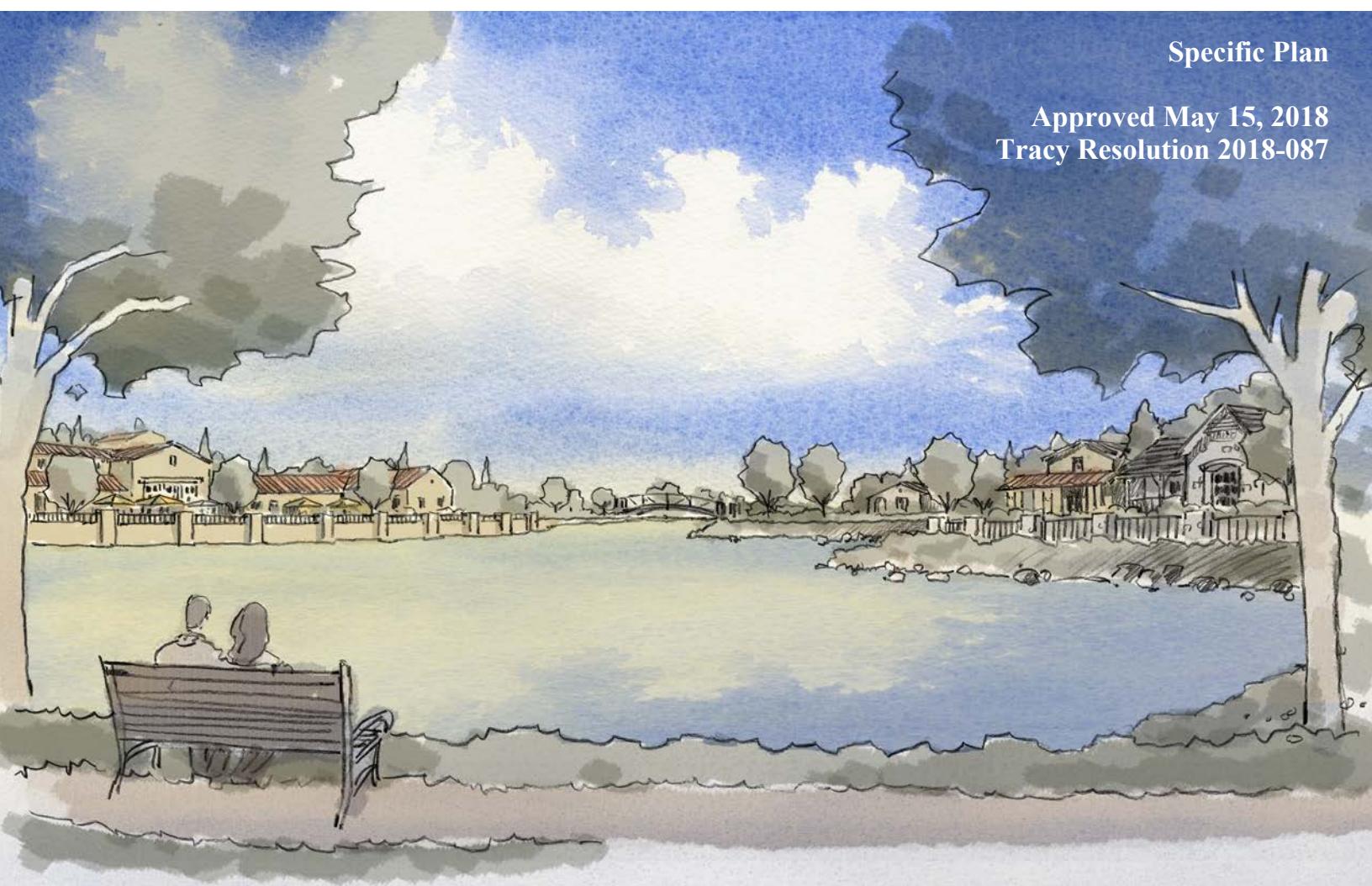


Tracy Village

Specific Plan

Approved May 15, 2018
Tracy Resolution 2018-087



2012113

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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 rezoning 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 rezoning 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 rezoning of RE.

Chapter One



Legend

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



Tracy Village

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.

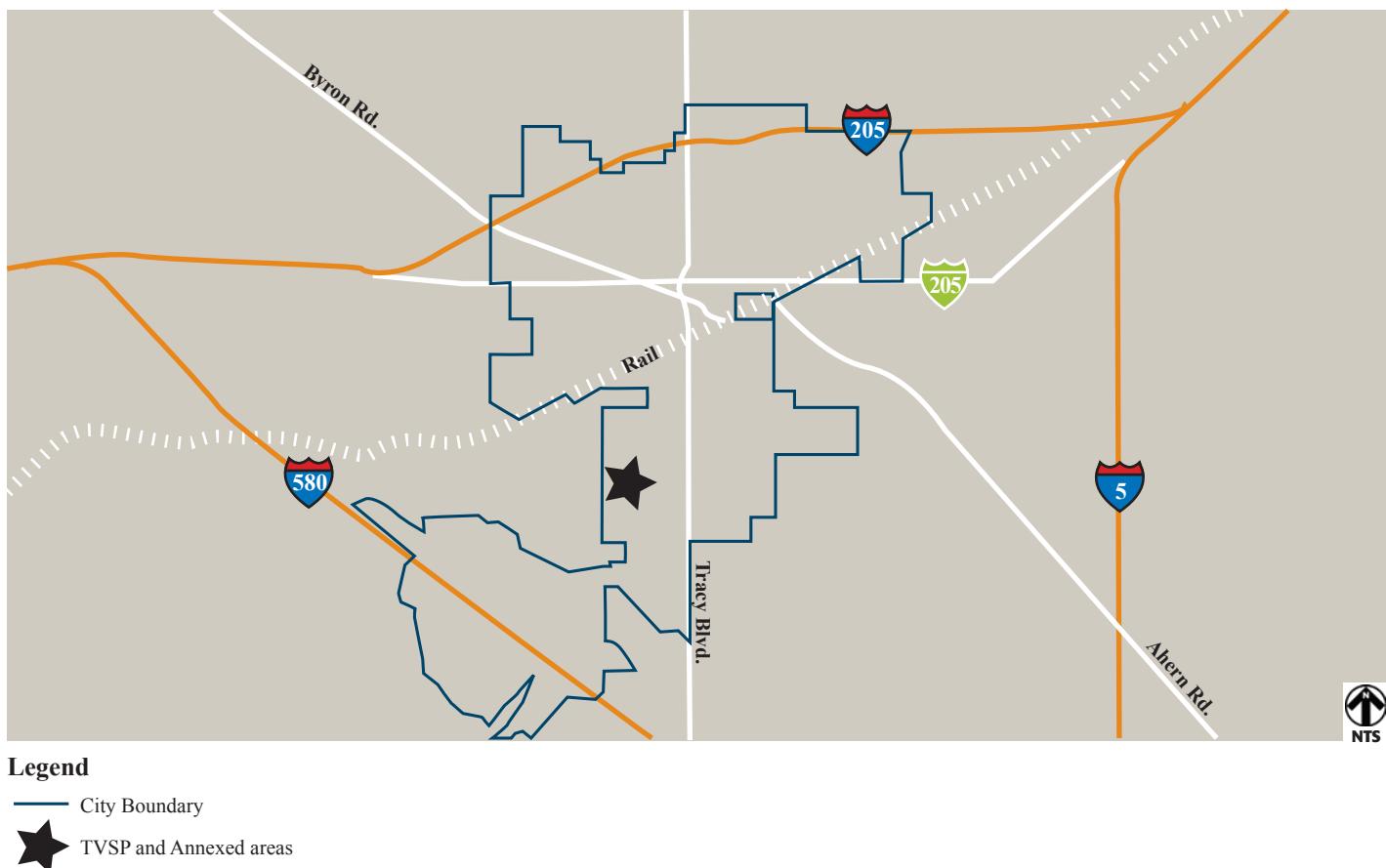


Figure 1.2: City Context

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.



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.

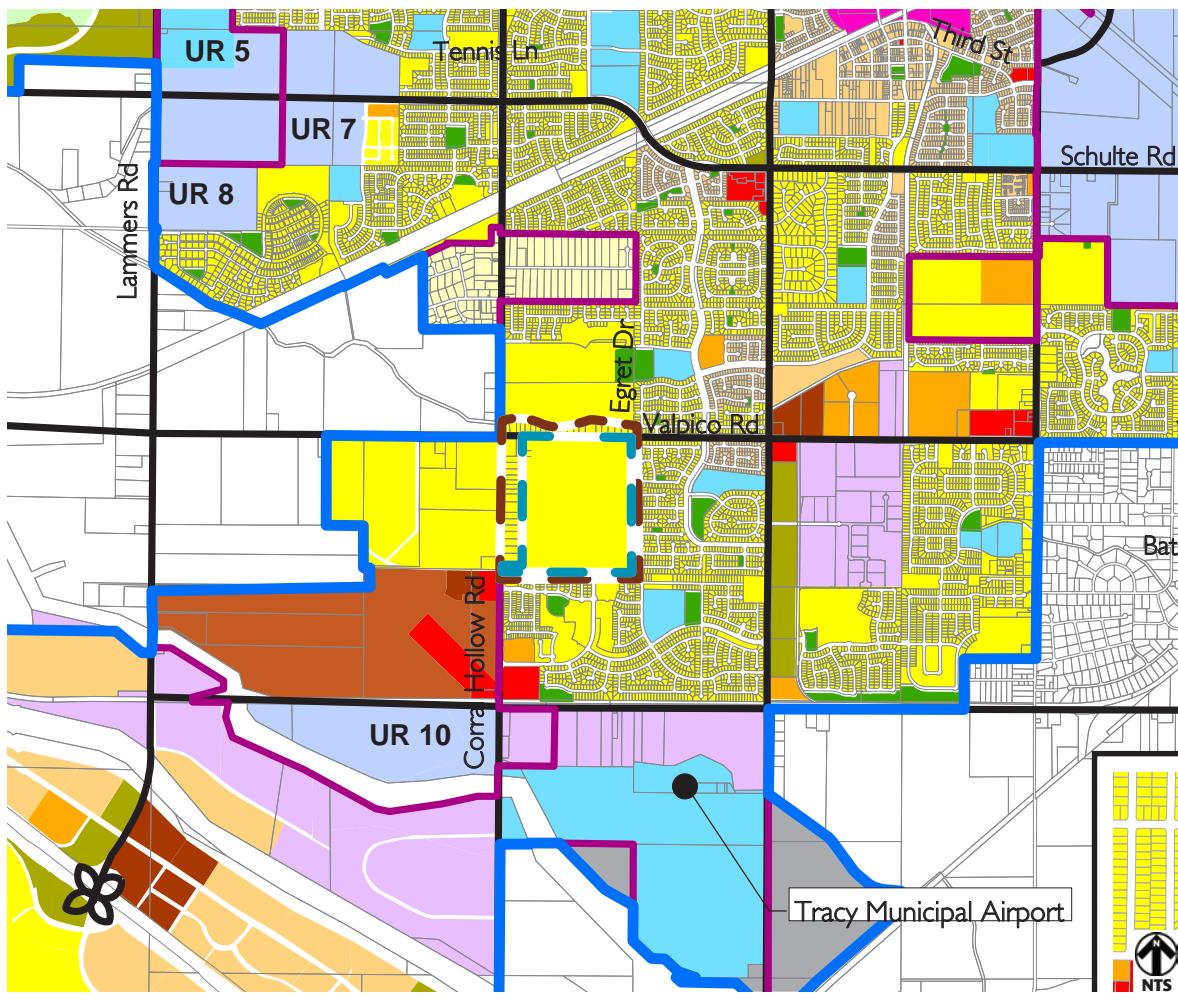
The TVSP is intended to be a regulatory document that serves as the zoning regulation for the property. Development plans or agreements, tract maps or any actions requiring ministerial or discretionary approval on this property must be consistent with the TVSP.

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.

Chapter One



Legend

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

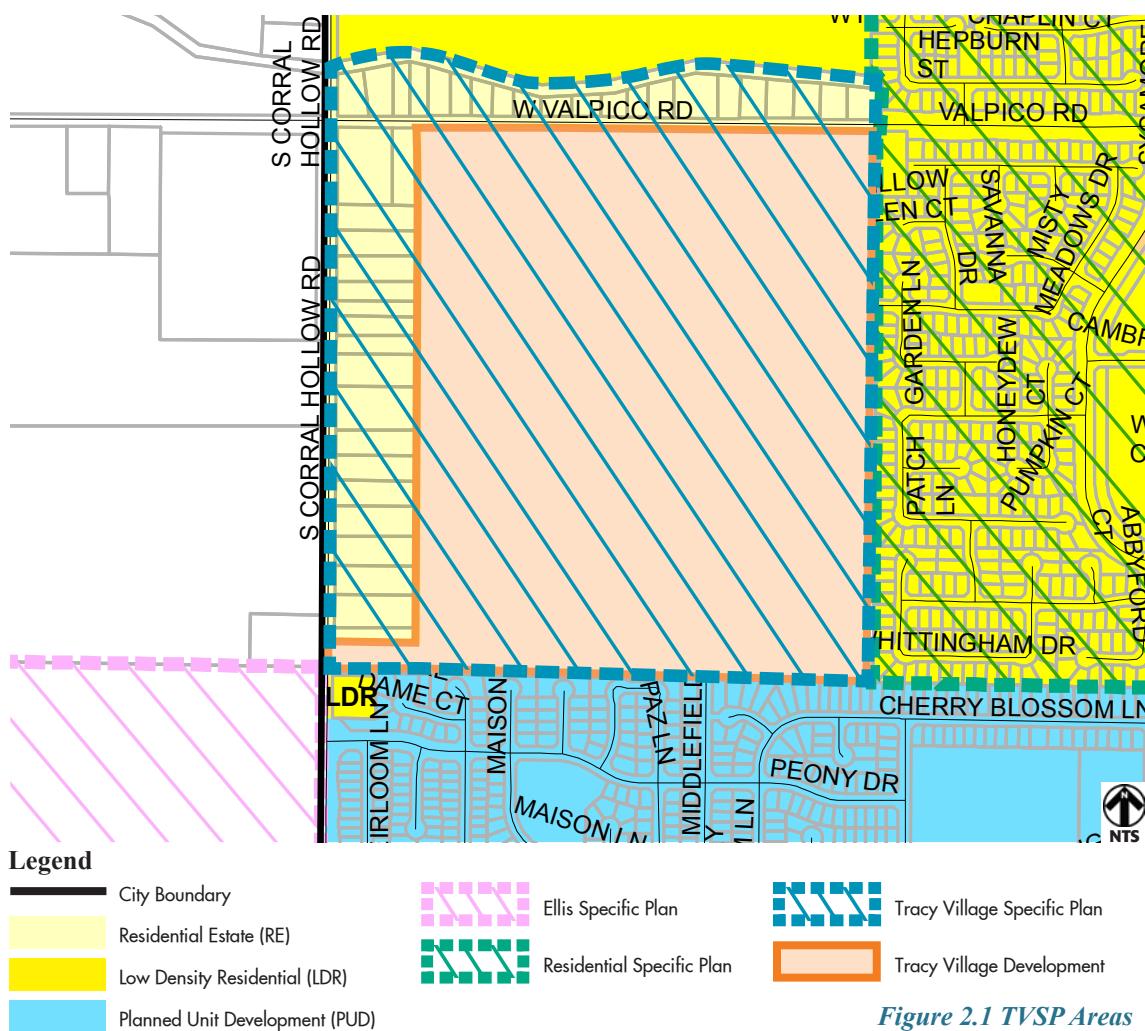


Figure 2.1 TVSP Areas

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			
Setbacks²								
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 Coverage⁴								
	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.

Chapter Two

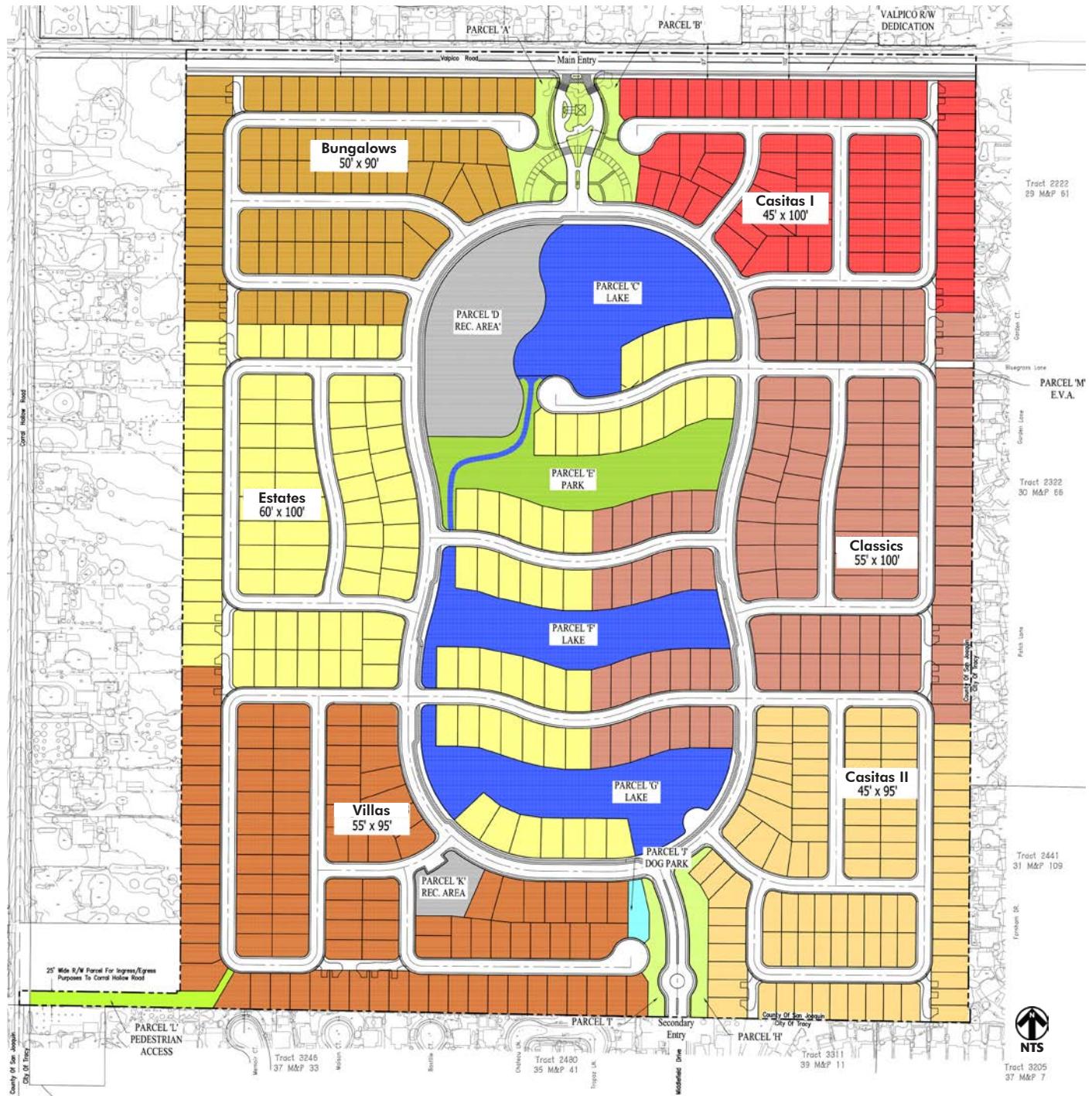
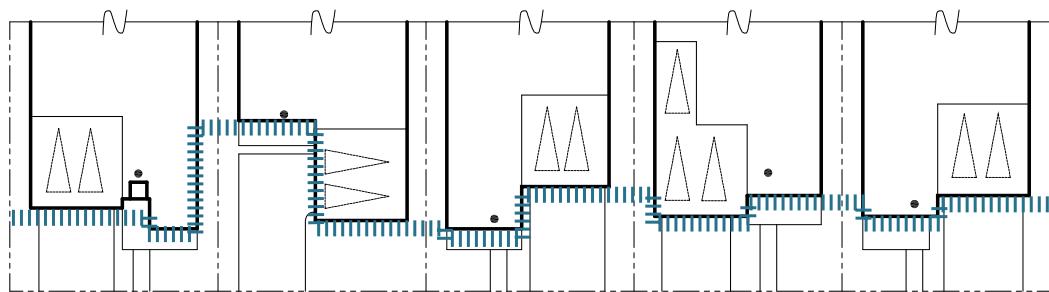


Figure 2.2 TVSP Zone Land Use Plan

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

Tracy Village



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.

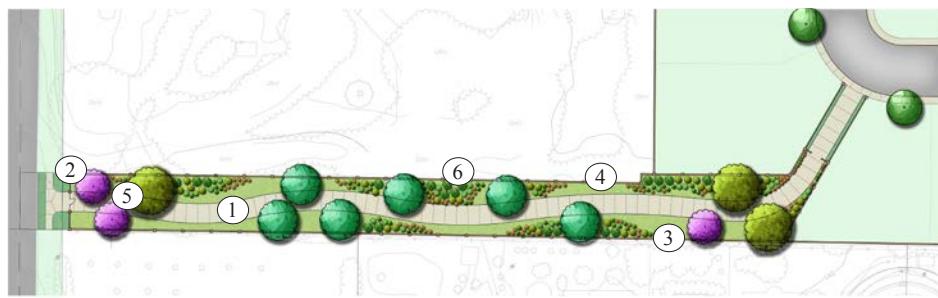
Pedestrian Connections

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.

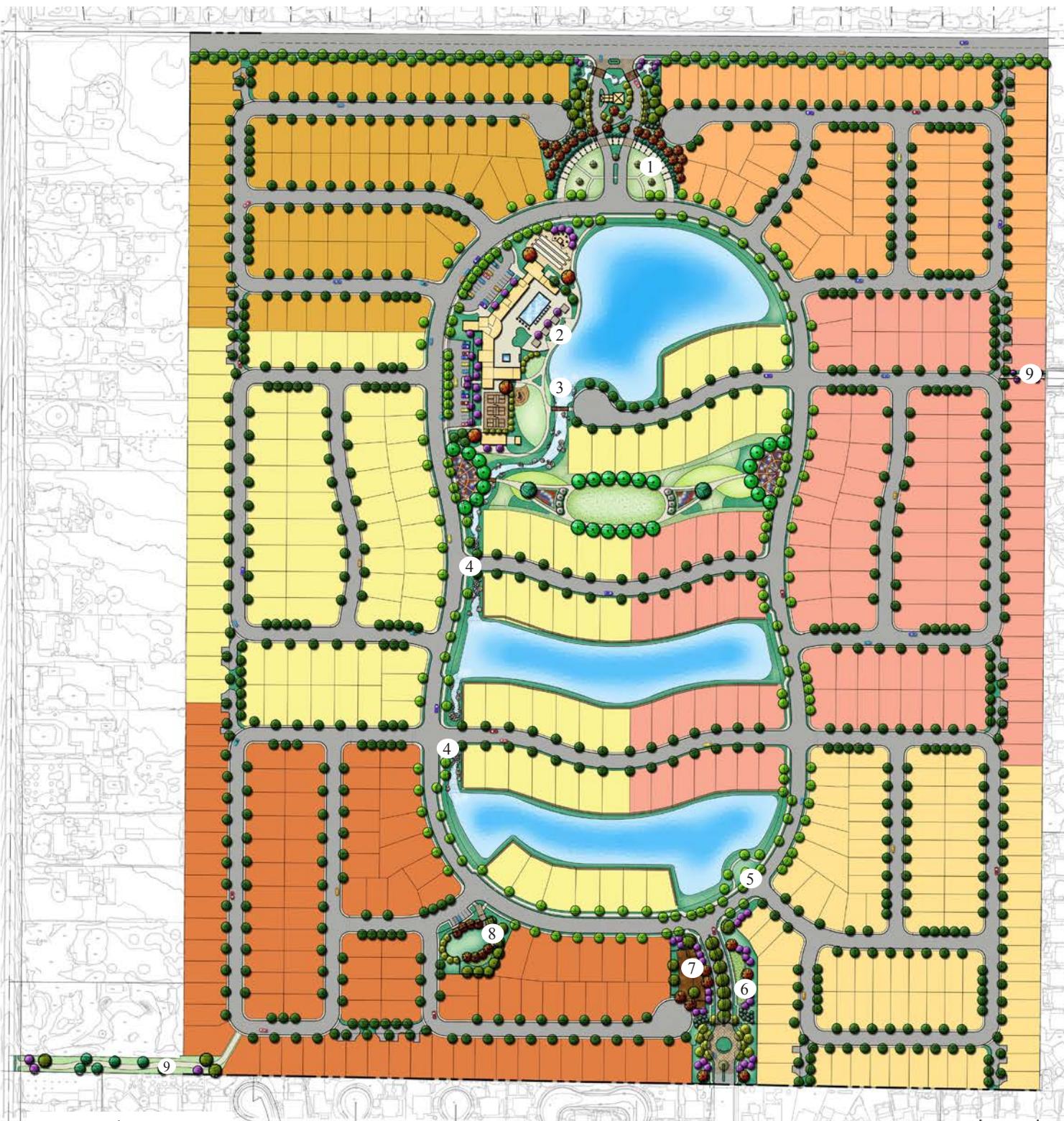
Legend

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

Conceptual Corral Hollow Pedestrian Connection



Chapter Three



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



Tracy Village



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.

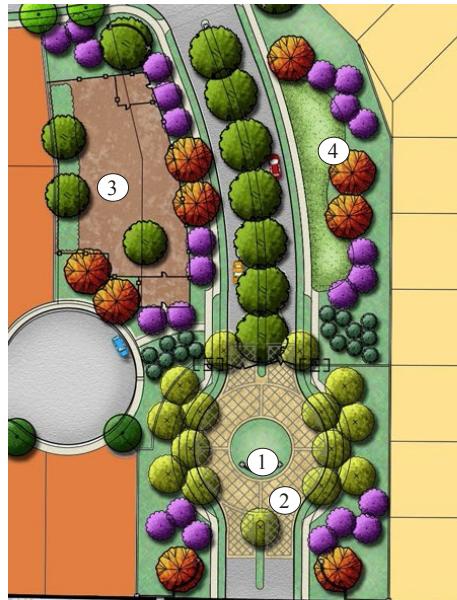
There is a semi-circular pergola that frames the garden area and the lake system view beyond. The pergola includes both soft surface materials and paving to allow for large gatherings and informal functions.

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 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



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.

Legend

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

Conceptual Secondary Entrance Landscape Plan

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

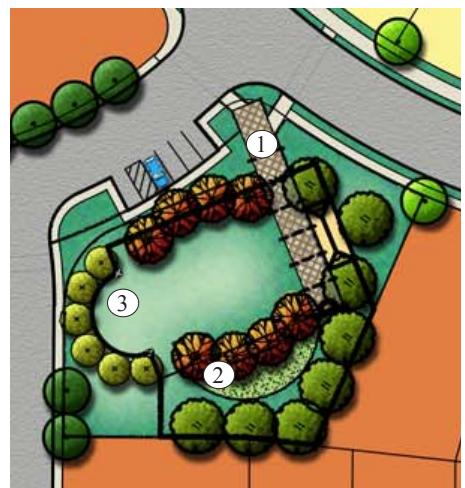
- ① Pergola Garden
- ② Passive Open Space
- ③ Orchard Planting

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

Tracy Village



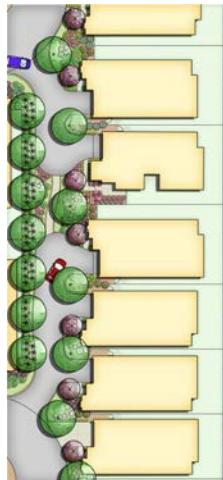
Dog Park

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..

Chapter Three

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.



Tracy Village

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

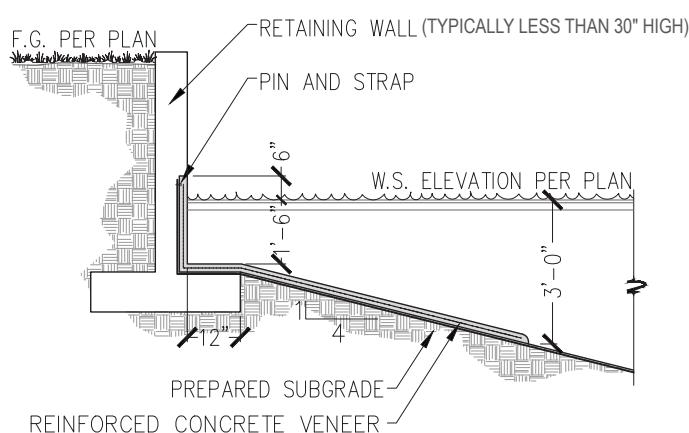
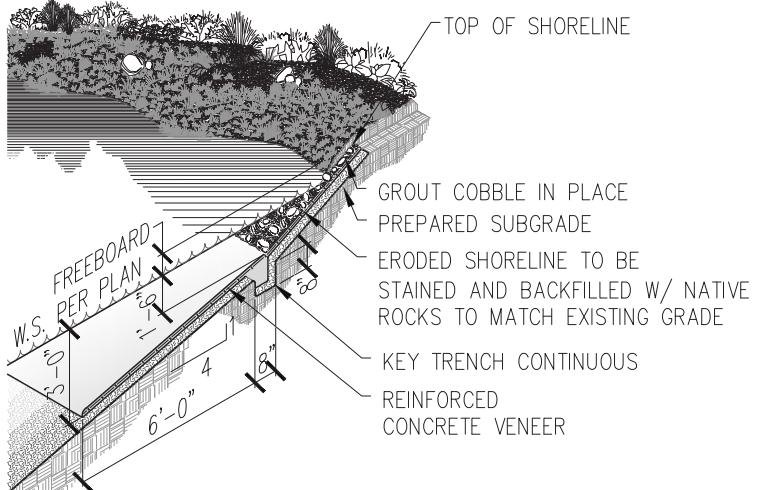
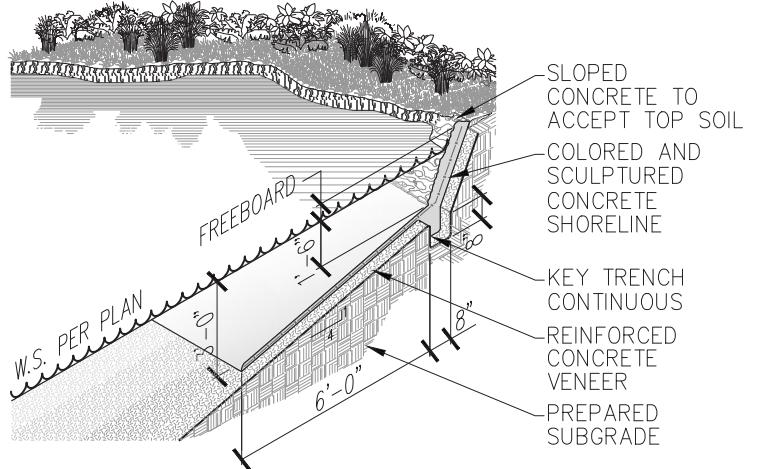


Figure 3.2a: Lake Edge Treatments

Chapter Three



Boulder Pocket



Planter Shoreline



Stream

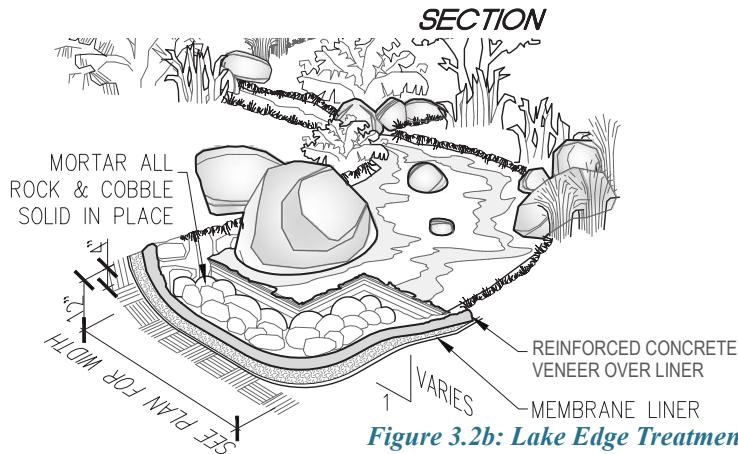
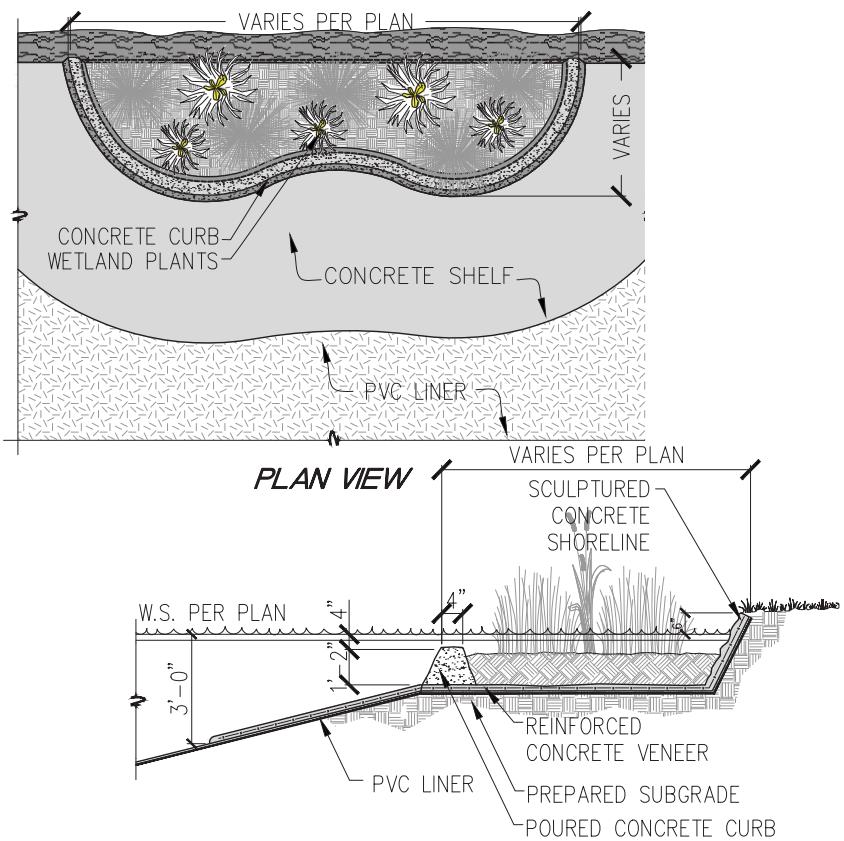
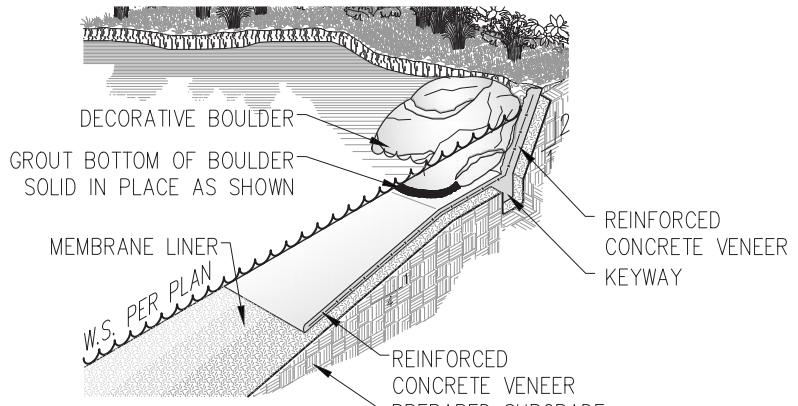


Figure 3.2b: Lake Edge Treatments

Draft Specific Plan | March 2018



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.

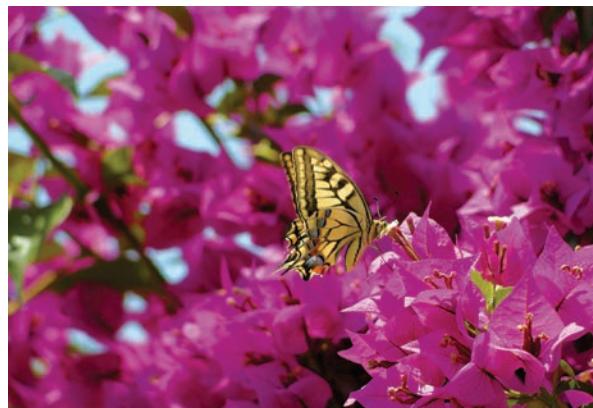
- Incorporate a state of the art water management system that allows groundwater to recharge.
- Encourage the use of low toxic wood preservatives (no CCA), or naturally rot-resistant wood for landscaping.
- Use of low water, drought tolerant, and/or native plants that match the micro-climate, and site 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

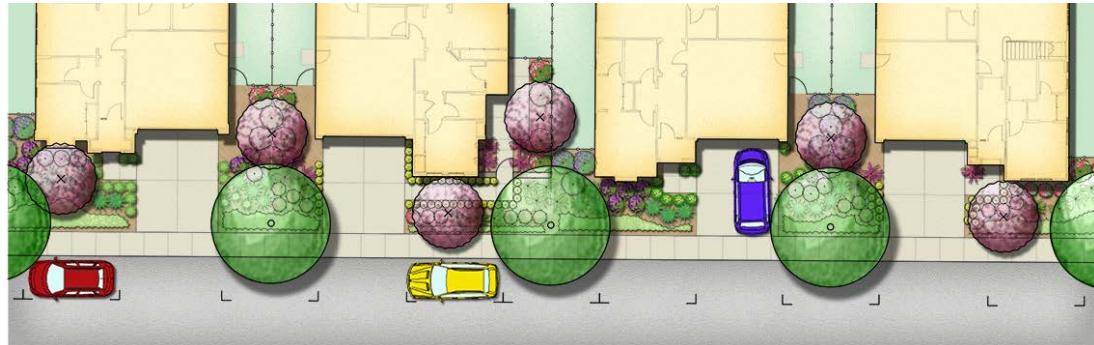
Landscape plant materials for single family residential front yards shall consist of turf and/or low-maintenance, drought tolerant shrubs and groundcovers planted in masses that combine into generous, herbaceous landscapes with diverse foliage colors, shapes, and plant sizes.

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.

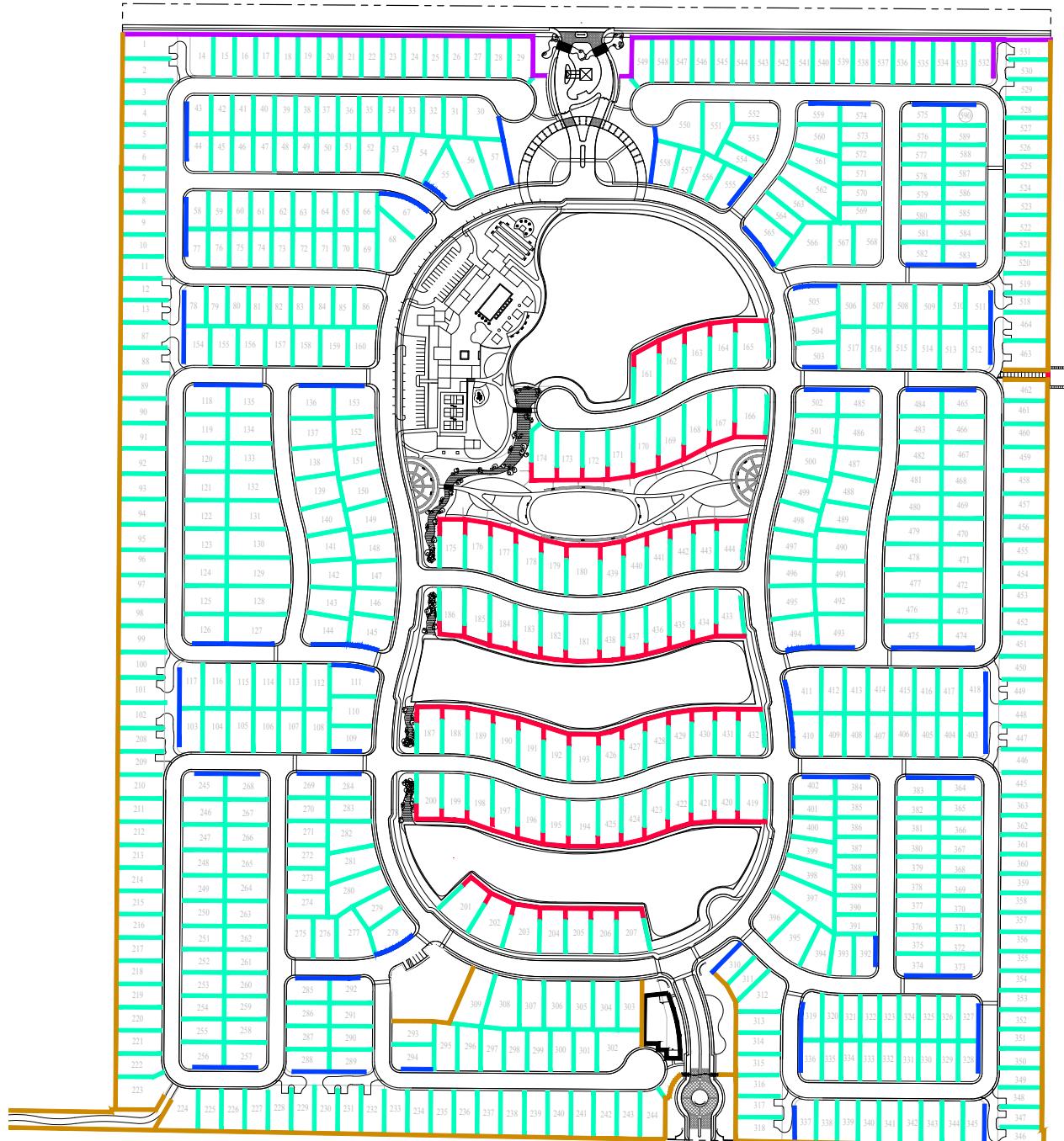
Drip irrigation shall be the preferred method of delivering water to the individual plant materials. Trees and shrubs shall be irrigated on separate valves to maximize water delivery efficiency and timed applications.

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.'

Chapter Three



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



Tracy Village

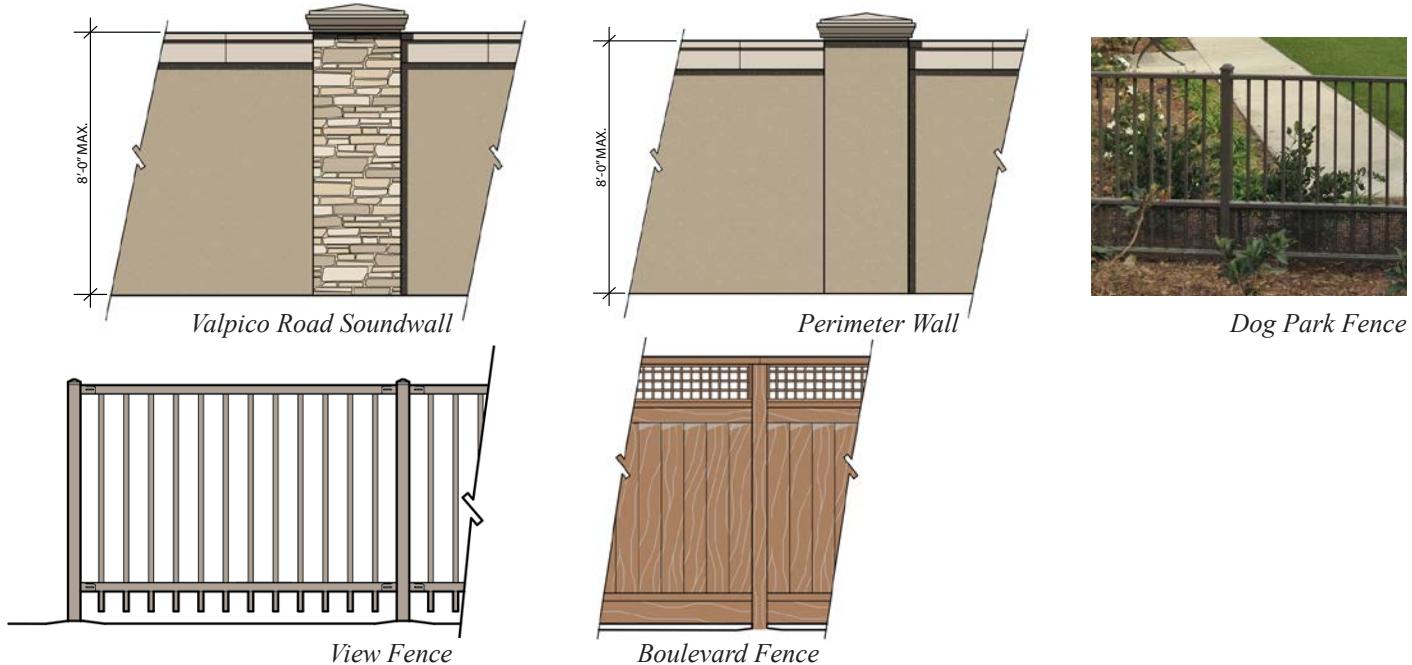


Figure 3.4: Wall and Fence Types



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).

Tracy Village



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.

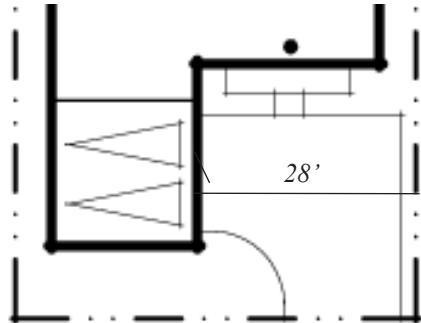


De-emphasize the visual prominence of garage doors through one of the following:

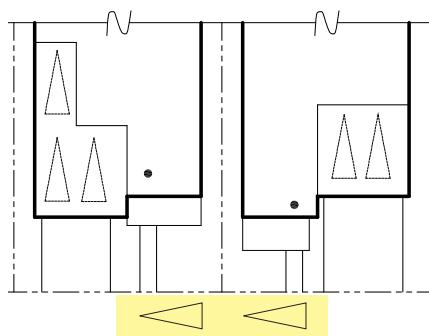
- Garage door recesses of no less than 12 inches.
- Trellis elements beneath garage roof fascias and/or above garage door header trims.
- Vine support elements at the garage.
- Side-on garage - On lots at least 55 feet wide, allow side-on garages (minimum back-up area shall be 28 feet).

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.



Side-on Garage Minimum Back-up Area



Plot living areas next to each other to maximize parking spaces

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.

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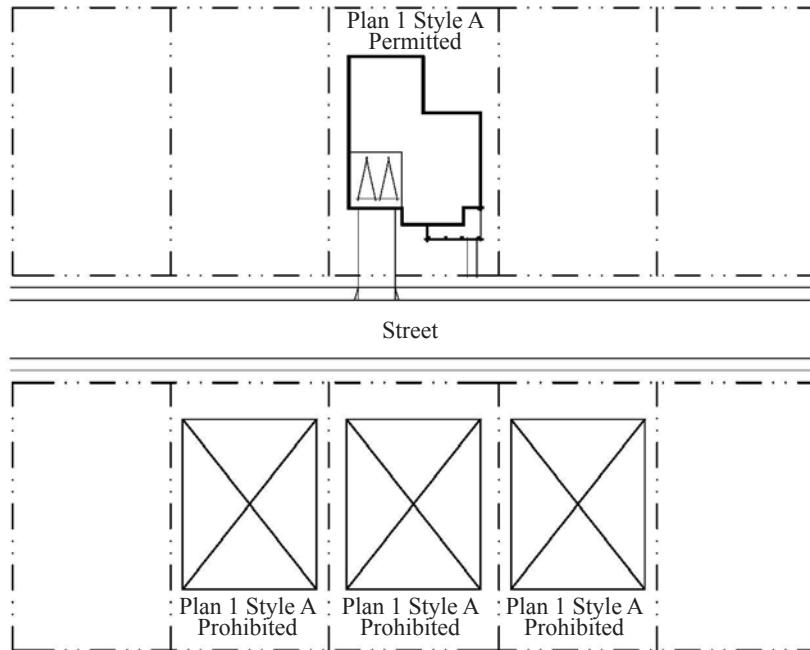


Figure 3.5: Plan/Elevation Style Plotting

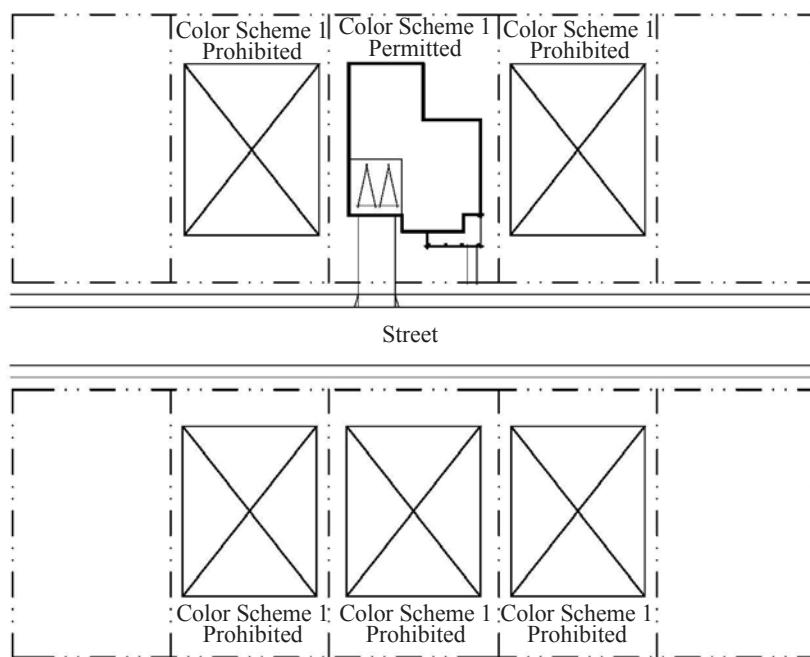


Figure 3.6: Color Scheme Plotting

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.

Chapter Three

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.



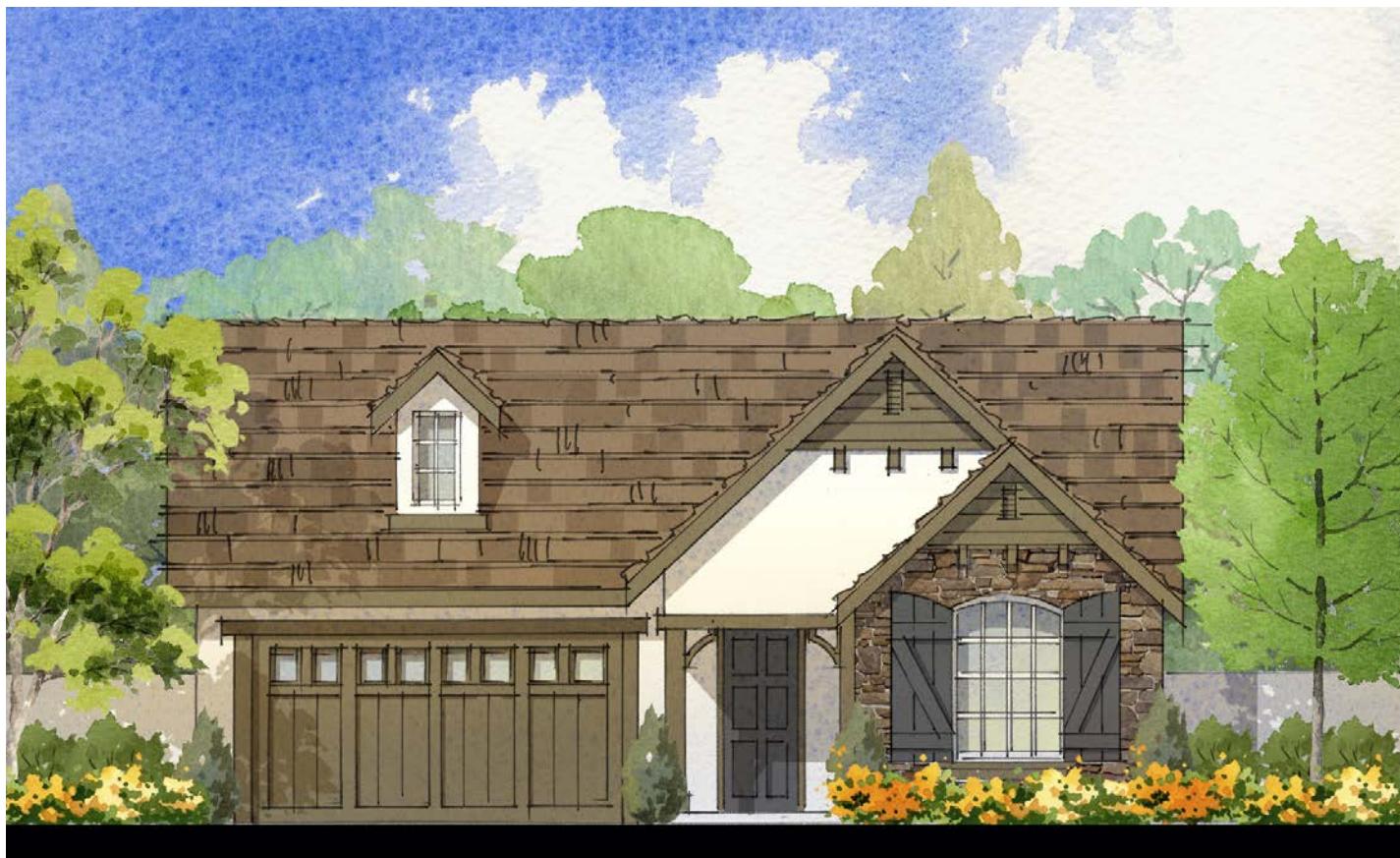
Conceptual Neighborhood Rendering



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

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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

Chapter Three

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

Chapter Three

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 Muddled bird stops
Walls	Medium sand float stucco finish (16/20) Horizontal siding accents	Adobe or slump block Brick Wood, board and batten, 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

Chapter Three

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

Chapter Three

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 1915 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

Chapter Three

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 Muddled 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

Chapter Three

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

Chapter Three

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

Chapter Three

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 batten siding Railing detail variation Limited traditional ornamentation elements Panel front entry doors Panel 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.

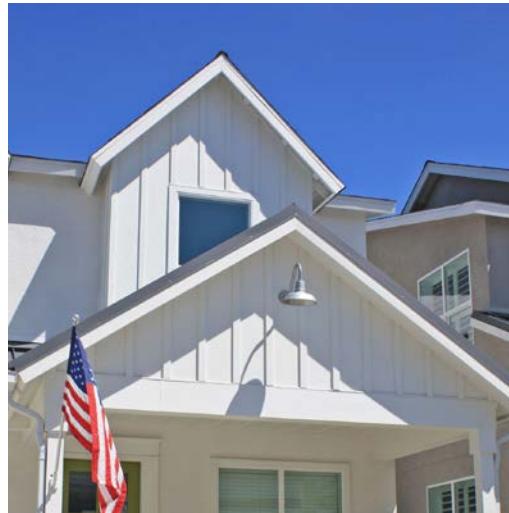


Progressive Farmhouse Style Elevation

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

Chapter Three

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



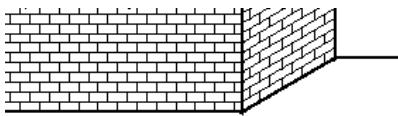
Example of Progressive Spanish Style

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

Muddled 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.

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.

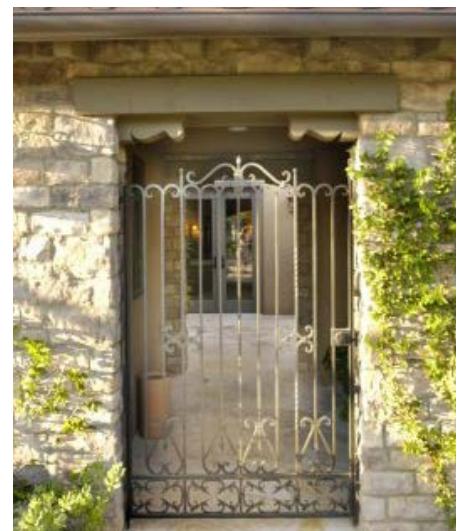
- No horizontal bathroom windows are permitted.
- All windows shall have trim surrounds, headers, or sills.
- Divided light windows are encouraged and should reflect the architectural style. Non street-facing and rear yard windows may delete the mullions.



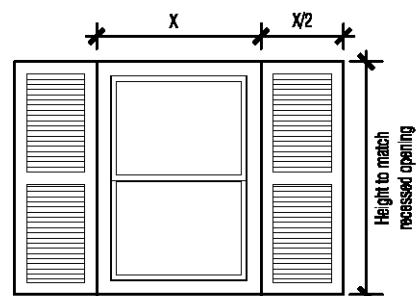
Examples of Prohibited Horizontal Bathroom Windows



Examples of Permitted Bathroom Windows



Gateway and Door Examples



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.

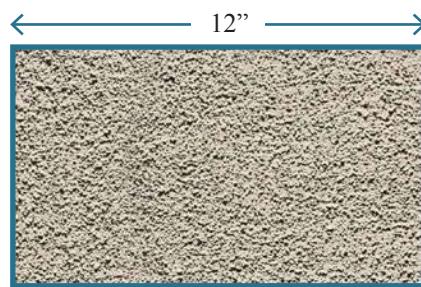
- Construct all stucco trim details (such as window surrounds, window sills, roof eaves, column details, lintels, etc.) with a level of precision and accuracy to express the authentic execution of the style.
- Use clean, crisp, and smooth stucco details.
- Use a different trim stucco finish from the 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.



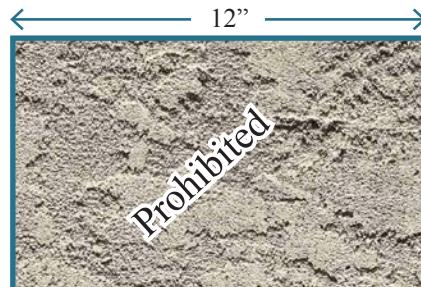
Light Lace Texture



Medium Sand Float (16/20 Aggregate)



Fine Sand Float (20/30 Aggregate)



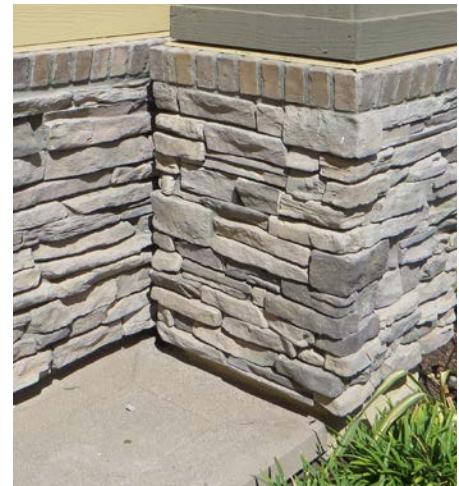
Spanish Texture - Prohibited



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.



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

Tracy Village



Conceptual Recreation Center Rendering



Conceptual Bird's Eye View of the Recreation Center

Chapter Three



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.

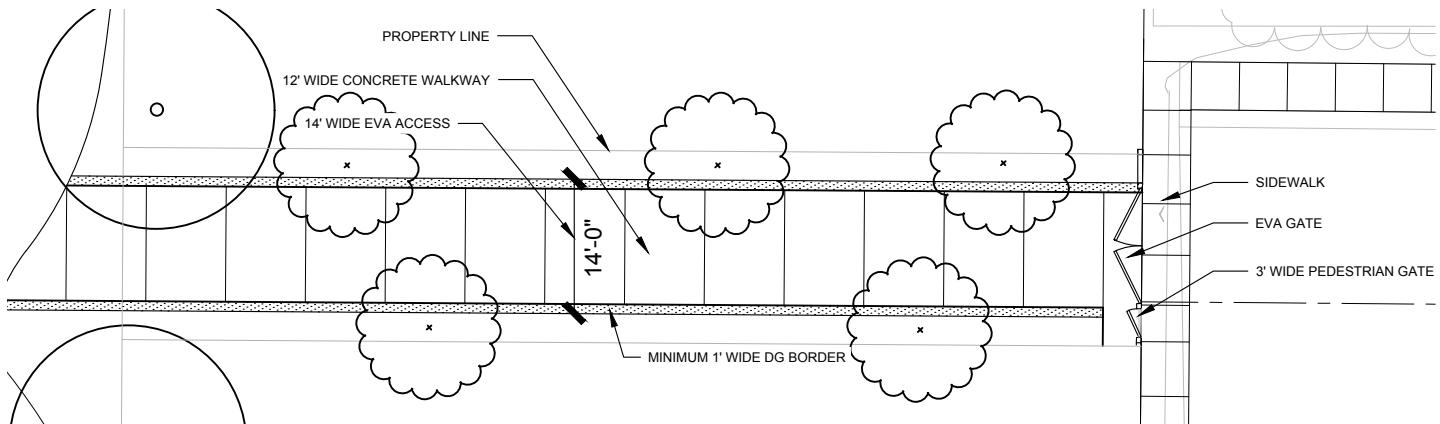
4.1 Access and Circulation

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

Chapter Four

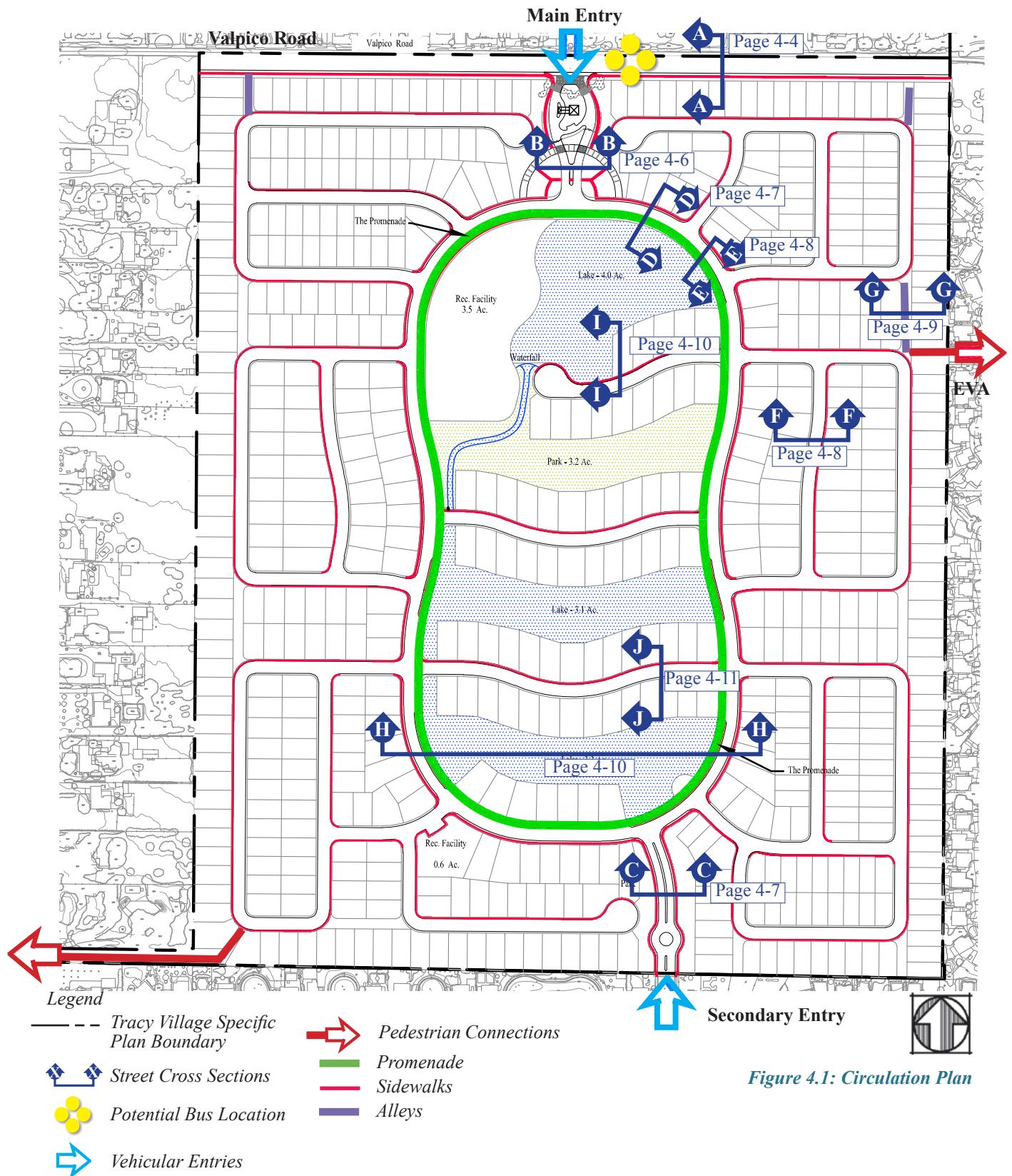
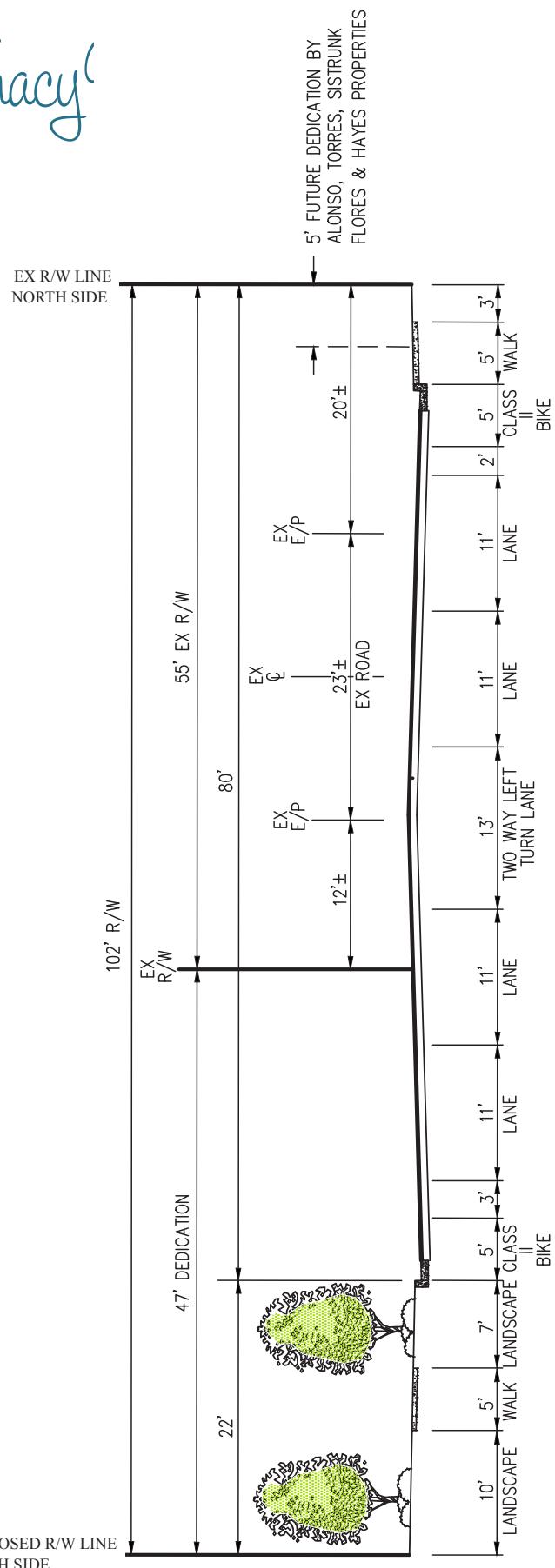


Figure 4.1: Circulation Plan

Tracy



Section A-A

ULTIMATE VALPICO ROAD TYPICAL SECTION

NOT TO SCALE

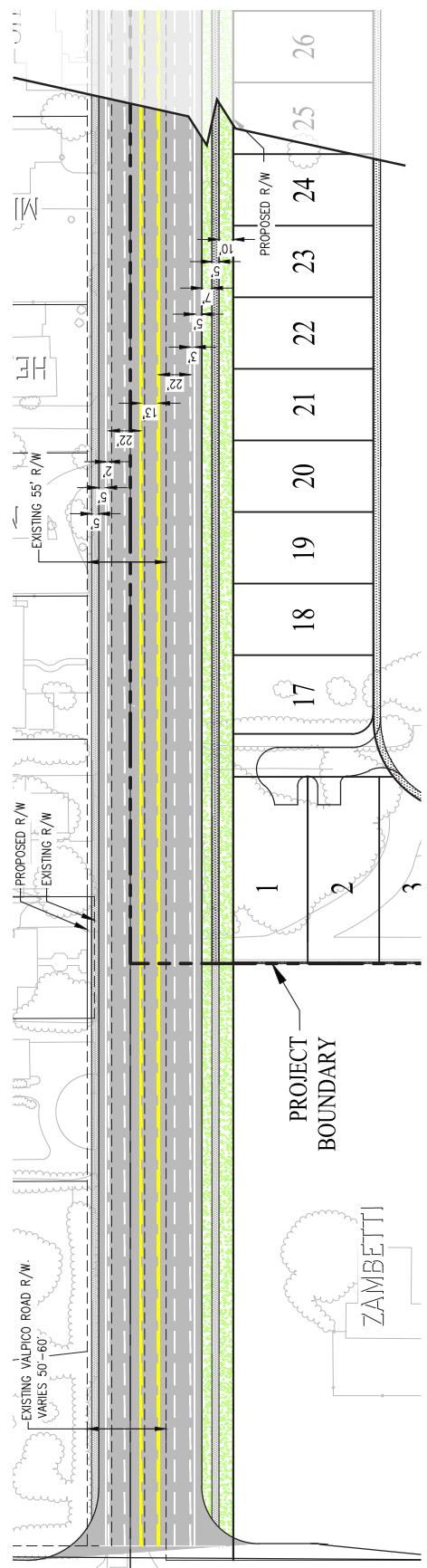
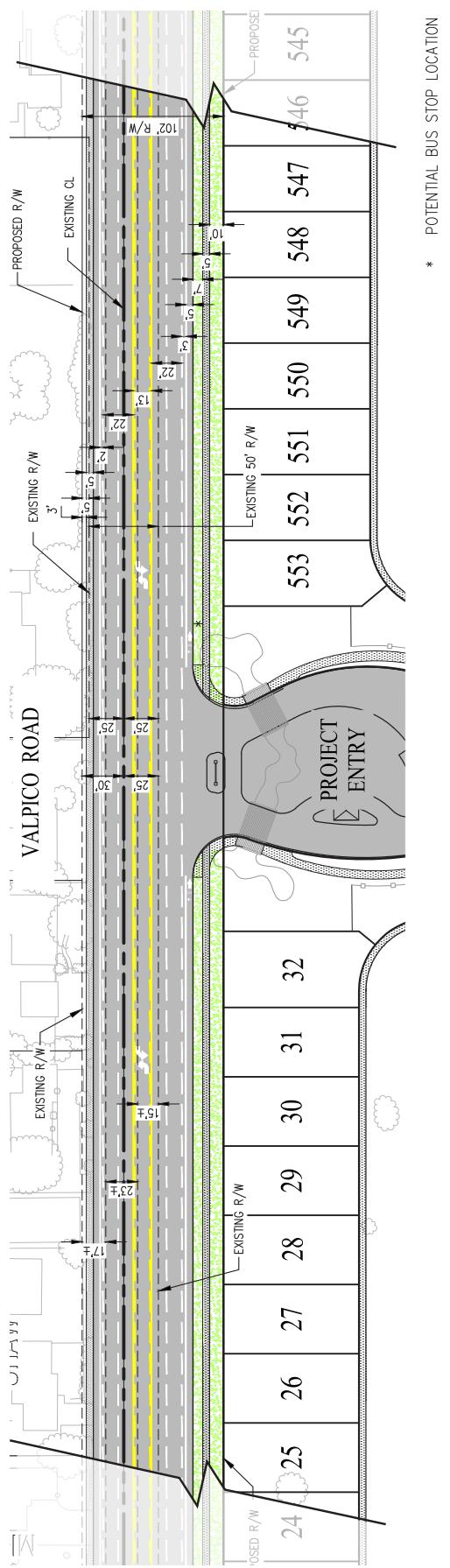
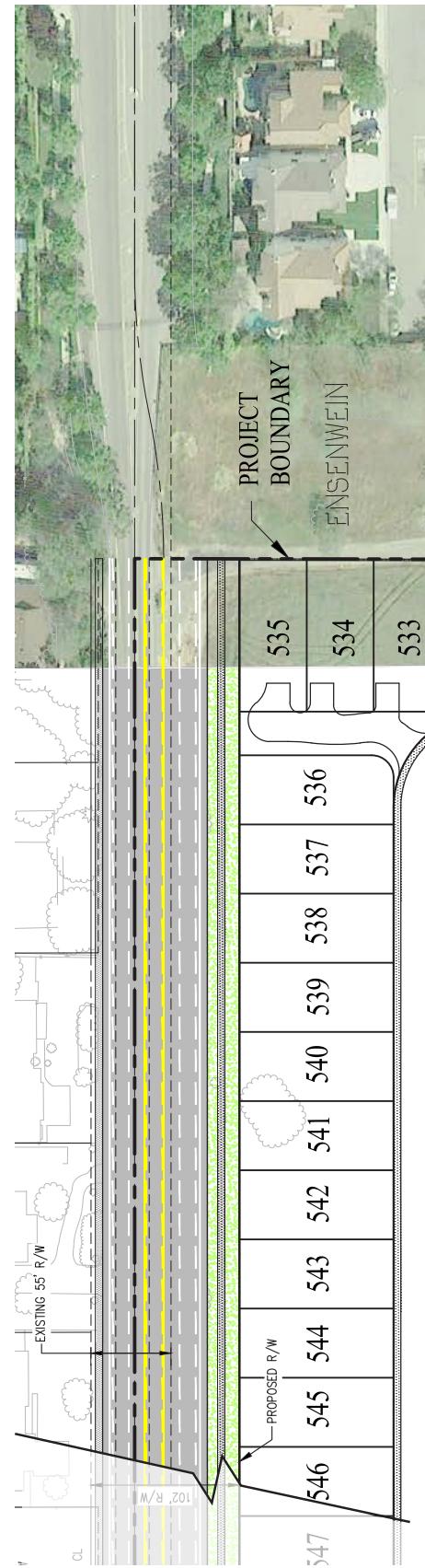


Figure 4.2a: Cross Section A-A and Plan

Chapter Four



4-5



Draft Specific Plan | March 2018

Tracy Village

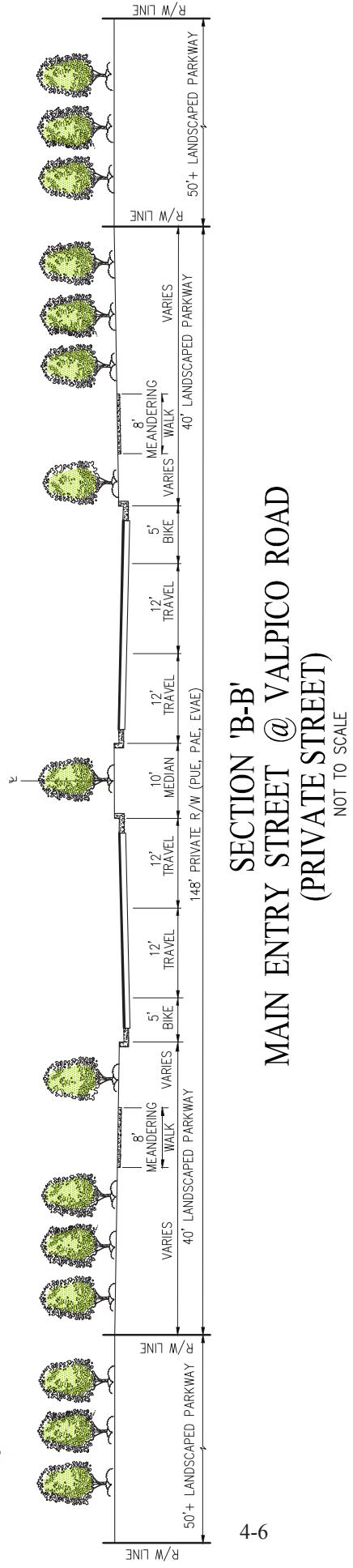
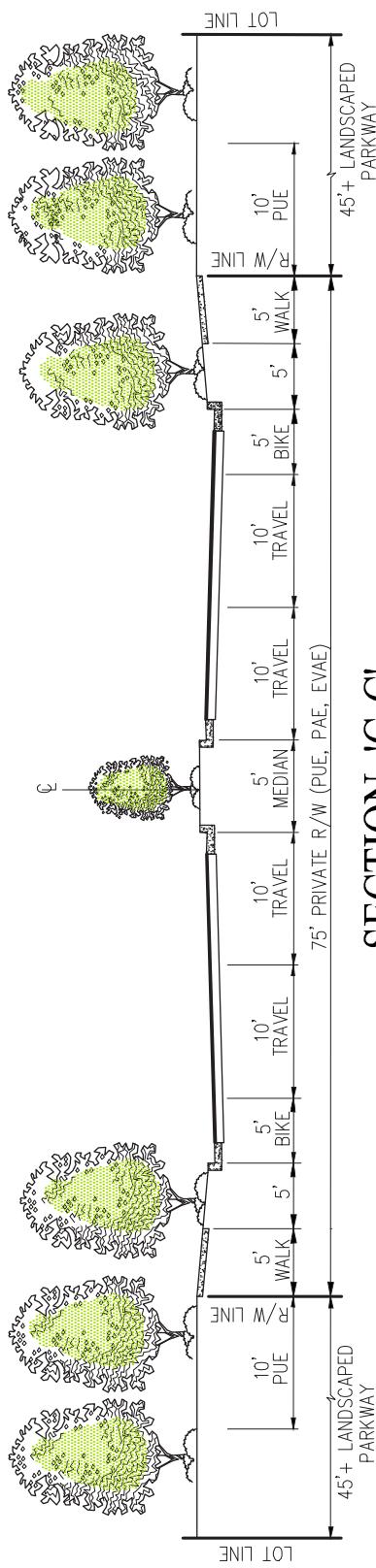


Figure 4.2b: Cross Section B-B



NOTE:

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

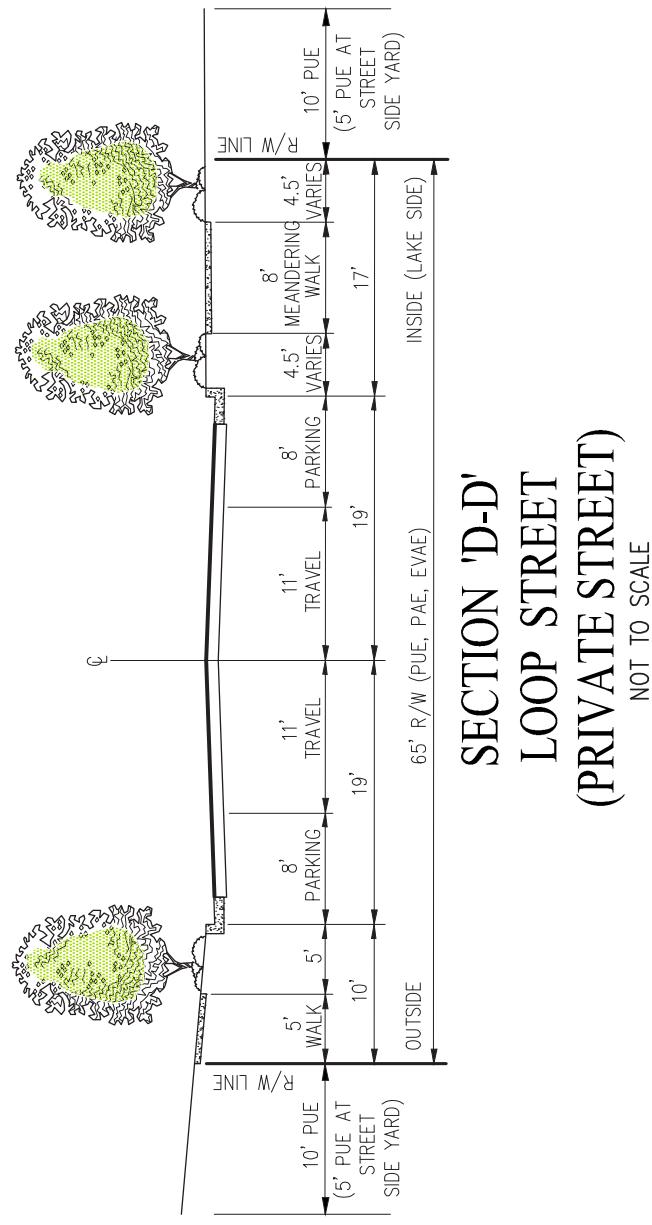
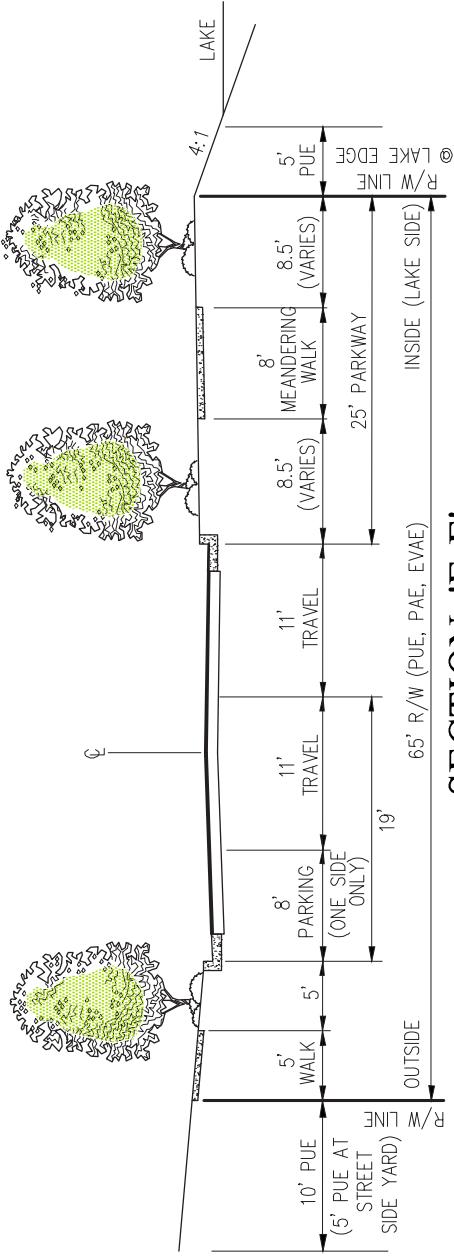


Figure 4.2c: Cross Sections C-C and D-D



LOOP STREET AT LAKE EDGE
(PRIVATE STREET)

NOTE:

1. ALL INTERNAL STREETS ARE PRIVATE & MAY NOT MEET CITY STANDARDS BUT WILL PROVIDE ADEQUATE TURNING MOVEMENTS FOR EMERGENCY VEHICLES.
2. NO PARKING SIGNAGE SHALL BE PROVIDED FOR THE SIDE OF THE LOOP STREET WHERE NO PARKING IS ALLOWED.

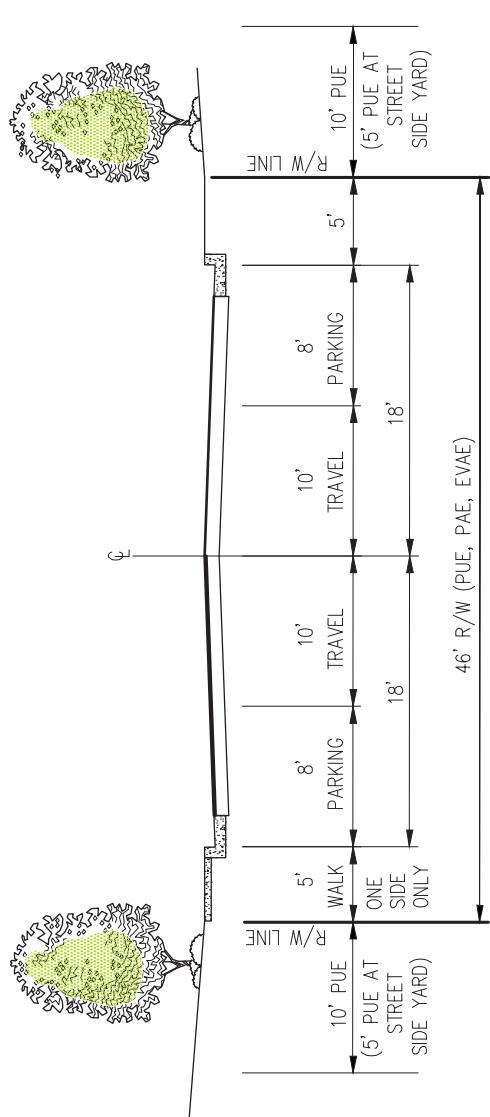


Figure 4.2d: Cross Sections E-E and F-F

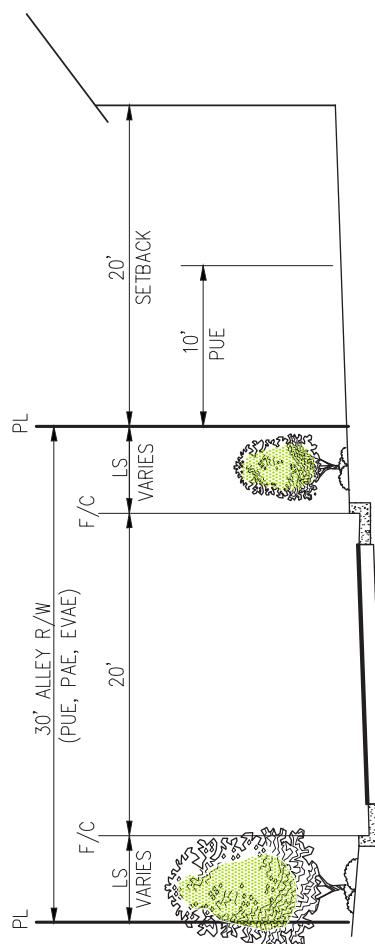


Figure 4.2e: Alley Cross Section G-G

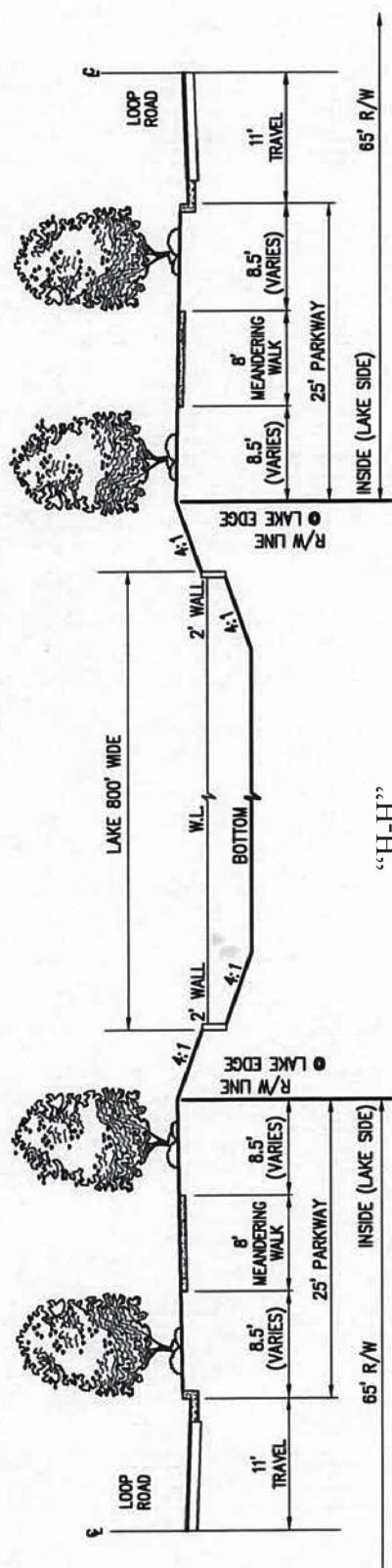
NOTE:

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

Tracy Village



TYPICAL LAKE CROSS SECTION

Not to Scale

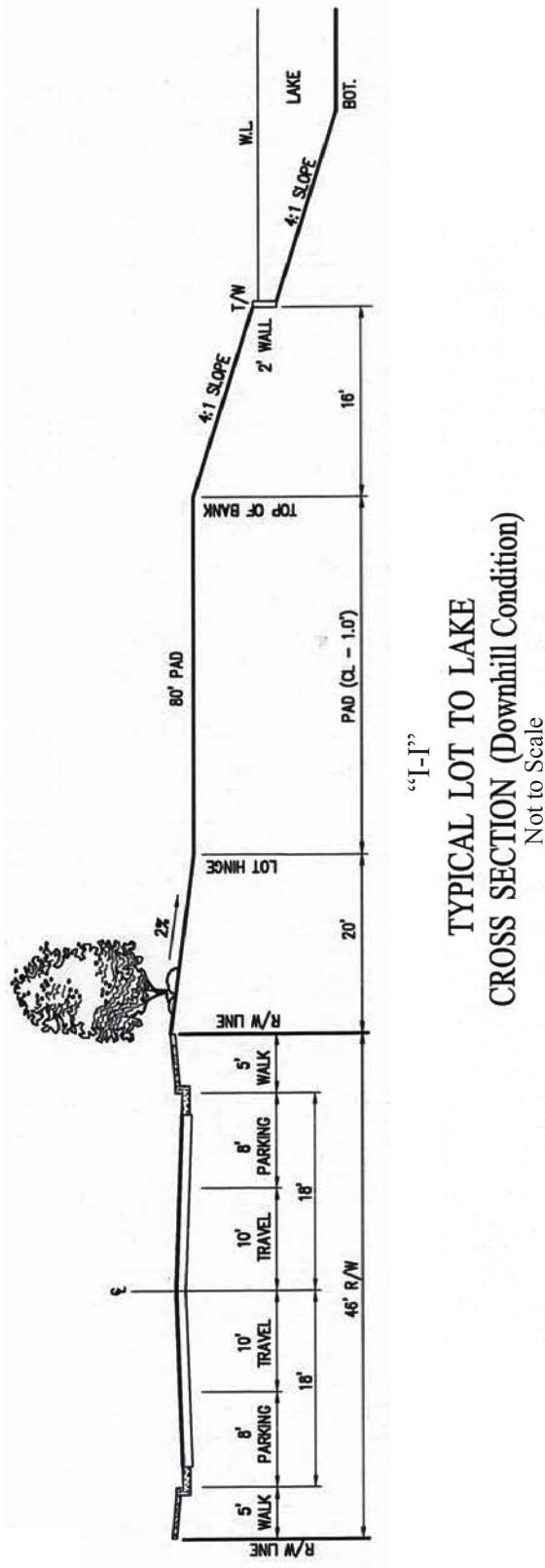


Figure 4.2f: Cross Sections H-H and I-I

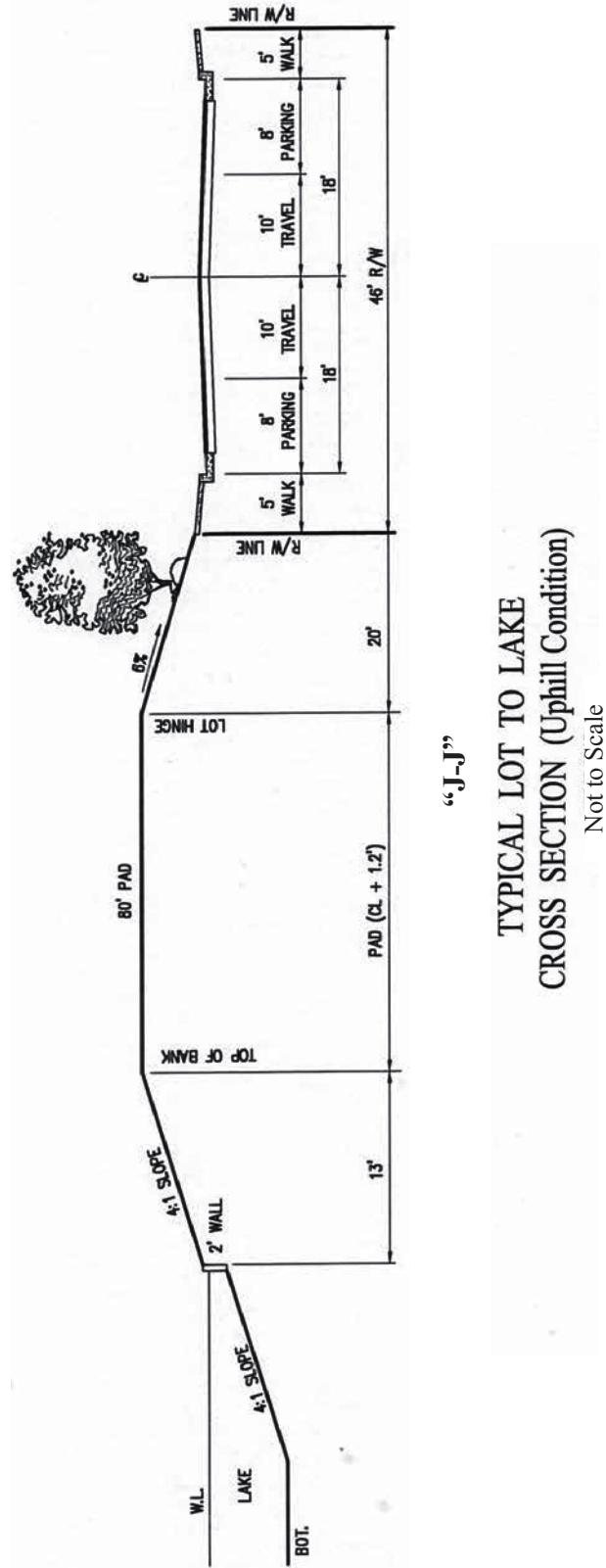


Figure 4.2g: Cross Section J-J

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.

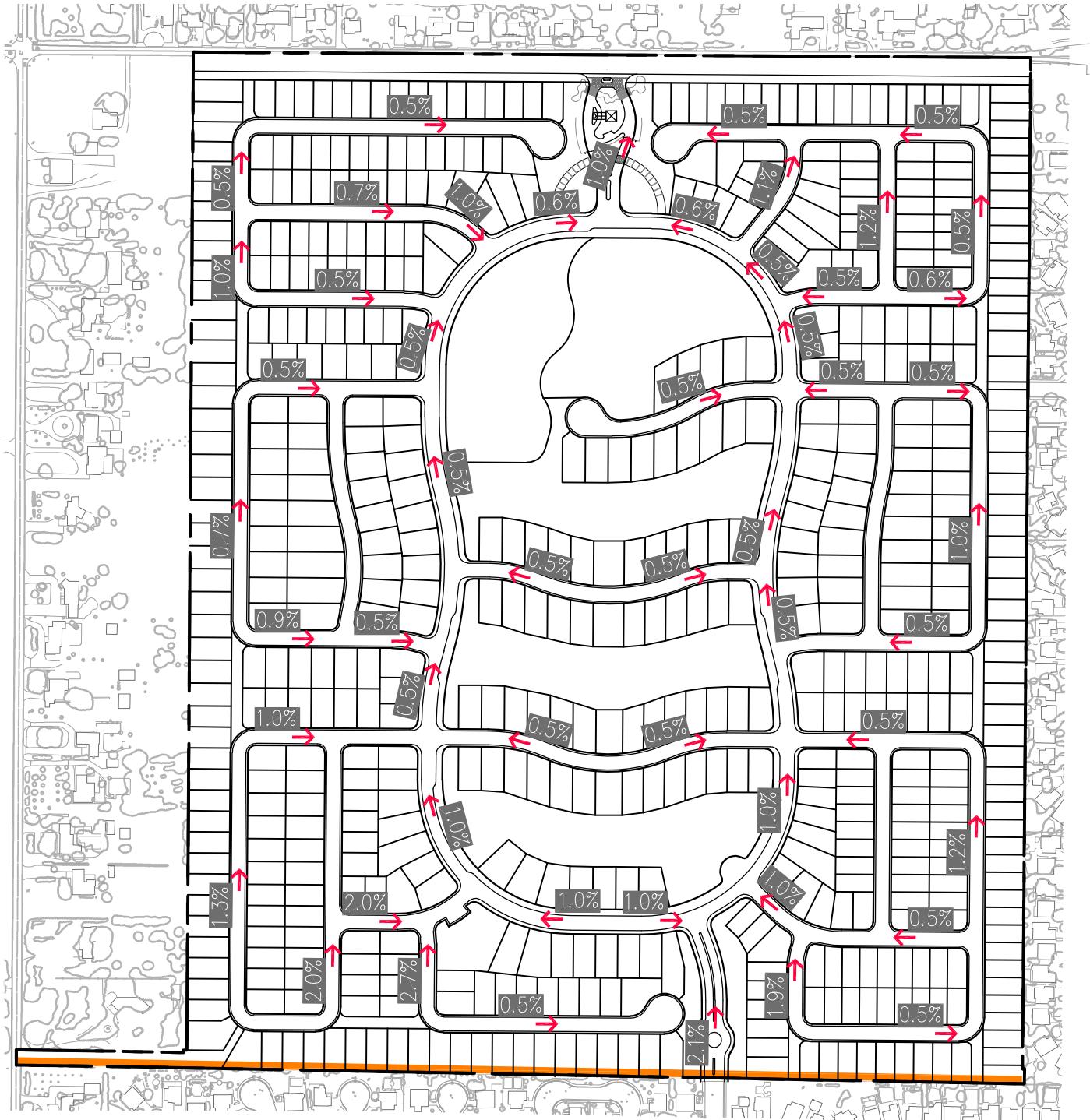


Figure 4.3: Preliminary Grading Plan



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

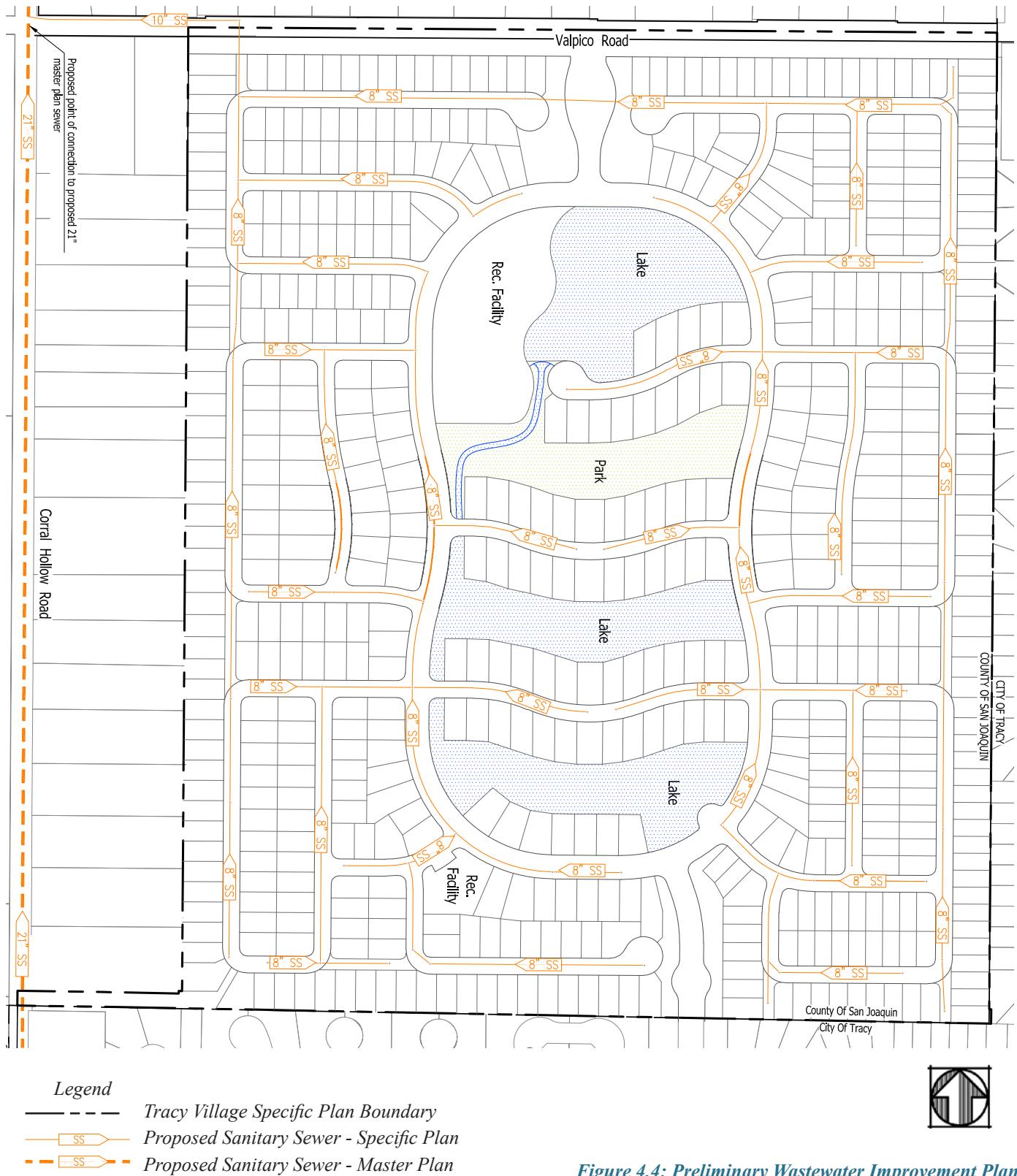
(Based on Proposed Specific Plan Land Uses and Age-Qualified Generation Factor)

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.

Chapter Four



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 buildup 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 buildup 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

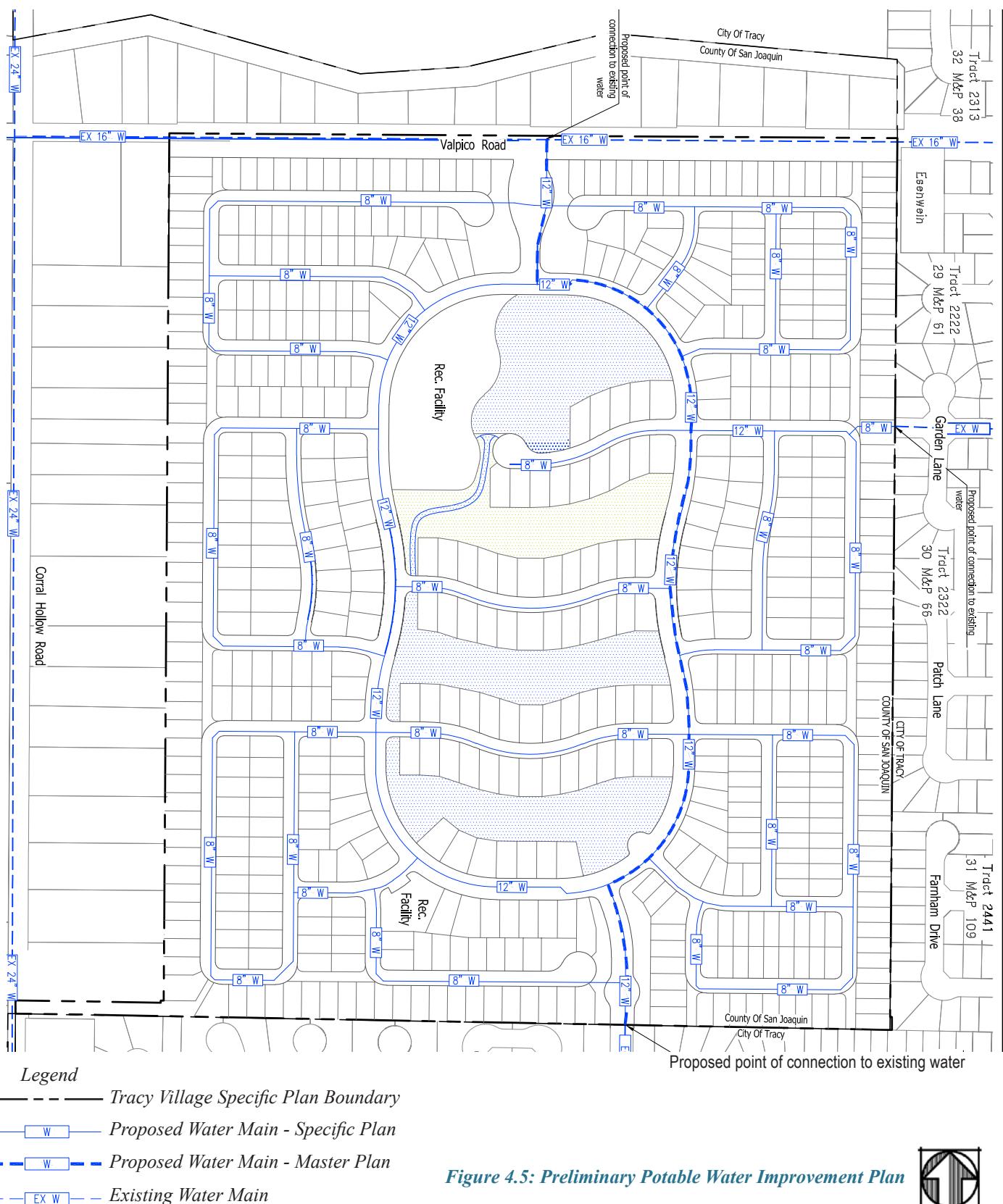
(Based on Proposed Specific Plan Land Uses and Age-Qualified Demand Factors)

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.

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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 Plant 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

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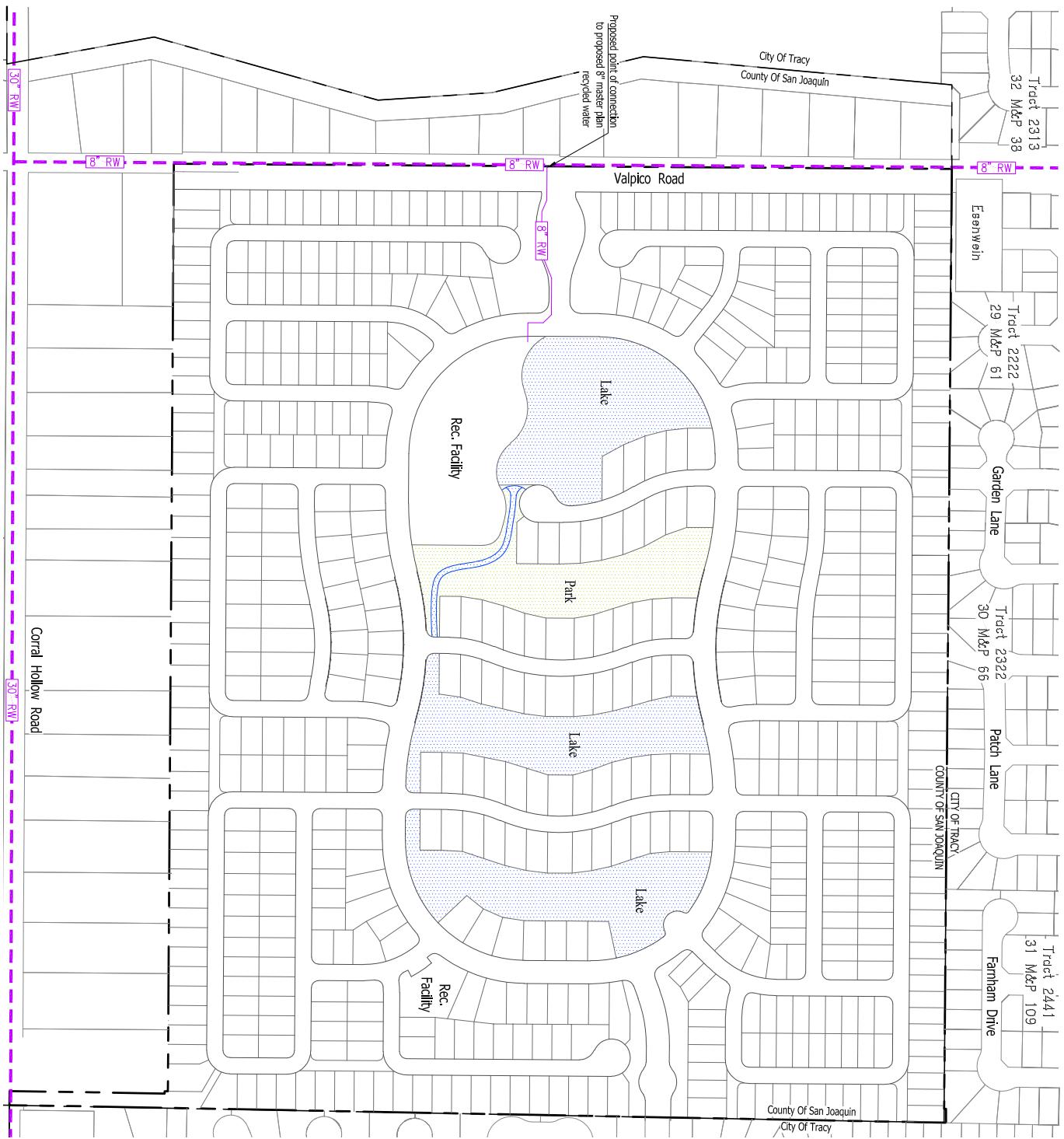


Figure 4.6: Recycled Water Improvement Plan

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.

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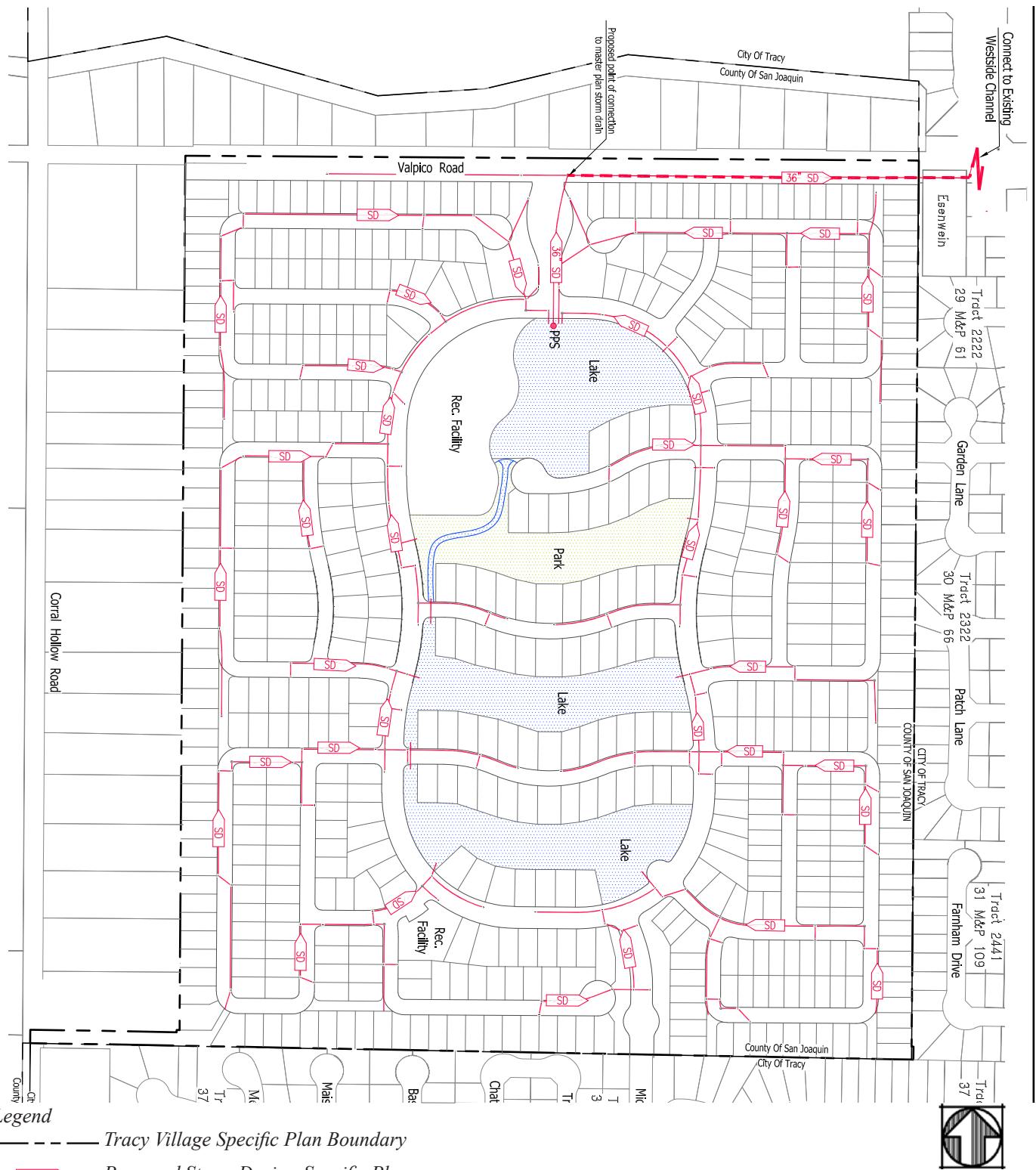


Figure 4.7: Storm Drain Improvement Plan

Legend

. Tracy Village Specific Plan Boundary

— SD — *Proposed Storm Drain - Specific Plan*

—  — *Proposed Storm Drain - Master Plan*

- *Conceptual Pump Station Location*

Tracy Village

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.

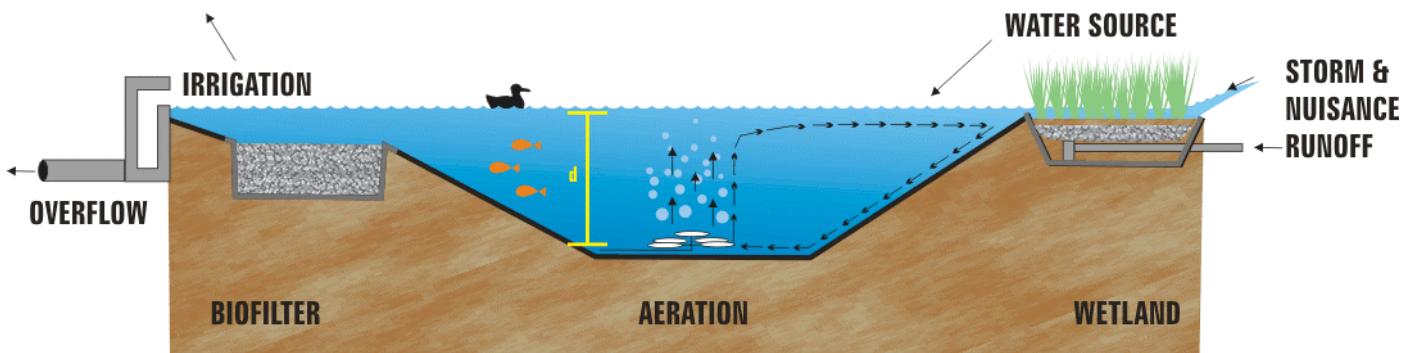


Figure 4.8: Stormwater Treatment and Water Quality Management Systems

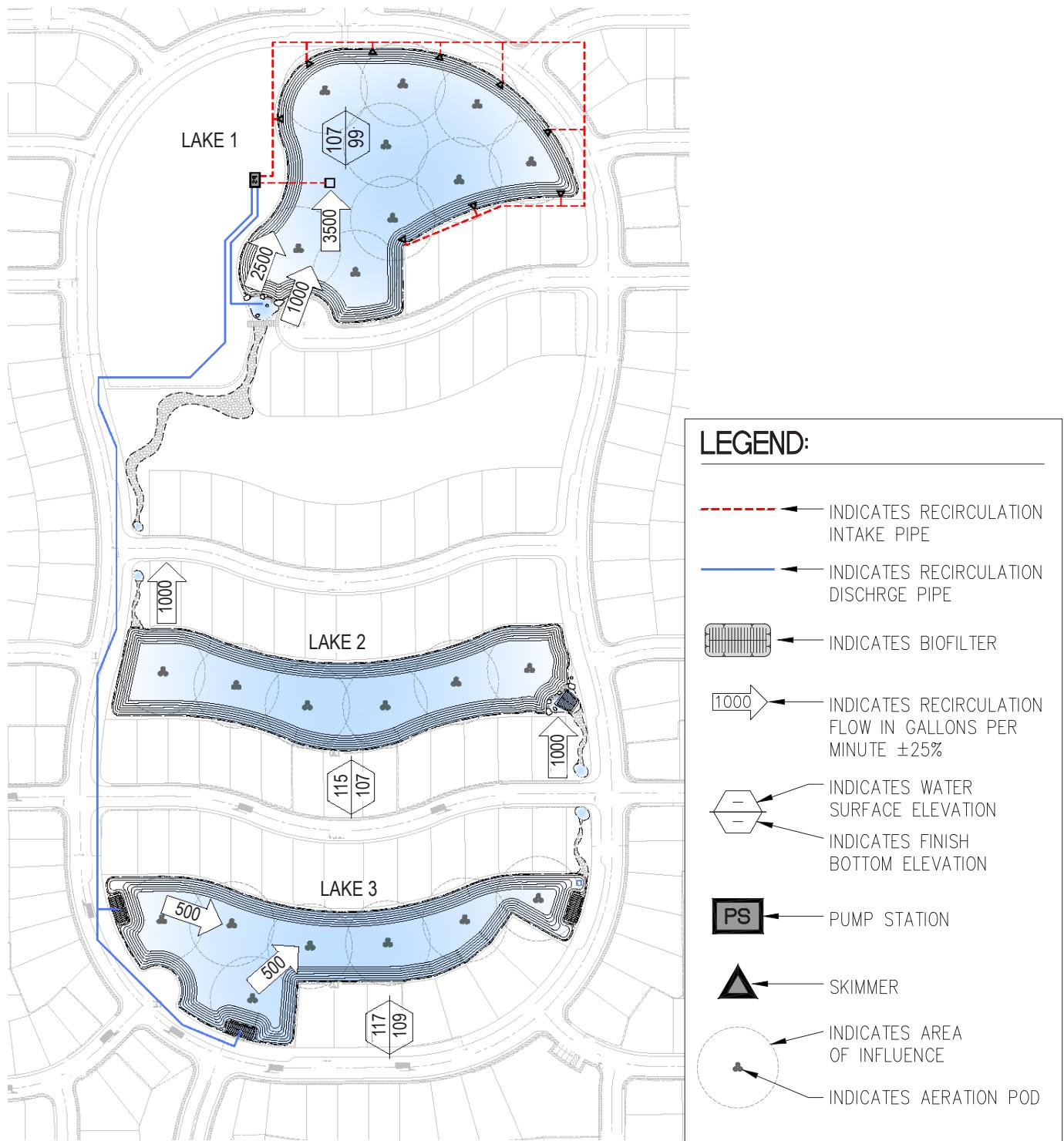


Figure 4.9: Conceptual Tracy Village Water Treatment Plan

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,

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- 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.

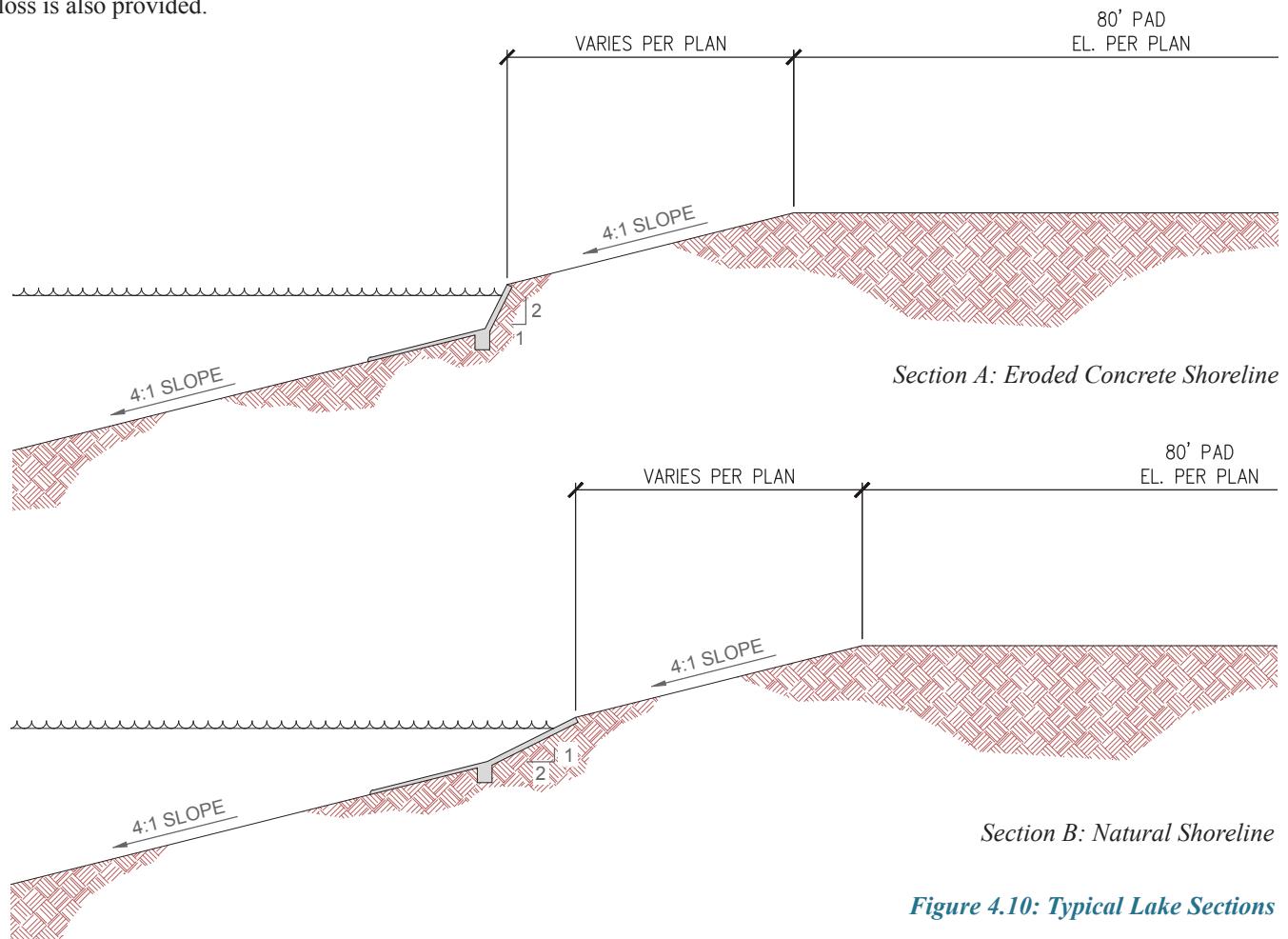


Figure 4.10: Typical Lake Sections

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.

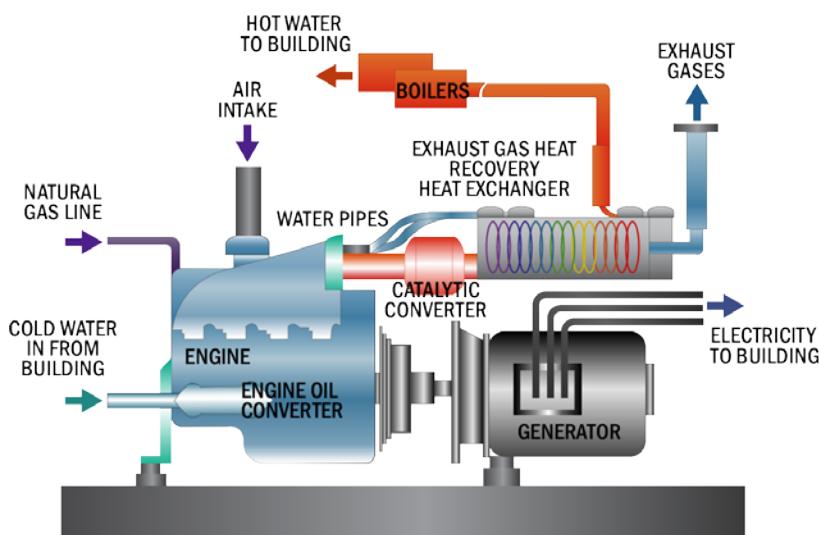
Since recycled water will be used for makeup water for the lake, the addition of alum and/or monochloramines will be required on occasion. It will be added once or twice a year to maintain the nutrients to a low level. This addition will not affect the wildlife, aquatic plants, and use of water as an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



SEPARATE PRODUCTION OF ELECTRICITY AND HEAT

100 Fuel → POWER PLANT → ELECTRICITY: 36

100 Fuel → BOILER → HEAT: 80

$$\text{EFFICIENCY: } (36+80)/200 = 0.58 \text{ OR } 58\%$$

COGENERATION

100 Fuel → COGENERATION SYSTEM → ELECTRICITY: 30

HEAT: 55

$$\text{EFFICIENCY: } (30+55)/100 = 0.85 \text{ OR } 85\%$$

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.

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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/Fences¹	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

Tracy Village

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Appendix A

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

Figure A-1: Plant Palette

Tracy Village

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

Appendix A

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

Tracy Village

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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.

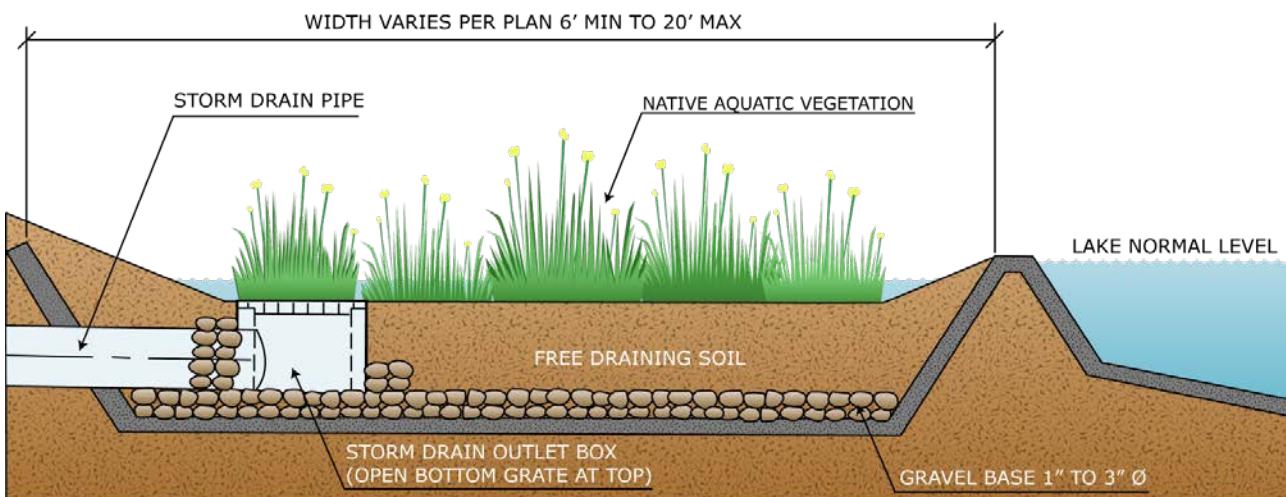


Figure B-1: Concept Water Quality Filter (Stormwater Extended Detention Basin)

Appendix B



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.

Tracy Village

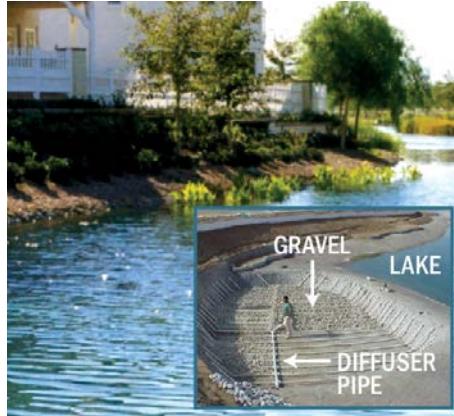


Figure 3: Biofilter, Pre and Post-Construction

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 predation in the media biofilters.

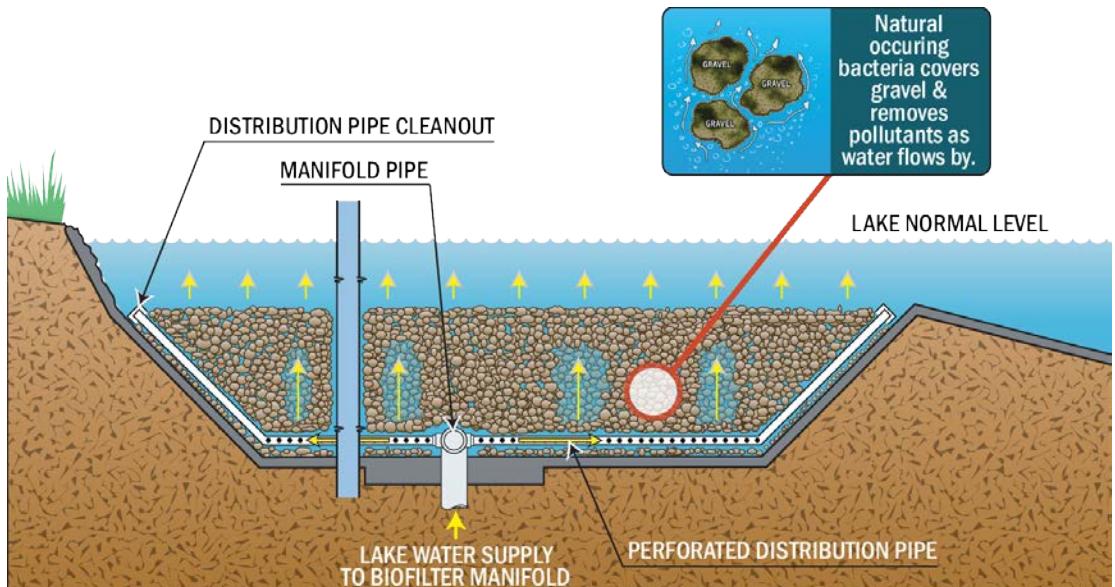


Figure B-4: Biofilter Section

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.

Appendix B

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.

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.

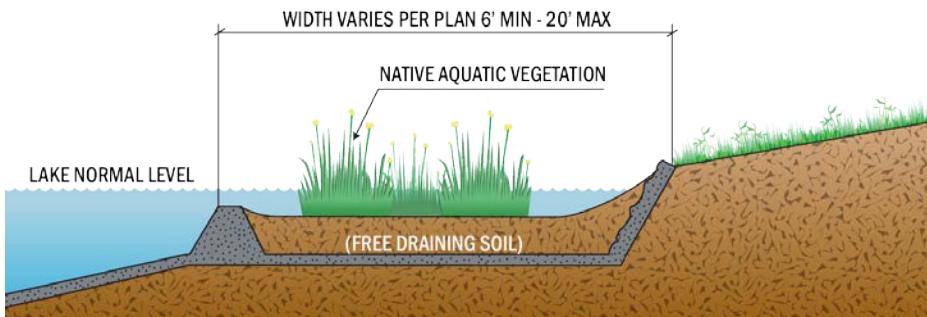


Figure B-5: Aeration System



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)

Tracy Village

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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

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.



Water Rakes for Aquatic Vegetation Management