "Traffic Report").

b) "Tracy Village Water Distribution System Hydraulic Network Analysis", prepared by West Yost Associates, dated February 16, 2018, and any subsequent amendments and updates. ("Water Report")

c) Technical Memorandum by Storm Water Consulting, Inc., dated January 8, 2018, and any subsequent amendments and updates. ("Storm Drainage Report").

E.2. Grading Permit

The Subdivider shall submit all relevant documents related to grading permit required by the applicable City Regulations and these Conditions of Approval, to the satisfaction of the City Engineer, including, but not limited to, the following:

E.2.1. Grading and Drainage Plans prepared on a 24" x 36" size polyester film (mylar). Grading and Drainage Plans shall be prepared under the supervision of, and stamped and signed by a Registered Civil Engineer.

a) The Subdivider shall obtain all applicable signatures by City departments and outside agencies (where applicable) on the mylars including signatures by Building Official and Fire Code Official prior to submitting the mylars to Engineering Division for City Engineer's approval.

b) Prior to the issuance of Grading Permit for the Project, Subdivider shall submit improvement plans and secure approval of plans from the City's Building Division, for the design of on-site sewer improvements and the Project's sewer connection.

E.2.2. Payment of the applicable Grading Permit fees which include grading plan checking and inspection fees, and other applicable fees as required by these Conditions of Approval.

E.2.3. Two (2) copies of the Project's Geo-technical /Soils Report prepared by Geo-technical Engineer.

E.2.4. Copy of recorded slope easements or construction/grading easements on adjacent properties (if applicable).

E.2.5. Three (3) sets of the Storm Water Pollution Prevention Plan (SWPPP) for the Project with a copy of the Notice of Intent (NOI) submitted to the State Water Quality Control Board (SWQCB) and any relevant documentation or written approvals from the SWQCB, including the Wastewater Discharge Identification Number (WDID#).

a. After the completion of the Project, the Subdivider is responsible for filing the Notice of Termination (NOT) required by SWQCB. The Subdivider shall provide the City with a copy of the completed Notice of Termination.

b. The cost of preparing the SWPPP, NOI and NOT, including the filing fee of the NOI and NOT, shall be paid by the Subdivider.

c. The Subdivider shall comply with all the requirements of the SWPPP and applicable Best Management Practices (BMPs) and the applicable provisions of the City's Storm Water Management Program.

E.2.6. Two (2) sets of the Project's Geotechnical Report signed and stamped by a licensed Geotechnical Engineer licensed to practice in the State of California.

a. The technical report must include relevant information related to soil types and characteristics, soil bearing capacity, pavement design recommendations, and elevation of the highest observed groundwater level.

E.2.7. A copy of the Approved Fugitive Dust and Emissions Control Plan that meets San Joaquin Valley Air Pollution Control District (SJVAPCD) as required in Mitigation Measure AQ-1 of the Mitigation Monitoring and Reporting Program of the Environmental Impact Report (EIR).

E.2.8. A copy of the approved Air Impact Assessment (AIA) with an Indirect Source Review (ISR) from San Joaquin Valley Air Pollution Control District (SJVAPCD).

E.2.9. Two (2) sets of Hydrologic and Storm Drainage Calculations for the design of the on-site storm drainage system and for determining the size of the project's storm drainage connection, as required in Conditions E.4.2.d and E.4.3.k, below.

E.3. Encroachment Permit – Subdivider shall submit all relevant documents related to encroachment permit required by the applicable City Regulations and these Conditions of Approval, to the satisfaction of the City Engineer, including, but not limited to, the following:

E.3.1. Improvement Plans prepared on a 24" x 36" size 4-mil thick polyester film (mylar), if necessary that incorporate all the requirements described in these Conditions of Approval. Improvement Plans shall be prepared under the supervision of, and stamped and signed by a Registered Civil, Traffic, Electrical, Mechanical Engineer, and Registered Landscape Architect for the relevant work.

a. The Subdivider shall obtain all applicable signatures by City departments and outside agencies (where applicable) on the mylars including signatures by Building Official and Fire Code Official prior to submitting the mylars to Engineering Division for City Engineer's approval.
E.3.2. Signed and stamped Engineer's Estimate that summarizes the cost of constructing all the public improvements shown on the Improvement Plans.

E.3.3. Traffic Control Plan shall be prepared under the supervision of, signed and stamped by a Registered Civil Engineer or Traffic Engineer licensed in the State of California, as required in Condition E.4, below.

E.3.4. Tracy's Fire Official's signature on the Improvement Plans indicating their approval for the fire service connection and fire and emergency vehicle access for the Project.

E.3.5. Signed and notarized Offsite Improvement Agreement (OIA) and Improvement Security, to guarantee completion of the identified public improvements that are necessary to serve the Project as required by these Conditions of Approval. The form and amount of Improvement Security shall be in accordance with Section 12.36.080 of the Tracy Municipal Code (TMC), and the OIA. The Subdivider's obligations in the OIA shall be deemed to be satisfied upon City Council's acceptance of the public improvements and release of the Improvement Security.

E.3.6. Check payment for the applicable of engineering review fees which include plan checking, permit and agreement processing, testing, construction inspection, and other applicable fees as required by these Conditions of Approval. The engineering review fees will be calculated based on the fee rate adopted by the City Council on May 17, 2016, per Resolution 2016-094.

E.4. Improvement Plans - Improvement Plans shall contain the design, construction details and specifications of public improvements and all subdivision improvements that are required to serve the Project. The Improvement Plans shall be drawn on a 24" x 36" size 4-mil thick polyester film (mylar) and shall be prepared under the supervision of, and stamped and signed by a Registered Civil, Traffic, Electrical, Mechanical Engineer, and Registered Landscape Architect for the relevant work. The Improvement Plans shall be completed to comply with City Regulations, these Conditions of Approval, and the following requirements:

E.4.1. The Improvement Plans including the Grading and Drainage Plans prepared in accordance with the City's Subdivision Ordinance and Design Standards. The improvement plans for all improvements (onsite and off-site) required to serve the Project in accordance with the City Design Documents, and these Conditions of Approval.

a. The Improvement Plans shall be prepared in mylar with the standard title and signature block.

b. The Subdivider shall obtain all applicable signatures by City departments and outside agencies (where applicable) on the mylar including signatures by the Chief Building Official and Fire Code Official or Fire Safety Officer, prior to submitting the mylars to Engineering Division for City Engineer's approval.

E.4.2. The improvement plans shall be prepared to specifically include, but not be limited to, the following items:

a. All existing and proposed utilities such as domestic water line, irrigation service, fire service line, storm drain, and sanitary sewer, including the size and location of the pipes.

b. All supporting engineering calculations, materials information or technical specifications, cost estimate, and technical reports.

c. Two (2) copies of the Project's Geotechnical /Soils Report, prepared or signed and stamped by a Geotechnical Engineer.

d. The Project's on-site drainage connections to City's storm drainage system and on-site storm water treatment as approved by the City Engineer. Improvement Plans to be submitted with the hydrology and storm drainage calculations for the sizing of the on-site storm drainage system.

e. Three (3) sets of the Project's Storm Water Pollution Prevention Plan (SWPPP), Best Management Practices (BMPs) and a copy of the Notice of Intent (NOI) with the State-issued Wastewater Discharge Identification number (WDID#).

E.4.3. Grading and Storm Drainage Plans

Site Grading

a. Include all proposed erosion control methods and construction details to be employed and specify materials to be used.

b. All grading work shall be performed and completed in accordance with the recommendation(s) of the Project's Geotechnical Engineer. A copy of the Project's Geotechnical Report must be submitted with the Grading and Storm Drainage Plans.

c. Site grading shall be designed such that the Project's storm water can gravity drain directly to an existing storm drain system with adequate capacity to drain storm water from the Project Site in the event that the on-site storm drainage system fails or is clogged. The storm drainage release point is recommended to be at least 0.70 foot lower than the building finish floor elevation and shall be improved to the satisfaction of the City Engineer.

d. When the grade differential between the Project Site and adjacent property(s) exceeds 12 inches, a reinforced or masonry block, or engineered retaining wall is required for retaining soil. The Grading Plan shall show construction detail(s) of the retaining wall or masonry wall. The entire retaining wall and footing shall be constructed within the Project Site. A structural calculation shall be submitted with the Grading and Storm Drainage Plans.

e. An engineered fill between the Project site and adjacent properties may be accepted as a substitute of a retaining wall, if the grade differential is less than 2 feet and subject to approval by the City Engineer. The Grading and Storm Drainage Plans must show the extent of the slope easement(s). The Subdivider shall be responsible for obtaining permission from owner(s) of the adjacent and affected property(s). The slope easement must be recorded, prior to the issuance of the final building certificate of occupancy.

Storm Drainage

f. The Subdivider shall design and install the Project's storm drainage connection(s) to the City's storm drain facilities per the City of Tracy Citywide Stormwater Master Plan and the "Storm Drainage Study" and as required by the City Engineer.

g. The Subdivider shall submit design calculations and obtain approval of improvement plans for the off-site storm drain line to connect to existing channel at Sycamore Parkway. The Subdivider shall execute Offsite Improvement Agreement prior to beginning of work. The Subdivider will be required to overlay half street section on Valpico Road along the full length of the storm drain line after completion of installation of the storm drain line.

h. All on-site SD facilities, lakes, channels and associated facilities including the proposed connection(s) to the City's public drainage facilities, shall be owned and maintained by the HOA.

i. The Subdivider shall provide a Stormwater Quality Control Plan (SWQCP) detailing the methods in which the development will address compliance with the applicable City's Multi-Agency Post-Construction Stormwater Standards Manual (Manual).

The proposed stormwater treatment within the lake system will be subject review and approval by the City. Prior to the issuance of the grading permit for the project, the SWQCP shall be approved by the City Engineer.

j. Prior to the final inspection of the first building to be constructed on the Property, the Subdivider shall submit a signed and notarized Stormwater Treatment Facilities Maintenance Agreement (STFMA) as a guarantee for the performance of Subdivider's responsibility towards the repair and maintenance of on-site storm water treatment facilities. Calculations related to the design and sizing of on-site storm water treatment facilities must be submitted with the STFMA and the Grading and Storm Drainage Plans.

E.4.4. Sanitary Sewer Facilities

a. The Subdivider shall design and install sanitary sewer facilities including the Project's sewer connection in accordance with City Regulations and utility improvement plans approved by the City Engineer.

b. The Subdivider shall build and dedicate, to the satisfaction of the City Engineer, public sewer mains, manholes and associated improvements required to serve the entire subdivision. All public infrastructure shall be located in the private subdivision roadways. The Subdivider shall provide easements, to the satisfaction of the City Engineer, across the entire road plus 5 feet on either side as measured from the back of curb. Repair and maintenance of all sewer lines outside of easements which includes (but it not limited to) laterals and appurtenances shall be a private maintenance obligation either from the fronting property owner, HOA, or another City approved maintenance entity.

c. In the event the permanent sewer main in Corral Hollow Road and downstream improvements required to provide permanent capacity for the Project have not been constructed (by others) at the time of request for first building permit within the Project, the Subdivider shall complete the design and install master plan facilities within Corral Hollow Road from the Project to Node 4W-1 as shown in Figure 5-1 of Tracy Wastewater Master Plan.

d. Interim capacity in the existing sewer main north of Node 4W-1 may be temporarily available and the Project may be permitted to utilize existing capacity in the system north of Node 4W-1 subject to verification of availability of capacity in the existing facilities by completion of a technical analysis by City's Consultant ("Interim Sewer Capacity Analysis"). The cost of the Interim Sewer Capacity Analysis shall be funded by the Subdivider, and shall be completed prior to issuance of first building permit. If the Interim Sewer Capacity Analysis indicates that there is no capacity available for the Project, the Subdivider shall design and construct master plan facilities to provide additional capacity per the Wastewater Master Plan.

e. The Subdivider shall design and install wastewater services to existing homes on the north side of Valpico Road as part of the Offsite Improvements. The subdivider will be eligible for fee credits for the cost of installation of the water services.

f. In order to facilitate installation of wastewater service connections to existing homes fronting Corral Hollow Road as part of City's CIP project, a funding requirement in the amount of $100,000 has been identified. The Subdivider shall pay to the City the amount specified above within 30 days from written request from the City Engineer. City will identify funding

source for reimbursement of the amount to the Subdivider, and enter into a Reimbursement Agreement prior to payment by the Subdivider.

g. The Subdivider is hereby notified that the City has limited wastewater treatment capacity in the City's Wastewater Treatment Plant until current and future expansion capital improvement projects are completed and operational. As of January 2017, the City had an unused capacity of approximately 1851 EDU's within its wastewater treatment plant available to new development within the City on a first come-first served basis. These EDU's are currently available to serve the proposed project, but as other development projects within the City come forward and building permits are issued, this remaining capacity will be reduced.

E.4.5. Water Distribution System

a. Water line sizing, layout and looping requirements for this Project shall comply with recommendations of the analysis by the City's Water Consultant.

b. If development of the Project is phased (e.g., the north part of the Project is developed as Phase 1 and the south part of the Project is developed as Phase 2), both connections to the City's existing potable water system (at Valpico Road and at Middlefield Drive), should be constructed with the first phase of development to provide for water supply redundancy and ensure adequate fire flow availability under all phases of Project development.

c. All water connections that are bigger than 2 inches in diameter shall be Ductile Iron Pipe (DIP).

d. During the construction of the Project, the Subdivider is responsible for providing water infrastructure (temporary or permanent) capable of delivering adequate fire flows and pressure appropriate to the various stages of construction and as approved by the City of Tracy Fire Code Official.

e. All costs associated with the installation of the Project's permanent water connection(s) as identified in the Water Study including the cost of removing and replacing asphalt concrete pavement, pavement marking and striping such as crosswalk lines and lane line markings, replacing traffic detecting loops, conduits, and wires, relocating existing utilities that may be in conflict with the water connection(s), and other improvements shall be paid by the Subdivider.

f. Subdivider shall obtain an account for the water service to the Project and register the water meter with the Finance Department. Subdivider shall prepare and submit a map depicting the location of the water meter(s) to Finance Department.

g. If water main shut down is necessary, the City will allow a maximum of 4-hour water supply shutdown. The Subdivider shall be responsible for notifying residents or business owner(s), regarding the water main shutdown. The written notice, as approved by the City Engineer, shall be delivered to the affected residents or business owner(s) at least 72 hours before the water main shutdown. Prior to starting the work described in this section, the Subdivider shall submit a Water Shutdown Plan and Traffic Control Plan to be used during the installation of the offsite water mains.

h. The Subdivider shall design and install domestic water service connections, including remote-read water meter (the water meter to be located within City's easement) in accordance with City Regulations.

i. The Subdivider shall build and dedicate, to the satisfaction of the City Engineer, public water mains, valves, fittings, fire hydrants and associated improvements required to serve the entire subdivision. All public infrastructure shall be located in the private subdivision roadways. The Subdivider shall provide easements, to the satisfaction of the City Engineer, across the entire road plus 5 feet on either side as measured from the back of curb to maintain the valves, fitting, fire hydrants and other associated improvements. Repair and maintenance of all water lines outside of easements which includes (but it not limited to) laterals, meters and appurtenances shall be a private maintenance obligation either from the fronting property owner, HOA, or another City approved maintenance entity.

j. The Subdivider shall design and install fire hydrants at the locations approved by the City's Fire Safety Officer and Chief Building Official. Prior to the approval of the Improvement Plans, the Subdivider shall obtain written approval from the City's Fire Safety Officer and Chief Building Official, for the design, location and construction details of the fire service connection to the Project, and for the location and spacing of fire hydrants that are to be installed to serve the Project.

k. The Subdivider shall design and install water services to existing homes on the north side of Valpico Road as part of the Offsite Improvements. The Subdivider will be eligible for fee credits for the cost of installation of the water services.

l. In order to facilitate installation of water service connections to existing homes fronting Corral Hollow Road as part of City's CIP project, a funding requirement in the amount of $100,000 has been identified. The Subdivider shall pay to the City the amount specified above within 30 days from written request from the City Engineer. City will identify funding source for reimbursement of the amount to the Subdivider, and enter into a Reimbursement Agreement prior to payment by the Subdivider.

m. Recycled Water

On-site Recycled Water is proposed to fill and maintain the water levels in the proposed project's lakes. On-site and off-site recycled water lines shall be designed per City Standards and applicable Regulations. The Subdivider shall install Recycled Water main in Valpico Road with construction of required roadway improvements on Valpico Road.

City will be installing Recycled Water facilities from the Wastewater Treatment Plant upto the intersection of Lammers Road and Old Schulte Road. Prior to final inspection of 150th home excluding model homes, the Subdivider shall complete installation of Recycled Water facilities from the Project to the intersection of Lammers Road and Old Schulte Road to connect to Recycled Water line, if City's project has installed the Recycled Water Mains from the WWTP upto this junction.

If City's Recycled Water facilities are not completed, or are partially completed prior to final inspection of 150th home excluding model homes, the Subdivider shall construct needed facilities to extend Recycled Water facilities to connect the Project to Recycled Water lines. If no Recycled Water facilities are available to connect, the Subdivider shall demonstrate that

City's domestic water supplies and water network are adequate to provide water to the Project and lakes. In such event, City's consultant will prepare a report with recommendations for any improvements to the City's water system or other means of addressing the additional demand on City's domestic water system. The Subdivider shall be responsible for costs of full compliance with the recommendations.

If the Subdivider installs Recycled Water Facilities that are funded by the Development Impact Fees or other sources, the Subdivider will be eligible to request fee credits and/or reimbursements pursuant to Tracy Municipal Code.

E.4.6. Utility Easements

a. Utilities within private streets shall be located within utility easements dedicated to the City, and shall be subject to review and approval by the City Engineer. Proposed Maintenance access roads or curb cuts shall be reviewed and approved by the City Engineer.

b. The Subdivider shall coordinate with local service providers and dedicate necessary Public Utility Easements (PUE) along the Project's frontage on Valpico Road and within the Project for Joint Trench Utilities to serve the Project.

E.4.7 Street Improvements:

a) Right of Way on Valpico Road Per the Citywide Roadway & Transportation Master Plan (CRTMP) that was adopted by the City Council on November 26, 2012, pursuant to Resolution 2012-240, Valpico Road will be a 4-lane major arterial street with a minimum right-of-way of 99 feet. The street section proposed consists of 102' wide right-of-way.

The Subdivider shall dedicate 47 feet right-of-way from the existing right-of-way line of Valpico Road towards the Property along the entire frontage of the Property on Valpico Road, for the construction of Valpico Road Frontage Improvements. The Subdivider shall dedicate the right-of-way on Final Map, or execute a Grant Deed to convey the land in fee title and submit legal description and plat map that describes the area to be dedicated, prior to the issuance of the Grading Permit. The cost of preparing the legal description and plat map will be the sole responsibility of the Subdivider.

Subdivider shall acquire right-of-way required on the north side of Valpico Road (County parcels) to install the roadway and sidewalk improvements including undergrounding of overhead utilities. City may assist Subdivider in acquisition of the right-of-way. Cost of acquisition of right-of-way shall be reimbursable to the Subdivider from the program fees as determined by the City Engineer.

Subdivider will be eligible to request fee credits and/or reimbursements for the cost of right-of-way in excess of Subdivider's obligation as defined in Traffic Master Plan and pursuant to Tracy Municipal Code requirements.

The City will assume responsibility to maintain the public improvements and accept the offer of dedication for right-of-way on Valpico Road after the City Council accepts the public improvements.

b) Frontage Improvements on Valpico Road – The Subdivider shall design and construct all roadway improvements on Valpico Road that are necessary to provide safe and functional access(s) to the Project for each phase and at Project's build-out condition, as described by the Traffic Report, and as required by the Conditions of Approval.

(i) The Frontage Improvements involve the widening of the south side of Valpico Road along the frontage of the Project and pavement transitions on both sides on Valpico Road and other improvements which include but not limited to, the installation of new asphalt concrete pavement, concrete curb, gutter, sidewalk, Class I bike lane, handicap ramp(s), crosswalk, bus shelter with turnout and associated improvements, parkway landscaping improvements with automatic irrigation system, storm drainage, catch basin/ drop inlet, fire hydrant, domestic, irrigation and fire services, street lights traffic sign(s), pavement marking and striping along the entire frontage on Valpico Road, and other improvements such as barricades, signing, and striping that are necessary to provide a safe transition to and from existing roadway section of Valpico Road (Frontage Improvements).

(ii) The roadway improvements shall also include the installation of a traffic signal at the Main Entry Street at Valpico Road. The intersection improvements will include but not limited to, traffic detection loops, pull boxes, conduits and wires, audible pedestrian warning, electronic sign, crosswalk, pavement legends and markings, lane markings, traffic signs, and other improvements as determined by the City Engineer that are deemed to be necessary to have a safe and functional traffic signal. The traffic signal is not included in funded improvements in City's fee program, and hence costs of design, acquisition of right-of-way (if required) and installation of the traffic signal is not eligible for fee credits or reimbursements.

(iii) The sidewalk along the frontage of the project shall be extended east of the Project boundary to connect to the existing sidewalk. Cost of acquiring right-of-way or easements and installation of the sidewalk shall be the responsibility of the Subdivider.

(iv) Subdivider shall design and install improvements on Valpico Road west of the Project to provide safe transitions to existing improvements. Subdivider shall acquire needed right-of-way on both sides of Valpico Road. Scope of roadway improvements shall be as determined by the City Engineer during the review of the improvement plans for the Project.

(v) Subdivider will be eligible to request fee credits and/or reimbursements for the cost of design and construction of improvements on Valpico Road that are in excess of Subdivider's obligation as defined in Traffic Master Plan and pursuant to Tracy Municipal Code requirements.

(vi) The Subdivider may request formation of a benefit district for recovering cost of right-of-way and construction of improvements beyond the Subdivider's frontage responsibility and not included in City's fee program. The City will collect administrative fee, formation cost, and program management fees for forming, administering, and managing the benefit district. The Subdivider is responsible for submitting all documents such as materials receipts, payroll, equipment rental and others to show actual construction cost or expenses incurred or to support claim for reimbursement.

(vii) Improvement plans to be prepared for Valpico Road improvements shall include transition paving, widening, striping and signage, modification or removal of the existing guard rail (if required) to the east of the Project to conform to existing 4-lane street section in

compliance with applicable standards to ensure safe transition for eastbound and westbound traffic on Valpico Road. The improvement plans shall also include transition paving, widening, striping and signage, modification or removal of the existing private improvements, relocation of existing overhead utility poles (if required) to the west of the Project to conform to existing street section in compliance with applicable standards to ensure safe transition for eastbound and westbound traffic on Valpico Road. The improvements shall be as approved by the City Engineer.

(viii) City has approved improvement plans to construct improvements on Corral Hollow Road to widen the street section to 4-lane configuration. The improvements on Valpico Road to be installed with the Project shall match the improvements per the approved improvement plans for Corral Hollow Road Improvements project at the intersection of Corral Hollow Road and Valpico Road. If the improvements at the intersection of Corral Hollow Road and Valpico Road are completed by the City at the time of construction of Valpico Road improvements by the Subdivider, the Subdivider shall design and construct improvements on Valpico Road to match the intersection improvements.

(ix) The construction details and specifications of bus turnout and bus shelter on Valpico Road shall be submitted for City's review at the time of review of Offsite Improvement Plans. The cost of the bus shelters and turnout and associated improvements are to be paid by the Subdivider without any reimbursement from the City.

(x) The Subdivider shall dedicate an easement for maintenance of traffic signal loops within Entry Street 1 on the Final Map, or execute a Grant Of Easement to the City, and submit legal description and plat map that describes the easement area.

(xi) Any travel lane(s) or left-turn and right-turn lane(s) and traffic signal at Entry Street 1 are considered to be site specific offsite improvements and they are Subdivider's responsibility to design and construct without any fee credits or reimbursements.

(xii) Prior to the issuance of a Building Permit for the project, the Subdivider shall dedicate a Public Utility Easement (PUE) along the full frontage of the Project on Valpico Road.

(xiii) CMU wall that is proposed to be constructed along the frontage of the project shall be located behind the right-of-way on Valpico Road. Maintenance of the wall, monument and decorative pavement at Entry Street 1 shall be the responsibility of the HOA.

c. Roadway Improvements on North side of Valpico Road- The Subdivider shall design and construct all roadway improvements on north side Valpico Road per the Valpico Road Typical section shown on the Tentative Map and City Standards.

(i) Improvement plans to be prepared for Valpico Road improvements shall include improvements required to construct 4-lane arterial section with 5' wide Class II bike lane, curb and gutter, 5' wide sidewalk and improvements behind the sidewalk within the 3' setback to the right-of-way on the north side of Valpico Road. The improvement plans shall also include modification or removal of the existing private improvements as required to construct improvements and undergrounding of existing overhead utility poles in compliance with applicable standards. The improvement plans shall show modifications of driveways, landscape, fences, walls, mailboxes and other structures that may be impacted with the

construction of the improvements.

The Subdivider shall coordinate modifications with property owners to minimize impacts to the parcels. City may require preparation of detailed exhibits for each of the parcels to provide necessary information to the owners.

d. All roadway improvements described in these Conditions of Approval must be designed and constructed by the Subdivider to meet the applicable requirements of the latest edition of the California Department of Transportation Highway Design Manual (HDM) and the California Manual of Uniform Traffic Control Devices (MUTCD), all applicable City Regulations, and these Conditions of Approval.

The Subdivider may complete the construction of improvements on Valpico Road in two phases:

First phase consisting of design and construction of Frontage Improvements on the south side of Valpico Road, four traffic lanes (two lanes for eastbound and two lanes for westbound traffic) with interim asphalt curb on the north side of Valpico Road, and installation of the traffic signal shall be completed by the Subdivider prior to issuance of 100th building permit within the Property.

Second phase consisting of removal of interim improvements, undergrounding of overhead utilities and sidewalk on the northside of Valpico Road shall be completed by the Subdivider prior to issuance of 200th building permit within the Property.

e. The Subdivider shall be responsible for any repairs or reconstruction of street pavement, curb, gutter and sidewalk and other public improvements on Valpico Road, if determined by the City Engineer to be in poor condition or damaged by construction activities related to the Project.

f. If the Subdivider completes the construction of roadway improvements on Valpico Road as described in these Conditions of Approval that are beyond the frontage responsibility of the Project, the Subdivider may be entitled to fee credits and/or reimbursement for the program portion of the roadway improvements on Valpico Road in accordance with the OIA and Title 13 of the Tracy Municipal Code. The amount of fee credit and/or reimbursement shall be determined during the review of improvement plans.

E.4.8. Project Access and Traffic Circulation -

a. Design and construction of all streets and Entry Street 1 and 2 shall comply with the findings of the Traffic Analysis by Kimley-Horn Associates, and applicable City Standards.

b. The Subdivider shall construct complete street improvements for the Private internal streets and alleys as generally shown in the Tentative Map Tract No. 3917. Subdivider shall comply with the requirements of Fire Department and Public Works Department for access and design of structural pavement for Maintenance Access roads and Fire Lane access Roads within the Development. Improvement Plans shall be submitted to Engineering Division for review and approval by the City Engineer.

i) Private Streets and alleys will be maintained by the HOA.

ii) The Subdivider shall prepare a Signing and Striping Plan for the on-site private streets and alleys. The Signing and Striping Plan shall include all stop bars, stop legends, stop signs, right-turn or left turn arrows, centerline stripes, traffic control signage, etc. as necessary for internal traffic circulation.

iii) Striping and signage for on-street parking on the internal private streets and for designated parking lots for resident, guest, employees, and visitor parking shall comply with City's standards for Off Street Parking.

iv) The Subdivider shall submit detailed plans for Parcel L, Pedestrian Access to Corral Hollow Road. The improvements proposed within Parcel L shall be submitted for review and approval by City Engineer, Public Works Director and Police Chief.

E.4.9. Irrigation and Landscaping Plans

a. All parkway landscaping improvements along the frontage of the Property on Valpico Road shall be designed and constructed in accordance with City Regulations and completed as part of the Valpico Road Frontage Improvements. Design and construction details of these improvements shall be included in the Irrigation and Landscaping Plans. Parkway landscaping shall be maintained by the HOA as part of the Long-Term Maintenance Agreement between the City and Subdivider or HOA. The parkway landscape planting and irrigation system shall be separate from the onsite landscaping plan, including a separate irrigation meter, irrigation main(s), and irrigation controller(s). Parkway landscape improvements shall conform to City standards.

b. The Subdivider shall design and install public and private improvements, including street trees, monument signs, decorative fences and walls, and other improvements at locations that shall meet requirements related to horizontal sight distance.

E.4.10. Undergrounding of Overhead Existing Overhead Utilities

a. The Subdivider shall design and underground existing utilities on the north side of Valpico Road across from the Project as part of the Frontage Improvements. The Subdivider shall coordinate design and installation of underground utilities with the utility companies and the property owners. Undergrounding of services to the existing homes shall be completed with the undergrounding. City will provide assistance in seeking cooperation of the property owners in undergrounding of services to homes. The Subdivider shall acquire easements if required to install the underground utilities. If the Subdivider is unable to acquire the necessary easements, City may extend its power of eminent domain subject approval of the City Council.

b. Pursuant to Tracy Municipal Code, Subdivider is responsible for 50% of the cost of undergrounding of overhead utilities on the north side of Valpico Road. City may reimburse the Subdivider for costs in excess of Subdivider's obligation towards the cost of undergrounding subject to availability of funds. At the time of approval of this Development Application, City has not identified funding sources for reimbursement. City will continue its evaluation of funding sources including Rule 20-A funding.

E.4.11. Offsite Improvement Agreement

a. Prior to starting any work on Valpico Road Frontage Improvements, the Subdivider shall sign an improvement agreement (Offsite Improvement Agreement or OIA) and post improvement security in accordance with Section 12.36.080 of the TMC, to guarantee completion of the public improvements. The OIA requires approval from the City Council.

E.4.12. Traffic Impact Mitigations

a. All Applicable traffic impact mitigations identified in the Environmental Impact Report shall be complied with.

E.4.13. Traffic Control Plan - Prior to starting the work, the Subdivider shall submit a Traffic Control Plan, to show the method and type of construction signs to be used for regulating traffic at the work areas within these streets. The Traffic Control Plan shall be prepared by a Civil Engineer or Traffic Engineer licensed to practice in the State of California.

E.4.14. Joint Utility Trench Plans – The Subdivider shall prepare joint trench plans in compliance with utility companies' requirements and City regulations, and obtain approval of the plans. All private utility services to serve Project, including electric, telephone and cable TV to the building must be installed underground, and to be installed at the location approved by the respective owner(s) of the utilities.

a. The Subdivider shall submit Joint Utility Trench Plans for the installation of electric, gas, telephone and TV cable main and service lines that are necessary to be installed to serve the Project. These utilities shall be installed within the Public Utility Easement (PUE) that will be offered for dedication to the City. The Subdivider shall coordinate, as feasible, with the respective owner(s) of the utilities for the design of these underground utilities to ensure they can be installed within the PUE to the extent feasible (and except in the event, that additional space beyond the PUE is required, as determined by the utilities owner(s)).

b. The Subdivider shall verify with the respective utility owner(s) if they will allow the installation of private landscaping within the public utility easement. Subdivider shall provide the utilities' owner(s) written notification and receive permission to construct the improvements, prior to the approval of the building permit.

E.5. Building Permit - No building permit will be approved by the City until the Subdivider demonstrates, to the satisfaction of the City Engineer, compliance with all required Conditions of Approval, including, but not limited to, the following:

E.5.1. Payment of the Master Plan Fees for Citywide Roadway and Traffic, Water, Recycled Water, Wastewater, Storm Drainage, Public Safety, Public Facilities, and Park adopted by the City Council on January 7, 2014, per Resolution 2014-010.

E.5.2. Payment of the San Joaquin County Facilities Fees as required in Chapter 13.24 of the TMC, and these Conditions of Approval.

E.5.3. Payment of the Agricultural Conversion or Mitigation Fee as required in Chapter 13.28 of the TMC, and these Conditions of Approval.

E.5.4. Payment of the Regional Transportation Impact Fees (RTIF) as required in Chapter 13.32 of the TMC, and these Conditions of Approval.

E.5.5. Documentation evidencing that the Property has been annexed to an existing Landscape Maintenance District (LMD),

E.6. Acceptance of Public Improvements - Public improvements will not be accepted by the City Council until after the Subdivider completes construction of the relevant public improvements, and also demonstrates to the City Engineer satisfactory completion of the following:

E.6.1. Correction of all items listed in the deficiency report prepared by the assigned Engineering Inspector relating to public improvements subject to City Council's acceptance.

E.6.2. Certified "As-Built" Improvement Plans (or Record Drawings). Upon completion of the construction by the Subdivider, the City shall temporarily release the originals of the Improvement Plans to the Subdivider so that the Subdivider will be able to document revisions to show the "As Built" configuration of all improvements.

E.6.3. Reasonable written permission from irrigation district or affected owner(s), if applicable, as required in Condition E.10.3, below. The cost of relocating and/or removing irrigation facilities and/or tile drains is the sole responsibility of the Subdivider.

E.7. Temporary or Final Building Certificate of Occupancy or Final Building Inspection - No Temporary or Final Building Certificate of Occupancy will be issued by the City until after the Subdivider provides reasonable documentation which demonstrates, to the satisfaction of the City Engineer, that:

E.7.1. The Subdivider has satisfied all applicable requirements set forth in Condition E.6, above.

E.7.2. The Subdivider has completed construction of all required public facilities for the building for which a certificate of occupancy is requested and all the improvements required in these Conditions of Approval. Unless specifically provided in these Conditions of Approval, or some other applicable City Regulations, the Subdivider shall use diligent and good faith efforts in taking all actions necessary to construct all public facilities required to serve the Project, and the Subdivider shall bear all costs related to construction of the public facilities (including all costs of design, construction, construction management, plan check, inspection, land acquisition, program implementation, and contingency).

E.7.3. Unless dedicated on the Final Map, signed and notarized Grant Deed with the legal description and plat map that describes the area to be dedicated to the City, for the construction of Valpico Road Improvements.

E.7.4. Unless dedicated on the Final Map, signed and notarized Grant of Public Access Easements, Emergency Vehicle Access Easements, and Utility Easements with legal description and plat maps as applicable.

E.8. Improvement Security – The Subdivider shall provide improvement security for all public facilities, as required by the OIA and these Conditions of Approval. The form of the improvement security may be a surety bond, letter of credit or other form in accordance with section 12.36.080 of the TMC. The amount of improvement security shall be as follows:

E.8.1. Faithful Performance (100% of the estimated cost of constructing the public facilities),

E.8.2. Labor & Materials (100% of the estimated cost of constructing the public facilities), and

E.8.3. Warranty (10% of the estimated cost of constructing the public facilities)

E.9. Release of Improvement Security - Improvement Security(s) described herein shall be released to the Subdivider after City Council's acceptance of public improvements, and after the Subdivider demonstrates, to the satisfaction of the City Engineer, compliance of these Conditions of Approval, and completion of the following:

E.9.1. Improvement Security for Faithful Performance, Labor & Materials, and Warranty shall be released to the Subdivider in accordance with Section 12.36.080 of the TMC.

E.9.2. Written request from the Subdivider and a copy of the recorded Notice of Completion.

E.10. Special Conditions

E.10.1. All streets and utilities improvements within City's right-of-way shall be designed and constructed in accordance with City Regulations, and City's Design documents including the City's Facilities Master Plan for storm drainage, roadway, wastewater and water adopted by the City, or as otherwise specifically approved by the City.

E.10.2. All existing on-site wells, if any, shall be abandoned or removed in accordance with the City and San Joaquin County requirements. The Subdivider shall be responsible for all costs associated with the abandonment or removal of the existing well(s) including the cost of permit(s) and inspection. The Subdivider shall submit a copy of written approval(s) or permit(s) obtained from San Joaquin County regarding the removal and abandonment of any existing well(s), prior to the issuance of the Grading Permit.

E.10.3. The Subdivider shall abandon or remove all existing irrigation structures, channels and pipes, if any, as directed by the City after coordination with the irrigation district, if the facilities are no longer required for irrigation purposes. If irrigation facilities including tile drains, if any, are required to remain to serve existing adjacent agricultural uses, the Subdivider will design, coordinate and construct required modifications to the facilities to the satisfaction of the affected agency and the City. Written permission from irrigation district or affected owner(s) will be required to be submitted to the City prior to the issuance of the Grading Permit. The cost of relocating and/or removing irrigation facilities and/or tile drains is the sole responsibility of the Subdivider.

E.10.4. Nothing contained herein shall be construed to permit any violation of relevant ordinances and regulations of the City of Tracy, or another public agency having jurisdiction. This Condition of Approval does not preclude the City from requiring pertinent revisions and additional requirements to the Grading Permit, Encroachment Permit, Building Permit,

Improvement Plans, and OIA, if the City Engineer finds it necessary due to public health and safety reasons, and it is in the best interest of the City. The Subdivider shall bear all the cost for the inclusion, design, and implementations of such additions and requirements, without reimbursement or any payment from the City.

F. Fire Department Conditions of Approval

1. Prior to occupancy of any structures, monitored NFPA 13-R automatic sprinkler and smoke alarm systems must be installed.
2. Trees planted along fire apparatus access roads or alleys shall be maintained/pruned to provide the minimum 13.5 feet of clear vertical height or the variety provided shall be the type which will not naturally encroach into this right-of-way for emergency vehicle access.
3. Any cul-de-sac bulb that cannot accommodate fire truck turning with on-street parking shall be striped and signed “no parking” to the satisfaction of the Fire Chief.
4. All alleys shall be signed and striped “no parking” to ensure a 20-foot clear travel way at all times for emergency vehicle access.

G. Public Works Conditions of Approval

1. The City requires that the Tracy Village Development project homeowners association (HOA) provide for maintenance of all landscape areas within the project boundaries, and shall join a Community Facilities district (CFD) for landscape maintenance adjacent to the project within the City’s right-of-way along both Corral Hollow and Valpico Roads. While required to join the CFD, it will be kept in a “dormant” status for the private streets landscape maintenance and only activated if the HOA does not provide for maintenance as needed. Landscape maintenance on each privately owned lot will be the responsibility of the individual homeowners.

2. Landscaping shall be provided consistent with standard details of the City Master Plans.

3. The developer shall coordinate with the City’s trash collector (currently Tracy Delta disposal) to allow for access through the entry gates, and shall either plan for manual collection on the alley-loaded lots, or ensure that the toters are located for pick-up by the trucks on the right hand side only.

ORDINANCE _____

AN ORDINANCE OF THE CITY OF TRACY PREZONING AND ZONING THE TRACY VILLAGE PROJECT SITE TO THE TRACY VILLAGE SPECIFIC PLAN ZONE FOR APPROXIMATELY 135 ACRES OF THE TRACY VILLAGE PROJECT SITE LOCATED SOUTH OF VALPICO ROAD AND EAST OF CORRAL HOLLOW ROAD, ASSESSOR'S PARCEL NUMBERS 244-040-01 AND 244-030-01 AND 02 , AND PREZONING AND ZONING OF 42 LOTS ADJACENT TO THE TRACY VILLAGE PROJECT SITE ALONG THE NORTH SIDE OF VALPICO ROAD AND EAST SIDE OF CORRAL HOLLOW ROAD, CONSISTING OF ASSESSOR'S PARCEL NUMBERS 244-030-03 THROUGH 244-030-22 AND 242-050-01 THROUGH 242-050-21, AND 242-040-29 TO RESIDENTIAL ESTATE, APPLICATION NUMBER A/P13-0001

WHEREAS, The property owner filed an application to zone the Tracy Village project site to Tracy Village Specific Plan, with the Specific Plan to serve as pre-zoning to meet the requirements of LAFCo, and

WHEREAS, The proposed zoning of the Tracy Village project site is consistent with the General Plan land use designation of Active Adult Residential and is consistent with goals and policies of the Land Use and Housing Element, and

WHEREAS, The project also includes the zoning of 42 lots adjoining the Tracy Village project site, situated along Valpico Road and Corral Hollow Road, and

WHEREAS, The 42 lots would be zoned Residential Estate to reflect the range of lot sizes and single-family residential uses existing on many of the lots, and

WHEREAS, On _____, 2018, the City Council conducted a public hearing to review and consider the project;

WHEREAS, The City Council certified an Environmental Impact Report for this project, in accordance with California Environmental Quality Act Guidelines, on _____, 2018.

SECTION 1: Zoning and prezoning is hereby established to classify the Tracy Village project site as Tracy Village Specific Plan, consisting of approximately 135 acres situated along the south side of Valpico Road, east of Corral Hollow Road, consisting of Assessor's Parcel Numbers 244-040-01 and 244-030-01 and 02, and

Zoning and prezoning is hereby established to classify the 42 lots adjoining the Tracy Village project site as Residential Estate, for lands along the north side of Valpico Road and east of Corral Hollow Road, Assessor's Parcel Numbers 244-030-03 through 244-030-22 and 242-050-01 through 242-050-21 and 242-040-29.

SECTION 2: Tracy Municipal Code Section 10.08.980 will be amended to add the Tracy Village Specific Plan Zone.

SECTION 3: This Ordinance shall take effect thirty (30) days after its final passage and adoption.

SECTION 4 : This Ordinance shall be published once in a newspaper of general circulation within fifteen (15) days from and after its final passage and adoption.

* * * * * * * * * * * * *

The forgoing Ordinance _____ was introduced at a regular meeting of the Tracy City Council held on the ___ day of _____, 2018, and finally adopted on the _____ day of _____, 2018, by the following vote:

AYES: COUNCIL MEMBERS:

NOES: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

ABSTAIN: COUNCIL MEMBERS:

_____
MAYOR

ATTEST:

_____
CITY CLERK