Chapter 4: Mobility

4.1 Mobility Plan

The Mobility Plan for Fanita Ranch focuses on reducing the number and the length of vehicle trips and providing alternatives to fossil fuel-powered vehicle use. This is achieved through organizing land uses to locate services and goods close to homes, and optimizing circulation systems to create direct, efficient, safe and comfortable routes for a variety of transportation modes. The Development Plan Area land uses are designed to meet the daily needs of the Fanita Ranch residents to minimize trips outside of the Development Plan Area. Emphasis is placed on encouraging transportation modes that generate fewer emissions, such as walking, biking, electric vehicles, transit and ride-sharing.

4.1.1 Regional Access

Santee is accessible via State Route 52 (SR-52), which connects to Interstate 5 (I-5) and Interstate (I-805) in the west and State Route 67 (SR-67) in the east. SR-67 and State Route 125 (SR-125), which also connects to SR-52, both provide connections to I-8 south of Santee. From SR-52, Fanita Ranch can be accessed directly from Cuyamaca Street, or indirectly via Mast Boulevard to Fanita Parkway or via the extension of Magnolia Avenue from the existing terminus at Princess Joann Road to Cuyamaca Street.

4.1.2 Complete Streets

Streets within Fanita Ranch, as shown in *Exhibit 4.1: Circulation Plan*, are designed as a system of Complete Streets that safely accommodate and support multiple user types, including motorists, pedestrians, bicycles and transit riders. The benefits of Complete Streets include the following:

A. Improved safety for multiple user types by providing adequate facilities and reducing traffic speeds.

B. Balanced transportation systems that provide direct connections, variety of transportation choices, and reduced traffic congestion.

C. Opportunities for healthier, more active lifestyles that include walking and bicycling.

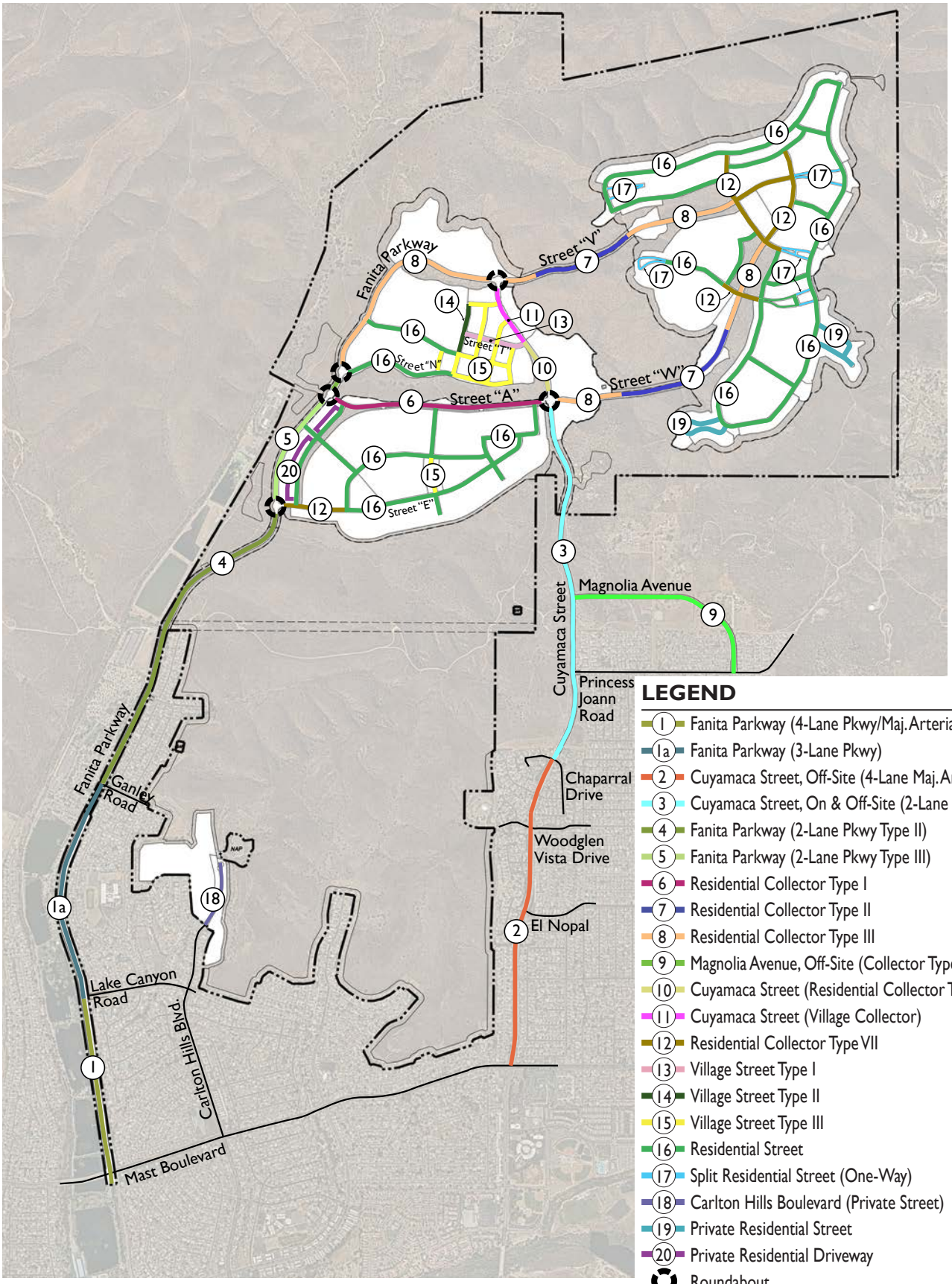


Exhibit 4.1: Circulation Plan

The Fanita Ranch Development Plan establishes the street designs within the boundaries of the Development Plan Area. Street improvements associated with development in Fanita Ranch include the extension of existing streets and the construction of a new internal system of public and private streets. The Development Plan establishes a network of streets of varying design capacities tailored to meet the unique concepts of the three Villages. The Development Plan street designs address safety, aesthetics and functionality as well as site constraints. The difference between the Development Plan streets and the City of Santee Public Works Standards (February 1998) related to the street right-of-way (ROW) widths, curb-to-curb dimensions, sidewalk and median configurations are described in *Appendix B: Fanita Ranch Street Design*.

Within the Development Plan Area, specially designed street sections respond to the physical characteristics of the site, including steep terrain and environmentally sensitive areas, and express the agrarian character through design and landscaping. Streets within Fanita Ranch are intended to provide diversity, uniqueness, and strong neighborhood identity while optimizing efficiency and user safety. Design elements include roundabouts, split streets, landscaped medians and parkways that will be planted with native and edible plant species to complement adjacent open space areas and the Farm. Roadways that pass through open space areas are designed to minimize impacts to habitat, maximize views to natural features and encourage the feasibility of potential wildlife crossings. *Table 4.1: Street Design Criteria* provides the design criteria for the streets within the Development Plan Area. Street cross sections and landscape treatments are provided in *Section 4.2: Street Corridor & Landscape Standards*. Unless expressly provided otherwise herein, the street design criteria and standards contained in this Development Plan shall govern over other applicable City street design criteria and standards with respect to Fanita Ranch.

Table 4.1: Street Design Criteria

PROPOSED SECTION – FANITA DEVELOPMENT PLAN NO.	NAME	ADT RANGE (Santee Mobility Element Equivalent)	Estimated ADT	DESIGN SPEED MPH	TRAVEL LANES	BIKE LANE	PARKING	MEDIAN WIDTH (FT)	CURB TO CURB (FT)	ROW (FT)	MAX GRADE % (f)	MAX GRADE % THROUGH INTERSECTION	MAX CENL. INTERSECTION ANGLE (DEG)	MIN. CENL (e) RADIUS (FT) STD. CROWN/ FULL SUPER	MIN. TRAFFIC INDEX	STOPPING SIGHT DISTANCE
1	FANITA PARKWAY 4 LANE PARKWAY	15,000-40,000 4-Lane Parkway/ Major Arterial City Std. Optn. 2	15,460	50[g]	4-12′	CLASS I & II	EMERGENCY, BOTH SIDES	14′[b] RAISED	68′, 76′	89′, 97′	7	5	10	1400/850	8.5	430′
1a	FANITA PARKWAY 3 LANE PARKWAY	15,000-40,000 4-Lane Parkway/ Major Arterial City Std. Optn. 2	15,130	50[g]	2-12′ + 1-12′	CLASS I & II	EMERGENCY, BOTH SIDES	14′[b] RAISED	57′, 65′	89′-97′	7	5	10	1400/850	8.5	430′
2 Offsite	CUYAMACA STREET 4 LANE MAJOR ARTERIAL	15,000-40,000 4-Lane Major Arterial	18,630	50	4-12′	CLASS II	EMERGENCY, BOTH SIDES	14′ RAISED	82′	102′	7	5	10	1400/850	8.5	430′
3 On & Offsite	CUYAMACA STREET 2 LANE PARKWAY TYPE I	5,000-15,000 2-Lane Parkway w/ TWLTL	13,920	40[d]	2-12′	CLASS II	EMERGENCY, BOTH SIDES	10′[b] RAISED	52′, 56′	70′, 74′	12	5	10	800/550	8.0	300′
4	FANITA PARKWAY 2 LANE PARKWAY TYPE II	5,000-15,000 2-Lane Parkway w/ TWLTL	12,350	40[d]	2-12′	CLASS I & II	EMERGENCY, BOTH SIDES	14′[b] RAISED	48′, 56′	69′, 77′	12	5	10	800/550	8.0	300′
5	FANITA PARKWAY 2 LANE PARKWAY TYPE III	5,000-15,000 2-Lane Parkway w/ TWLTL	9,730	40[d]	2-12′	CLASS I & II	YES ONE SIDE, EMERGENCY ONE SIDE	10′ RAISED	57′	83′	10	5	10	800/550	8.0	300′
6	RESIDENTIAL COLLECTOR TYPE I	4,000-10,000 Residential Collector/ 2-Lane Parkway	7,400	35[d]	2-12′	CLASS II	YES ONE SIDE	10′ PAINTED	53′	59′, 69′	13	5	10	610/400	7.5	250′
7	RESIDENTIAL COLLECTOR TYPE II	4,000-10,000 Residential Collector/ 2-Lane Parkway	6,480	35[g]	2-12′	CLASS II	EMERGENCY, BOTH SIDES	6′ RAISED	48′	62′	15	5	10	610/400	7.5	250′
8	RESIDENTIAL COLLECTOR TYPE III	4,000-10,000 Residential Collector/ 2-Lane Parkway	6,480	35[d]	2-12′	CLASS II	EMERGENCY, BOTH SIDES	14′ RAISED	56′	78′, 83′	12[a]	5	10	610/400	7.5	250′
9 Offsite	MAGNOLIA AVENUE COLLECTOR TYPE IV	4,000-10,000 Collector/ 2-Lane Parkway	6,310	35[d][j]	2-13′	CLASS II	YES, BOTH SIDES	12′ PAINTED	52′	67′	12	5	10	610/400	7.5	250′
10	CUYAMACA STREET RESIDENTIAL COLLECTOR TYPE V	4,000-10,000 Residential Collector/ 2-Lane Parkway	6,180	35[d][g]	2-12′	CLASS II	EMERGENCY, BOTH SIDES	10′ RAISED	52′	75′	15[a]	5	10	610/400	7.5	250′
11	VILLAGE COLLECTOR	4,000-10,000 Residential Collector/ 2-Lane Parkway	6,180	35[d]	2-12.5′	N/A	YES, BOTH SIDES[c]	N/A	64′	88′	10	5	10	610/400	7.5	250′
12	RESIDENTIAL COLLECTOR TYPE VII	4,000-10,000 Residential Collector/ 2-Lane Parkway	4,300	25[d]	2-12′	N/A	YES, BOTH SIDES	N/A	40′	62′, 63′	12[a]	5	10	200	7.5	160′
13	VILLAGE STREET TYPE I	2,200 (LOCAL)		25	2-12′	N/A	YES, BOTH SIDES	20′ RAISED	60′	80′	12	5	10	200	5.0	160′
14	VILLAGE STREET TYPE II	2,200 (LOCAL)		25	1-12.5′+ 1-10′	N/A	YES, BOTH SIDES	N/A	50′	70′	12	5	10	200	5.0	160′
15	VILLAGE STREET TYPE III	2,200 (LOCAL)		25	2-10′	N/A	YES, BOTH SIDES	N/A	36′	56′	12	5	10	200	5.0	160′
16	RESIDENTIAL STREET	2,200 (LOCAL)		25	2-10′	N/A	YES, BOTH SIDES[c]	N/A	36′	57′, 58′, 62′	15[a]	5	10	200	5.0	160′
17	RESIDENTIAL STREET	2,200 (LOCAL)		25	2-10′	N/A	YES, BOTH SIDES[c]	N/A	42′	VARIES PER PLAN	15[a]	5	10	200	5.0	160′
18	PRIVATE RESIDENTIAL STREET	2,200 (LOCAL)		25	2-12′	N/A	YES, ONE SIDE	N/A	32′	70′[i]	12	5	10	200	5.0	160′
19	PRIVATE RESIDENTIAL STREET	1,100 (PRIVATE)		15	2	N/A	SEE PLAN	N/A	VARIES PER PLAN	VARIES PER PLAN	12	5	10	35	5.0	100′
20	PRIVATE RESIDENTIAL DRIVEWAY	1,100 (PRIVATE)		15	2	N/A	N/A	N/A	VARIES PER PLAN	VARIES PER PLAN	12	5	10	35	5.0	100′

NOTES:

A. THE STREETS WITH A GRADIENT EXCEEDING 12% SHALL BE PCC IN ACCORDANCE WITH PUBLIC WORKS STANDARDS, CITY OF SANTEE.

B. MEDIAN WIDTH MAY BE REDUCED TO 6' IN THE VICINITY OF WETLAND AND/OR BIOLOGICAL IMPACTS PROVIDED THE REQUIRED TURN POCKETS FUNCTION PROPERLY. PARKWAY AND MEDIAN MAY HAVE UP TO A 4:1 SLOPE WHERE SHOWN ON PLANS.

C. PARKING MAY BE ELIMINATED ON ONE SIDE WHERE SHOWN ON PLANS.

D. ENTRY DESIGN SPEED OF A ROUNDABOUT SHALL BE 20 MPH.

E. CURVE RADII SHOWN ARE PER CALTRANS TABLE 202.2 ASSUMING STANDARD CROWN SECTION. MINIMUM CENTERLINE RADIUS ON SUPER ELEVATED STREETS SHALL BE PER CITY OF SANTEE PUBLIC WORKS STANDARDS TABLE A.

F. LIGHTED SAG VERTICAL CURVES CALCULATED AS $L=0.0215AV^2$ MAY BE USED ON ANY STREET PROVIDED THAT STREET LIGHTS ARE INSTALLED TO THE SATISFACTION OF THE DIRECTOR OF DEVELOPMENT SERVICES.

G. PARKWAY – PARKWAY IS DEFINED BY THE CITY OF SANTEE MOBILITY ELEMENT AS "ROADWAYS REQUIRING UNIQUE DESIGN APPLICATIONS WHERE STANDARD DESIGNS CANNOT BE UTILIZED BECAUSE OF STEEP TERRAIN, RIGHT-OF-WAY CONSTRAINTS, SPECIAL DEVELOPMENT NEEDS AND/OR OTHER SPECIAL CONDITIONS. DUE TO SIGNIFICANT VARIATION ALONG PARKWAY CROSS-SECTIONS, A TYPICAL CROSS-SECTION IS NOT PROVIDED."

H. THE FANITA RANCH DEVELOPMENT PLAN USES CALTRANS STANDARDS FOR HORIZONTAL AND VERTICAL DESIGN GEOMETRY BASED ON THE ASSIGNED DESIGN SPEED FOR EACH ROADWAY TYPE. UNLESS OTHERWISE NOTED STREET DESIGN SHALL CONFORM TO CITY OF SANTEE STANDARDS.

I. EXISTING 70′ ROADWAY EASEMENT.

J. THE DESIGN SPEED OF MAGNOLIA AVENUE BETWEEN PRINCESS JOANN ROAD AND CUYAMACA STREET IS 40 MPH; HOWEVER, THE VERTICAL GRADE DOES NOT MEET THE 40 MPH DESIGN SPEED DUE TO CONDITIONS (TERRAIN CONSTRAINTS) FOR WHICH A DESIGN VARIANCE IS PROVIDED ON THE VESTING TENTATIVE MAP.

4.1.3 Traffic Calming Plan

The purpose of the Fanita Ranch Traffic Calming Plan is to lower the vehicle speeds on neighborhood streets without restricting access. This Traffic Calming Plan includes a set of street designs that slow and reduce traffic speeds while encouraging walkers and cyclists to share the street. The intent in implementing traffic calming measures throughout Fanita Ranch is to create streets that are valuable public spaces shared equally by all users.

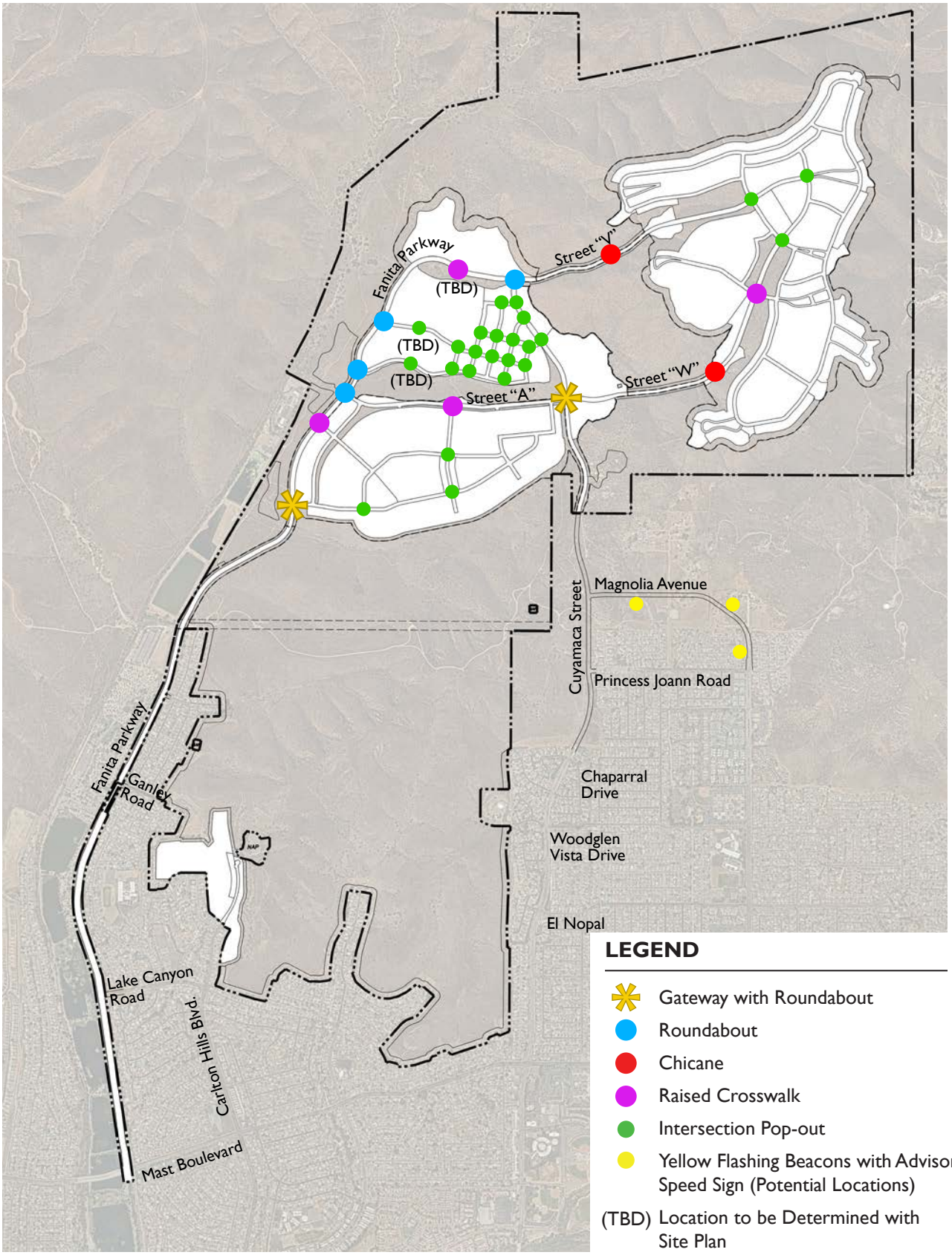
The overall goals of the Traffic Calming Plan are to:

- Improve the quality of life for residents;
- Reduce impacts of motor vehicles on local and collector streets;
- Create safe and attractive streets; and
- Create a friendly environment for pedestrians and bicyclists.

The objectives of the Traffic Calming Plan are to:

- Increase the level of respect for non-motorists;
- Create a feeling of safety for all users;
- Improve safety and convenience for all users;
- Reduce traffic accidents;
- Reduce noise;
- Provide space for non-vehicular users;
- Enhance street appearance;
- Reduce vehicular speed; and
- Reduce the need for enforcement.

Traffic calming measures are designed to physically force drivers to slow down to avoid an uncomfortable driving experience. Traffic calming measures can also be designed to achieve a desired speed limit which drivers are physically compelled to meet. Design considerations include safety, maintenance, emergency vehicle access, self-enforcement and drainage. There are a variety of traffic calming measures that are widely used throughout the United States. The Fanita Ranch Traffic Calming Plan includes the traffic calming measures described in *Table 4.2: Traffic Calming Measures* and identified in *Exhibit 4.2: Conceptual Traffic Calming Plan*. The traffic calming measures are depicted in *Exhibits 4.3.1* to *4.3.6*. *Exhibit 4.2: Conceptual Traffic Calming Plan* depicts the conceptual locations of proposed traffic calming measures. The final locations of these measures will be determined during final engineering.



Conceptual traffic calming measure locations only; final locations to be determined during final engineering.

Exhibit 4.2: Conceptual Traffic Calming Plan

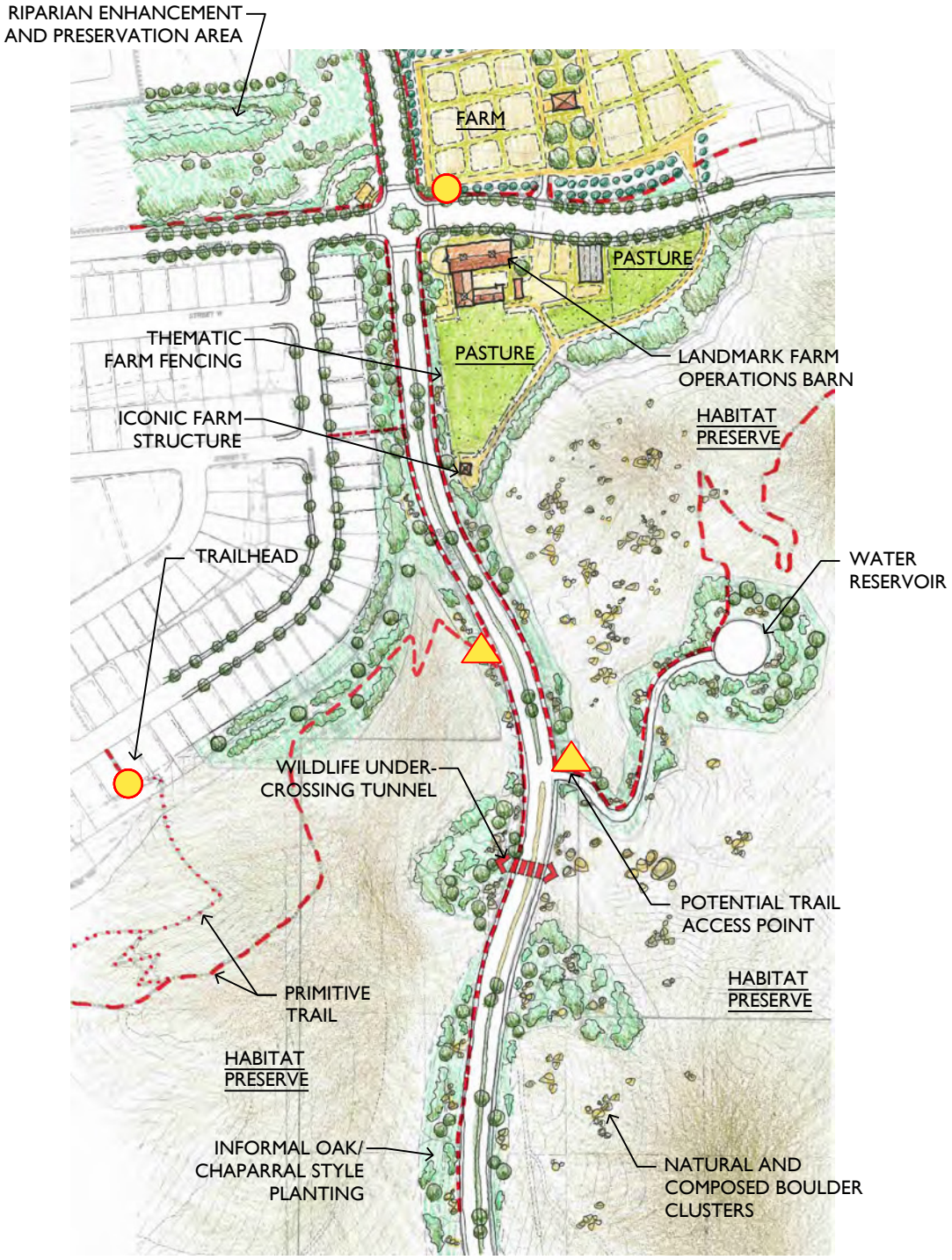
not to scale

Table 4.2: Traffic Calming Measures

Traffic Calming Measure	Description	Benefit/Target
Gateways	Treatments include the use of signs, landscaping, special paving, and community identity monuments placed at the entrances to a neighborhood or community announcing to motorists that they are entering a community where there is a significant change in the driving environment.	• Reduces Speed • Improves Safety • Enhances Community Aesthetics
Roundabouts	Roundabouts include a raised center landscaped island, special paving, splitter islands, accessible pedestrian crossings and pedestrian/bike refuge islands	• Reduces Speed • Improves Safety • Provides Multi-Modal Accommodations • Improves traffic movement • Replaces traffic stops/signals
Chicanes	A chicane is a channelization that causes a single or series of tight turns in opposite directions on an otherwise straight section of a street. The combination of narrowed street width, a wider raised median and the serpentine path of travel slows traffic.	• Reduces Speed • Improves Safety
Raised Medians / Split Street	Includes raised plantable median areas at the center of a street and split streets with park or open space areas in the center.	• Reduces Speed • Reduces Cut-through Volume • Improves Safety • Multi-Modal Accommodations
Intersection Pop-Outs	Intersection pop-outs are curb extensions that narrow the street at intersections by widening the sidewalks at the point of crossing. They are used to make pedestrian crossings shorter and reduce the visual width of a long street. Pop-outs can also be used at intersections to create a street gateway effect, visually announcing an entrance to a neighborhood.	• Reduces Speed • Improves Pedestrian Safety • Provides Multi-Modal Accommodations
Raised Crosswalk	A raised crosswalk is essentially a speed table and is typically approximately 3.5 inches high and 22 feet long in the direction of travel with 6-foot ramps at the ends and a 10-foot field top. Final dimensions to be determined during final engineering	• Reduces Speed • Enhances Pedestrian Safety

Table 4.2: Traffic Calming Measures (cont.)

Traffic Calming Measure	Description	Benefit/Target
Lane Narrowing	Travel lanes are narrowed by reducing the paving width from standards and may include pavement markings	• Reduces Speed • Improves Safety • Provides Multi-Modal Accommodations
On-Street Bicycle Facilities	Bicycle lanes are designated through the use of signage and pavement markings identifying separate travel lanes for bicycles	• Reduces Speed • Improves Safety • Provides Multi-Modal Accommodations
On-Street Parking	Striped diagonal parking or parallel parking along one or both sides of a street	• Reduces Speed • Improves Safety
Yellow Flashing Beacons with Advisory Speed Signs	Yellow flashing beacons with advisory speed signs that alert drivers of steep roadway grades and to reduce speed on Magnolia Avenue	• Reduces Speed • Improves Safety



Note: Refer to Exhibit 4.13: Trails Map for detail regarding trail types and widths.

For illustrative purposes only; final design may vary.

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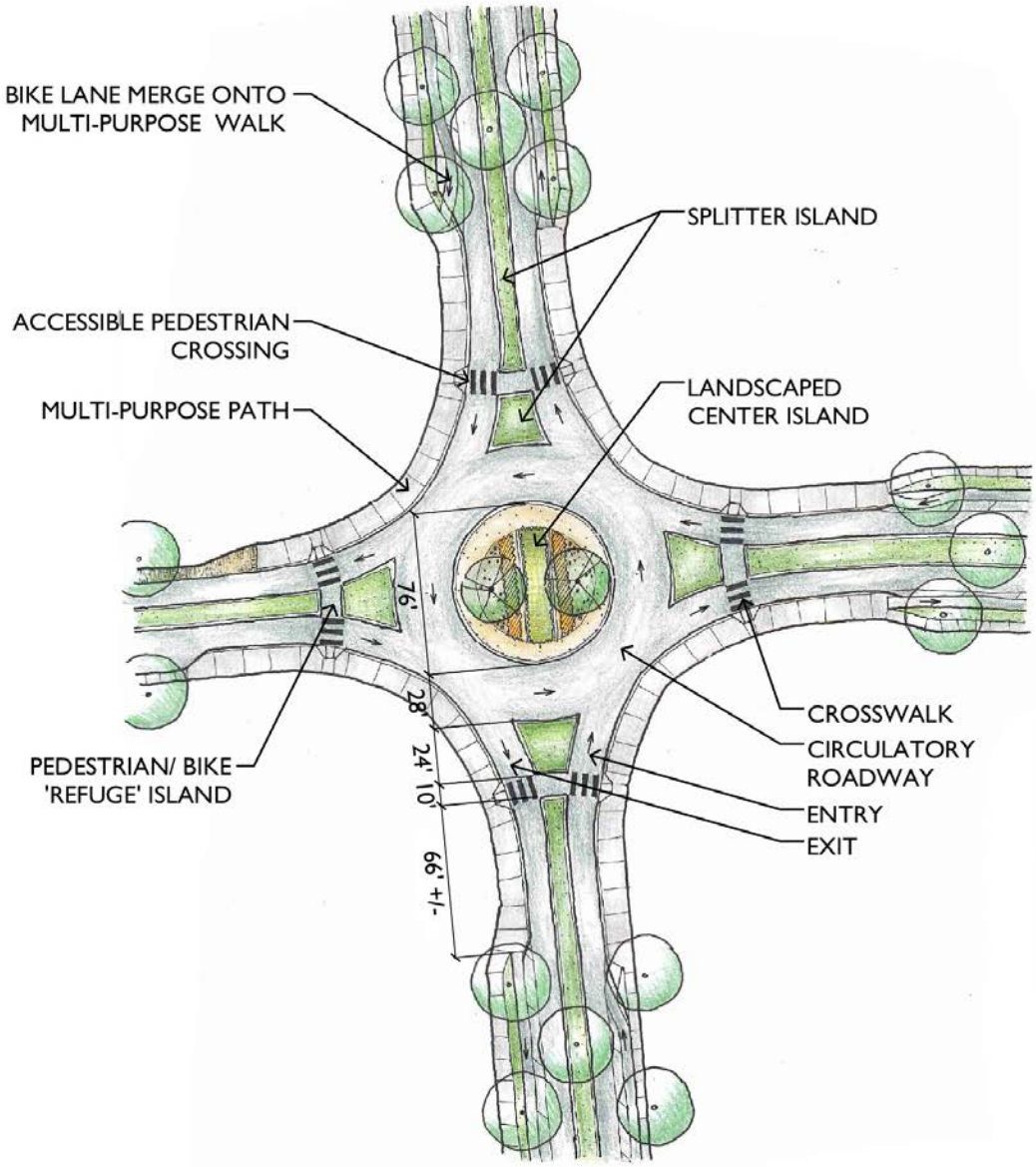
Exhibit 4.3.1: Conceptual Traffic Calming Gateway Design



For illustrative purposes only; final design may vary.

Exhibit 4.3.2: Conceptual Roundabout Design

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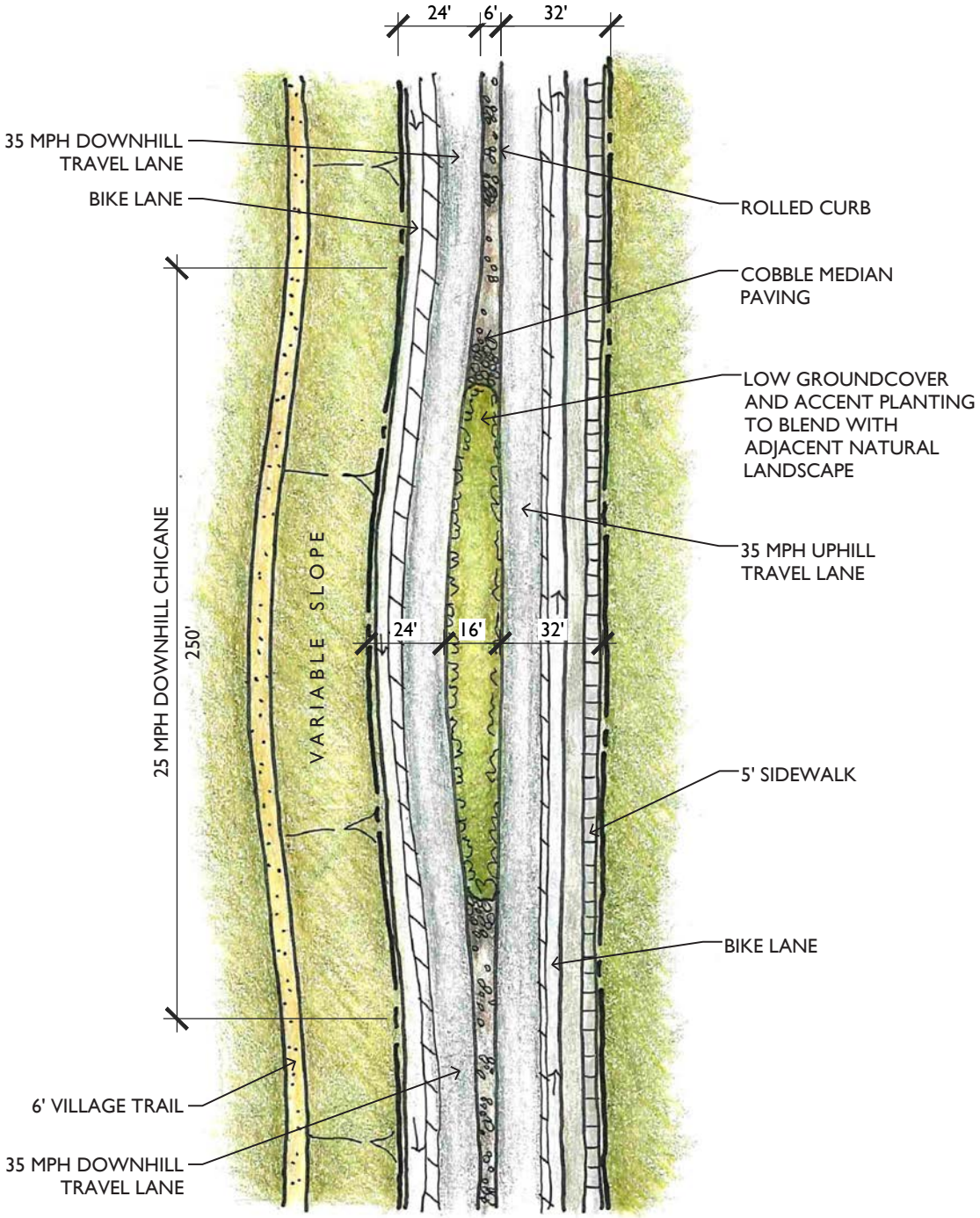

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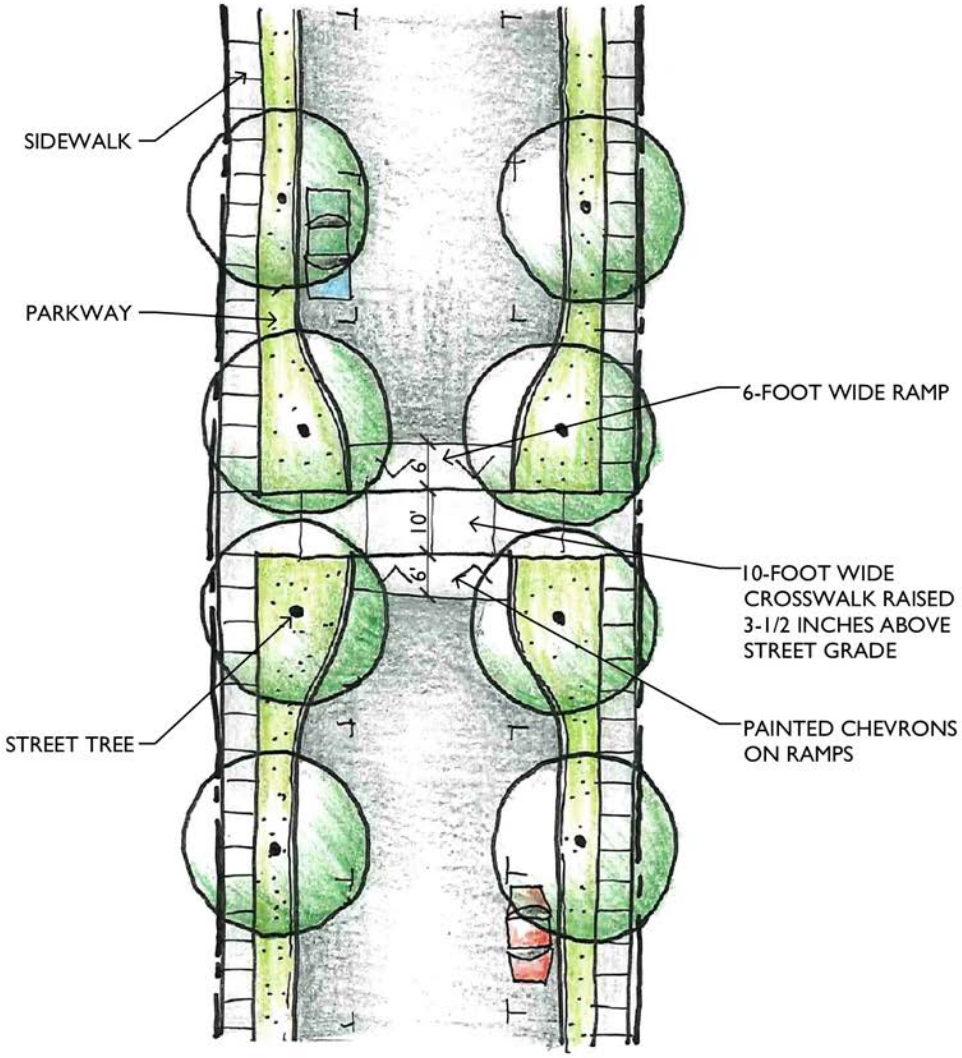
Exhibit 4.3.3: Conceptual Chicane Design



For illustrative purposes only; final design may vary.

Exhibit 4.3.4: Conceptual Raised Crosswalk

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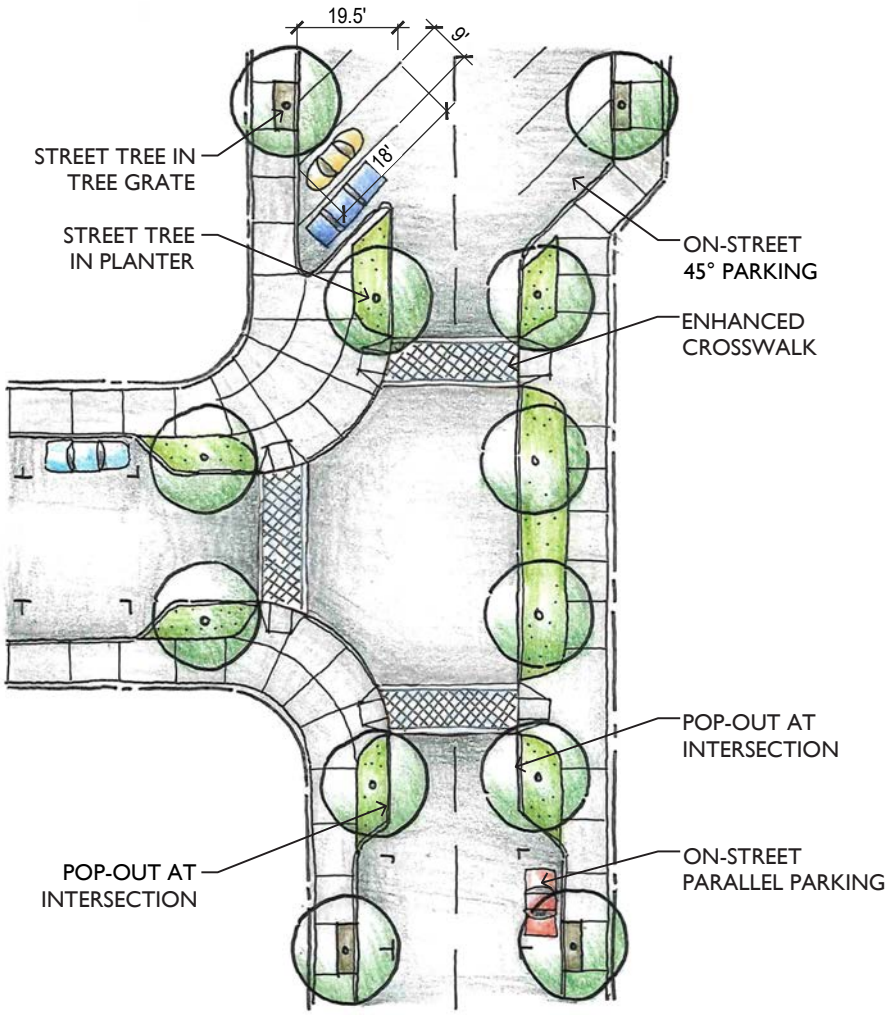

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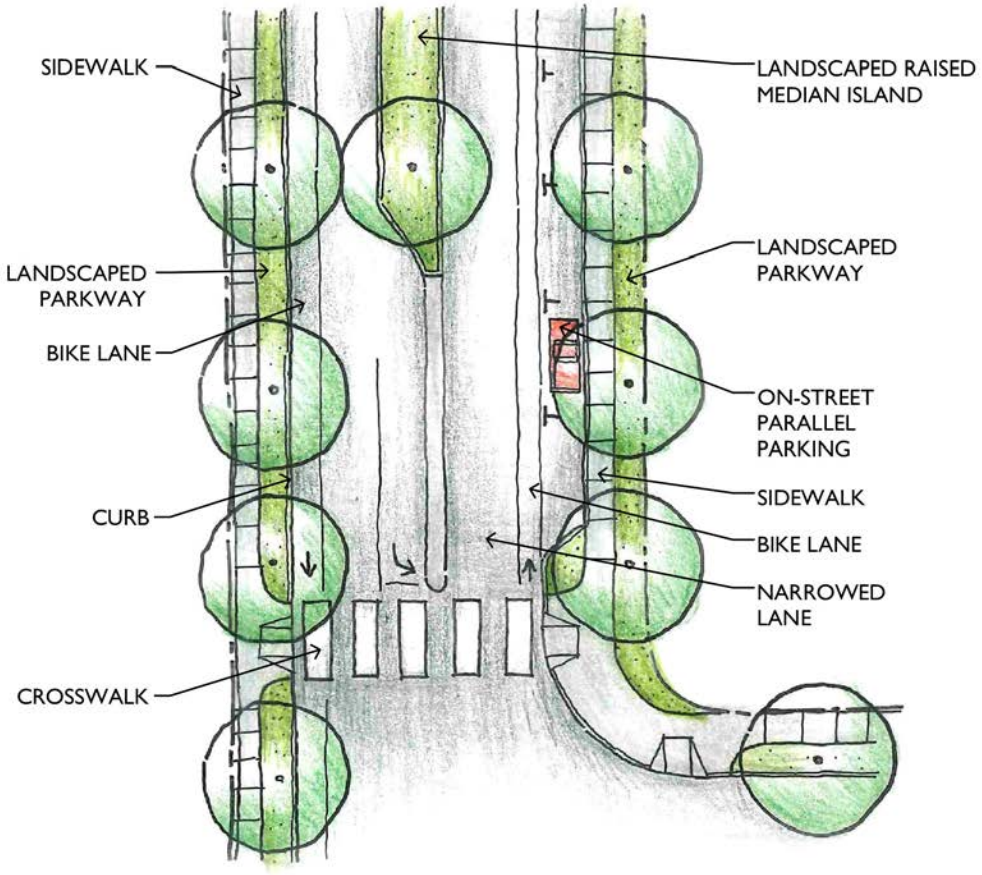
For illustrative purposes only; final design may vary.

Exhibit 4.3.5: Conceptual Intersection Pop-outs & On-Street Parking



For illustrative purposes only; final design may vary.

Exhibit 4.3.6: Other Conceptual Traffic Calming Devices

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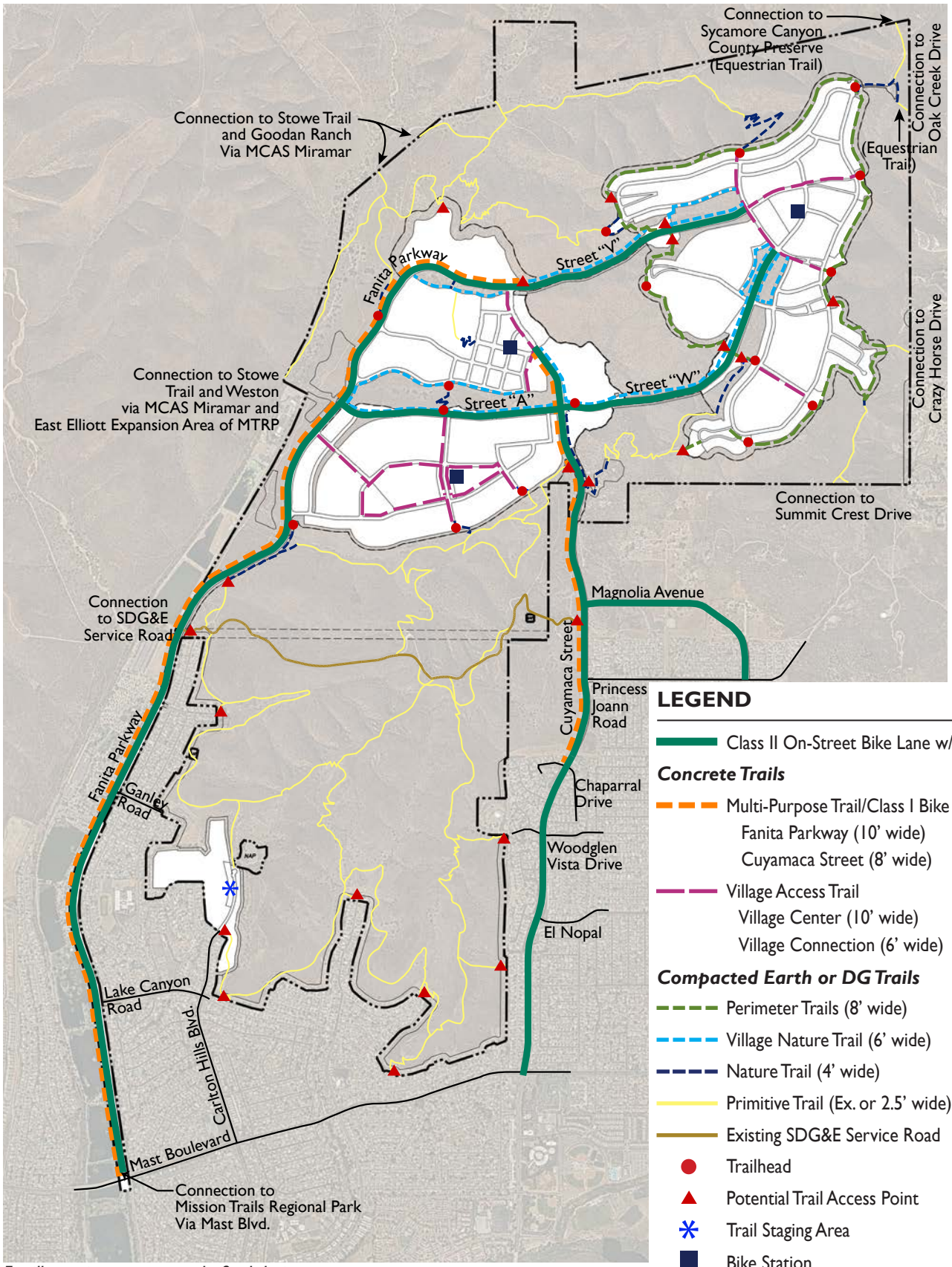
4.1.4 Bicycle Circulation

Bicycle circulation throughout the community is provided through a combination of on-street bike lanes and off-street multi-purpose trails as illustrated in *Exhibit 4.4: Bicycle Circulation Plan.* The Habitat Preserve offers mountain biking trails and uses existing trail routes to the extent feasible to avoid sensitive habitat areas. Bicycle trails are designed for both recreation and to provide direct access between the Villages.

To further promote bicycling within Fanita Ranch, each Village is envisioned to provide a bike station within the Village Centers where riders have access to water and air, electric bike charging stations and a bicycle sharing system. Bicycle parking will be provided at the school site, the Farm, the Village Centers, the community park and neighborhood parks, and within all multi-family neighborhoods to further support bicycling as a viable alternative to vehicle use.



For illustrative purposes only; final design may vary.

Exhibit 4.4: Bicycle Circulation Plan

4.1.5 Pedestrian Circulation

Pedestrian circulation throughout the Development Plan Area is provided through a network of sidewalks, multi-purpose trails and hiking trails as shown in *Exhibit 4.5: Pedestrian Circulation Plan*. The key to a successful pedestrian circulation system is to provide safety, connectivity and comfort.

A. Safety

There are several features designed into the mobility plan to calm traffic, promote pedestrian safety, and provide safe routes to the school. Traffic calming measures utilized in the Development Plan Area are discussed in *Section 4.1.3: Traffic Calming Plan*. Additional measures and advanced technologies for traffic calming may be used as part of future designs, particularly when considering pedestrian routes between the Farm and other key areas such as the school site, Village Centers and Active Adult neighborhood.

In addition to the traffic calming measures listed in *Section 4.1.3: Traffic Calming Plan*, the following pedestrian safety features are incorporated into the street designs within the community:

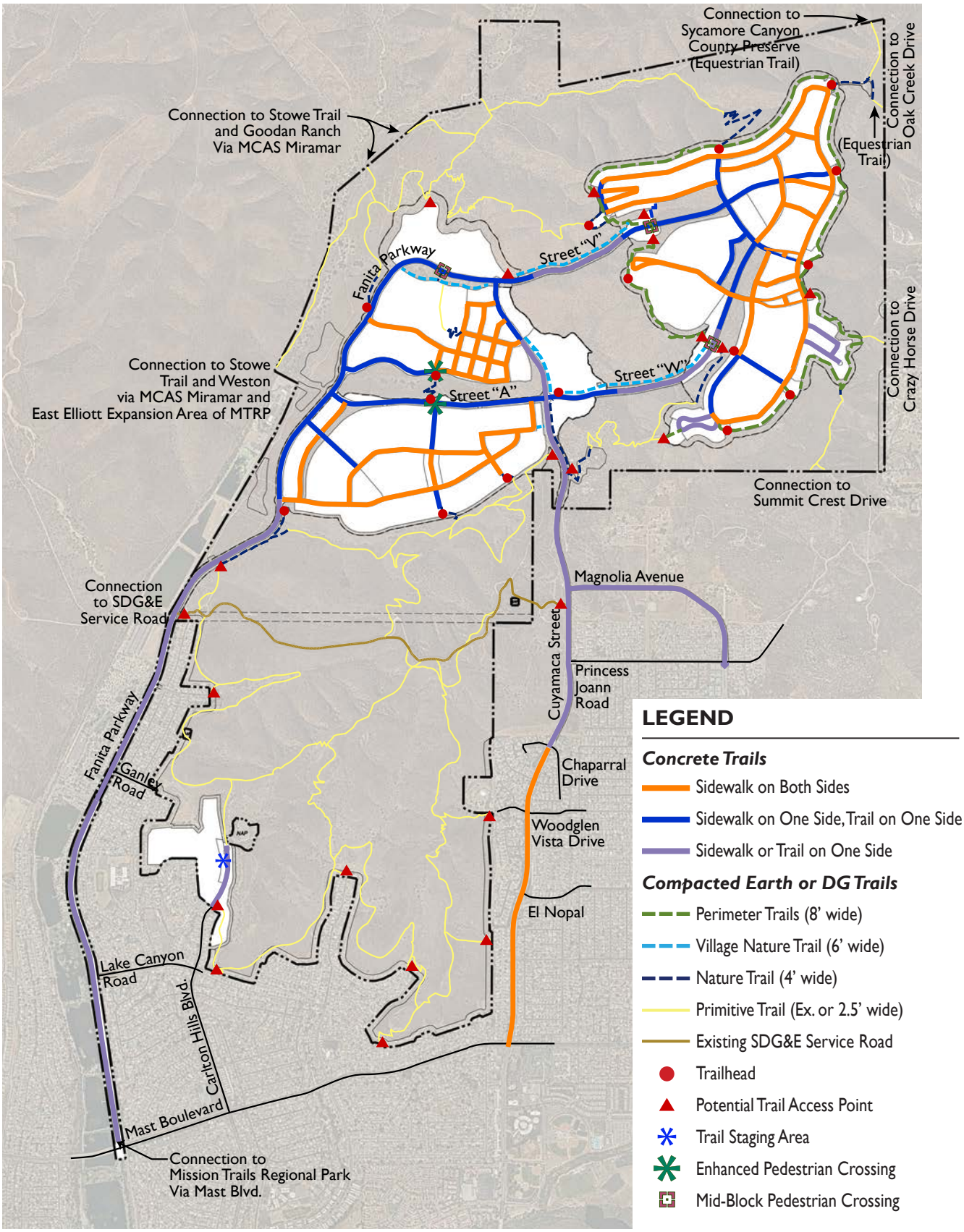
1. Enhanced Pedestrian Crossings: At intersections within Fanita Commons where significant pedestrian crossing is anticipated, crosswalks are enhanced with striping and landscape features designed to heighten the driver's awareness and indicate the presence of pedestrians, as illustrated by *Exhibit 4.6: Enhanced Pedestrian Crossings.* In Fanita Commons, curb pop-outs at intersections will be added to narrow the streets to slow traffic down and provide a shorter crossing route for pedestrians.

2. Buffers: Sidewalks throughout the Development Plan Area are buffered by landscaped parkways and/or on-street parking.

3. Mid-Block Crossings: Where the Vineyard Village perimeter trail crosses the Residential Collectors near the Habitat Preserve, pavement texture and pedestrian-activated crosswalk warning systems will be utilized for additional pedestrian safety.

B. Connectivity

Walking is encouraged by providing direct connections to multiple destinations that shorten the routes and allow walking to be an efficient and viable method of travel. This is achieved by providing a variety of routes and multiple intersections offering pedestrians a wide range of options. The Fanita Ranch Pedestrian Circulation Plan provides an extensive system of interconnected sidewalks and trails that connect the Villages and destinations within the Villages.



For illustrative purposes only; final design may vary.

Exhibit 4.5: Pedestrian Circulation Plan

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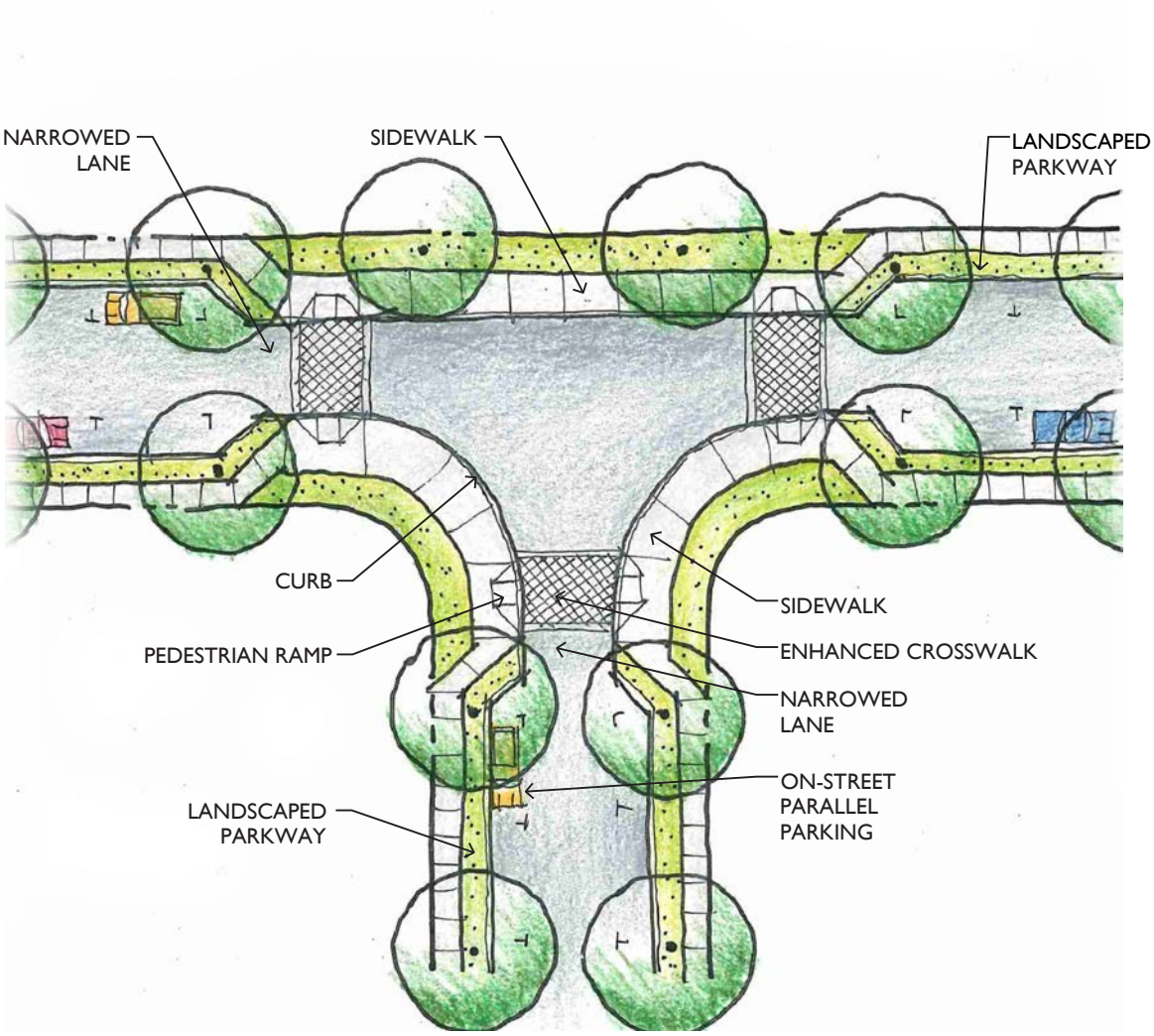


For illustrative purposes only; final design may vary.

Exhibit 4.6: Enhanced Pedestrian Crossings

Every street within Fanita Ranch includes a sidewalk and/or multi-purpose trail to accommodate pedestrian travel. Trails along the northerly and southerly drainages also offer pedestrian connections between the school, the Farm, and the Active Adult neighborhood with minimal interruptions from vehicular traffic.

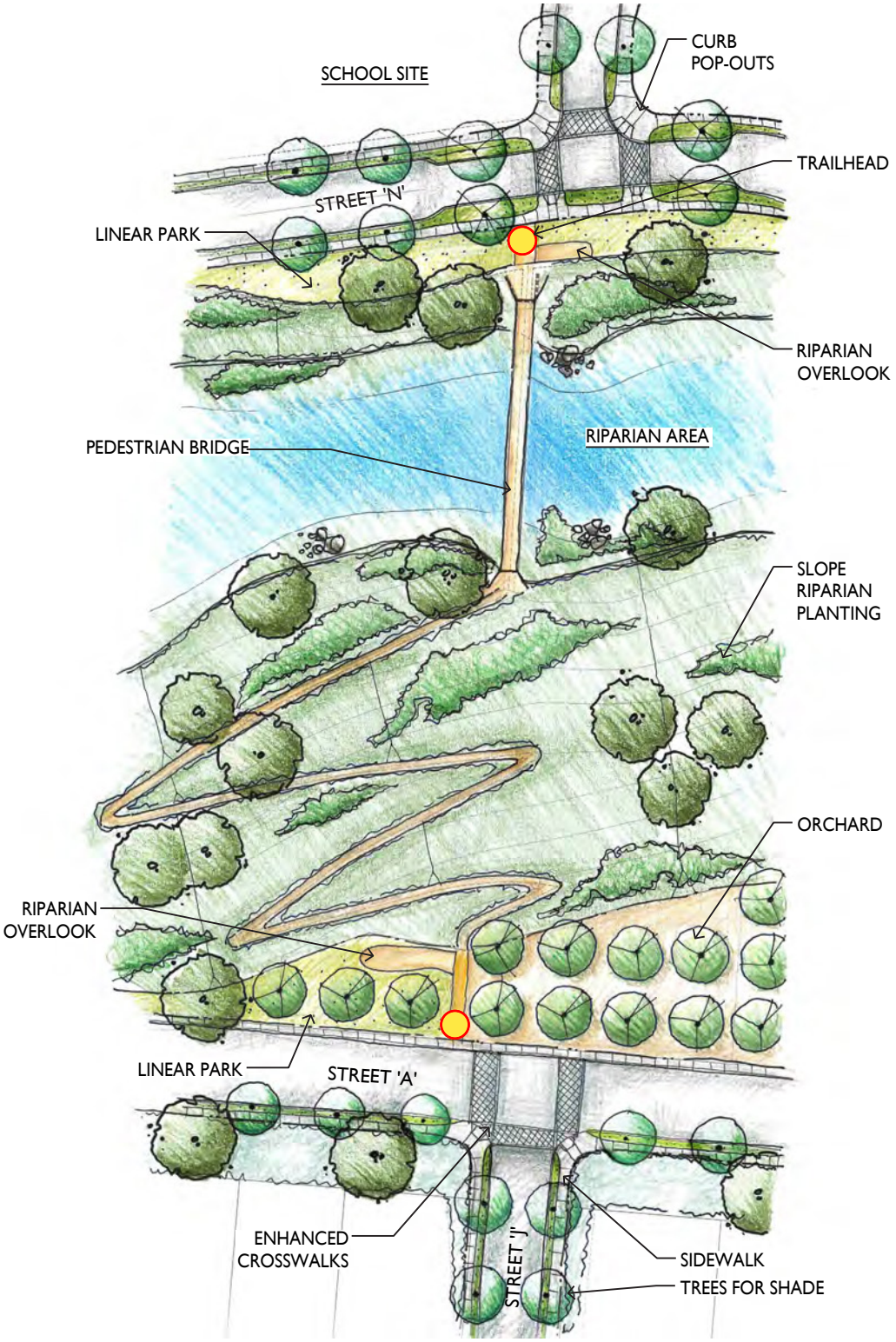
Two pedestrian bridges are envisioned to provide direct connections across the two drainages in Fanita Commons to significantly shorten the walking distance. The bridge that traverses the northerly drainage provides convenient access between the Active Adult neighborhood and the Community Park. The bridge traversing the southerly drainage connects the Orchard Village to the school, Community Park and Fanita Commons. As illustrated in *Exhibit 4.7: Southerly Bridge Crossing Detail,* the southerly bridge and its associated landing areas provide a viewing platform for observing the riparian habitat.

Trails within open space areas provide connectivity between the Villages. In addition to linking the community, the trails are also excellent locations for residents to explore the outdoors and improve their health, to learn about the natural surroundings, and to learn about and experience farming and food production. Trails within open space areas are designed to achieve the following:

1. Connect trails within Fanita Ranch to the adjacent regional trails and open space, which are described below and shown on *Exhibit 4.8: Regional Trail Context.* Fanita Ranch is a critical link to the regional trail system. Important regional trail connections are depicted in *Exhibit 4.5: Pedestrian Circulation Plan* and *Exhibit 4.13, Trails Map.*

    a. Stowe Trail: This historic trail follows the western boundary of the Development Plan Area from the north end of the Padre Dam Municipal Water District (PDMWD) property to the northwestern corner of the Development Plan Area. The trail connects to the Goodan Ranch / Sycamore Canyon County Preserve.

    b. San Diego River Park Trail/Santee River Park: An existing river park trailhead is located on Carlton Hills Boulevard, approximately ½-mile south of the south terminus of the proposed Fanita Parkway multi-purpose trail (Mast Park West trail). The trailhead can be reached by proposed sidewalks and bike lanes on Fanita Parkway, Carlton Oaks Drive and Carlton Hills Boulevard. The river park trails can also be reached on Cuyamaca Street by the sidewalk and bike lanes approximately one mile south of the southern terminus of Cuyamaca Street multi-purpose trail.



For illustrative purposes only; final design may vary.

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Exhibit 4.7: Southerly Bridge Crossing Detail

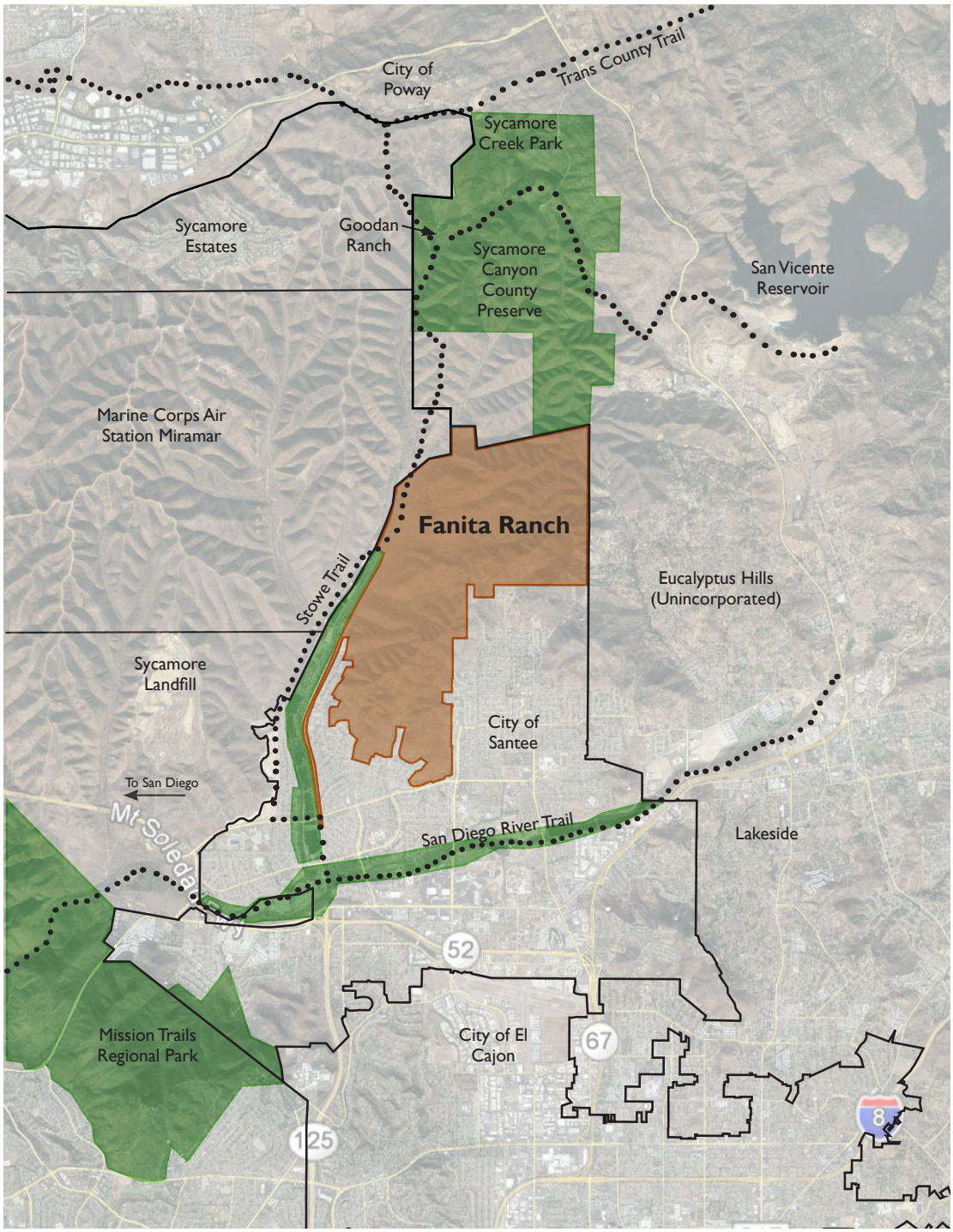

Exhibit 4.8: Regional Trail Context

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c. Goodan Ranch / Sycamore Canyon County Preserve: In the northeastern corner of the Development Plan Area, a connection is made to an existing equestrian trail that leads northwards to the Goodan Ranch / Sycamore Canyon County Preserve.

d. Mission Trails Regional Park: The East Fortuna Staging Area of the park is located approximately 1 ½ miles west of the intersection of Fanita Parkway and Mast Boulevard, at the western terminus of Mast Boulevard. This staging area provides parking, picnicking and access to more than 60 miles of trails within the park.

2. Provide for public access to existing primitive trails within the Habitat Preserve.

3. Carefully coordinate trail locations to minimize conflicts with sensitive habitat areas by utilizing existing trails and dirt roads, and providing signage, well-defined trail markers, fencing and community education to protect habitat areas.

4. Establish a community-wide hiking, biking, walking, educational and recreational trail system, called "AgMeander" (see *Section 7.3.5: AgMeander* of the Development Plan), that connects agricultural and/or environmental locations throughout the community.

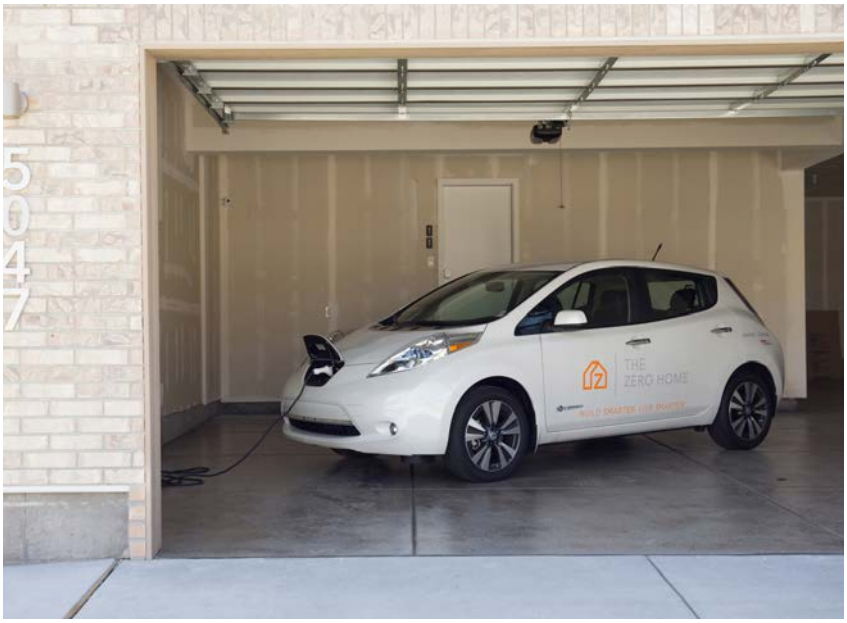
C. Comfort

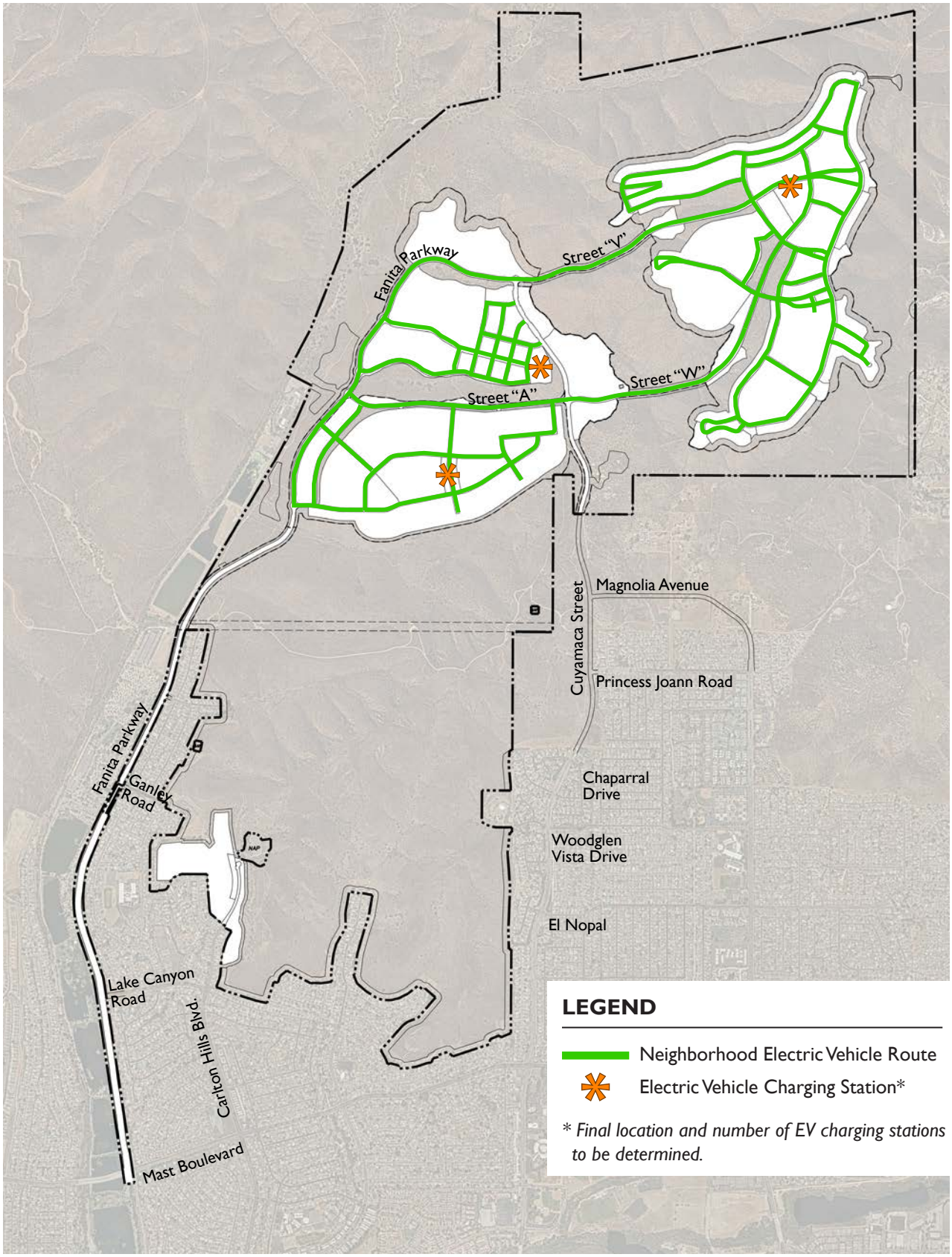
Pedestrian comfort requires more than just safety. It requires creating a comfortable and enjoyable walking experience to encourage walking as a preferred means of mobility. Design guidelines contained in *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* and *Chapter 6: Architectural Design Guidelines* focus on creating comfortable, convenient and safe pedestrian pathways through architectural and landscape design. Such strategies include careful placement of parking to reduce visual impacts to streets, building placement and design that define street edges and create pedestrian scale, and landscaping and street furniture that support pedestrian comfort. Street trees are planted along all streets to provide shaded sidewalks and roadways, as well as reduce glare from parked cars.

4.1.6 Alternative Vehicles & Ride-sharing

Neighborhood Electric Vehicles (NEVs) are small, vehicles typically designed to travel at speeds of more than 20 miles per hour and not more than 25 miles per hour. NEVs are built to specific federal vehicle standards by licensed manufacturers and carry a Federal Certification Safety label. According to the California Vehicle Code, NEVs may be operated on public streets where the speed limit is 35 miles per hour or less. In Fanita Ranch, this includes the roadways within and between the Villages that are indicated in *Exhibit 4.9: Alternative Vehicle Circulation Plan.* Tractors and all-terrain vehicles associated with the operation and maintenance of the agriculture areas are also permitted on these low-speed roadways.

Car-sharing and electric vehicle (EV) use will be supported and encouraged through the provision of passenger loading areas, charging stations and dedicated preferred parking locations in each Village Center. EV chargers will be installed in all homes within the Low Density Residential land use designation areas, some homes in the Medium Density Residential, Active Adult and Village Center land use designation areas, as well as within the parking lots of commercial projects in the Village Centers (see Fanita Ranch EIR Appendix H, Greenhouse Gas Analysis). As technologies evolve, additional community-wide features may be incorporated into the Development Plan Area in support of the Sustainable Santee Plan.





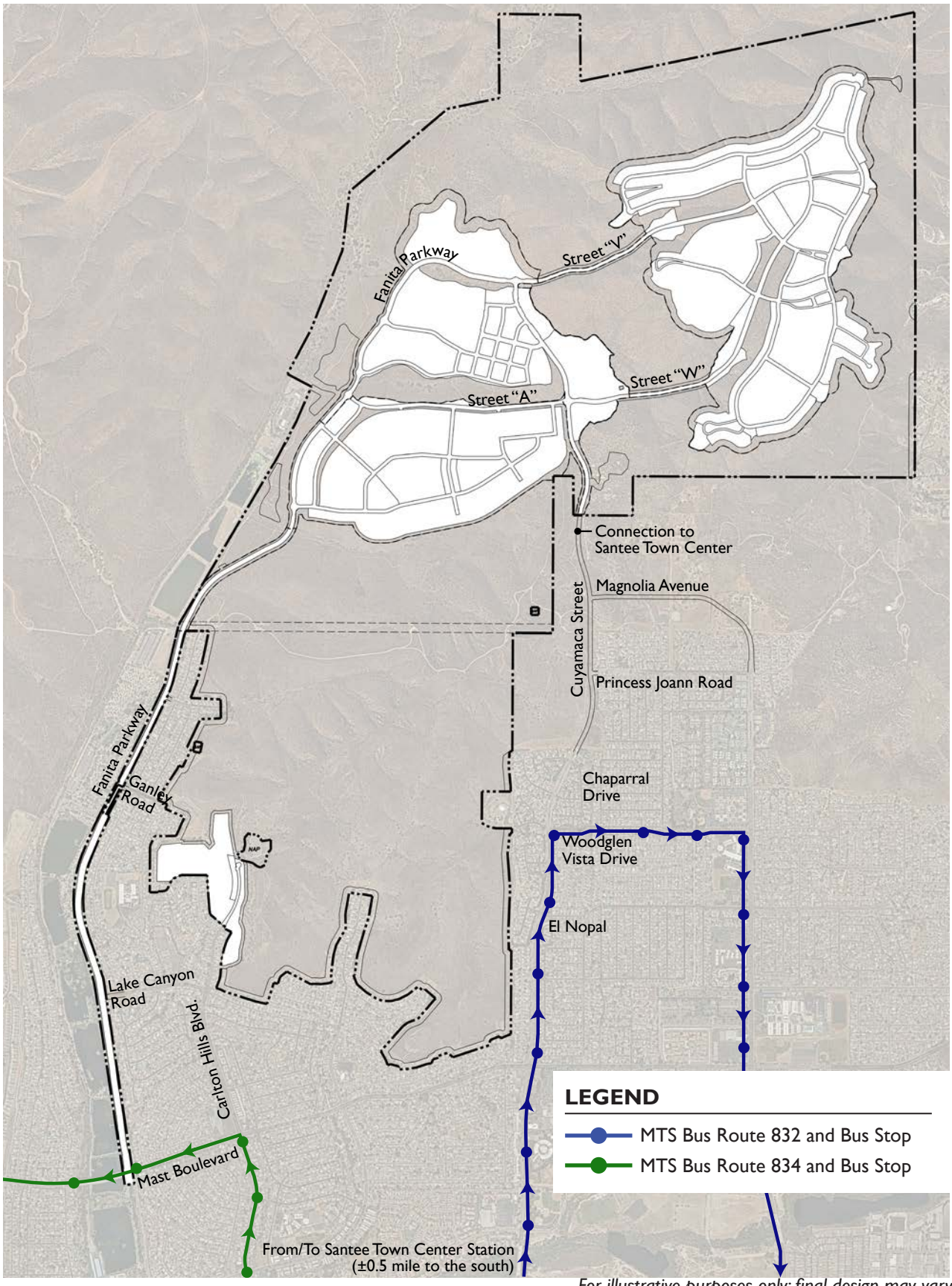
For illustrative purposes only; final design may vary.

not to scale

Exhibit 4.9: Alternative Vehicle Circulation Plan

4.1.7 Transit

The Metropolitan Transit System (MTS) provides transit services within the City of Santee. MTS operates two local bus routes in the vicinity of Fanita Ranch. Existing MTS Route 832 operates on Cuyamaca Street, Woodglen Vista Drive and Magnolia Avenue, and existing MTS Route 834 operates on Mast Boulevard and Carlton Hills Boulevard. Both existing local bus routes connect to the Sycuan Green Trolley Line at a transit station located in the Santee Town Center. MTS does not have plans to extend local bus services to Fanita Ranch; however, if MTS expands local bus service into Fanita Ranch in the future, local bus stops could be accommodated within the Village Centers. See *Exhibit 4.10, Conceptual Transit Plan* for the location of existing MTS local bus routes.



For illustrative purposes only; final design may vary.

not to scale

Exhibit 4.10: Conceptual Transit Plan

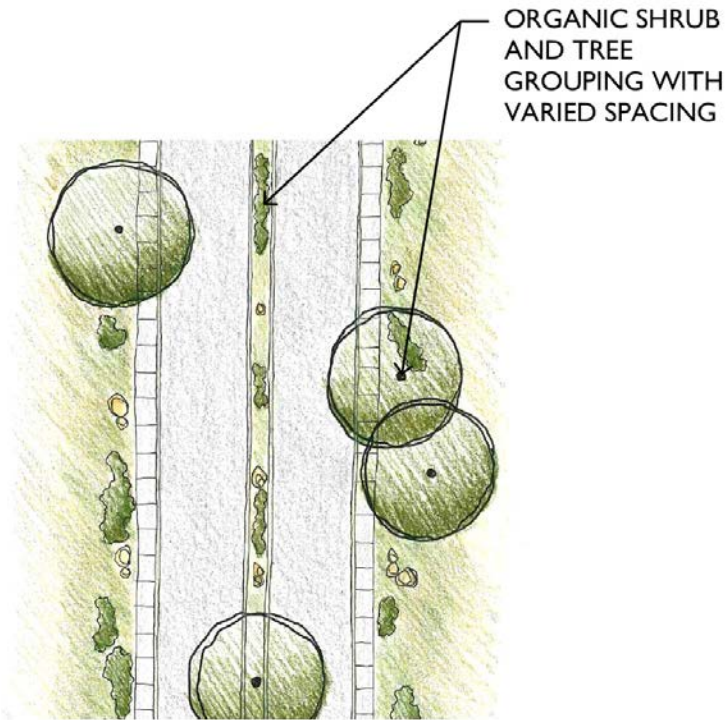
4.2 Street Corridor & Landscape Standards

Thoughtful planning and design of the street corridors and their landscape treatments is essential to creating community and Village identity. The Fanita Ranch street corridor and landscape treatments are designed in either informal or formal styles as illustrated in *Exhibit 4.11, Planting Styles.*

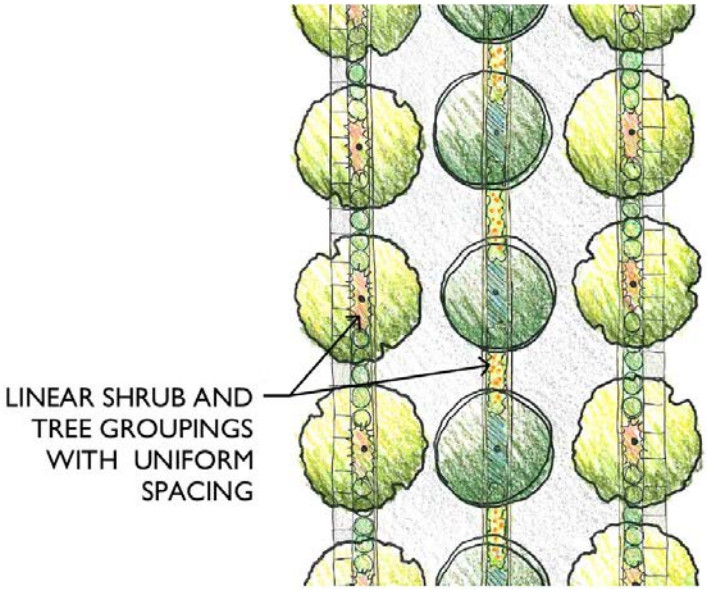
Informal planting is characterized by varied tree and shrub spacing and organic or naturalistic plant grouping shapes. Informal landscape treatment is utilized where the street is either in or adjacent to the Habitat Preserve or other informal landscape areas. Informal planting schemes will be implemented on Fanita Parkway and Gateway, Cuyamaca Street and Gateway, Street "A" along the southerly side of the southerly riparian area and portions of Streets "W" and "V" where they cross the Habitat Preserve and at the basins.

The formal planting style is characterized by uniform plant spacing and linear or geometric shaped plant groupings. Formal landscape planting is utilized for the off-site extension of Magnolia Avenue, streets in Fanita Commons, interior residential streets and private residential driveways.

The Fanita Ranch community-wide street sections and corresponding landscape treatments are depicted in *Exhibits 4.12.1* through *4.12.8, 4.12.10, 4.12.11* and *4.12.13. Exhibits 4.12.12, 4.12.14* and *4.12.16 through 4.12.21* represent Village-specific streets. Their plant palettes are described in detail in *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan.*



Informal Planting Style



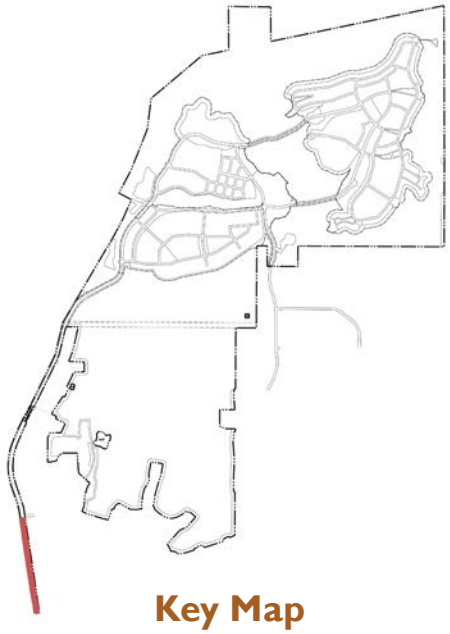
Formal Planting Style

For illustrative purposes only; final design may vary.

Exhibit 4.11: Planting Styles

4.2.1 Fanita Parkway - 4-Lane Parkway/ Major Arterial (Mast Boulevard to Lake Canyon Road)

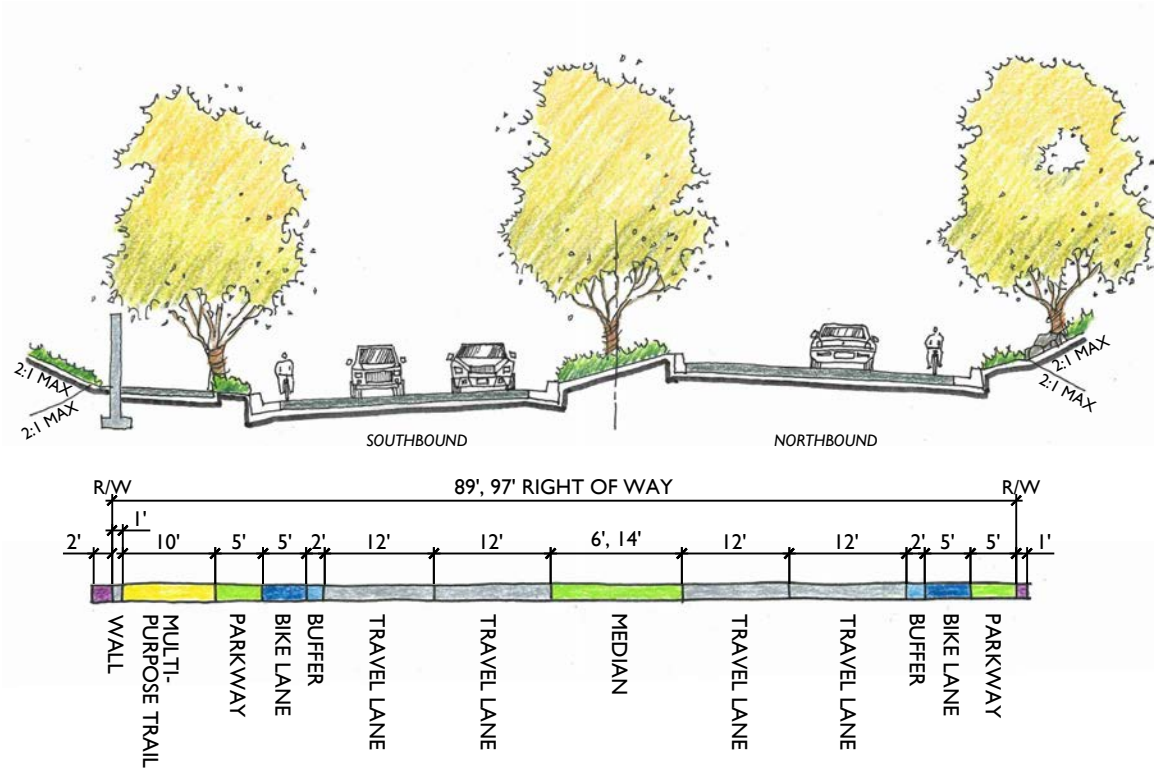
Between Mast Boulevard and Lake Canyon Road, Fanita Parkway will be widened from a 2-lane road with no median to a 4-lane divided road with a landscaped median as illustrated in *Exhibit 4.12.1: Fanita Parkway - 4-Lane Parkway/Major Arterial (Mast Boulevard to Lake Canyon Road)*. This roadway section includes bike lanes on both sides and a multi-purpose trail on the west side of the street. Parking is limited to emergency vehicles.



Key Map
not to scale

Design Standards[1]	
Volume	15,000 - 40,000 Average Daily Trips
Design Speed	50 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	97 feet (89 feet where median width is reduced)
Curb-to-Curb Width	31 feet in each direction
Median	6 feet, 14 feet wide (width varies[2]), raised and landscaped
Landscape Scheme	
Style	Informal "Riparian" parkway and median planting
Tree Spacing	40 - 500 feet on center
Roadside FMZ	50 feet both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 1)*
2. *Median width may be reduced to 6' in the vicinity of wetland and/or biological impacts, provided the required turn pockets function properly. Parkway and median may have up to a 4:1 slope where shown on plans.*



Landscape Palette:

Trees

- PLATANUS RACEMOSA - California Sycamore
- KOELREUTERIA BIPINNATA - Chinese Flame Tree
- ARBUTUS X 'MARINA' - Arbutus

Shrubs / Perennials

- CEANOTHUS SP. - California Lilac
- CISTUS SP. - Rockrose
- PHORMIUM TENAX - New Zealand Flax

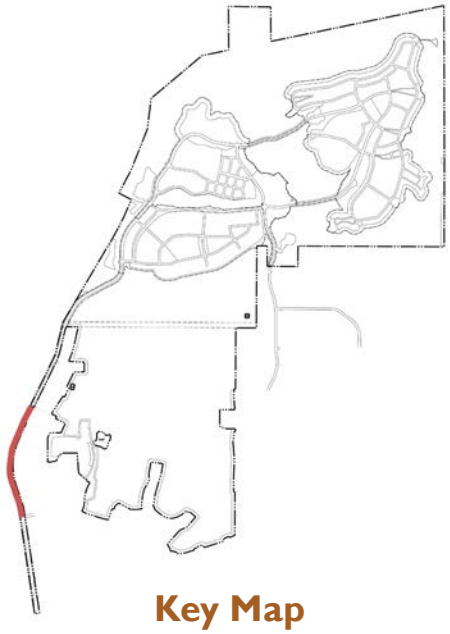
Groundcovers

- CEANOTHUS G. HORIZONTALIS - Carmel Creeper
- LANTANA MONTEVIDENSIS - Trailing Lantana
- MYOPORUM PARVIFOLIUM 'PINK' - Pink Myoporum

Exhibit 4.12.1: Fanita Parkway - 4-Lane Parkway/Major Arterial
(Mast Boulevard to Lake Canyon Road)

4.2.2 Fanita Parkway - 3-Lane Parkway (Lake Canyon Road to Ganley Road)

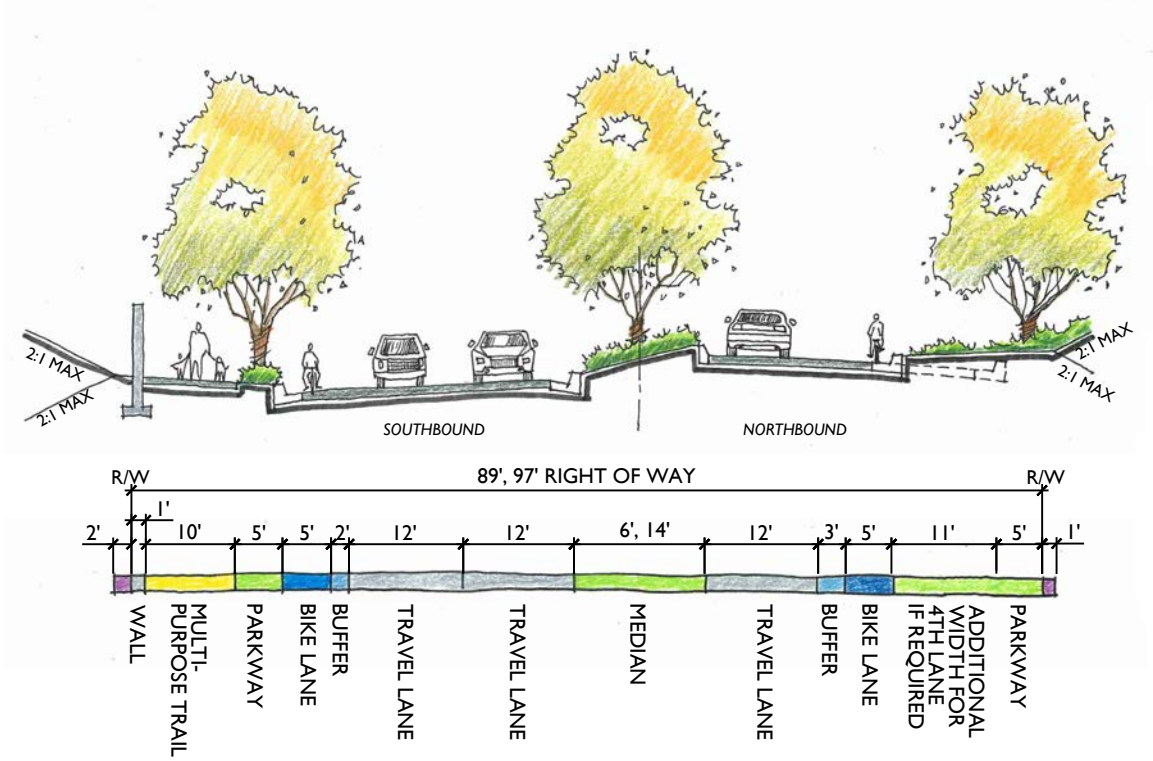
Fanita Parkway transitions to a 3-lane parkway between Lake Canyon Road and Ganley Road. The west (southbound) side of the roadway maintains two travel lanes, while the east (northbound) side consists of one travel lane. A landscaped median divides both sides of the road as shown in *Exhibit 4.12.2: Fanita Parkway - 3-Lane Parkway (Lake Canyon Road to Ganley Road).* This roadway section includes bike lanes on both sides and a multi-purpose trail on the west side of the street.



Key Map
not to scale

Design Standards[1]	
Volume	15,000 - 40,000 Average Daily Trips
Design Speed	50 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	97 feet (89 feet where median width is reduced)
Curb-to-Curb Width	• West side (southbound): 31 feet • East side (northbound): 20 feet
Median	6 feet, 14 feet wide (width varies2), raised and landscaped
Landscape Scheme	
Style	Informal "Riparian" parkway and median planting
Tree Spacing	40 - 500 feet on center
Roadside FMZ	50 feet both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 1a)*
2. *Median width may be reduced to 6' in the vicinity of wetland and/or biological impacts, provided the required turn pockets function properly. Parkway and median may have up to a 4:1 slope where shown on plans.*



Landscape Palette:

Trees

- PLATANUS RACEMOSA - California Sycamore
- KOELREUTERIA BIPINNATA - Chinese Flame Tree
- ARBUTUS X 'MARINA' - Arbutus

Shrubs / Perennials

- CEANOTHUS SP. - California Lilac
- CISTUS SP. - Rockrose
- PHORMIUM TENAX - New Zealand Flax

Groundcovers

- CEANOTHUS G. HORIZONTALIS - Carmel Creeper
- LANTANA MONTEVIDENSIS - Trailing Lantana
- MYOPORUM PARVIFOLIUM 'PINK' - Pink Myoporum

Exhibit 4.12.2: Fanita Parkway - 3-Lane Parkway
(Lake Canyon Road to Ganley Road)

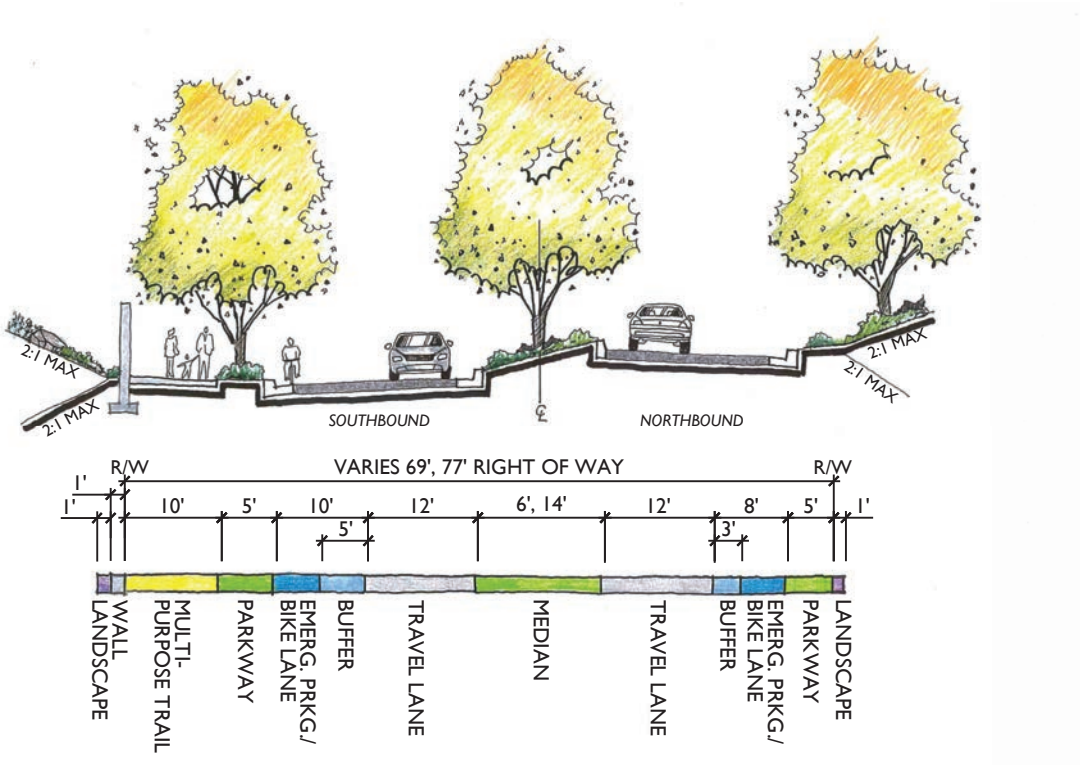
4.2.3 Fanita Parkway - 2-Lane Parkway Type II (Ganley Road to Street "E")

Fanita Parkway transitions to a 2-lane road with a median from Ganley Road to Street "E" in Orchard Village. The road section includes one 12-foot travel lane, 5-foot bike lanes, and a 3- to 5-foot bike lane buffer in each direction. The 10-foot multi-purpose trail continues along the west side of the street and is separated from the road by a 6-foot landscaped parkway. A 5-foot landscape area and no sidewalk are proposed on the east side, as illustrated in *Exhibit 4.12.3: Fanita Parkway - 2-Lane Parkway Type II (Ganley Road to Street "E").*

Key Map
not to scale

Design Standards[1]	
Volume	5,000 - 15,000 Average Daily Trips
Design Speed	40 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	77 feet (69 feet where median width is reduced)
Curb-to-Curb Width	• West side (southbound): 22 feet • East side (northbound): 20 feet
Median	6 feet, 14 feet wide (width varies2), raised and landscaped
Landscape Scheme	
Style	Informal "Riparian" parkway and median planting
Tree Spacing	40 - 500 feet on center
Roadside FMZ	50 feet both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 4)*
2. *Median width may be reduced to 6' in the vicinity of wetland and/or biological impacts, provided the required turn pockets function properly. Parkway and median may have up to a 4:1 slope where shown on plans.*



Landscape Palette:

Trees

- PLATANUS RACEMOSA - California Sycamore
- KOELREUTERIA BIPINNATA - Chinese Flame Tree
- ARBUTUS X 'MARINA' - Arbutus

Shrubs / Perennials

- CEANOTHUS SP. - California Lilac
- CISTUS SP. - Rockrose
- PHORMIUM TENAX - New Zealand Flax

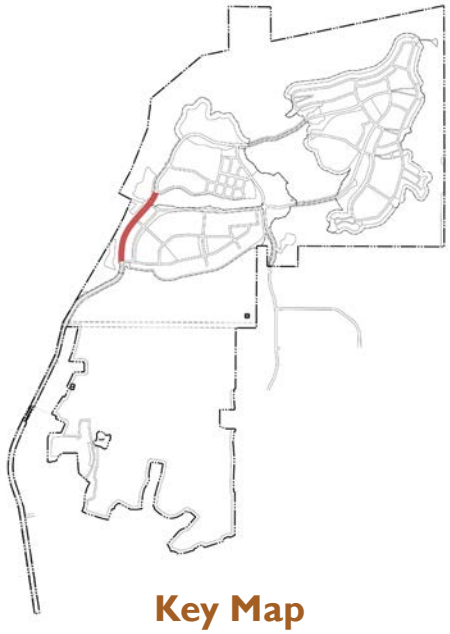
Groundcovers

- CEANOTHUS G. HORIZONTALIS - Carmel Creeper
- LANTANA MONTEVIDENSIS - Trailing Lantana
- MYOPORUM PARVIFOLIUM 'PINK' - Pink Myoporum

Exhibit 4.12.3: Fanita Parkway - 2-Lane Parkway Type II
(Ganley Road to Street "E")

4.2.4 Fanita Parkway - 2-Lane Parkway Type III (Street "E" to Street "N")

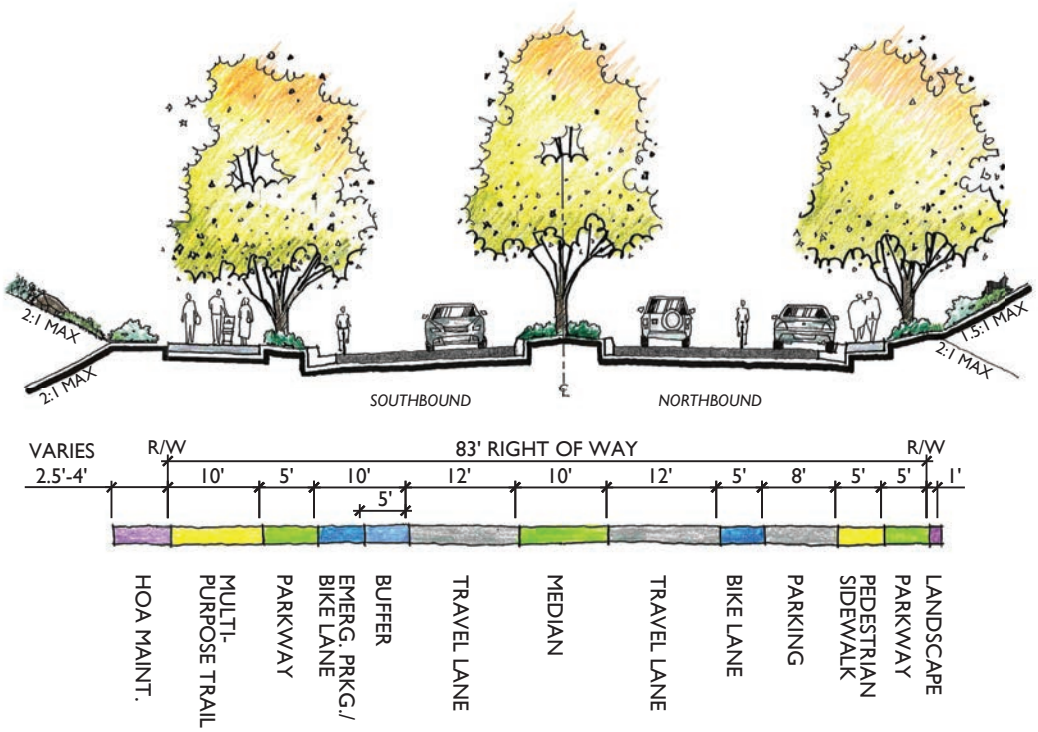
Fanita Parkway intersects with Street "E" in Orchard Village, continues northward across the southerly drainage and intersects with Street "N" in Fanita Commons. This 83-foot wide section consists of a 2-lane road divided by a 10-foot raised median. The 10-foot multi-purpose trail continues along the west side of the street. On-street parallel parking occurs on the east side of the street and bike lanes are provided on both sides of the street, as illustrated in *Exhibit 4.12.4: Fanita Parkway - 2-Lane Parkway Type III (Street "E" to Street "N").*



Key Map
not to scale

Design Standards[1]	
Volume	5,000 - 15,000 Average Daily Trips
Design Speed	40 mph (20 mph in vicinity of roundabout)
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	83 feet
Curb-to-Curb Width	• West side (southbound): 22 feet • East side (northbound): 25 feet
Median	10 feet wide, raised and landscaped
Landscape Scheme	
Style	Informal "Riparian" parkway and median planting
Tree Spacing	40 - 500 feet on center
Roadside FMZ	50 feet both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 5)*



Landscape Palette:

Trees

- PLATANUS RACEMOSA - California Sycamore
- KOELREUTERIA BIPINNATA - Chinese Flame Tree
- ARBUTUS X 'MARINA' - Arbutus

Shrubs / Perennials

- CEANOTHUS SP. - California Lilac
- CISTUS SP. - Rockrose
- PHORMIUM TENAX - New Zealand Flax

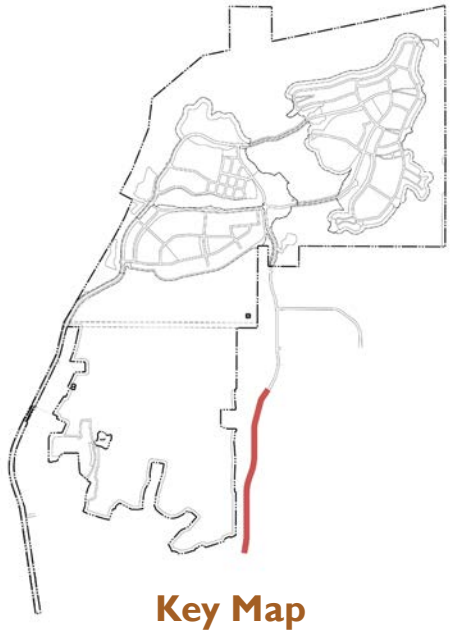
Groundcovers

- CEANOTHUS G. HORIZONTALIS - Carmel Creeper
- LANTANA MONTEVIDENSIS - Trailing Lantana
- MYOPORUM PARVIFOLIUM 'PINK' - Pink Myoporum

Exhibit 4.12.4: Fanita Parkway - 2-Lane Parkway Type III
(Street "E" to Street "N")

4.2.5 Cuyamaca Street, Off-Site - 4-Lane Major Arterial (Mast Boulevard to Chaparral Drive)

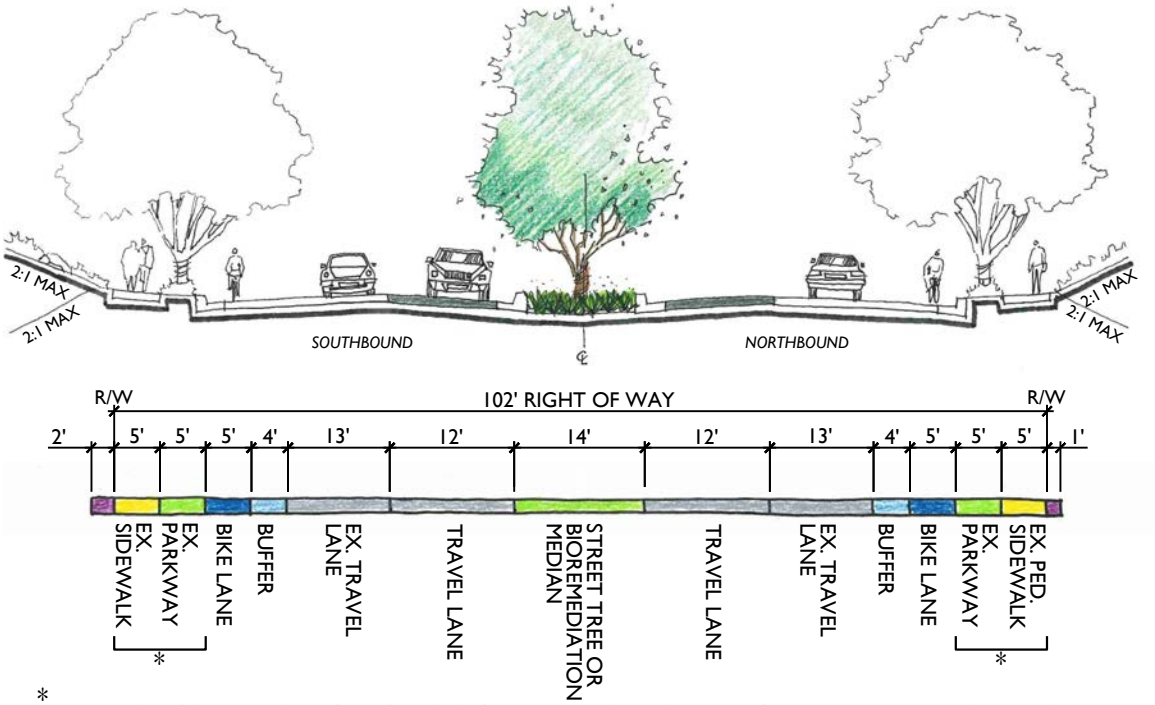
Cuyamaca Street provides the primary entrance into Fanita Ranch. North of Mast Boulevard, existing segments of the roadway will be improved to match the street section illustrated in *Exhibit 4.12.5: Cuyamaca Street, Off-Site - 4-Lane Major Arterial (Mast Boulevard to Chaparral Drive)*. This street section consists of a 4-lane divided road with 2 travel lanes in each direction, as well as bike lanes and existing sidewalks on both sides. Sidewalks are separated from the street by a landscaped parkway on portions of the street north of Silverado Court. The median will also be landscaped.



Key Map
not to scale

Design Standards[1]	
Volume	15,000 - 40,000 Average Daily Trips
Design Speed	50 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	102 feet
Curb-to-Curb Width	34 feet in each direction
Median	14 feet wide, raised and landscaped
Landscape Scheme	
Style	Informal median planting
Tree Spacing	35 - 70 feet on center
Roadside FMZ	None

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 2)*



* *NOTE: EXISTING SIDEWALKS ARE CONTIGUOUS TO CURB FROM MAST TO SILVERADO COURT AND MEANDER NORTH OF SILVERADO.*

Landscape Palette:

Trees

- QUERCUS ILEX - Holly Oak
- CHILOPSIS LINEARIS CULT. - Desert Willow Cultivars
- CERCIDIUM 'DESERT MUSEUM' - Palo Verde *Photo: Star Nursery

Shrubs / Perennials

- GREVILLEA SP. - Grevillea
- LAVANDULA DENTATA - French Lavender
- AGAVE ATTENUATA - Agave

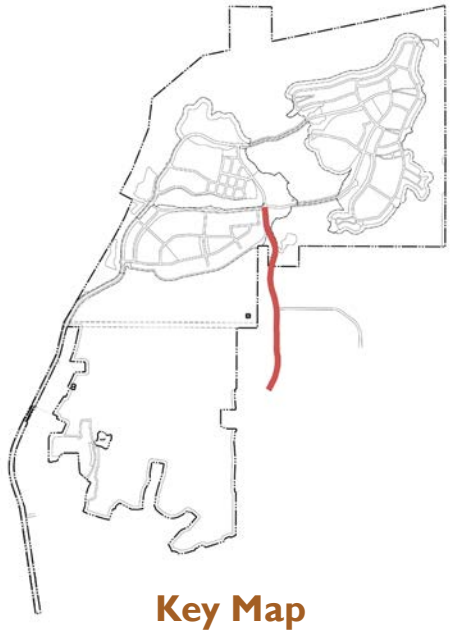
Groundcovers

- LANTANA X `NEW GOLD` - New Gold Lantana
- SENECIO SP. - Blue Chalksticks

Exhibit 4.12.5: Cuyamaca Street, Off-Site - 4-Lane Major Arterial
(Mast Boulevard to Chaparral Drive)

4.2.6 Cuyamaca Street, On & Off-Site - 2-Lane Parkway Type I (Chaparral Drive to Street "A"/Street "W")

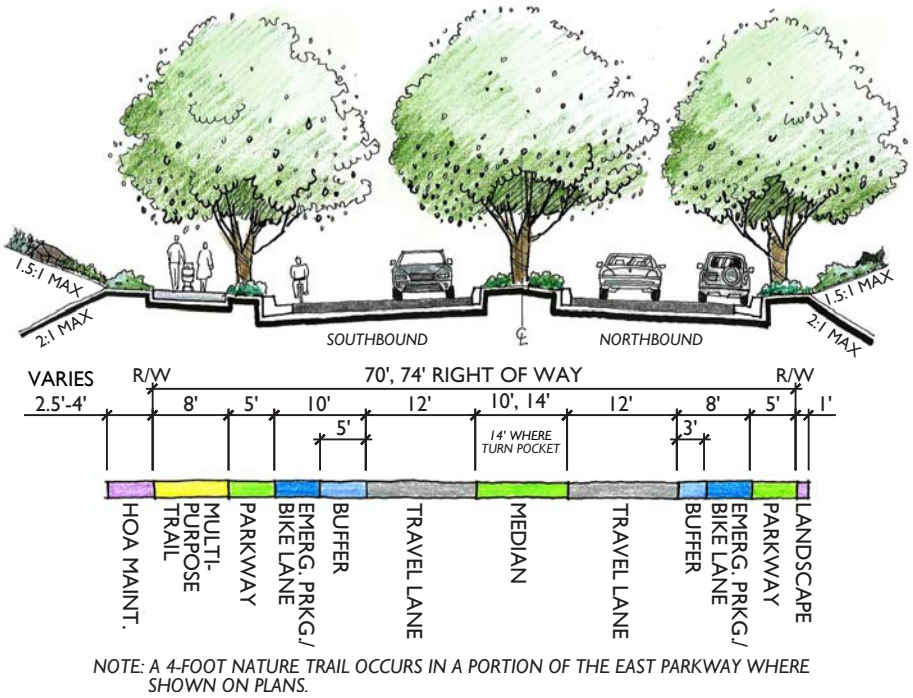
Cuyamaca Street will be extended beyond Chaparral Drive, as illustrated in *Exhibit 4.12.6: Cuyamaca Street, On & Off-Site - 2-Lane Parkway Type I (Chaparral Drive to Street "A"/ Street "W")*. This street section consists of a 2-lane divided road with bike lanes in each direction and an 8-foot multi-purpose trail on the west side of the street. A 4-foot wide nature trail on the east side of Cuyamaca Street will connect an existing primitive trail at the reservoir access road to the village nature trail at the first roundabout at Streets "A"/"W." The width of this street section has been minimized and the alignment carefully planned to decrease grading while providing full mobility and emergency access. This section of roadway seeks to preserve the scenic character of the rock outcroppings and topography as a gateway experience as described in *Section 5.2.1: Cuyamaca Street Gateway*.



Key Map
not to scale

Design Standards[1]	
Volume	5,000-15,000 Average Daily Trips
Design Speed	40 mph (20 mph in vicinity of roundabout)
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	70 feet, 74 feet at turn pockets
Curb-to-Curb Width	• West side (southbound): 22 feet • East side (northbound): 20 feet
Median	10 feet wide (increases to 14 feet wide at turn pockets), raised and landscaped
Modes	
Landscape Scheme	
Style	Informal "Chaparral" parkway and median planting
Tree Spacing	75 - 500 feet on center
Roadside FMZ	50 feet both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 3)*



NOTE: A 4-FOOT NATURE TRAIL OCCURS IN A PORTION OF THE EAST PARKWAY WHERE SHOWN ON PLANS.

Landscape Palette:

Trees

- QUERCUS AGRIFOLIA - Coast Live Oak
- QUERCUS ILEX - Holly Oak
- CHILOPSIS LINEARIS CULT. - Desert Willow Cultivars

Shrubs / Perennials

- RHAMNUS CALIFORNICA - California Coffeeberry
- AGAVE WEBERI - Weber's Agave
- OPUNTIA FICUS-INDICA - Prickly Pear or Nopales

Groundcovers

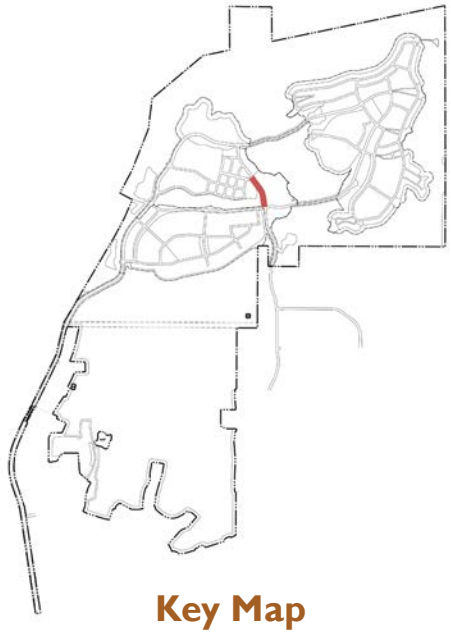
- BACCHARIS P. 'PILULARIS' - Dwarf Coyote Bush
- COTONEASTER DAMMERI `LOWFAST` - Lowfast Bearberry Cotoneaster
- ACHILLEA 'MILLEFOLIUM' - Yarrow

Exhibit 4.12.6: Cuyamaca Street, On & Off-Site - 2-Lane Parkway Type I

(Chaparral Drive to Street "A"/Street "W")

4.2.7 Cuyamaca Street - Residential Collector Type V (Street "A"/Street "W" to Street "T")

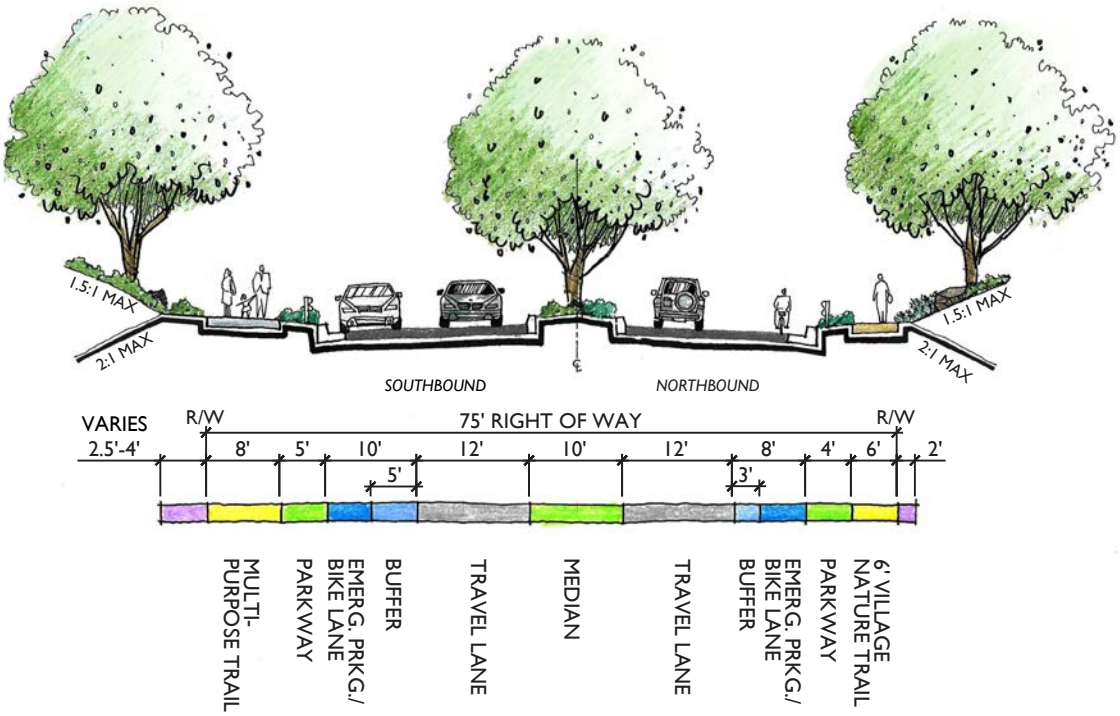
From Street "A"/Street "W" northward to Street "T" in Fanita Commons, Cuyamaca Street transitions to the cross section illustrated in *Exhibit 4.12.7: Cuyamaca Street - Residential Collector Type V (Street "A"/Street "W" to Street "T").* This street section consists of a 2-lane divided road with bike lanes in each direction, an 8-foot multi-purpose trail on the west side of the street and a 6-foot Village Nature Trail adjacent to the Farm on the east side of the street. This section of road slopes down toward the Fanita Commons Village Center, offering views of the Farm and hills north of the Village, reflecting the agrarian character of Fanita Ranch.



Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	35 mph (20 mph in vicinity of roundabout)
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	75 feet
Curb-to-Curb Width	• West side (southbound): 22 feet • East side (northbound): 20 feet
Median	10 feet wide, raised and landscaped
Landscape Scheme	
Style	Informal "Chaparral" parkway and median planting
Tree Spacing	75 - 500 feet on center
Roadside FMZ	50 feet west side

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 10)*



NOTE: GUARDRAIL TO BE CORTEN STEEL OR WOOD WHERE REQUIRED.

Landscape Palette:

Trees

- QUERCUS AGRIFOLIA - Coast Live Oak
- QUERCUS ILEX - Holly Oak
- CHILOPSIS LINEARIS CULT. -Desert Willow Cultivars

Shrubs / Perennials

- RHAMNUS CALIFORNICA - California Coffeeberry
- AGAVE WEBERI - Weber's Agave
- OPUNTIA FICUS-INDICA - Prickly Pear or Nopales

Groundcovers

- BACCHARIS P. 'PIGEON POINT' - Dwarf Coyote Bush
- COTONEASTER DAMMERI `LOWFAST` - Lowfast Bearberry Cotoneaster
- ACHILLEA 'MOONSHINE' - Moonshine Yarrow

Exhibit 4.12.7: Cuyamaca Street - Residential Collector Type V

(Street "A"/Street "W" to Street "T")

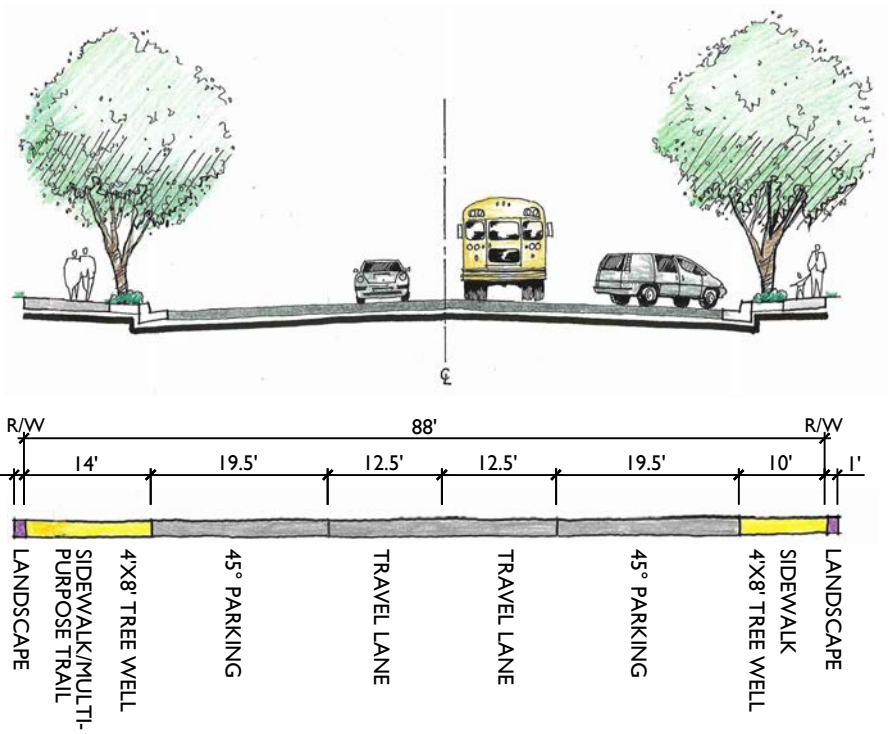
4.2.8 Cuyamaca Street - Village Collector (Street "T" to Fanita Parkway)

From Street "T" to Fanita Parkway, Cuyamaca Street transitions to the cross section illustrated in *Exhibit 4.12.8: Cuyamaca Street – Village Collector (Street "T" to Fanita Parkway)*. This street section consists of a 2-lane road with 45 degree angled parking in each direction, a 14-foot sidewalk/ multi-purpose trail on the west side of the street and a 10-foot sidewalk on the east side of the street. Landscape pockets are located intermittently between angled parking stalls.

Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	35 mph (20 mph in vicinity of roundabout)
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	88 feet
Curb-to-Curb Width	64 feet
Median	None
Landscape Scheme	
Style	Formal parkway
Tree Spacing	30 - 50 feet on center
Roadside FMZ	None

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 11)*



Landscape Palette:

Trees

- CERCIS C. 'FOREST PANSY' - Forest Pansy Redbut
- GEIJERA PARVIFLORA - Australian Willow
- KOELREUTERIA PANICULATA - Golden Rain Tree

Shrubs / Perennials

- AGAVE 'BLUE GLOW' – Blue Glow Agave
- RHAPHIOLEPIS SP. – Indian Hawthorn

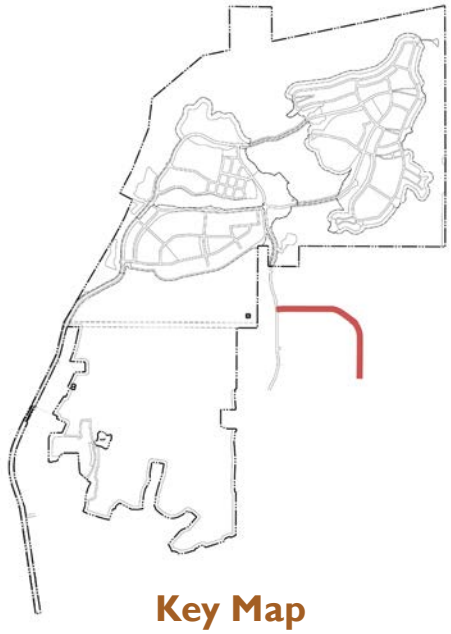
Groundcovers

- CRASSULA MULTICAVA – Fairy Crassula
- FRAGARIA CHILOENSIS – Ornamental Strawberry
- MYPOPRUM P. 'PINK' - Pink Myoporum

Exhibit 4.12.8: Cuyamaca Street - Village Collector
(Street "T" to Fanita Parkway)

4.2.9 Magnolia Avenue, Off-Site - Collector Type IV (Existing Terminus to Cuyamaca Street)

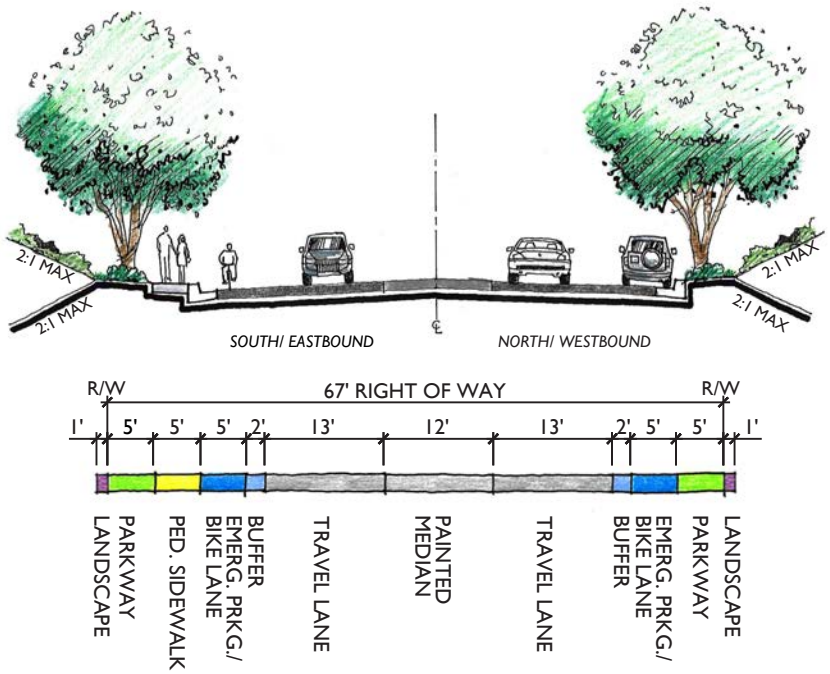
Magnolia Avenue will be extended from its current terminus and curve to the west to intersect with Cuyamaca Street outside the Development Plan Area boundary. *Exhibit 4.12.9: Magnolia Avenue, Off-Site – Collector Type IV (Existing Terminus to Cuyamaca Street)* illustrates the proposed street section for this new segment of roadway, which provides additional access to Fanita Ranch via Cuyamaca Street. This street section consists of 2 travel lanes, a painted center median, bike lanes/emergency parking on both sides, a landscaped parkway on one side and a continuous sidewalk on the other side.



Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	35 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	67 feet
Curb-to-Curb Width	52 feet
Median	12 feet wide, painted
Modes	
Landscape Scheme	
Style	Formal parkway planting
Tree Spacing	50 feet on center
Roadside FMZ	50 feet both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 9)*



Landscape Palette:

Trees

- MAGNOLIA GRANDIFLORA `MAJESTIC BEAUTY` - Southern Magnolia
- LOPHOSTEMON CONFERTUS - Brisbane Box
- HYMENOSPORUM FLAVUM - Sweetshade

Shrubs / Perennials

- CEANOTHUS SP. - California Lilac
- CISTUS SP. - Rockrose
- HEMEROCALLIS SP. - Daylily

Groundcovers

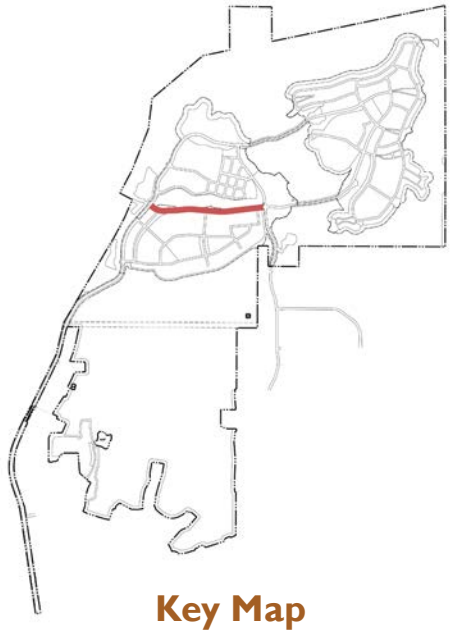
- BACCHARIS P. 'PIGEON POINT' - Dwarf Coyote Bush
- ERIGERON KARVINSKIANUS - Santa Barbara Daisy
- CISTUS SKANBERGII – Pink Rock Rose

Exhibit 4.12.9: Magnolia Avenue, Off-Site - Collector Type IV
(Existing Terminus to Cuyamaca Street)

4.2.10 Residential Collector Type I

(Fanita Parkway to Cuyamaca Street)

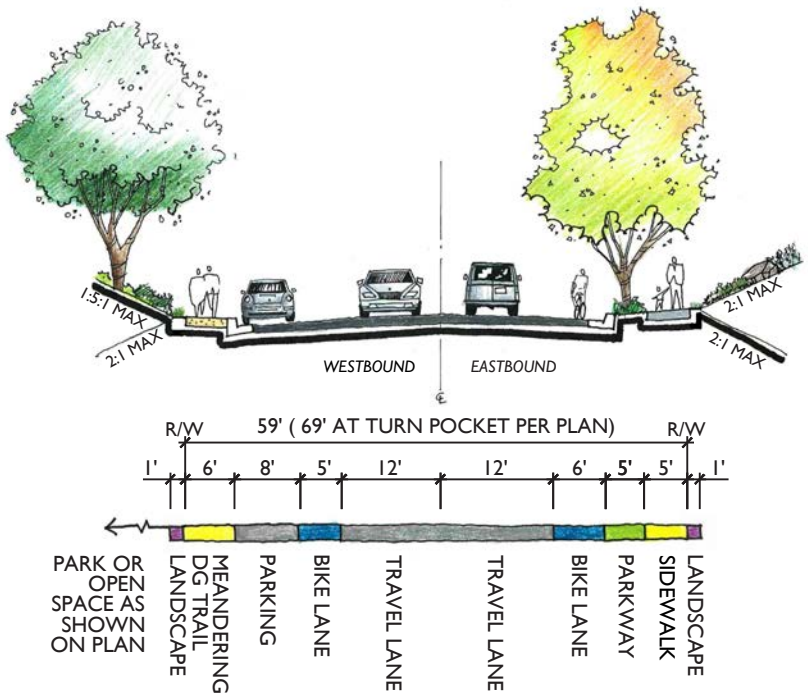
Exhibit 4.12.10: Residential Collector Type I (Fanita Parkway to Cuyamaca Street) illustrates the residential collector street located adjacent to the south drainage connecting Fanita Parkway and Cuyamaca Street. This roadway is adjacent to the southerly bank of the drainage and is elevated above Fanita Commons offering significant views of the main Village Center below. A neighborhood park and 6-foot trail along the drainage provide recreational opportunities, as well as a pedestrian connection via a pedestrian bridge to the school site and the Village Center.



Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	35 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	59 feet, 69 feet at turn pockets
Curb-to-Curb Width	43 - 53 feet
Median	10 feet wide painted at left turn pockets
Landscape Scheme	
Style	Informal "Riparian" parkway planting
Tree Spacing	75 - 500 feet on center
Roadside FMZ	30 feet on north side

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 6)*



Landscape Palette:

Trees

- QUERCUS AGRIFOLIA - Coast Live Oak
- CHILOPSIS LINEARIS CULT. - Desert Willow Cultivars
- QUERCUS ILEX - Holly Oak

Shrubs / Perennials

- IVA HAYESIANA - San Diego Poverty Weed
- AGAVE PARRYI - Parry Agave
- FESTUCA MAIREI - Atlas Fescue

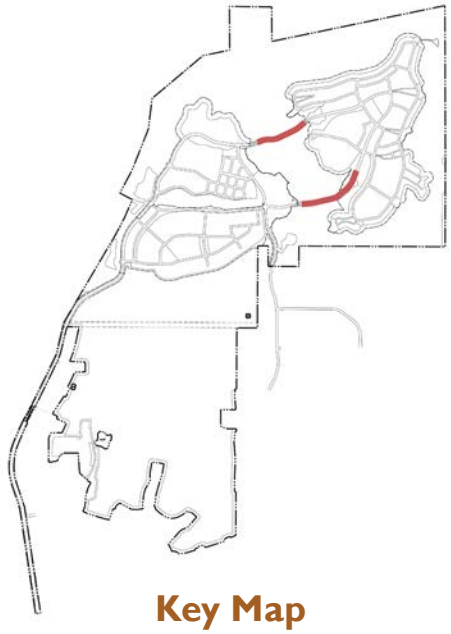
Groundcovers

- MYOPROUM X 'PACIFICA' - Trailing Myoporum
- CEANOTHUS G. HORIZONTALIS - Carmel Creeper
- CRASSULA MULTICAVA - Fairy Crassula

Exhibit 4.12.10: Residential Collector Type I
(Fanita Parkway to Cuyamaca Street)

4.2.11 Residential Collector Type II (Through Habitat Preserve - Streets "V" and "W")

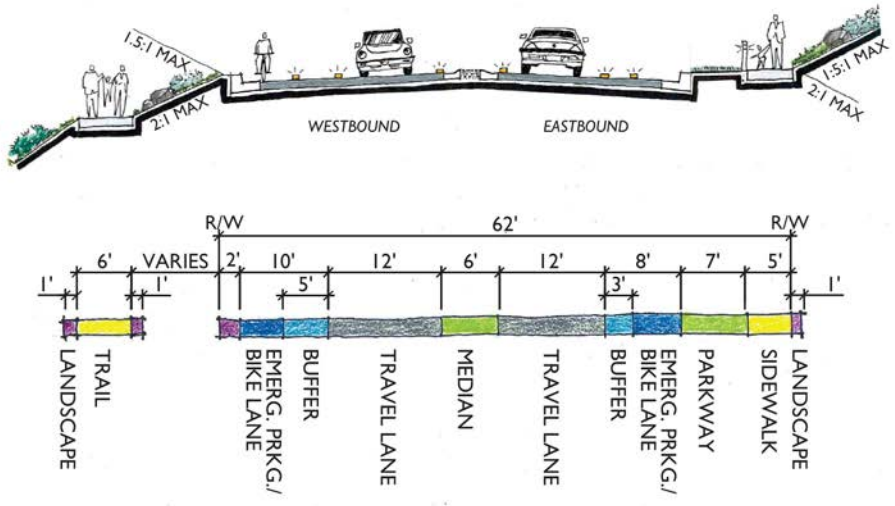
Where the Residential Collector Type II crosses the Habitat Preserve, a special street section has been designed to accommodate wildlife crossing and minimize disturbance of the Habitat Preserve. As illustrated in *Exhibit 4.12.11: Residential Collector Type II (Through Habitat Preserve - Streets "V" and "W")*, the street section is narrow to minimize grading and the crossing distance for wildlife. The 6-foot median is specially designed to minimize barriers perceived by wildlife. Paving through this segment of roadway may consist of colored pavement that mimics the natural terrain. Because these street segments are major fire evacuation routes, landscaping will be permanently irrigated and limited to low growing, fire-resistive shrubs and ground covers with a few trees.



Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	35 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	62 feet
Curb-to-Curb Width	48 feet
Median	6-foot wide median with rolled curb, no landscaping
Landscape Scheme	
Style	Informal planting of fire-resistive ground covers, shrubs and a few trees
Paving	Special colored concrete to blend with natural surroundings
Roadside FMZ	50 feet on both sides

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 7)*
2. *See Section 5.9: Conceptual Lighting Plan for lighting details.*



Landscape Palette:

Trees

- QUERCUS AGRIFOLIA - Coast Live Oak
- QUERCUS ILEX - Holly Oak
- CHILOPSIS LINEARIS CULT. - Desert Willow Cultivars

Shrubs / Perennials

- GALVEZIA SPECIOSA - Island Bush Snapdragon
- IVA HAYESIANA - Hayes Ivy
- RHAMNUS CROCEA - Red Coffeeberry

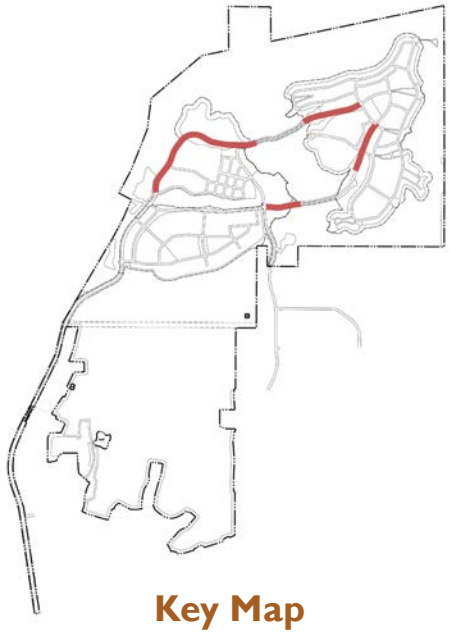
Groundcovers

- BACCHARIS P. 'PILULARIS' - Dwarf Coyote Bush
- CISTUS SP. - Rockrose
- MYOPORUM P. 'PINK' - Pink Myoporum

Exhibit 4.12.11: Residential Collector Type II
(Through Habitat Preserve - Streets "V" and "W")

4.2.12 Residential Collector Type III

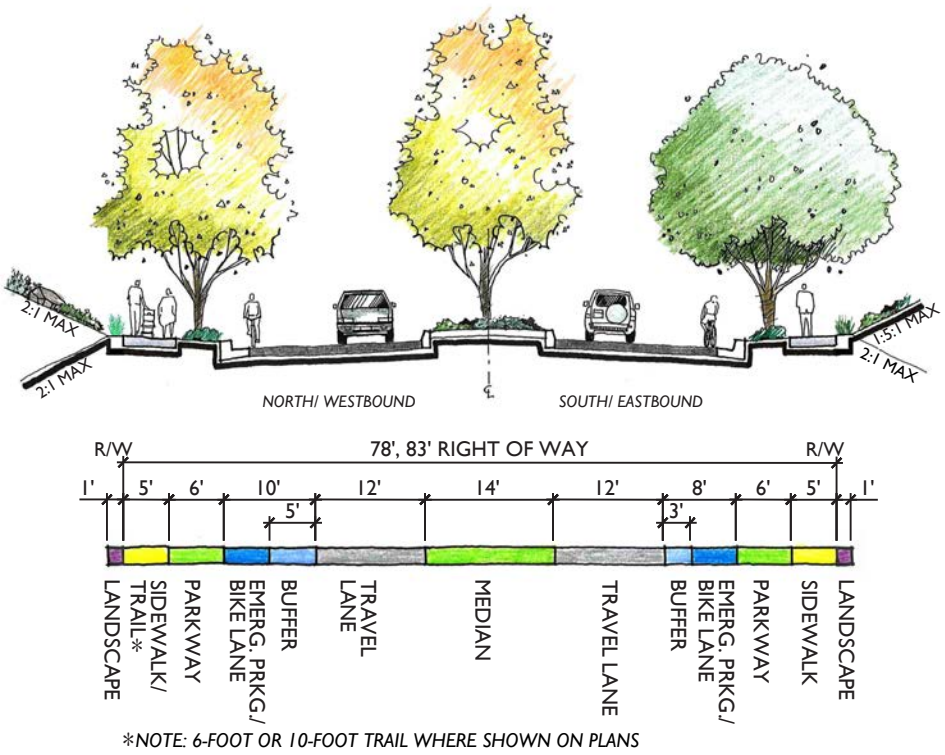
The Residential Collector Type III street section applies to a variety of internal roadway segments, including portions of Fanita Parkway and Street "A" that traverse various Villages. The section, as illustrated *Exhibit 4.12.12: Residential Collector Type III,* consists of a 2-lane divided road with bike lanes on both sides and a 14-foot raised and landscaped median. In some locations, the section provides 5-foot sidewalks on both sides. In other locations, the sidewalk on one side of the street is replaced by a 6-foot or 10-foot trail to provide continuous trail connectivity, based upon location within the community. Landscape palette and style vary by Village.



Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	35 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	78 feet, 83 feet
Curb-to-Curb Width	22 feet on the west/north side, 20 feet on the east/south side
Median	14 feet wide, raised and landscaped
Landscape Scheme	
Style	Informal "Chaparral" or "Riparian" parkway planting by Village
Tree Spacing	75 - 500 feet on center
Roadside FMZ	No FMZ, or 30 feet or 50 feet per Tentative Map; varies

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 8)*

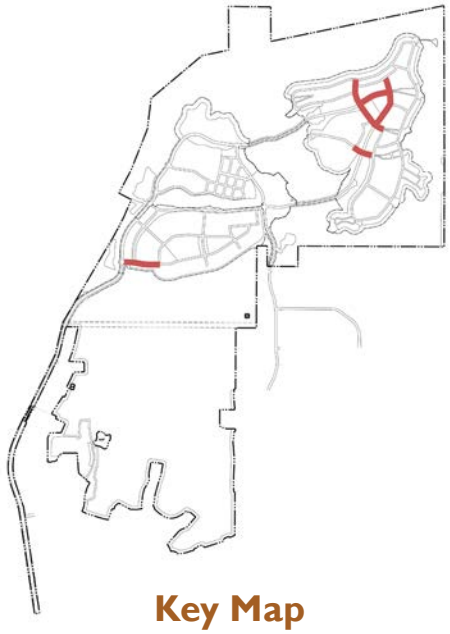


Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.12.12: Residential Collector Type III

4.2.13 Residential Collector Type VII

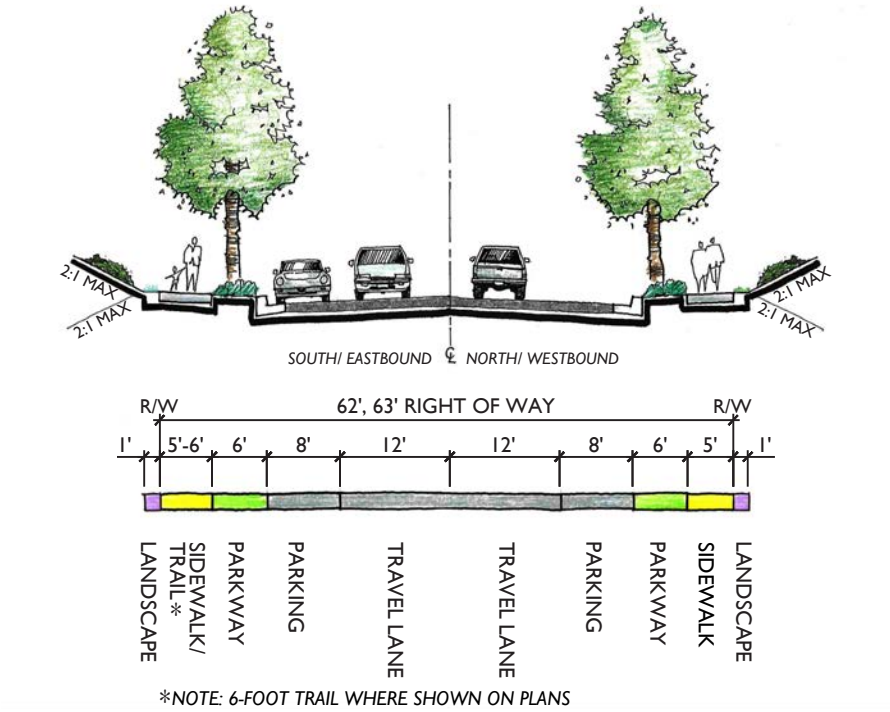
This Residential Collector Type VII section, as illustrated in *Exhibit 4.12.13: Residential Collector Type VII*, occurs in Orchard and Vineyard Villages. This street section consists of a 2-lane road with parking, parkways and sidewalks on both sides.



Key Map
not to scale

Design Standards[1]	
Volume	4,000 - 10,000 Average Daily Trips
Design Speed	25 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	62 feet (63 feet with 6-foot trail option)
Curb-to-Curb Width	40 feet
Median	None
Landscape Scheme	
Style	Formal parkway and median planting
Tree Spacing	50 feet on center
Roadside FMZ	None

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 12)*



Landscape Palette:

Trees

- LOPHOSTEMON CONFERTUS - Brisbane Box
- Liquidambar styraciflua - Sweetgum
- MAGNOLIA GRANDIFLORA `MAJESTIC BEAUTY` - Southern Magnolia

Shrubs / Perennials

- DIETES SP. - Fortnight Lily
- ESCALLONIA 'NEWPORT DWARF' - Escallonia 'Newport Dwarf'
- PITTOSPORUM T. 'WHEERLER'S DWARF - Dwarf Mock Orange

Groundcovers

- AECHILLEA 'MOONSHINE' - Moonshine Yarrow
- FESTUCA MAIREI - Atlas Fescue
- HEMEROCALLIS SP. - Daylily

Exhibit 4.12.13: Residential Collector Type VII

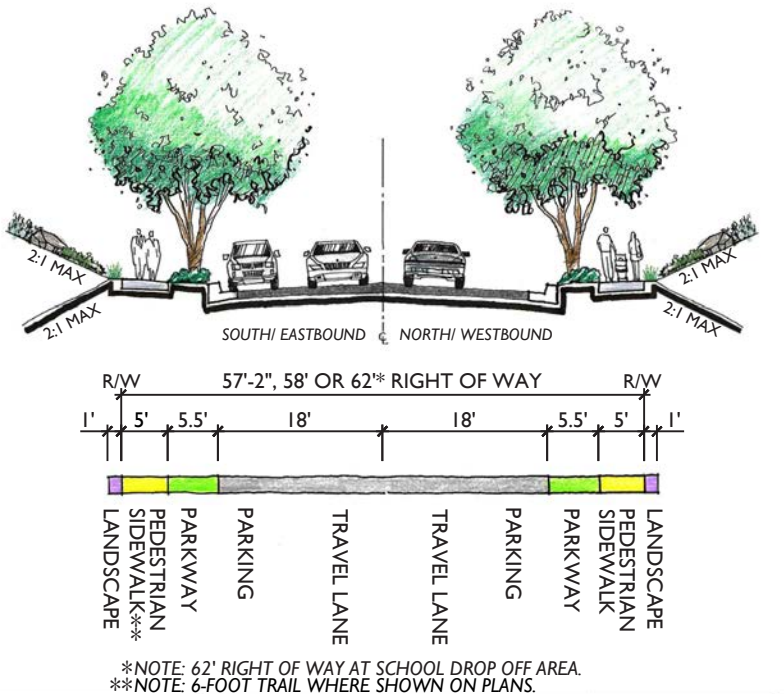
4.2.14 Residential Street

Residential streets include conventional 2-way streets with parallel parking on both sides, as illustrated in *Exhibit 4.12.14: Residential Street*. Street trees provide shade for pavement and parked cars to reduce heat island effect. Sidewalks are provided on both sides. In select locations the sidewalk on one side is replaced with a 6-foot trail. Plant palette varies by Village. This street is modified along the school site to accommodate pedestrian circulation and drop-off. The final design will be coordinated with the Santee School District during school site design.

Key Map
not to scale

Design Standards[1]	
Volume	2,200 Average Daily Trips
Design Speed	25 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	57 feet (58 feet with 6-foot trail option; 62 feet at school drop-off)
Curb-to-Curb Width	36 feet (41 feet at school drop-off)
Median	None
Landscape Scheme	
Style	Formal parkway planting
Tree Spacing	50 feet on center
Roadside FMZ	50 feet on south side of Street "N" only per Tentative Map

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 16)*

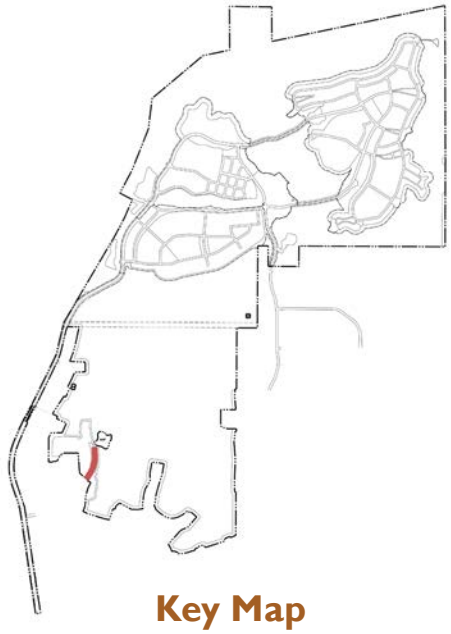


Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.12.14: Residential Street

4.2.15 Carlton Hills Boulevard (Private Street)

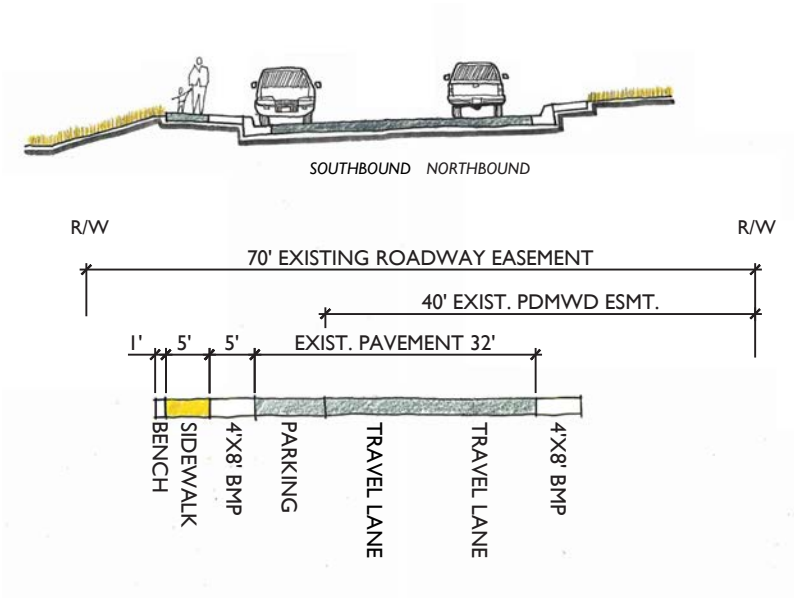
Carlton Hills Boulevard is an existing dead-end street that provides access to the Special Use Area, a Padre Dam Municipal Water District reservoir and a mini park that includes a trail staging area. The existing asphalt curbs will be replaced with concrete curb and gutter and a sidewalk will be added to the west side of the street (see *Exhibit 4.12.15: Carlton Hills Boulevard - Private Street*). Due to existing geologic conditions, permanent irrigation is not allowed. Plantings will be limited to a non-irrigated hydroseed mix of hardy native grasses, forbs, perennials and a few shrubs as required for implementation of BMPs within the 4' x 8' areas. The hydroseed mix will be applied in the winter to maximize establishment. This portion of Carlton Hills Boulevard may be designed as a public street during final engineering.



Key Map
not to scale

Design Standards[1]	
Volume	2,200 Average Daily Trips
Design Speed	25 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	70 feet (existing roadway easement)
Curb-to-Curb Width	32 feet
Median	None
Landscape Scheme	
Style	Informal "Chaparral" planting
Tree Spacing	Not applicable
Roadside FMZ	None

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 18)*

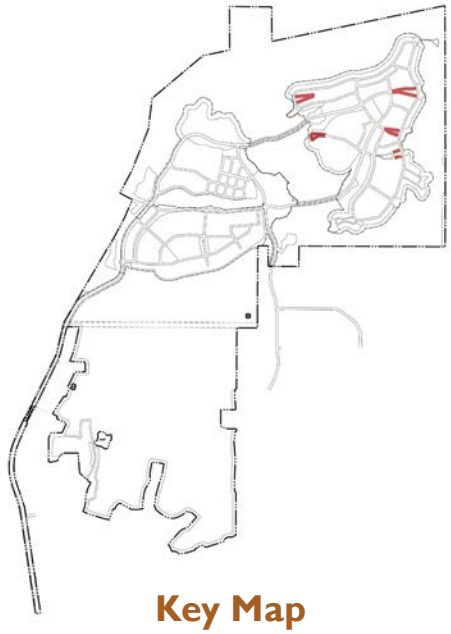


Plantings will be limited to a non-irrigated hydroseed mix of hardy native grasses, forbs, perennials and a few shrubs as required for implementation of BMPs within the 4' x 8' areas.

Exhibit 4.12.15: Carlton Hills Boulevard - Private Street

4.2.16 Split Residential Street (One-Way)

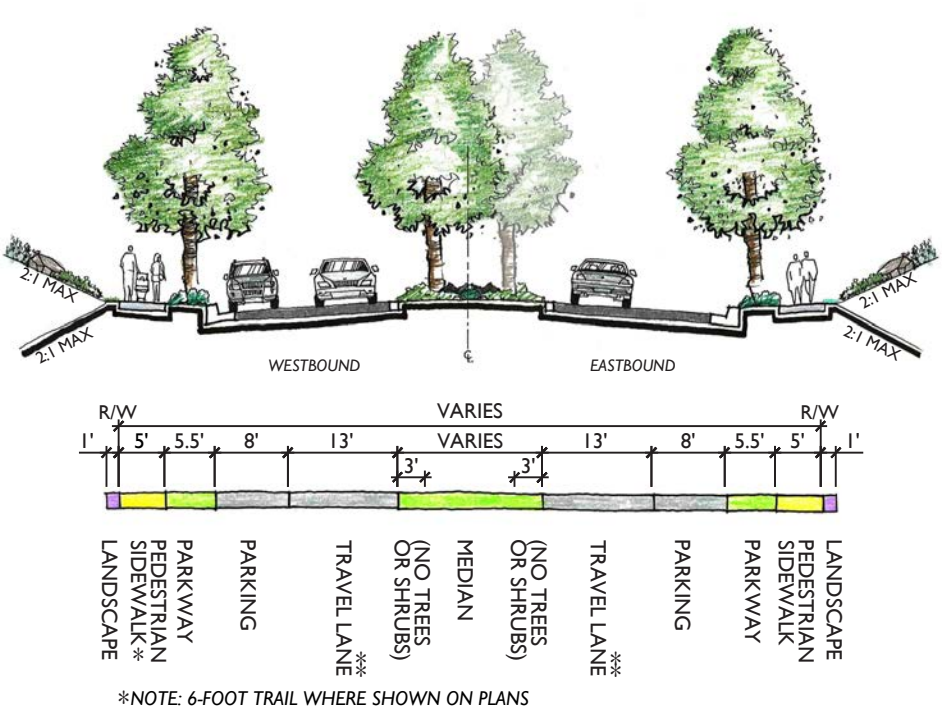
Split residential streets are one-way streets that are separated by a median or park. The width of the median or park varies as illustrated in *Exhibit 4.12.16: Split Residential Street (One-Way).* These unique streets establish neighborhood character. Parallel parking and sidewalks are provided on both sides. In select locations, the sidewalk on one side is replaced with a 6-foot trail. Plant palette varies by Village.



Key Map
not to scale

Design Standards[1]	
Volume	2,200 Average Daily Trips
Design Speed	25 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	Varies
Curb-to-Curb Width	21 feet in each direction
Median	Varies
Landscape Scheme	
Style	Formal parkway planting
Tree Spacing	50 feet on center
Roadside FMZ	None

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 17)*

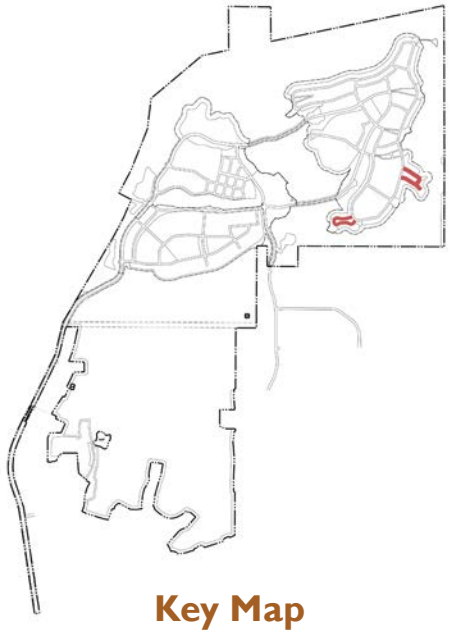


Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.12.16: Split Residential Street (One-Way)

4.2.17 Private Residential Street

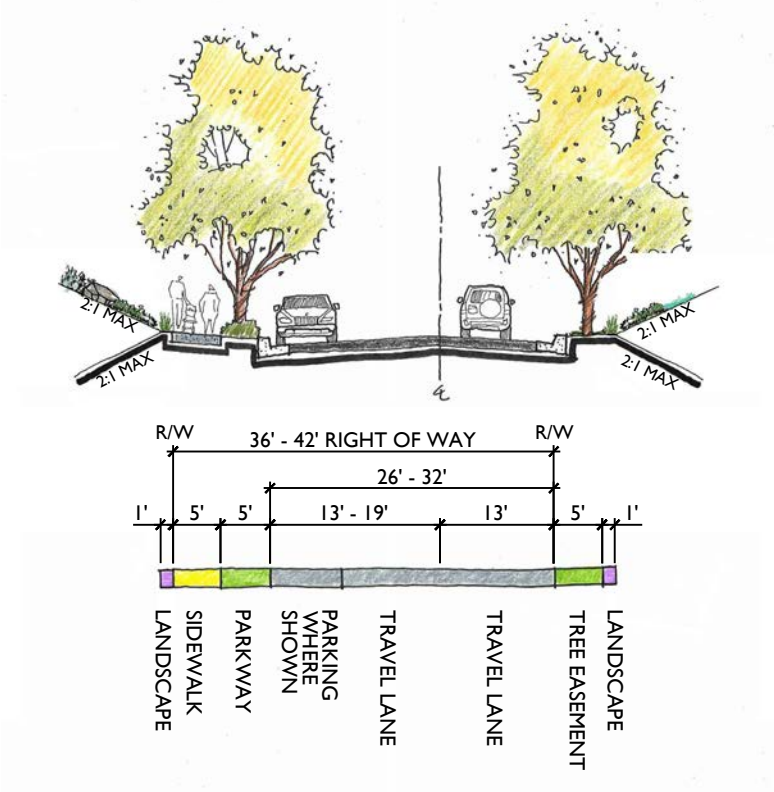
Private residential streets are local 2-way streets with parallel parking on one side and a street tree easement on the other side, as shown in *Exhibit 4.12.17: Private Residential Street*. These streets provide local access within a neighborhood creating an enclave-type feel. Street trees provide shade for pavement and parked cars to reduce heat island effect and for the comfort of pedestrians. A sidewalk is provided on one side of the street.



Key Map
not to scale

Design Standards[1]	
Volume	1,100 Average Daily Trips
Design Speed	25 mph
Modes	• Vehicles • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	36 - 42 feet
Curb-to-Curb Width	26 - 32 feet
Median	None
Landscape Scheme	
Style	Formal parkway planting
Tree Spacing	50 feet on center
Roadside FMZ	None

1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 19)*

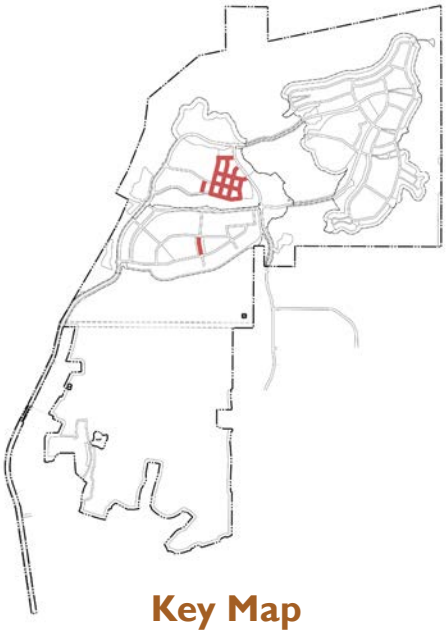


Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.12.17: Private Residential Street

4.2.18 Village Streets

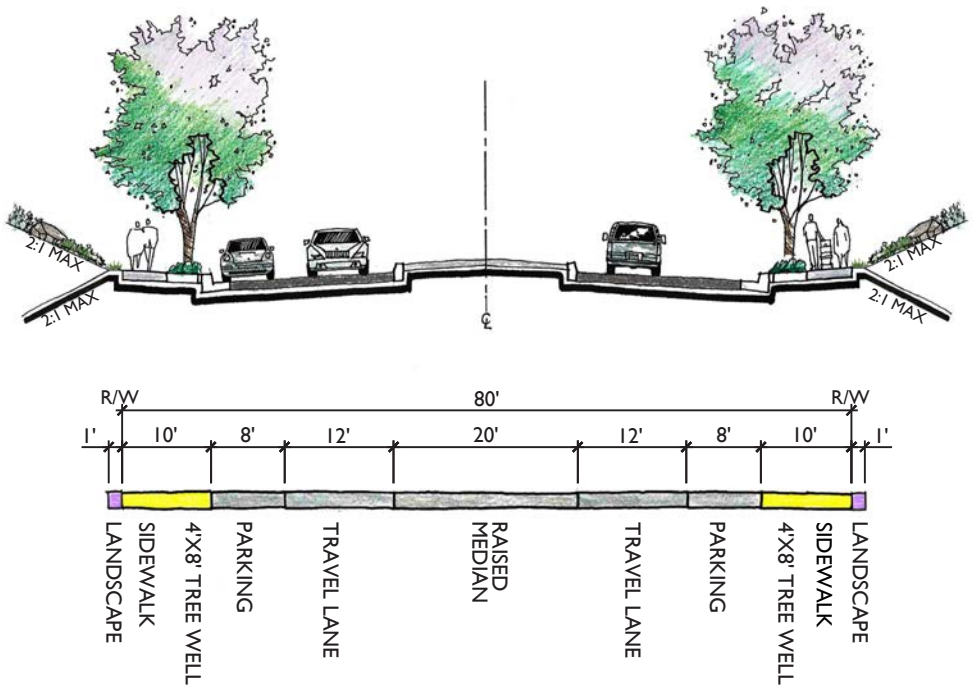
Within each Village Center, a variety of street sections are possible. This variety is intended to provide options in creating diversity in streetscapes that are consistent with the vision for walkable, "main street" style Village Centers. Each Village Street is designed to provide on-street parking in parallel or angled parking configurations. Each Village Street also includes a 10-foot sidewalk on each side, with tree wells located within the sidewalk approximately every 50 feet on center. Trees provide shade for pavement and parked cars to reduce heat island effect. Refer to *Exhibits 4.12.18 through 4.12.20*.



Key Map
not to scale

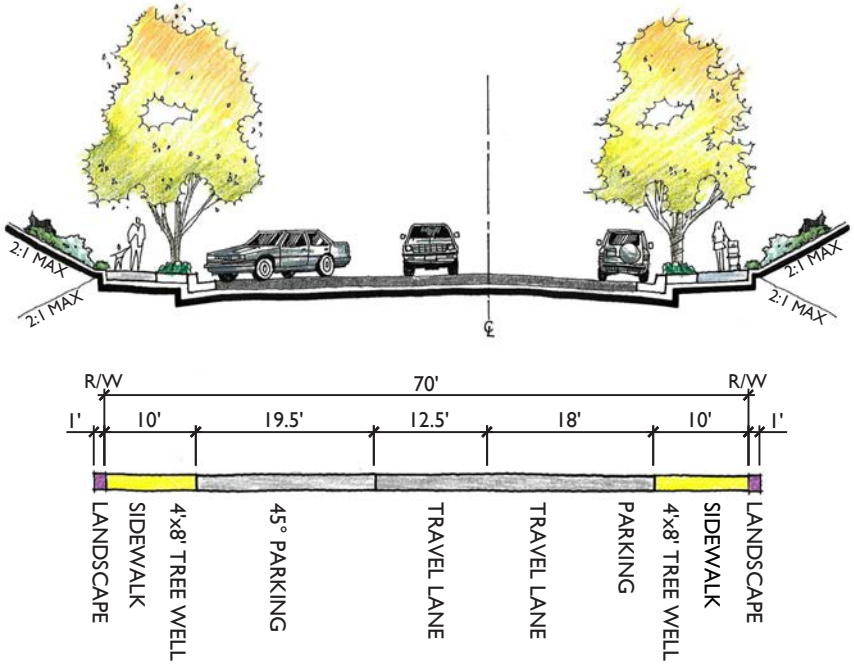
Design Standards[1]	
Volume	2,200 Average Daily Trips
Design Speed	25 mph
Modes	• Vehicles • NEVs • Bicycles • Pedestrians
Dimensions	
Right-of-Way Width	56 - 80 feet (depending upon section)
Curb-to-Curb Width	36 - 60 feet (depending upon section)
Median	Depends on section
Landscape Scheme	
Style	Formal parkway
Tree Spacing	50 feet on center
Roadside FMZ	30 feet for a portion of Street P per Tentative Map

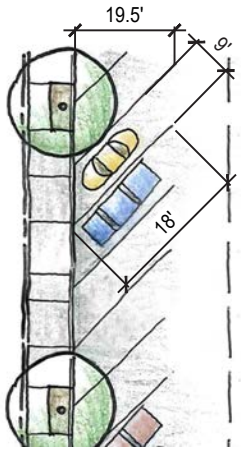
1. *For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Sections No. 13, 14 and 15)*



Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village. (Tentative Map Street Section No. 13)

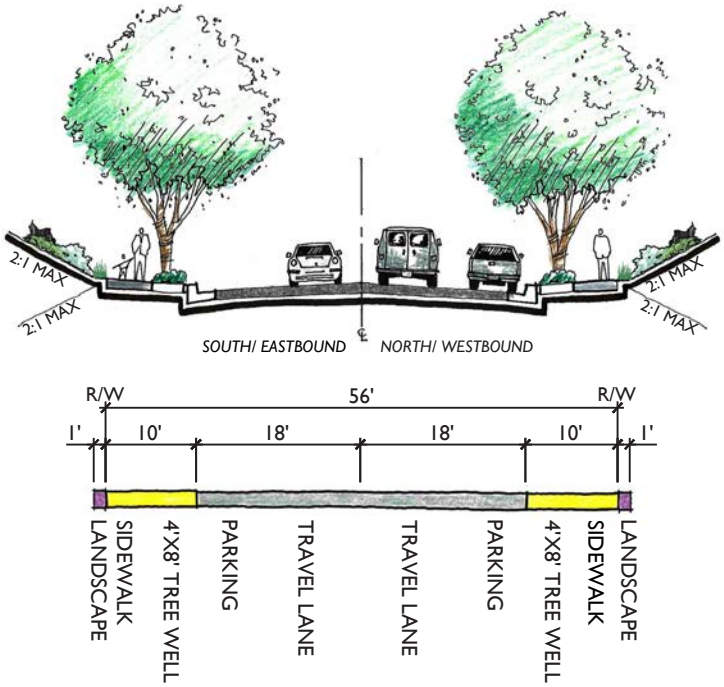
Exhibit 4.12.18: Village Street Type I





Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village. (Tentative Map Street Section No. 14)

Exhibit 4.12.19: Village Street Type II

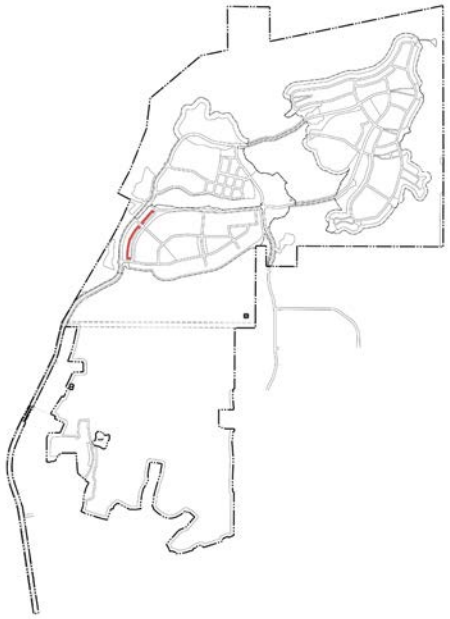


Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village. (Tentative Map Street Section No. 15)

Exhibit 4.12.20: Village Street Type III

4.2.19 Private Residential Driveway

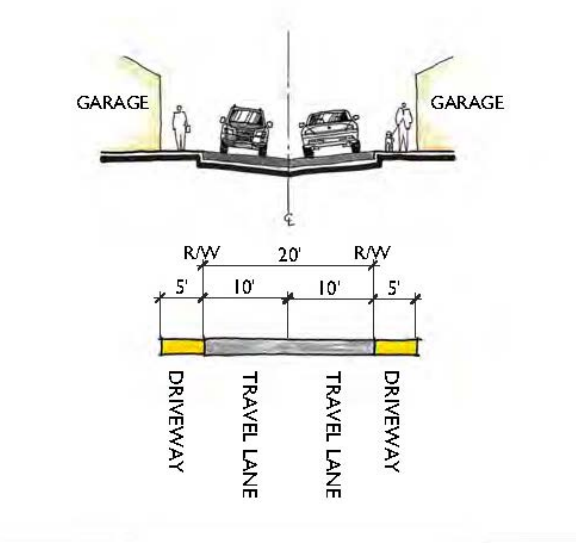
Private residential driveways provide access to garages located at the back of the buildings and are used to eliminate garage doors from the street to improve the street scene. Private residential driveways are located in Planning Area M-9 shown in *Exhibit 3.2: Site Utilization Plan* in Orchard Village and are also anticipated in residential areas within the Village Centers. As shown in *Exhibit 4.12.21: Private Residential Driveway*, these narrow travelways are intended for vehicle use and are designed for local access only. Because private residential driveways provide primary vehicular access to rear-loaded garages, they should be treated with landscaping, architectural articulation and lighting to create a pleasant and safe driving experience for the residents. To allow for landscaping, buildings shall be set back a minimum of 4 feet from the edge of the private residential driveway. Garage setbacks from the adjacent private residential driveway shall be 5 feet where no full garage driveway is provided for individual units or a minimum of 18 feet where full garage driveways are provided. Parking is prohibited along the private residential driveways.



Key Map
not to scale

Design Standards[1]	
Volume	Less than 1,000 Average Daily Trips
Design Speed	15 mph
Modes	Vehicles
Dimensions	
Right-of-Way Width	20 feet
Curb-to-Curb Width	10 feet in each direction
Median	None
Landscape Scheme	
Style	Small trees, vines and shrubs
Tree Spacing	Not applicable
Roadside FMZ	None

1. For full engineering street design criteria, refer to Table 4.1: Street Design Criteria. (Tentative Map Street Section No. 20)



Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.12.21: Private Residential Driveway

4.3 Trail Corridor & Landscape Standards

Thoughtful planning and design of trails is essential to encouraging their use for both transportation and recreation. In conformance with the Santee General Plan Trails Element, Fanita Ranch includes plans for more than 35 miles of trails. Trails are planned to provide safe, multi-modal paths that allow access for pedestrians and bicyclists throughout the community and to regional trails. An existing equestrian trail in the northeast corner of the Development Plan Area will be maintained to connect Sycamore Canyon County Preserve to the north with the Oak Creek Drive area (in the County of San Diego) to the east. To ensure the long-term quality and viability of the trail system, trail maintenance will be provided by the entity that is responsible for the areas in which the trails are located, as shown in *Exhibit 10.2: Operation & Maintenance Responsibility Areas*.

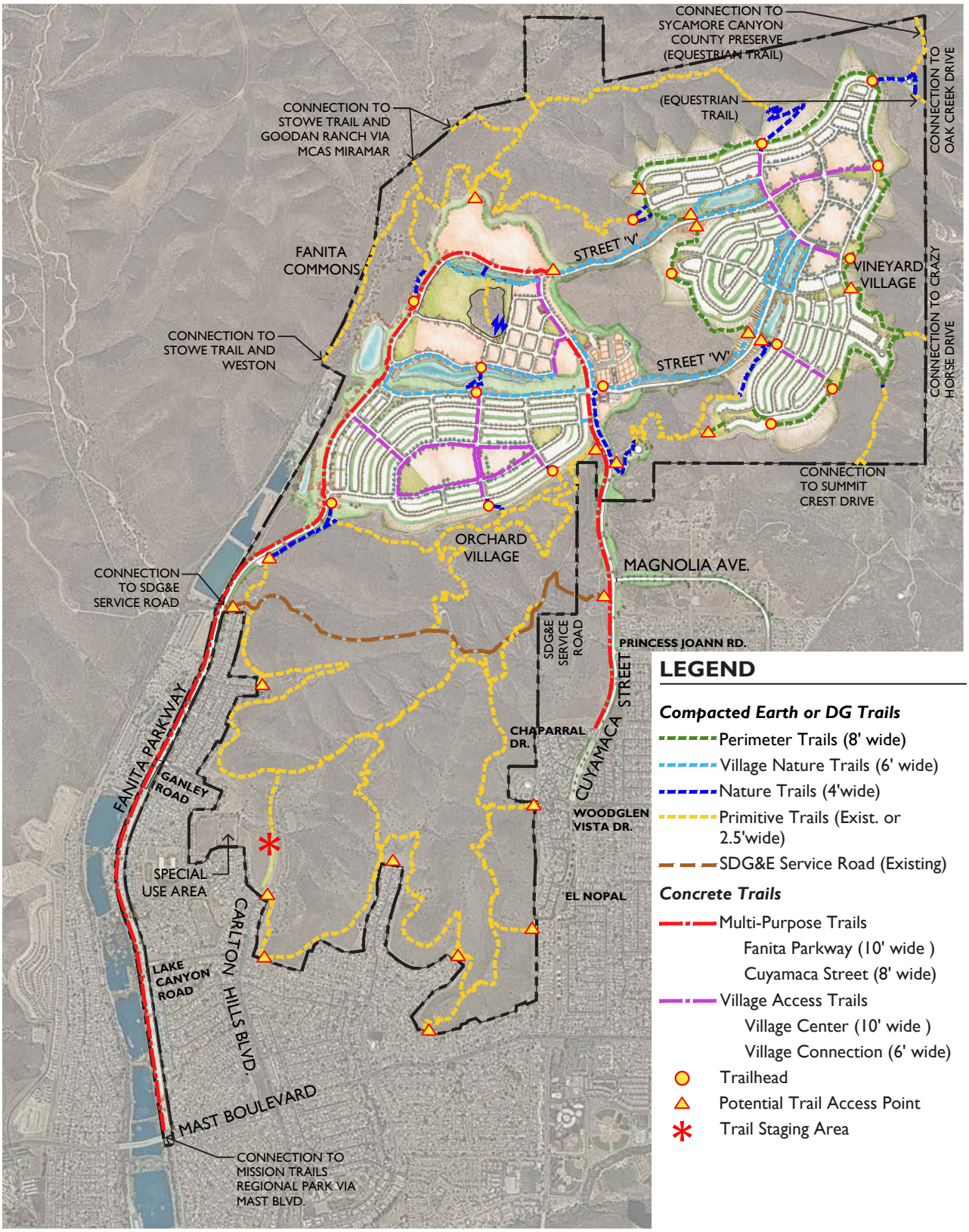
Trail surface type, width, grades, and vertical and horizontal clearances from vegetation and fixed objects will be designed in accordance with recognized standards as depicted in *Table 4.3: Trail Design.* Site amenities, such as trail maps, seating, shade and drinking fountains, will be sited at appropriate locations. Amenities in the Habitat Preserve shall be provided in accordance with the Public Access Plan (Fanita Ranch EIR Appendix D, Biological Resources Technical Report, Appendix T) requirements. Cable and post or post and rail fencing will be used where appropriate for user safety and the protection of surrounding habitat. Landscaping styles will be determined by adjacent landscapes such as the Habitat Preserve, riparian corridors or village themes, and will conform to the approved Fire Protection Plan and preserve management and restoration plans. *Exhibit 4.13: Trails Map* depict the Fanita Ranch trail system and *Exhibits 4.14.1 through 4.14.7* depict the standard trail sections.

Table 4.3: Trail Design

Trails Design Matrix					
Trail Type	Width	Surface	Grade[1]	Vertical Clearance	Horizontal Clearance
Multi-Purpose	10' - Fanita Parkway 8' - Cuyamaca Street	Concrete	≤12%	10'	2'
Village Access	10' Village Centers 6' to Village Center	Concrete	≤12%	10'	2'
Perimeter	8'	Earth or DG	≤15%	10'	2'
Village Nature	6'	Earth or DG	≤15%	10'	1'
Nature	4'	Earth or DG	≤20%	10'	1'
Primitive - Existing	Existing	Native Earth	Existing	10'	To Edge
Primitive - New[2]	2.5'	Native Earth	≤20%	10'	To Edge
SDG&E Service Road	Existing	Native Earth	Existing	Per SDG&E	To Edge

Notes:

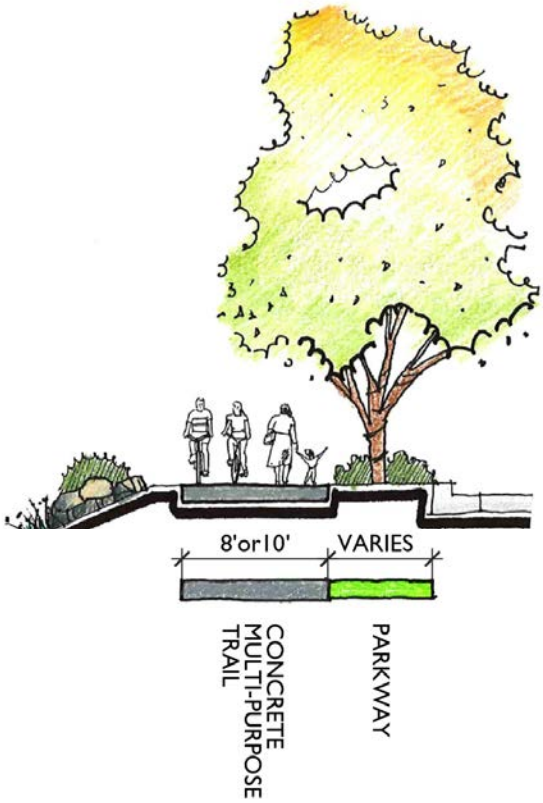
1. These are optimum grade ranges. Actual grades will vary due to topography, existing conditions and environmental constraints.



For illustrative purposes only; final design may vary.

Exhibit 4.13: Trails Map

not to scale

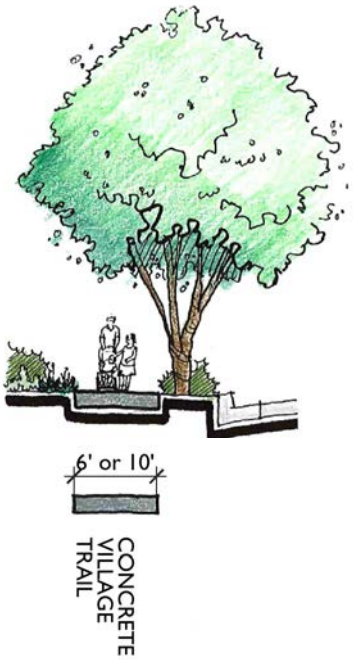


Multi-Purpose Trails are broad, all-weather, high user volume, concrete paved paths along Fanita Parkway and Cuyamaca Street that connect Fanita Ranch to Santee Lakes and greater Santee. Multi-Purpose Trails are separated from the roadways with a landscaped parkway strip that varies in width.

Design Standards	
Width	10 feet - Fanita Parkway 8 feet - Cuyamaca Street
Surface	Concrete
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.1: Multi-Purpose Trail

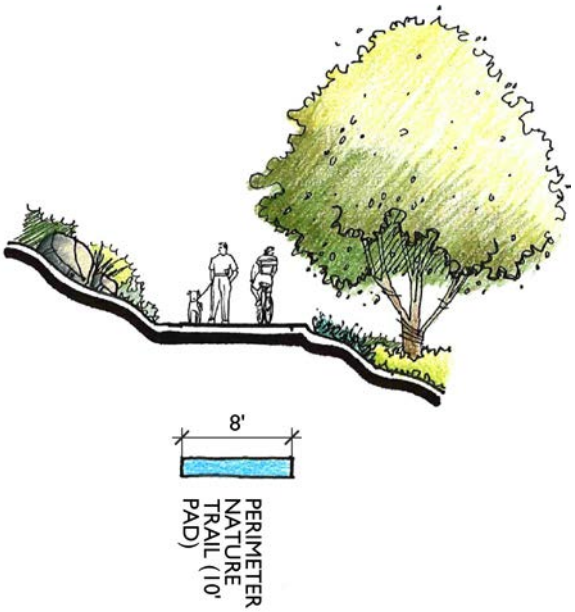


Village Access Trails are broad, all-weather, high user volume, concrete paved paths that connect Village Centers to the community-wide trail system.

Design Standards	
Width	10 feet wide and adjacent to curbs in Village Centers 6 feet elsewhere
Surface	Concrete
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.2: Village Access Trail

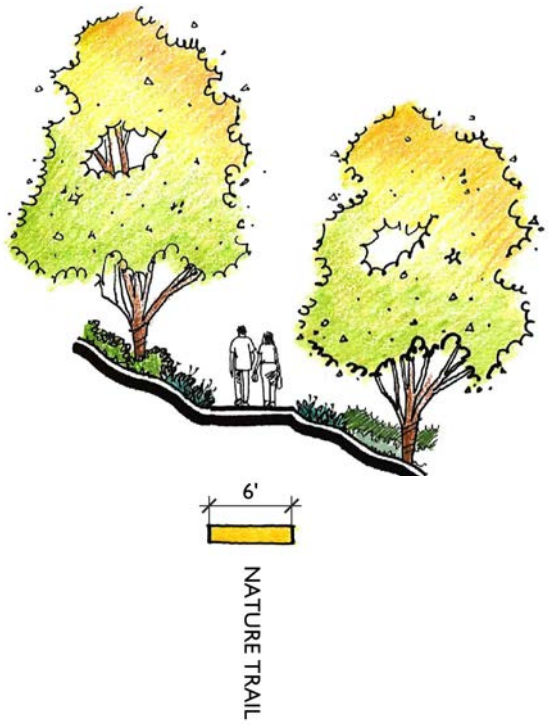


Perimeter Trails are 8-foot wide native earth or DG paths that loop around the Vineyard Village and are intended for recreational use and fire access. These trails also serve as maintenance access to the fuel modification zones. Neighborhood parks and mini-parks provide trail and maintenance access points.

Design Standards	
Width	8 feet (10-foot bench)
Surface	Native Earth or DG
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.3: Perimeter Trail

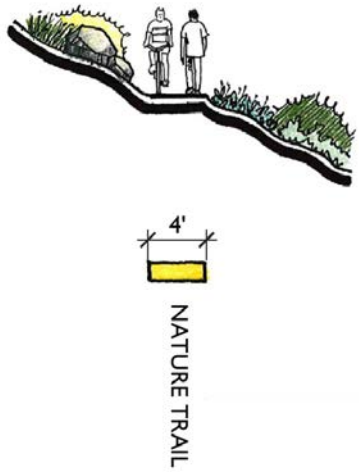


Village Nature Trails are 6-foot wide native earth or DG paths for maintenance vehicles and recreation uses. These trails connect Vineyard Village to Fanita Commons and the Farm through the Habitat Preserve, and provide access to the riparian areas and basins from Fanita Commons and Orchard and Vineyard Villages.

Design Standards	
Width	6 feet
Surface	Native Earth or DG
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.4: Village Nature Trail

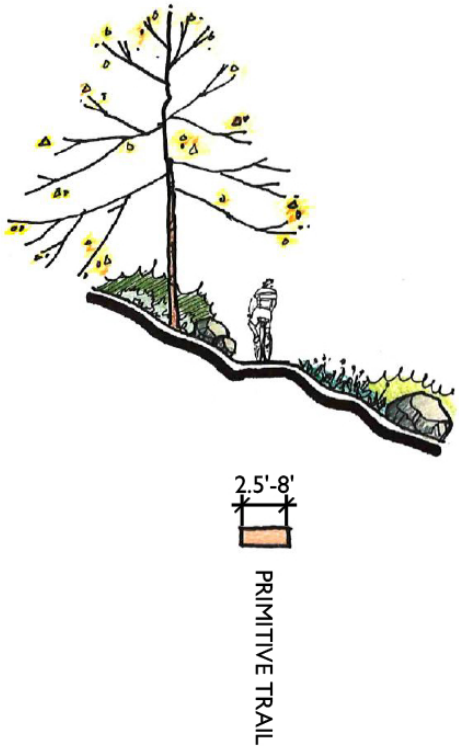


Nature Trails are 4-foot wide native earth or DG recreational trails that provide access from the developed area to the existing Primitive Trails in the Habitat Preserve. The final design of any Nature Trails in the Habitat Preserve shall be in accordance with MSCP Subarea Plan design standards.

Design Standards	
Width	4 feet
Surface	Native Earth or DG
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.5: Nature Trail

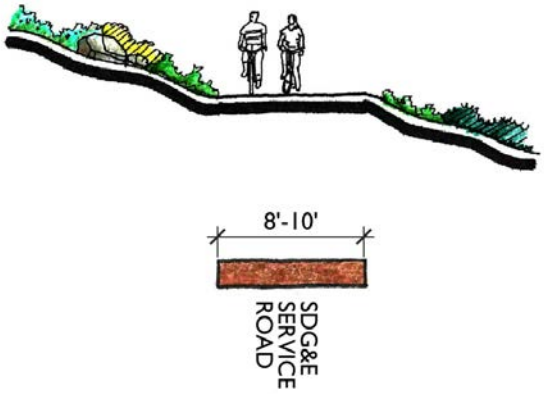


Primitive Trails are existing and new native earth recreational trails of varying widths located in the Habitat Preserve. Where existing trails have been identified as negatively impacting sensitive habitat, the trails will be removed, the impacted habitat restored, and new Primitive Trails constructed around the sensitive habitat in accordance with MSCP Subarea Plan design standards.

Design Standards	
Width	Existing varies, new trails 2.5 feet
Surface	Native Earth
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.6: Primitive Trail



The SDG&E Service Road is an existing native earth road of varying widths crossing through the southern Habitat Preserve utilized by SDG&E to access the existing power lines and towers. The road is also suitable for recreational use by pedestrians and bicyclists.

Design Standards	
Width	Existing
Surface	Native Earth
Modes	• Bicycles • Pedestrians

Refer to *Chapter 5: Landscape Architecture, Community Design & Outdoor Lighting Design Plan* for specific plant palettes by Village.

Exhibit 4.14.7: SDG&E Service Road