LAWRENCE STATION
SENSE OF PLACE PLAN

Sunnyvale

Adopted September 2021, Resolution 1083-21

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Background

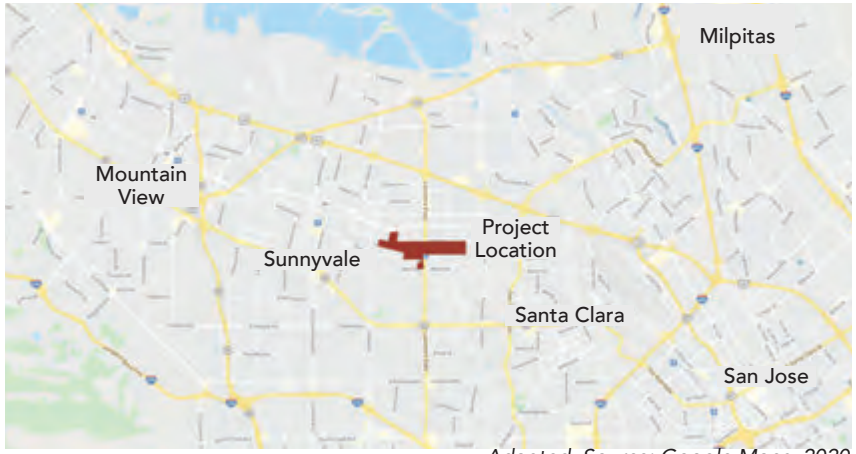
The Lawrence Station Sense of Place Plan ("SOP plan" or "Sense of Place Plan") has been prepared to supplement the Lawrence Station Area Plan ("LSAP"), which the Sunnyvale City Council adopted in 2016 and amended in 2021. The LSAP was developed to promote greater use of existing transit facilities and to guide the development of a diverse neighborhood that provides employment, residential, retail, and other services and recreational spaces. The Sense of Place Plan builds off of the goals, policies, and guidelines outlined in the LSAP and provides recommendations to shape the future character and improve the streetscape experience around Lawrence Station.

Purpose

The purpose of this report is to function as a policy document to ensure improvements to the Lawrence Station Area are implemented in accordance with the Sense of Place Plan.

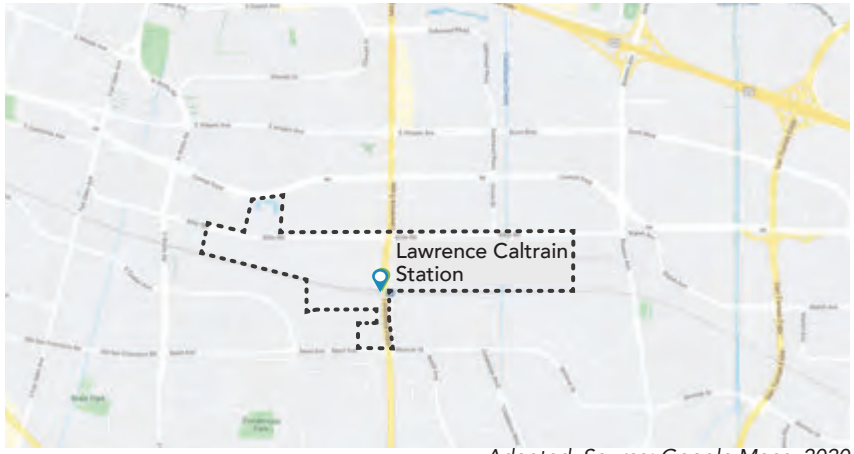
The primary goals of the Sense of Place Plan are to:

- Enhance the quality of life for current and future residents by promoting a vibrant streetlife
- Encourage multimodal transportation, with an emphasis on safer and more inviting streets for pedestrians, bicyclists, and transit users, in order to reduce the impacts of higher intensity development on traffic, greenhouse gas emissions, and noise.
- Enhance neighborhood identity and character through streetscape enhancements



Adapted, Source: Google Maps, 2020

Figure 1-1. Vicinity Map



Adapted, Source: Google Maps, 2020

Figure 1-2. Project Location Map

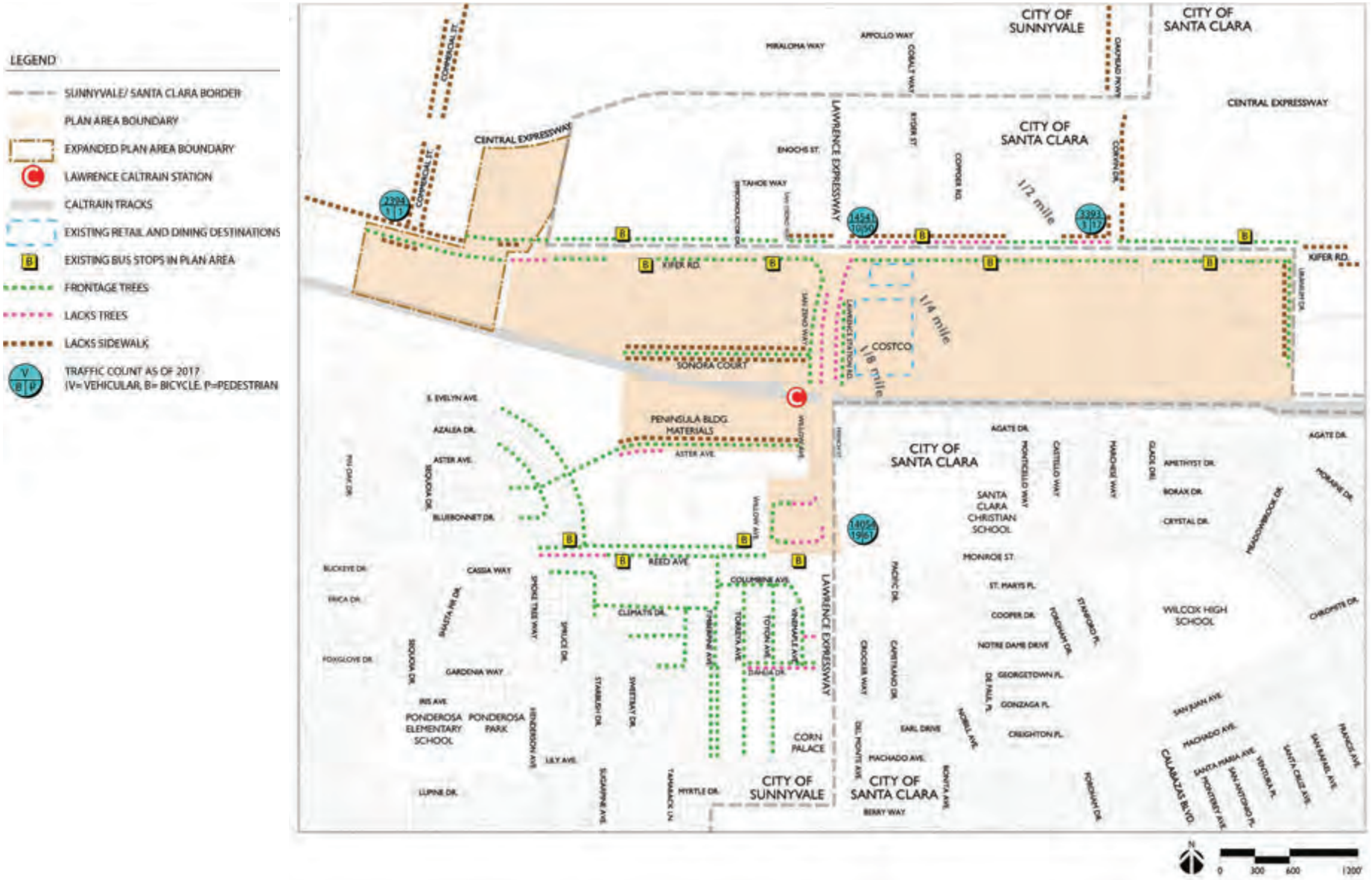


Figure 1-3. Existing Conditions Plan

Base Map Source: LSAP, February 2015

Location

The project is centered around the Lawrence Caltrain Station in Sunnyvale ("City"), California, and the study area is roughly bounded by Kifer Road to the north, Uranium Drive to the east, Reed Avenue, Aster Avenue and the Caltrain tracks to the south, and Commercial Street to the west. The project is also bounded by the Sunnyvale and Santa Clara city limits to the north and east as shown in Figure 1-3. The jurisdiction of the northern boundary of Kifer Road is shared between the City and Santa Clara.

Existing Conditions As of 2021

Two main collector roads, Kifer Road and Reed Avenue, run through the study area and connect to Lawrence Expressway, a major arterial that is under the jurisdiction of the County of Santa Clara. In the City of Santa Clara, offices line Kifer Road, directly north of the plan area. A new mixed-

Existing conditions at Aster Avenue (upper left), Lawrence Expressway (upper right), Kifer Road (lower left), and Uranium Drive (lower right)

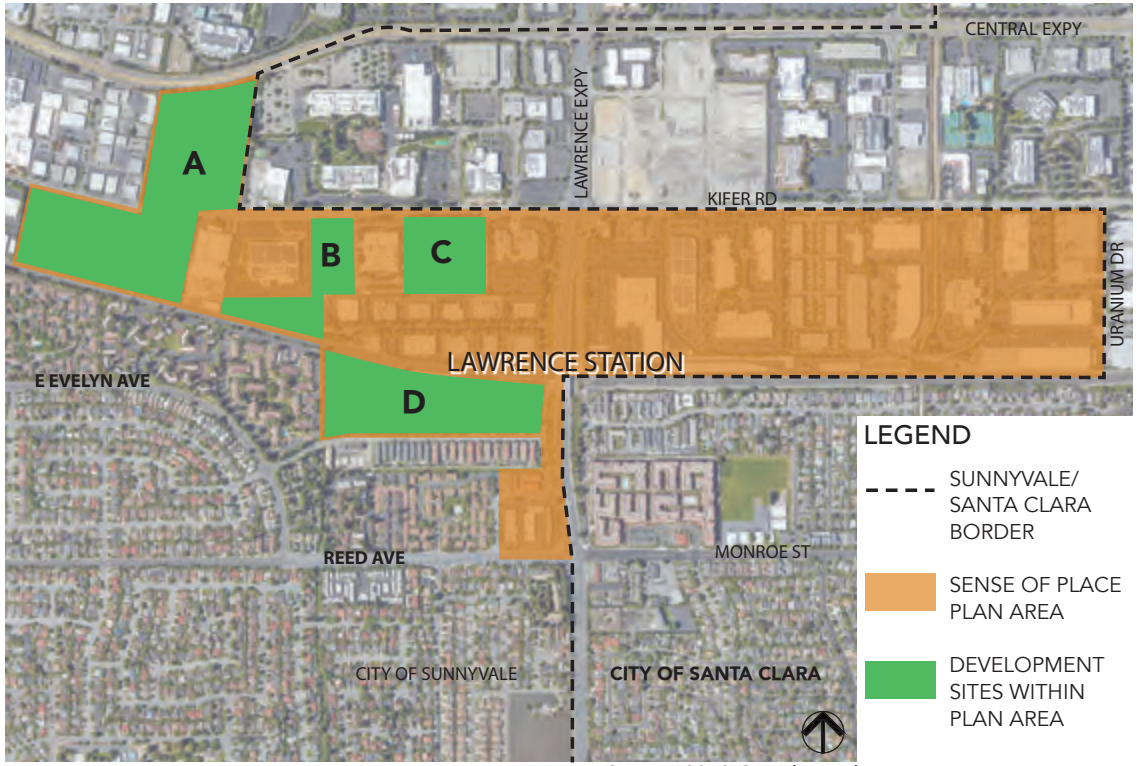
use housing development was recently constructed just outside the plan area, directly northeast of the Lawrence Expressway and Kifer Road intersection in the City of Santa Clara's LSAP. Industrial developments lie to the east of Uranium Drive (City of Santa Clara), and residential developments lie to the south of the plan area both in Sunnyvale and Santa Clara. These include apartment and townhome complexes directly to the south, and mature single-family residential neighborhoods that lie beyond those complexes.

Currently the plan area consists mostly of office uses. Industrial parcels include the eastern area between Calabazas Creek and Uranium Drive. A townhome/ condominium/apartment community has been approved on the former Calstone/Peninsula Building Materials site. Plans for new Intuitive Surgical office and manufacturing facilities are underway for the parcels at the western edge of the study area as shown in Figure 1-4. A mixed-use apartment development was recently completed at 1120 and 1130 Kifer Road and an expansion of the Intuitive Surgical campus was also recently completed at 1050 Kifer Road and 1127 Sonora Court, all located west of Lawrence Expressway.

Caltrain, Santa Clara Valley Transportation Authority (VTA), and the Altamont Corridor Express (ACE) shuttle provide public transit service to the study area.

Street trees are present primarily at office developments that were redeveloped in the recent years, and sidewalks and curb ramps are missing at some locations within the study area as shown in Figure 1-3. Mature street trees line portions of Kifer Road and all along Sonora Court.

Overall, existing conditions do not favor walking and bicycling in the plan area due to gaps in the sidewalk and bicycle lane network, wide, auto-oriented streets, large blocks, and inconsistent frontage amenities, such as street trees. Moreover, VTA buses do not make stops at Lawrence Station because of insufficient roadway access.



Base Map Source: 2019 Google Earth

KEY

A: INTUITIVE SURGICAL (932 & 945-955 KIFER ROAD), APPROVED, NOT BUILT

B: INTUITIVE SURGICAL (1050 & 1127 SONORA COURT), RECENTLY COMPLETED

C: GREYSTAR (1120 & 1130 KIFER ROAD), RECENTLY COMPLETED

D: OLYMPIC RESIDENTIAL GROUP (1155 & 1175 ASTER AVENUE), APPROVED, NOT BUILT

Figure 1-4. Developments Planned or Under Construction as of 2021

Other Studies

This report supplements the Lawrence Station Area Plan, as previously noted.

An amendment to the LSAP housing component was undertaken to study an increase in housing opportunities in the plan area. In June 2018, City Council selected an alternative that would increase the density allowance for areas zoned as mixed-use north of the railroad tracks and expand areas where housing may be considered to the area east of Calabazas Creek and the commercial center at Willow Avenue and Reed Avenue. This results in an increase of 3,612 units beyond the 2,323 units originally adopted. Rezonings of certain portions of the LSAP occurred in 2021 as part of the density increase as shown in Figure 1-5.

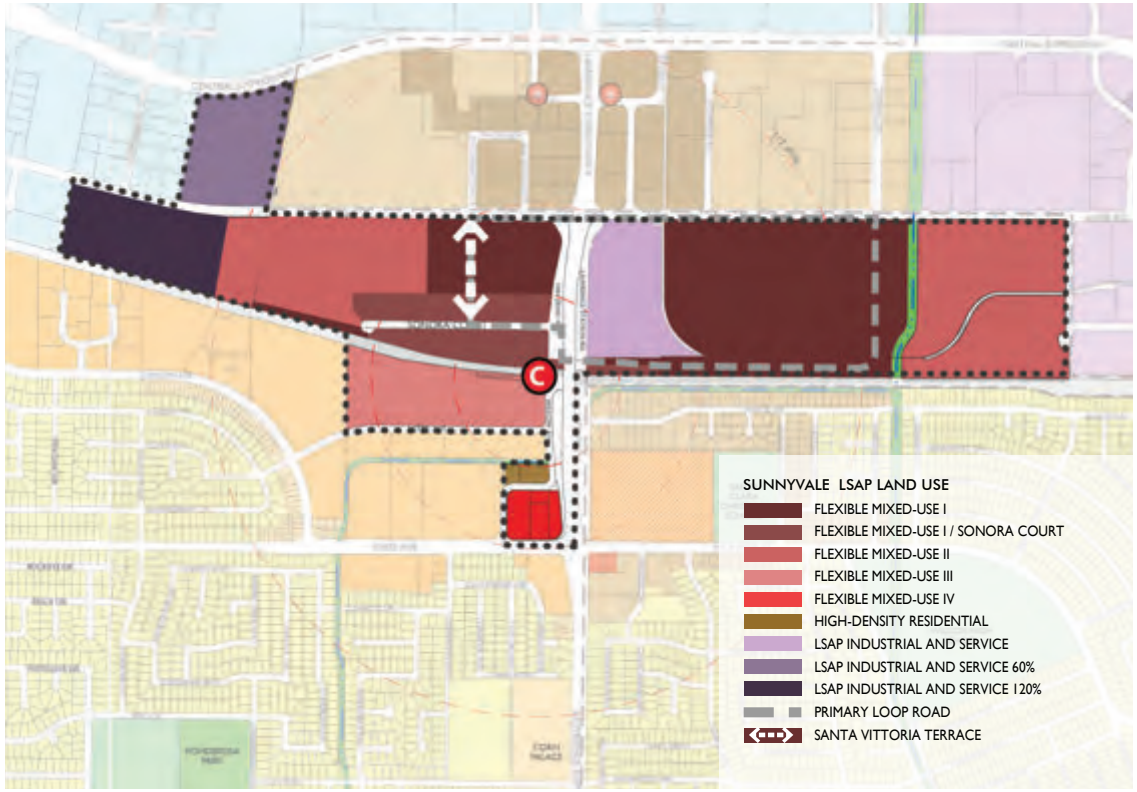
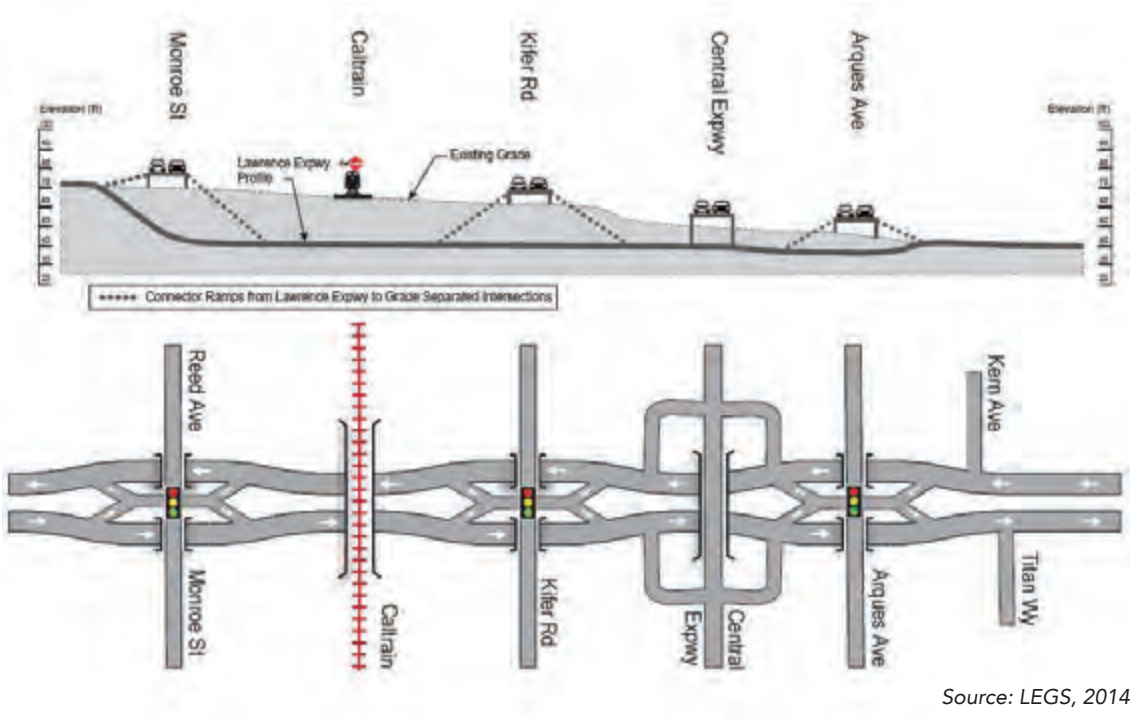


Figure 1-5. Zoning Map

The Lawrence Expressway Grade Separation ("LEGS") Concept Study was a report completed in 2014 by the County of Santa Clara that evaluated the potential for grade separations at the intersections of Lawrence Expressway with Arques Avenue, Kifer Road, and Reed Avenue/Monroe Street as shown in Figure 1-6. These were reportedly the most congested intersections along the expressway according to the 2003 Comprehensive County Expressway Planning Study, and congestion has continued to increase since then. The LEGS report presented a high-level concept that included improvements to pedestrian and bicycle circulation along the expressway. The Lawrence Expressway Grade Separation project from Reed/Monroe to Arques is included in the VTA's Santa Clara County Expressway Tier 1 Improvements list using 2016 Measure B funds. While the concept will require further study and development, including configuration of connections



Source: LEGS, 2014

Figure 1-6. Proposed Lawrence Expressway Grade-Separated Conceptual Design

between the expressway and local collector roads, select elements of the proposed concept are reflected in the Sense of Place Plan.

The Sense of Place Plan takes into consideration the City of Santa Clara Bicycle Plan Update 2018 and input from traffic engineering staff at the City of Santa Clara regarding proposed improvements along the city boundaries at Kifer Road and Uranium Drive.

Overview

The report organizes neighborhood sense of place enhancements into circulation improvements and streetlife improvements. These improvements pertain primarily to the public-right-of-way, although some recommendations affect site design. Recommendations are followed by a discussion of existing City policies, potential funding sources, likely cost, and methods and timing of implementation.

2 GOALS AND OBJECTIVES

The goal of the Lawrence Station Sense of Place Plan is to guide the future character of the neighborhood by defining key physical elements and improving the streetscape experience around Lawrence Station through circulation and streetlife improvements. It is also intended that the improvements in this plan will reduce the impact of higher intensity development on automobile traffic generation and noise, and greenhouse gas emissions. The term 'streetlife' in this document refers to the activation of the public street right-of-way and the public-private interface through the development and provision of amenities in public and publicly-accessible private spaces.

Objectives to improve circulation include:

- Creating new pedestrian pathways that reduce block sizes to increase walkability
- Creating a new shared-use path and buffered bike lane network to increase safety and circulation for pedestrians and bicyclists
- Enhancing safety through the addition of signalized intersections and landscaped medians at key locations along Kifer Road, which improve roadway crossings and aid traffic calming
- Addressing existing, minor pedestrian barriers such as eliminating gaps in sidewalks and missing curb ramps
- Achieving funding to provide grade-separated structures such as a tunnel or overcrossing to bridge major pedestrian and bicycle barriers such as the Caltrain tracks and Lawrence Expressway
- Providing new vehicular routes that provide alternatives for motorists accessing Lawrence Station and other destinations in the plan area

Objectives to improve streetlife include:

- Encouraging transit use by providing vehicular- and pedestrian-scale signage to increase visibility of and wayfinding access to the Lawrence Caltrain station
- Making public access corridors through private developments highly visible and intuitive
- Encouraging an exterior, public-street focus at private developments in lieu of developments that face the interior and are closed off to the surrounding neighborhood
- Introducing thematic elements such as site furnishings, lighting, and signage that strengthen the identity of the neighborhood
- Promoting community connections and social interactions through the provision of publicly accessible parks, plazas and seating
- Planting street trees, and creating landscaped parkway strips and landscaped medians that provide increased shade for pedestrians, bring a human scale to wide roads, and beautify the neighborhood
- Providing monumental signage to announce entries to the Lawrence Station Area neighborhood
- Providing pedestrian-scale and roadway lighting to improve

safety, encourage walkability, and to enhance community connectedness

Process

The goals and objectives were developed through a process that began in August 2018 and included the review of multiple City documents and a site visit to understand existing conditions.

Documents that were reviewed included:

- City GIS information (aerial, street trees, street lights, parcel boundaries)
- Collision data
- Traffic counts for key intersections
- Land use and zoning maps
- Lawrence Station Area Plan
- Lawrence Expressway Grade Separation Concept Study
- 1120 to 1130 Kifer Road development plans

Community workshop in March 2019

- 1050 Kifer Road development plans
- 1155 to 1175 Aster Avenue development plans
- City of Santa Clara Bicycle Plan Update 2018
- Sunnyvale Urban Forest Management Plan 2014
- City design guidelines and zoning standards

Site opportunities and constraints were evaluated and documented in Figure 1-3, and several meetings were held with City staff to review

draft planning documents. A meeting with the Intuitive Surgical team (owner, developer, and design consultants) for the 945, 955, 932, and 950 Kifer Road parcels was held to understand their design objectives. Coordination with the City of Santa Clara Department of Public Works was conducted to review proposed improvements to Kifer Road, French Street, and Uranium Drive.

In March 2019 a community workshop was held to solicit public input on the changes area residents wanted to see incorporated into the plan. After a short overview of the project goals and objectives, attendees were encouraged to visit four different discussion stations. The purpose of the stations was to share the project background, to understand the types of streetscape improvements residents wanted to see, to understand how residents currently circulate through the site compared to how they would like to circulate through the site, and to learn which motif residents identified with.

Community members sharing their thoughts at the workshop stations

Fifty people signed in at the meeting, and 28 completed questionnaires were returned at the end of the workshop. After the meeting, an online survey was made available and there were 37 respondents. Comments from the Caltrain Bicycle Advisory Committee and an employee who works in the plan area were emailed to the City as well. A more detailed summary of the public input is included in the Appendix.

In general, respondents had the following input:

1. **Which motif and architectural style do you feel should be used to enhance the character and identity of the Sense of Place plan area as a unique neighborhood?** Residents preferred trees as the motif for the neighborhood and Spanish Eclectic as the architectural style for future development.

2. **Where do you go and which route do you take to get there? Are there places you would consider problem areas?** The main destination for attendees was Costco and the main location identified as in need of improvement is the area immediately around Lawrence Caltrain Station. The intersections of Lawrence Expressway and Reed Avenue, Timberpine Avenue and Reed Avenue, and Kifer Road and Lawrence Expressway were also considered problem areas. When residents walk, bike, or take transit, they tend to take Timberpine Avenue, Willow Avenue, and Sonora Court. When driving, residents primarily take Lawrence Expressway, Timberpine Avenue, Kifer Road, Reed Avenue, Monroe Street, Central Expressway, and Wolfe Road.

3. **How can your experience on Kifer Road, Reed Avenue, Willow Avenue, and Uranium Drive be improved?** Residents primarily preferred for all these streets to be more walkable. They also wanted these streets to be more bikeable and have better wayfinding.

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3 NEIGHBORHOOD IMPROVEMENTS

Circulation Improvements

Circulation improvements provide safer routes for pedestrians and bicyclists through traffic calming measures, intersection improvements, and shared-use path networks. New vehicular routes and smaller block sizes provide more alternatives for both motorists and pedestrians and make the neighborhood more walkable. Circulation improvements are shown in Figure 3-1 and are described in more detail in this section.

Signal-Controlled Intersections

The existing traffic signals on Kifer Road are generally spaced at no more than 0.3-mile intervals. At Texas Instruments (3833 Kifer Road), the existing signal will be removed once the new traffic signal is installed at the 1020 Kifer Road driveway. A new traffic signal is also planned at the intersection of Kifer Road and Commercial Street, in conjunction with recent office project approvals nearby. The addition of other stop-controlled intersections will be determined based on location and necessity on a project-by-project basis.

A signal-controlled intersection at Kifer Road and Uranium Drive will replace the existing stop-controlled intersection to improve pedestrian and bicycle access to Uranium Drive, which will serve as the eastern connection to a Class I shared-use path. The current block length along Kifer Road from Corvin Drive to Bowers Avenue is approximately 0.5-miles, which is far longer than the typical recommended block length and a significant distance for pedestrians wishing to cross Kifer Road to detour. Providing the signal at Uranium Drive will reduce the interval to 0.3-miles, which is consistent with the maximum interval between signal-controlled intersections elsewhere in the plan area.

Santa Clara Valley Transportation Authority (VTA) Bus Stops

VTA has identified the following bus stops as in need of upgrades in order to meet current ADA and VTA standards:

- Eastbound Kifer Road opposite of Commercial Street
- Eastbound Kifer Road opposite of San Ysidro Way
- Eastbound Kifer Road opposite of Copper Road

Recommended improvements at each of these stops are:

- An 8’ x 40’ passenger pad per VTA standards to provide sufficient circulation and ADA access
- A 10’ x 55’ minimum bus pad per VTA standards to maximize pavement longevity

Additional bus stop standards and policies can be found in the following documents:

- VTA Bus Stop and Passenger Facilities Standards
- VTA Transit Passenger Environmental Plan
- VTA Bus Stop Placement, Closures, and Relocations Policy

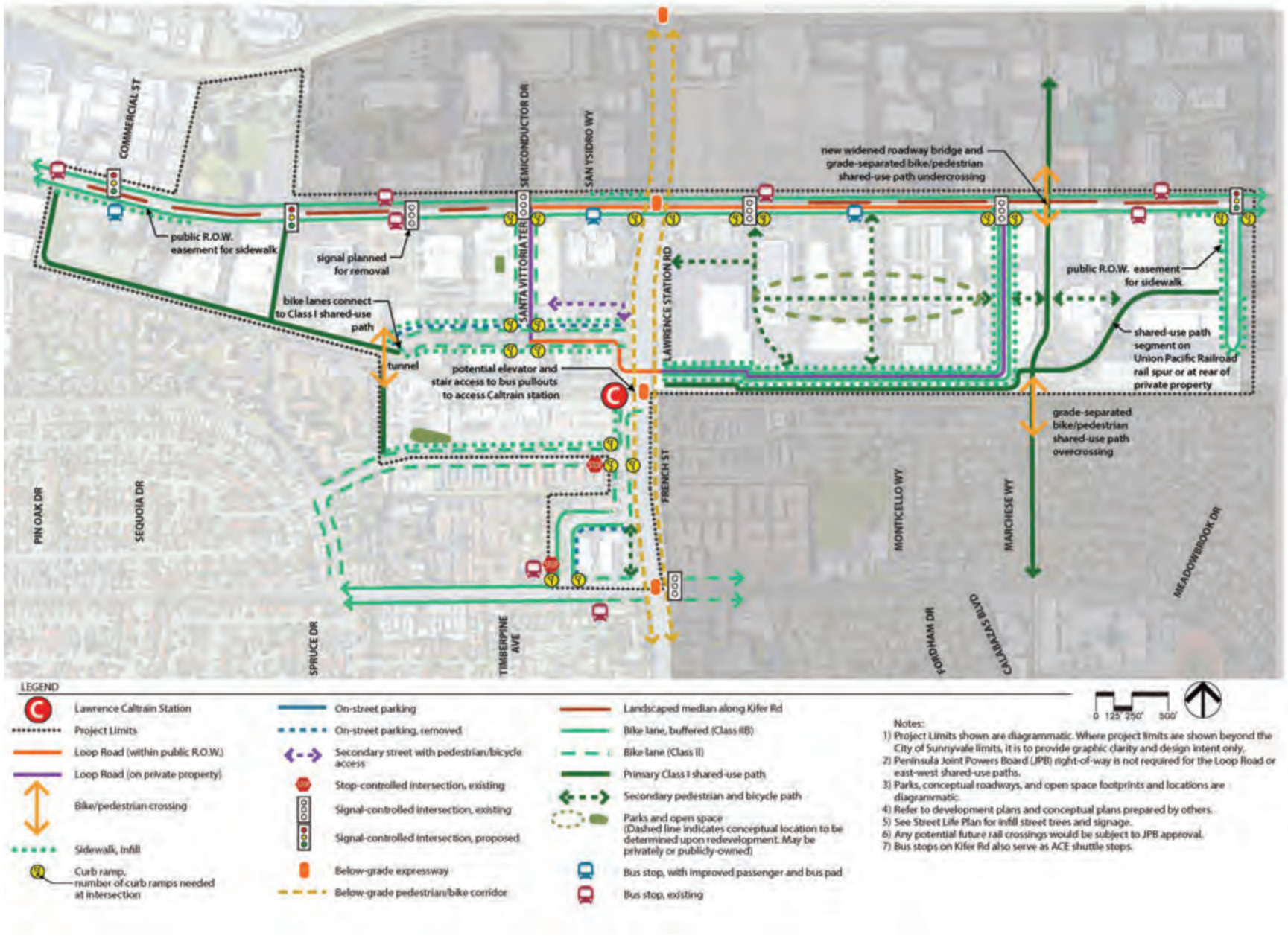


Figure 3-1. Sense of Place Plan
All improvements shown are conceptual and subject to further analysis and refinement.

Primary Shared-Use Paths

A network of publicly-accessible primary Class I shared-use paths will provide pedestrians and bicyclists routes that are physically separated from vehicles and an alternative to the use of on-street bike lanes. The path network west of Lawrence Expressway runs adjacent to the Caltrain tracks along the back end of parcels owned by Intuitive Surgicial. A section of the path that connects to Sonora Court was recently completed on the 1020 Kifer Road site. The path segment running east-west to the east of Lawrence Expressway is envisioned to be located within the dedicated 12'-0" path easement on the Extra Space Storage parcel at 106 Lawrence Station Road. From Calabazas Creek, it is envisioned to continue eastward on the rail spur property. If locating the path within the rail property is determined to be infeasible, the path shall be located at the rear of the parcels fronting Kifer Road. The path will also run north-south along Calabazas Creek, and an undercrossing should be provided at Kifer Road. This crossing would be a joint venture between the City, City of Santa Clara, and Valley Water.

A typical section of the shared-use path consisting of a 14'-0" wide paved path within a 22'-0" minimum shared-use path easement is shown in Figure 3-2. Lighting shown in Figure 3-3 should be provided along the path corridor to support commuter uses. Landscaping, including shade trees, and amenities like seating should be provided to provide a comfortable and inviting environment for path users. The maintenance of all landscaping,

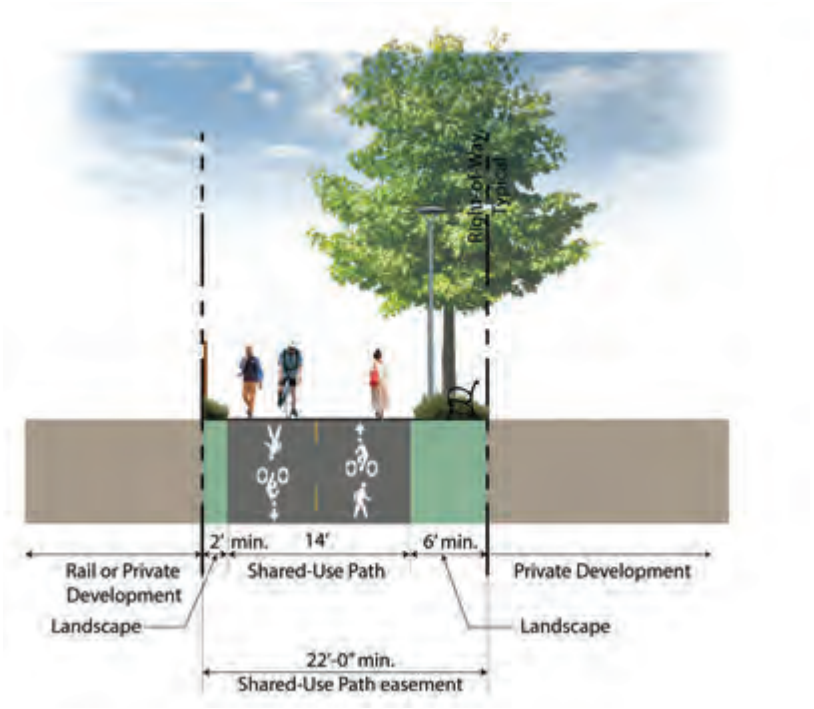


Figure 3-2. Typical Shared-Use Path Cross Section
All improvements shown are conceptual and subject to further analysis and refinement.

Source: Visionaire Lighting

Shared-use path lighting shall be Visionaire Lighting Premier II PRE-2-L-T2-32LC-3-3K-UNV-PT-SL-DIM-MS, POLE RNTA4RS-188-15'-AKB-343-T4R-SL, 15'-0" mounting height, single-mount pole, type II, cast aluminum housing, with silver metallic finish

Figure 3-3. Shared-Use Path Lighting

lighting, and amenities are the responsibility of individual property owners along the path.

Secondary Pedestrian and Bicycle Pathways

The secondary pedestrian and bicycle pathways break up large blocks on Kifer Road and provide shortcuts for pedestrians and bicyclists within the area east of Lawrence Expressway by reducing the block size from upwards of 1500' to 500' to 800'. The smaller block size is more walkable and convenient for pedestrians.

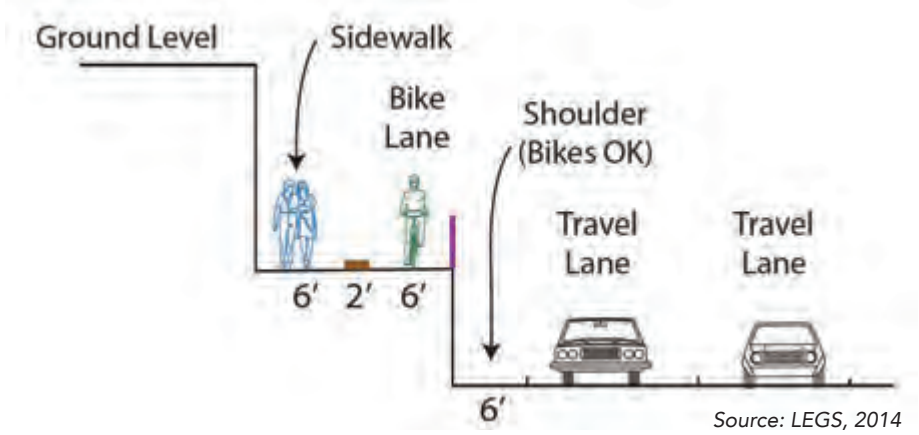
The pathways would connect the southernmost portion of the Loop Road with Kifer Road and would be similar to the shared-use path section shown in Figure 3-2. Curb ramps should be provided where these conceptual pathways intersect with sidewalks.

Lawrence Expressway Grade Separation

A below-grade expressway and below-grade pedestrian and bicycle corridor is envisioned in the County of Santa Clara's Lawrence Expressway Grade Separation Concept Study ("LEGS") from 2014.

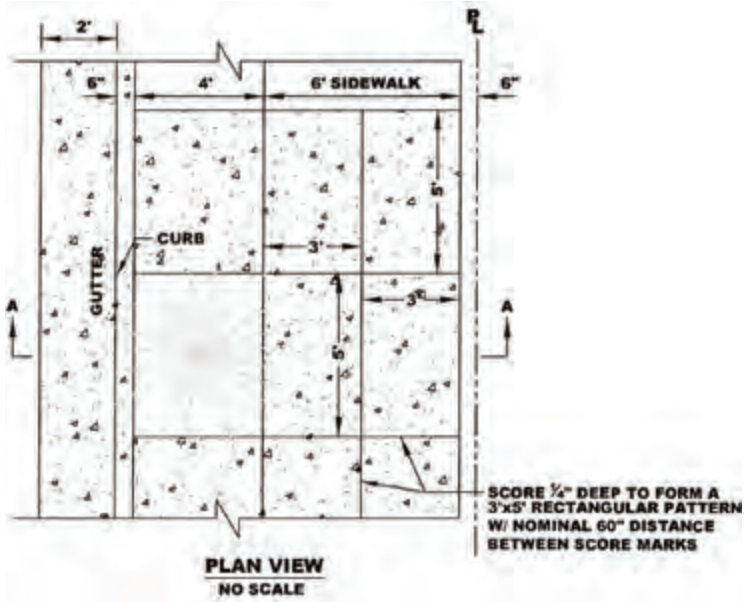
The below-grade expressway can improve east-west circulation on Kifer Road and Reed Avenue by prioritizing local traffic. Motorists traveling at higher-speeds would be kept separate from those roadways. The existing free right-turn lanes and "pork chop" or triangular raised islands between the free right-turn lane and the through lane, cater towards turning vehicles and tend to impede pedestrians and bicyclists. They currently provide motorists direct access to Lawrence Expressway at-grade and if they are removed, Kifer Road and Reed Avenue could be safer for pedestrians and bicyclists to cross.

The pedestrian and bicycle corridor shown in Figure 3-4 runs parallel to the below-grade expressway, and it is elevated five or six feet above the vehicular roadway to provide a safer pedestrian and bicyclist experience. This grade difference also results in less elevation change between the sidewalk and bike lanes on the collector roads and the below-grade corridor. The concept may also incorporate an elevator to bring people up to street-level and up to transit level. All information on the grade separation is conceptual and subject to change by the County pending further refinement. However, the County's plan indicates that land dedications may be required along the expressway to implement the project.



Source: LEGS, 2014

Figure 3-4. Lawrence Expressway Bicycle and Pedestrian Corridor



Source: City of Sunnyvale Standard Details for Public Works Construction, Revised 2019

Figure 3-5. Standard City Tree Well Sidewalk Detail

Street-Specific Improvements

The current City standards for streetscapes is a 11′-0″ minimum overall width measured from face of curb which consists of a 6′-0″ minimum paved width, a 4′-0″ by 5′-0″ tree well, six-inch curb, and six-inch back of sidewalk as shown in Figure 3-5. This provides a cohesive aesthetic throughout the City and offers a comfortable walkway width, shade, and a visual and physical buffer from the roadway.

Street-specific treatments are discussed below and may vary from these standards. Proposed road sections are conceptual-level diagrams and further refinement is required prior to construction. Some of the improvements shown will be implemented as part of capital improvement projects while others will likely occur when adjacent parcels redevelop.

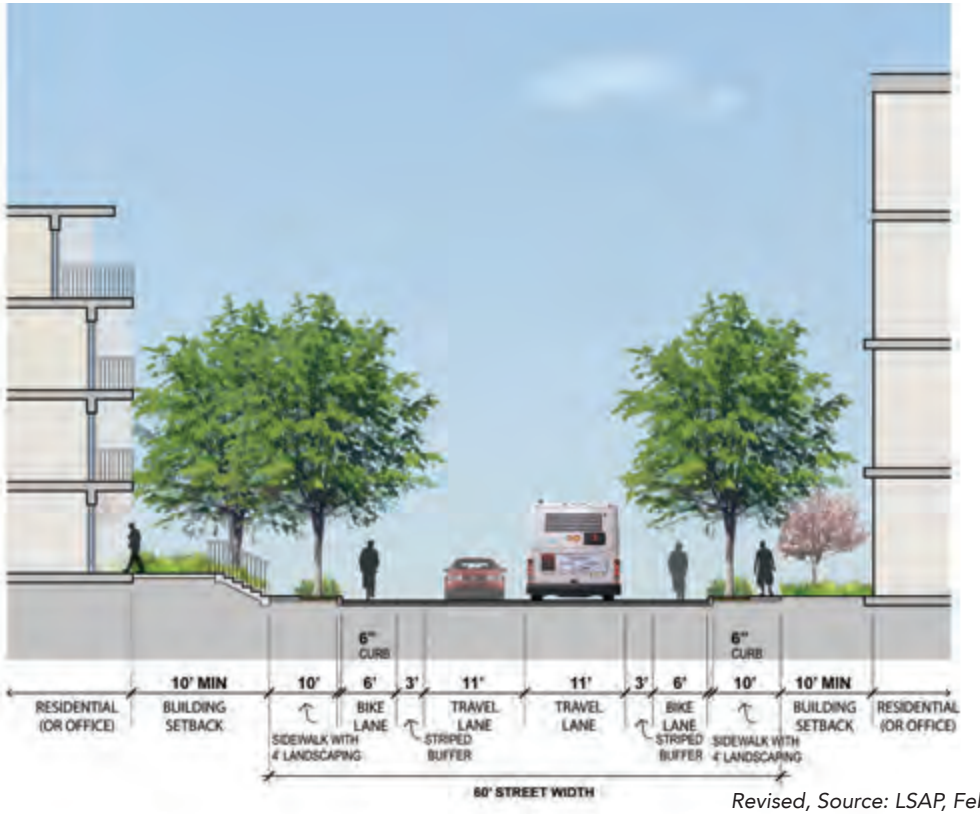
San Zeno Way & Lawrence Station Road

Given the uncertain extent of the Lawrence Expressway Grade Separation improvements, the street sections for San Zeno Way and Lawrence Station Road will remain largely the same with new sidewalk and street tree improvements in accordance with the standard noted in this plan. New street lights should be provided along both streets.

Loop Road

The Loop Road is primarily a privately-owned and maintained collector road that provides north-south access between Kifer Road and the station. It enables motorists traveling east-west along Central Expressway to readily access the station via its eastern arm, East Loop Road, which aligns with Corvin Drive. The typical section is shown in Figure 3-6. It also provides important transit connections to the station for bus riders and bicyclists.

The western arm of the Loop Road is Santa Vittoria Terrace, a pedestrian-friendly retail street which will connect to Sonora Court, which continues with direct access to the station via San Zeno Way. Parallel parking should be provided along Santa Vittoria Terrace to encourage mixed use/ retail development. Santa Vittoria Terrace would have a 15-foot wide pedestrian zone due to higher anticipated pedestrian volumes. The 15 feet is inclusive of a five-foot building zone, minimum paved pedestrian zone of six feet, and four-foot wide street buffer zone. See Figure 3-7



Revised, Source: LSAP, February 2015

Figure 3-6. East Loop Road, Typical Cross Section
All improvements shown are conceptual and subject to further analysis and refinement.

for a typical cross section of the street. The proposed location for the eastern arm of the Loop Road is the self-storage property located at 106 Lawrence Station Road. The development rights on this parcel could be transferred to the developer that is building the improvements on an adjacent parcel. If that is not feasible, the road would be located at the rear of the parcels fronting Kifer Road. The Loop Road would then utilize the existing Lawrence Station Road right-of-way to connect to the station and then utilize the San Zeno right-of-way to connect westward to Sonora Court.

It is important to note that the location of the Loop Road through private property on Figure 3-1 is conceptual, and the final location, width, and alignment will be determined upon review of development projects on sites in and near the path of the road.

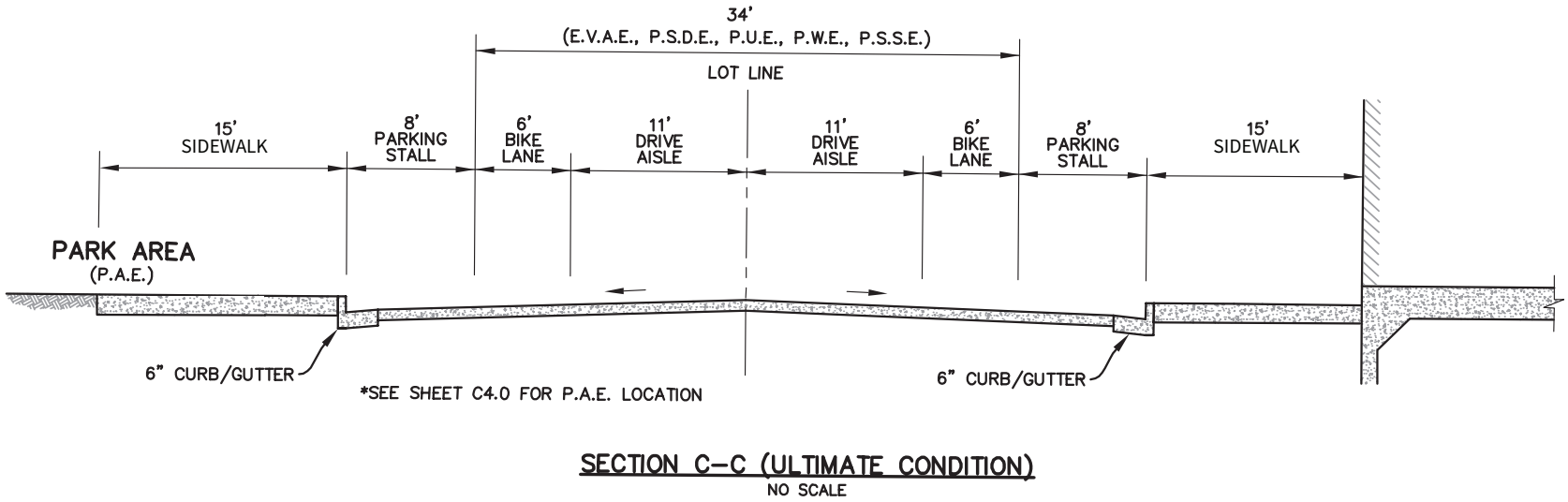


Figure 3-7. Santa Vittoria Terrace, Typical Cross Section
All improvements shown are conceptual and subject to further analysis and refinement.

Kifer Road

Previously, the LSAP had proposed a road diet on Kifer Road that would remove one travel lane from each side of the road. Due to the increase in housing density and higher traffic volumes projected, a road diet on Kifer Road is no longer appropriate.

The proposed road section in Figure 3-8 retains two travel lanes in each direction. Kifer Road runs along the city boundary and is disproportionately shared between City of Sunnyvale and City of Santa Clara, so proposed improvements shown beyond the City of Sunnyvale limits are for graphic clarity and to show design intent only. Actual improvements would be subject to City of Santa Clara approval. Kifer Road widths vary both east and west of Lawrence Expressway. Depending on existing widths, the City will require right of way dedications

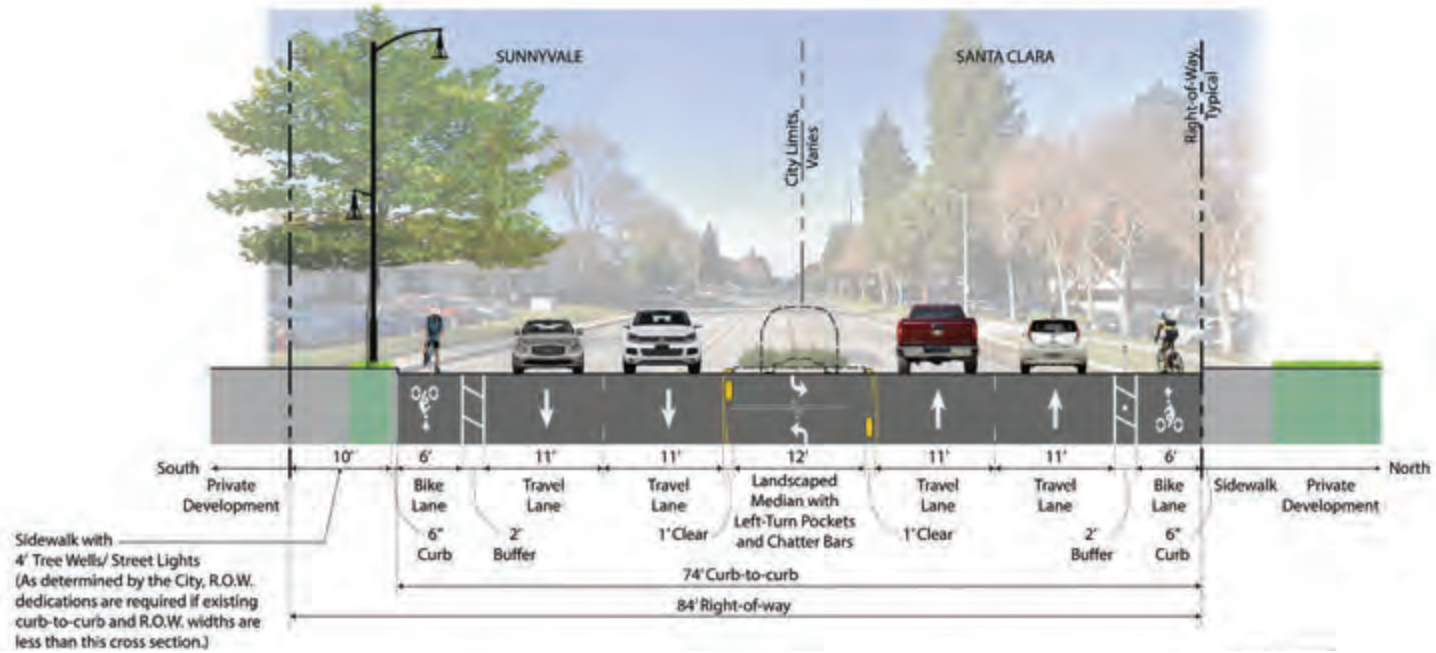


Figure 3-8. Kifer Road, Typical Cross Section
All improvements shown are conceptual and subject to further analysis and refinement. The right-of-way width varies along Kifer Road. This section shows roadway widths east of Lawrence Expressway. Widths west of Lawrence Expressway will be reduced as determined by the City.

east of Lawrence Expressway upon redevelopment for improvements shown in Figure 3.8.

Specific recommendations for Kifer Road include the following:

- Sidewalks: Sidewalks shall be a 10'-0" minimum overall width (measured from back of curb) and a 6'-0" minimum paved width. Street lights and 4'-0" tree wells shall also be provided. Sidewalk easements may be required to accommodate proposed improvements as shown.
- Bike lanes: Bike lanes shall be 6' wide with 2' wide buffers.
- Landscaped median and left-turn pockets: A 12' wide landscaped median will calm traffic by visually reducing the width of the road, beautifying and greening the road through landscaping, and providing left-turn pockets. In order to balance improved traffic calming and access to driveways, left turn pockets would be provided as determined by the City. No trees shall be planted in the landscaped medians east of Lawrence Expressway due to the presence of underground utilities along the center of Kifer Road.
- Travel Lanes: The 12'-0" wide center double left turn lane is removed and replaced with a 12' wide landscaped median with 11' wide travel lanes on either side of the median, and 11' wide travel lanes alongside bike buffers as shown in Figures 3-8, 3-9, and 3-10.

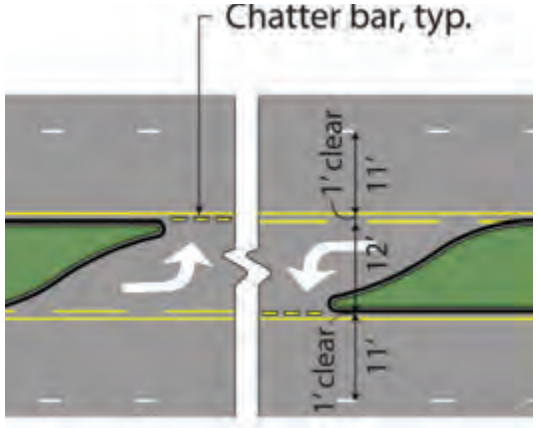


Figure 3-9. Kifer Road, Typical Left Turn Pocket
All improvements shown are conceptual and subject to further analysis and refinement.

Uranium Drive

Uranium Drive runs along the city boundary between the City of Sunnyvale and the City of Santa Clara. Proposed improvements shown beyond the City of Sunnyvale limits are for graphic clarity and to show design intent only. Actual improvements would be subject to City of Santa Clara approval.

Specific recommendations for Uranium Drive include the following:

- Sidewalks: Existing mature redwood trees on the west side shall remain. In order to accommodate a sidewalk behind the trees, a 6'-0" sidewalk easement will be required as shown in Figure 3-11. Should the redwood trees be in decline, the City may re-evaluate and implement 4'-0" tree wells instead as shown in Figure 3-10, which would allow the 2'-0" bike lane buffer to be increased to 3'-0", if a 2'-0" sidewalk easement is provided. The east side is in the City of Santa Clara, and sidewalks were recently

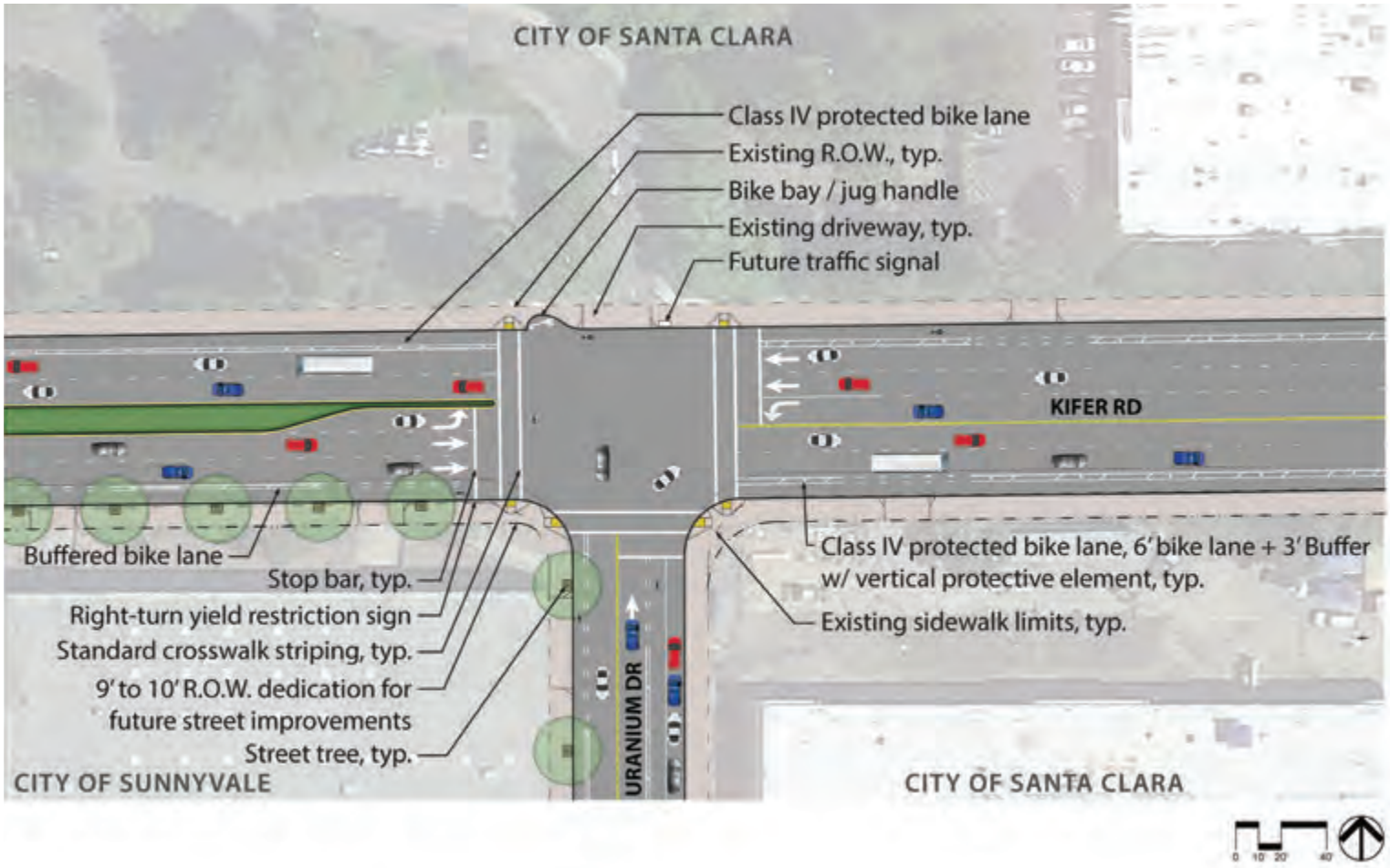


Figure 3-10. Kifer Road and Uranium Drive Plan
All improvements shown are conceptual and subject to further analysis and refinement. Improvements shown beyond project limits are for graphic purposes only.

installed along the eastern segment of Uranium Drive.

- Bike Lanes: A buffered bike lane shall be provided on the west side of Uranium Drive, composed of a 6'-0" bike lane and a 3'-0" striped buffer. A buffered bike lane is also shown on the east side within the City of Santa Clara.
- Parking: On-street parking is shown on the City of Santa Clara side for the use of the existing industrial developments. Sunnyvale parcels on the west side are required to provide onsite parking, so on-street parking on the west side of Uranium Drive is not needed.
- Travel Lanes: Shall be 12'-0" minimum in width to accommodate large trailers and trucks that currently use Uranium Drive.

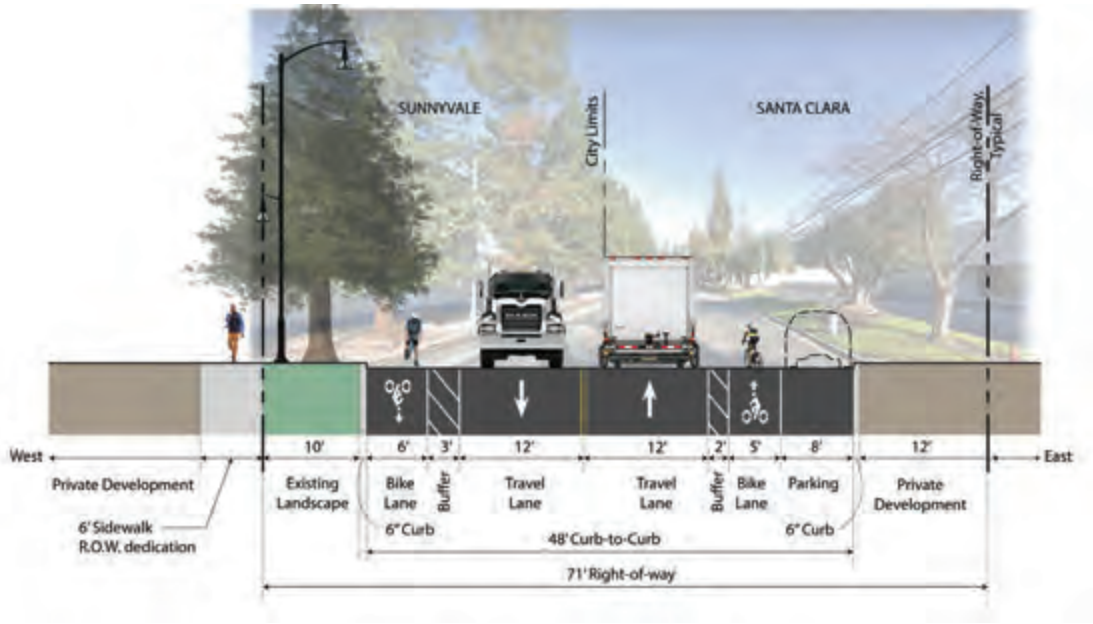


Figure 3-11. Uranium Drive, Typical Cross Section
All improvements shown are conceptual and subject to further analysis and refinement. Improvements shown beyond project limits are for graphic purposes only.

Reed Avenue

Specific recommendations for Reed Avenue include the following:

- Sidewalks: Shall be 10′-0″ minimum overall width (measured from back of curb), composed of 6′-0″ minimum paved width and 4′-0″ tree wells as shown in Figure 3-12. Existing parkway strips and paved sidewalk width along single family residences and existing magnolia trees along apartment complex frontages will likely remain.
- Bike Lanes: Bike lanes shall be City standard 6′-0″ minimum width with a 3′-0″ striped buffer on both sides of the road. Class IV protected bike lanes were evaluated but are not recommended due to the large number of existing driveways on Reed Avenue, where left turns from the existing residences would be restricted.
- Parking: On-street parking shall be retained on both sides of the road to serve the residents as shown in Figures 3-12 and 3-13.
- Travel Lanes: Reduce existing 18′-0″ wide lanes to 11′-0″ to accommodate buffered bike lanes.

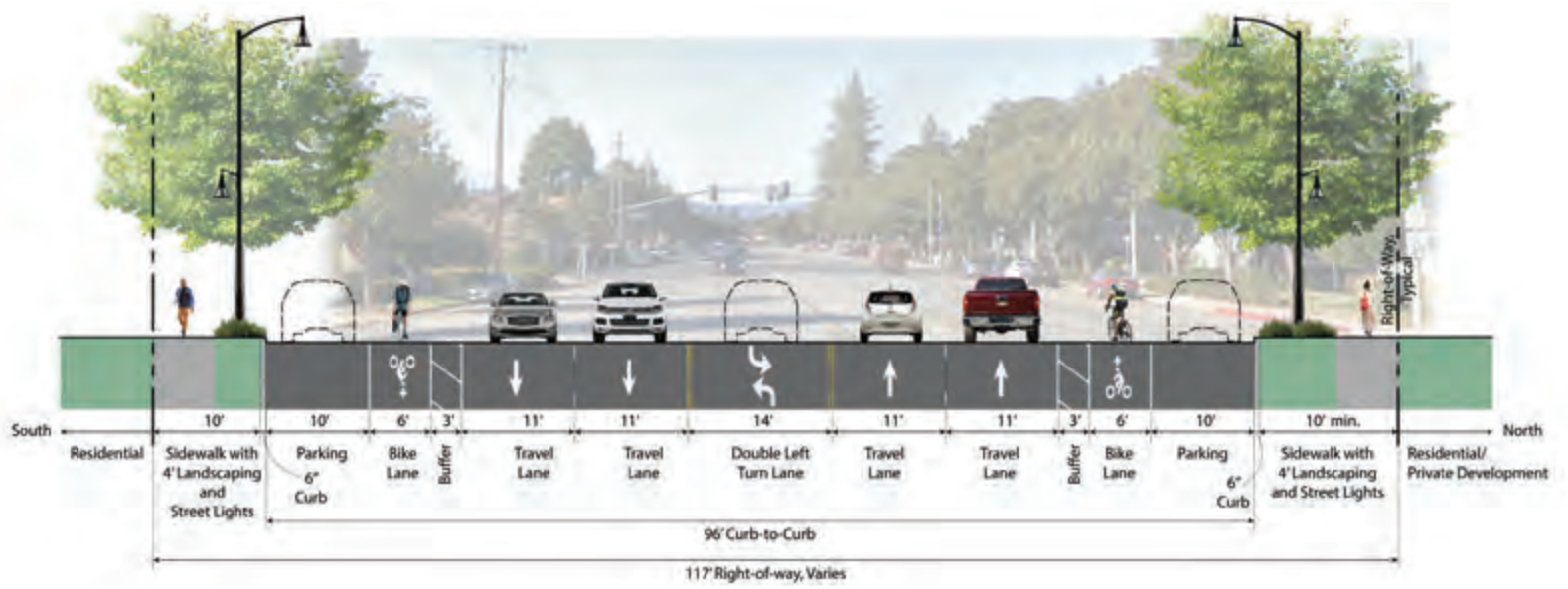


Figure 3-12. Reed Avenue, Typical Cross Section
All improvements shown are conceptual and subject to further analysis and refinement.

Willow Avenue

The condition shown in Figures 3-13 and 3-14 represents Willow Avenue at Reed Avenue when the parcels northeast of the intersection are redeveloped and a sidewalk easement can be obtained from the developer. Before those parcels are redeveloped, the City will install bike lanes along Willow Avenue. This will be an intermediate condition as it is not contingent upon changes to the existing sidewalk alignment. The portion of Willow Ave adjacent to Lawrence Expressway has a narrower curb-to-curb width, so it requires a different treatment as shown in Figure 3-15.

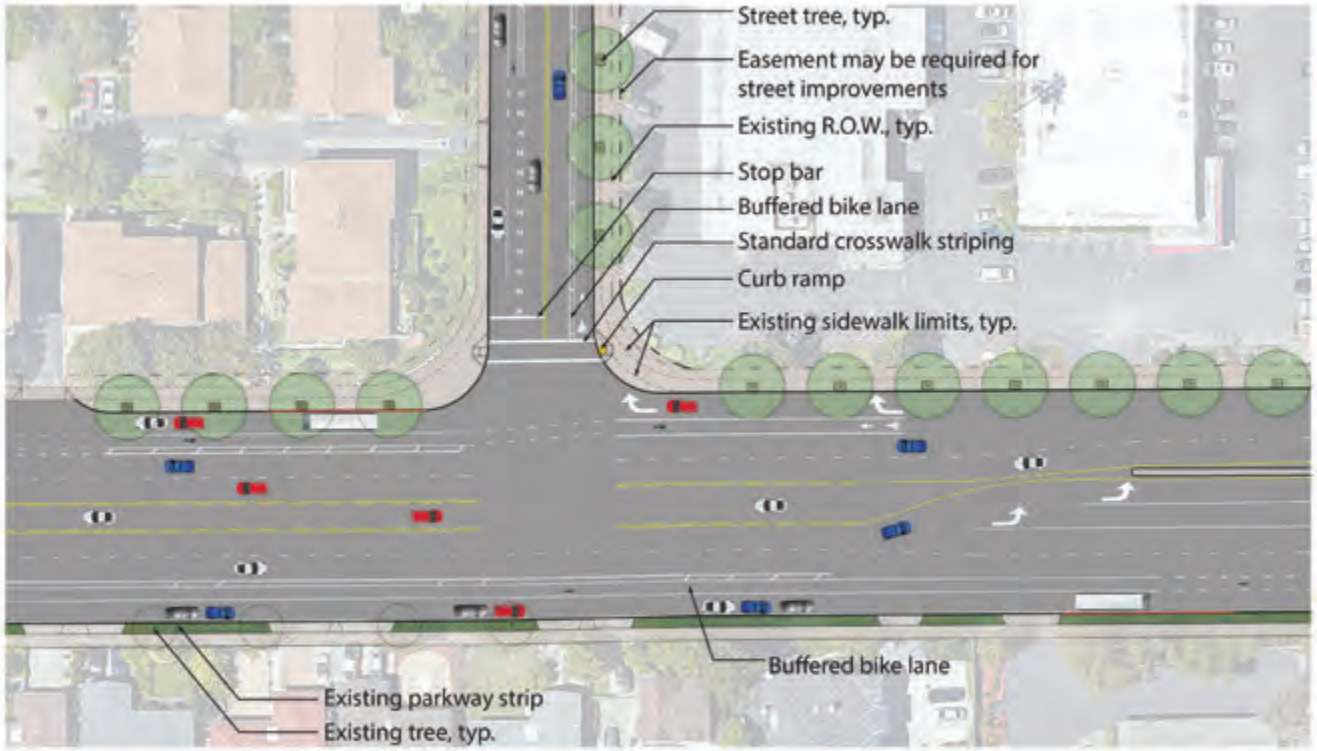


Figure 3-13. Willow Avenue and Reed Avenue Plan
All improvements shown are conceptual and subject to further analysis and refinement.

Specific recommendations for Willow Avenue include the following:

- Sidewalks: Sidewalks shall be 10'-0" minimum overall width (measured from back of curb), composed of a 6'-0" minimum paved width and 4'-0" tree wells on the east side. While the City standard is to provide tree wells between the paved path and the roadway, in this case the paved path is shown adjacent to the roadway on the west side of Willow Avenue in order to preserve the mature ginkgo trees. A sidewalk bulbout, reduced turning radius, crosswalk striping, and a stop bar shall be installed to create a safer pedestrian crossing experience as shown in Figure 3-13.
- Bike Lanes: The City will install 5'-0" wide bike lanes with 2'-0" striped buffers along approximately half the length of Willow Avenue from Reed Avenue to the bend in the road north of the commercial parcels. From the bend in the road to Aster Avenue, bike lanes shall be 6'-0" wide with no buffers. When the adjacent commercial parcels redevelop, a sidewalk easement would be required to accommodate proposed improvements shown in Figures 3-13 and 3-14.
- Bike Lanes at Caltrain Station: As Willow Avenue approaches the Caltrain station, bike lanes transition to sharrows in order to provide a dedicated Caltrain passenger loading zone on the City side of the boundary and on-street parking on the Santa Clara side of the boundary as shown in Figure 3-15.

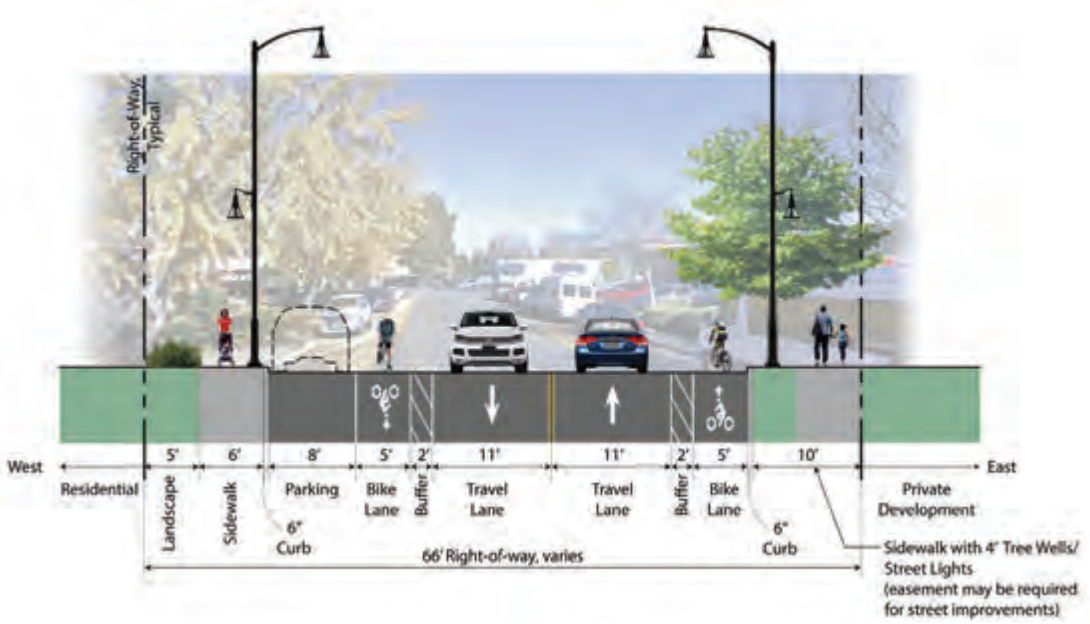


Figure 3-14. Willow Avenue, Typical Cross Section
All improvements shown are conceptual and subject to further analysis and refinement.

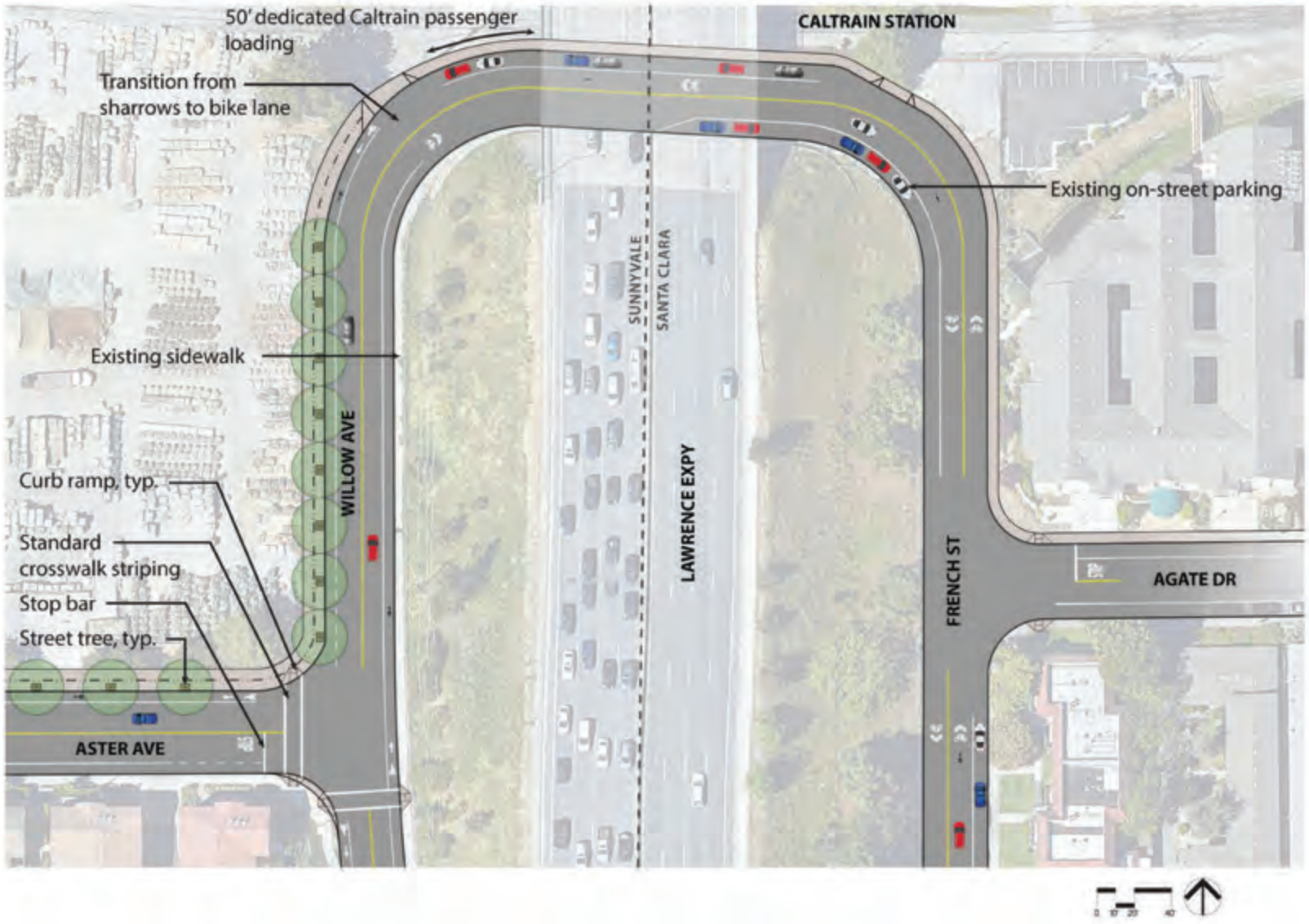


Figure 3-15. Willow Avenue and French Street Plan
All improvements shown are conceptual and subject to further analysis and refinement. Improvements shown beyond project limits are for graphic purposes only.

- Parking: On-street parking will be retained on both sides in the interim, but in the longer-term, on-street parking shall be retained on the west side only to serve residents of the existing apartment complex. The future development would provide onsite parking, so removing parking on the east side of Willow Avenue would provide a more open and pedestrian-friendly experience.
- Travel Lanes: Existing 12'-0" wide travel lanes are reduced to 11'-0" to accommodate buffered bike lanes.
- "No Left Turn" Sign: A "No Left Turn" sign is required at the intersection of Willow Avenue and Reed Avenue as part of the redevelopment project at the former Calstone/Peninsula Building Materials site. This sign would prohibit left turns from Willow Ave, Monday through Friday, 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m., excluding holidays.

Revised, Source: LSAP, February 2015

Figure 3-16. Sonora Court, Typical Cross Section Looking East
All improvements shown are conceptual and subject to further analysis and refinement.

Sonora Court

In order to preserve the mature redwood and cedar trees along Sonora Court, improvements shall minimize disturbance to the trees.

Specific recommendations for Sonora Court include the following:

- Sidewalks: Sidewalk easements shall be provided when parcels develop in order for a new sidewalk to be constructed behind the existing trees. Conceptual pedestrian access improvements for Sonora Court are shown in Figure 3-16.
- Bike Lanes: Bike lanes shall be City standard 6'-0" wide on both sides of the road. In order to preserve the existing trees and retain some on-street parking capacity, the bike lanes will not have striped buffers. Bike lane installation involves the following:
  - Removal of existing striping and slurry seal
  - Installation of signage on both sides of the street:
    - Bike lane R81 (CA) signs installed on the north side of the street
    - Combination R26/R81 no parking any time/bike lane signs installed on the south side of the street
  - Striping of the Class II bike lanes on both sides of the street, as well as the associated bike markings
  - Striping of centerline on Sonora Court, as directed by the City
- Parking: On-street parking will be removed from the south side and retained on the north side in order to continue providing parking for businesses, residents, and Caltrain passengers.
- Travel Lanes: Travel lanes shall be City standard 11'-0" wide in each direction.

Streetlife Improvements

Streetlife improvements promote an active and engaging space within the public realm. By making the street more comfortable, interesting, and easy to navigate for pedestrians and bicyclists, streetlife improvements can encourage residents to get out of their cars and use non-vehicular modes of travel. These improvements are shown in Figure 3-17 and are described in more detail in this section.

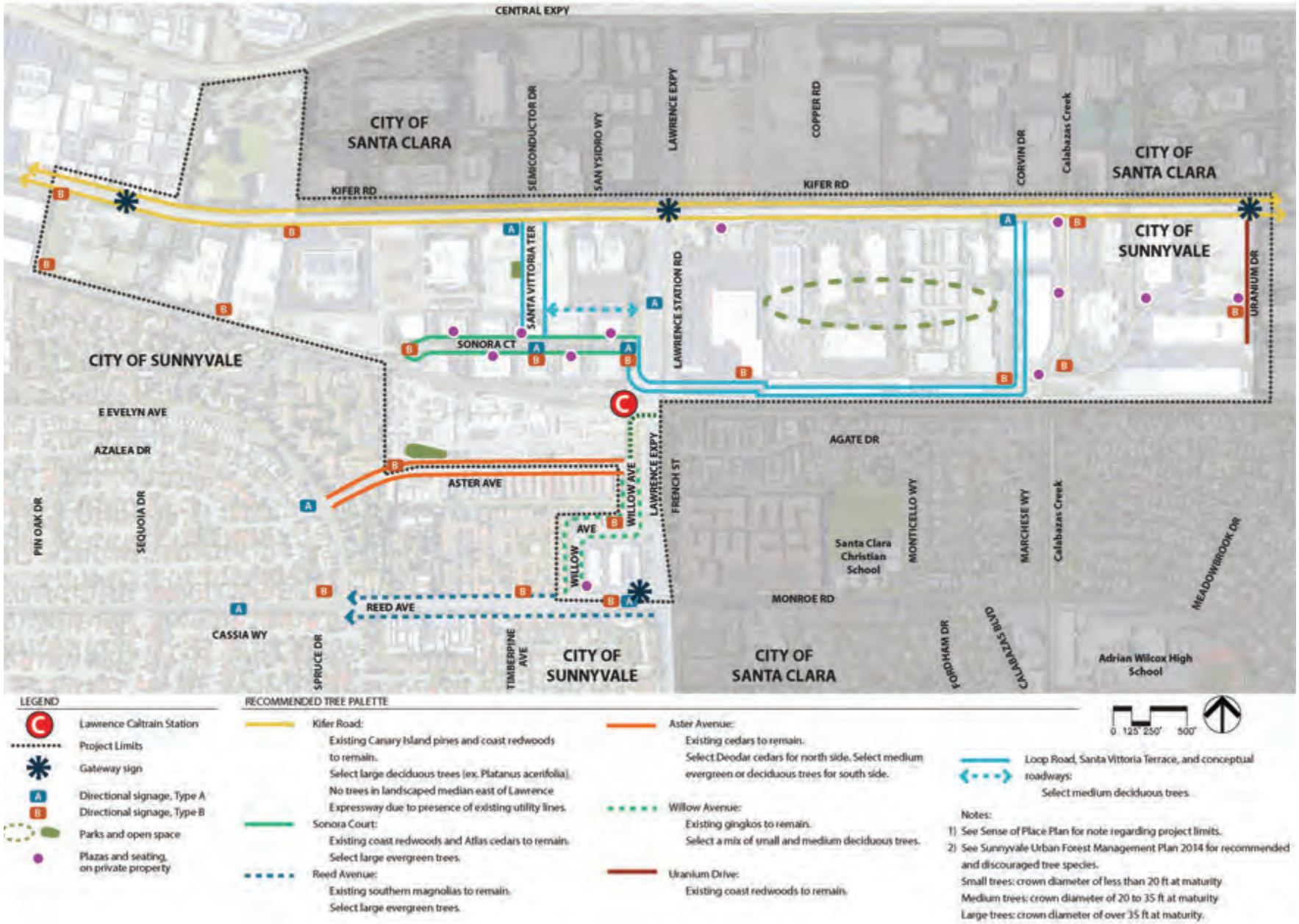


Figure 3-17. Streetlife and Wayfinding Plan
All improvements shown are conceptual and subject to further analysis and refinement.

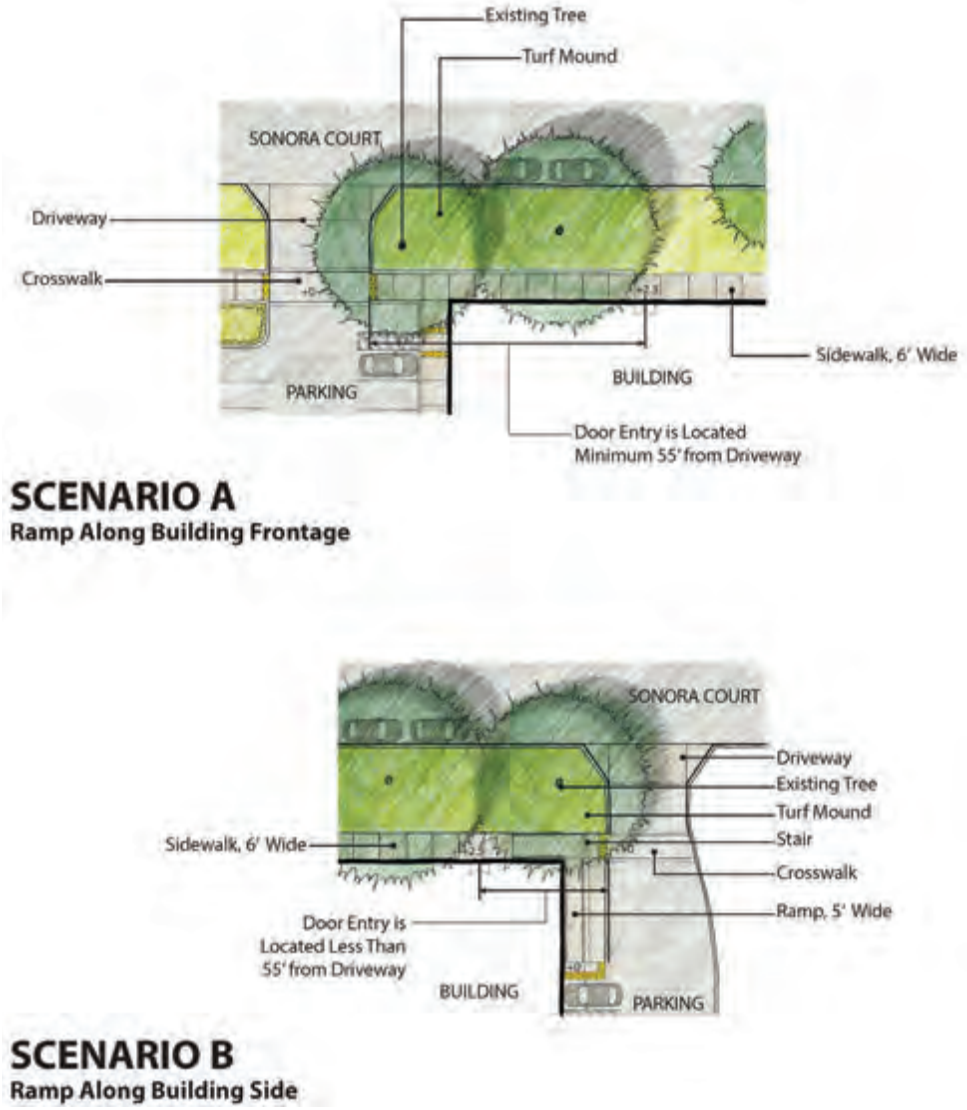


Figure 3-18. Sonora Court Pedestrian Access Improvements
All improvements shown are conceptual and subject to further analysis and refinement.

Existing plaza and walkway at Sonora Court

Figure 3-19. Site Furnishings

Plazas and Seating

Plazas and seating shown on the plan are envisioned to be privately-owned and maintained, publicly-accessible spaces. The locations shown on Sonora Court suggest that the existing plazas can be redeveloped to accommodate increased activity from the recently completed Class I trail segment and loop road at Santa Vittoria Terrace. Plazas should incorporate adequate protection of existing trees and meet accessibility requirements. Each scenario in Figure 3-18 highlights how an accessible public sidewalk can be provided given varied site conditions, and the existing locations of private walkways will be made public through sidewalk easements. Suggested plaza and seating locations along Calabazas Creek and east of the creek are located at shared-use path nodes. Site furnishings shown in Figure 3-19 are envisioned to be located on private property. The furnishings balance comfort and function, where metal provides durability and a black finish provides an unobstrusive and timeless look.

Gateway and Wayfinding Signage

Gateway signs are monumental structures that provide a visual cue that people are entering the Lawrence Station Area, and gateways are shown at each of the primary northern, southern, eastern, and western entrances to the Sense of Place Plan area. The pylon form and modern eclectic aesthetic of the gateway signs was designed based on the architectural style of the recent developments in the plan area. The gateway will consist of solid metal panels containing the city logo and area name in dimensional letters over a structural core as shown in Figure 3-20. The conceptual dimensions are 16’-0” height by 3’-6” width by 1’-0” depth. The final details will be determined by the City.

Directional sign Type A is vehicular scale and directs motorists to the Lawrence Caltrain Station, while directional sign Type B is pedestrian scale and directs pedestrians and bicyclists to Caltrain as well as to other local destinations as shown in Figures 3-21 and 3-22. The

A1: "Lawrence Station" in horizontal orientation

A2: "Lawrence Station" in vertical orientation

Both designs have push-through letters.

Color Palette

Figure 3-20. Gateway Sign

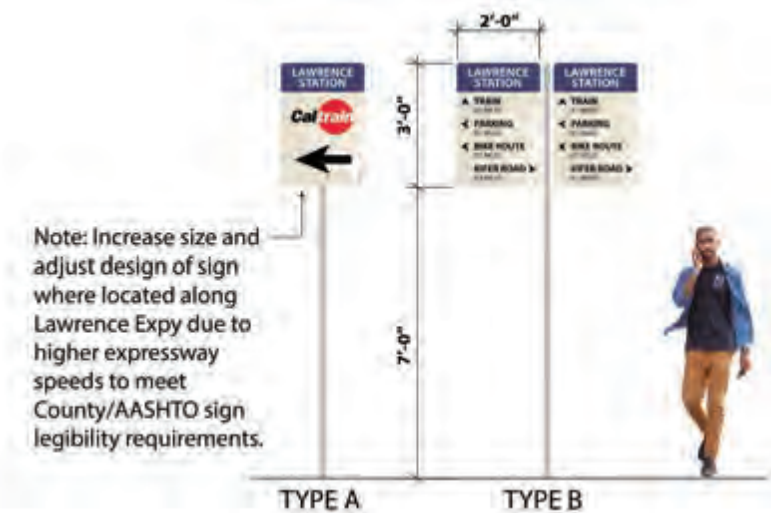


Figure 3-21. Directional Sign

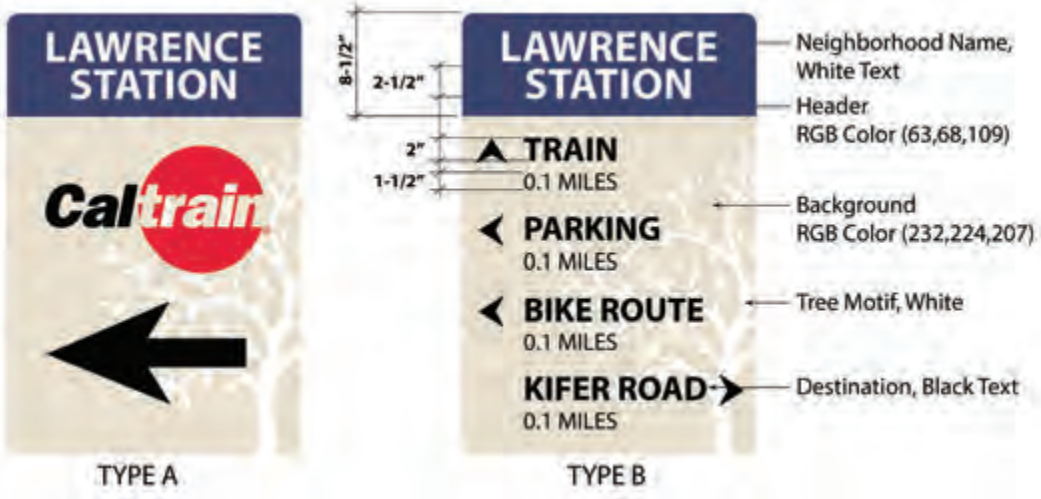


Figure 3-22. Directional Sign Enlargement

community preferred a tree as the motif for the neighborhood, and this input is incorporated in the directional sign graphic.

A sign at E. Evelyn Avenue and Reed Avenue directs eastbound bicyclists towards Aster Avenue in order to access the Caltrain station. Signage is also provided at Reed Avenue and Willow Avenue to access the station from Willow Avenue. Signage directing motorists to Lawrence Caltrain Station should be provided on Monroe Street and Lawrence Expressway if approved by the jurisdictions of City of Santa Clara and County of Santa Clara, respectively.

All gateway monuments and signs shall be placed beyond the intersection corner and driveway vision triangles per City Planning and Building Division requirements. Placement on the new Kifer Road median may also be considered.

Parks and Open Space

Parks and open space shown on the plan are based on development projects that are either approved and not under construction or currently being built. There is a need for parks and open space throughout the entire plan area, particularly east of Lawrence Expressway, and locations will be determined upon project review.

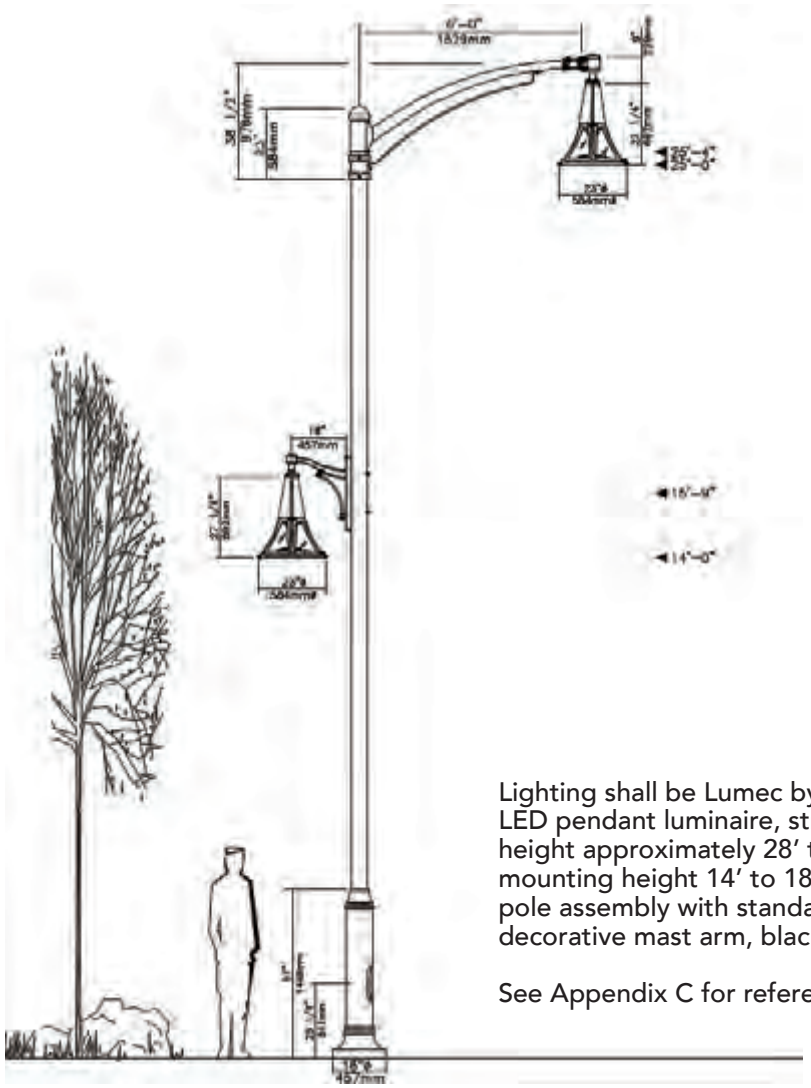
The City envisions a combination of publicly dedicated parks and privately-owned, publicly-accessible open spaces.

Lighting

The area is currently serviced by LED roadway lights, and the City will require developers to upgrade streetlight poles in the plan area as shown in Figure 3-23. Figure 3-24 shows the pedestrian and roadway light. The pedestrian and roadway light meets the functional needs for vehicular and pedestrian circulation and provides a cohesive look with the pendant style and a black finish that is consistent with the modern eclectic style site furnishings. These

Notes:
Project Limits shown are diagrammatic. Where project limits are shown beyond the City of Sunnyvale limits, it is to provide graphic clarity and design intent only. The LSAP street lighting standard will not be installed in the City of Santa Clara's jurisdiction.

Figure 3-23. Lighting Plan



Lighting shall be Lumec by Signify. UrbanScape LED pendant luminaire, street light mounting height approximately 28’ to 32’, pedestrian light mounting height 14’ to 18’, round non-tapered pole assembly with standard SSM8V muffler pole, decorative mast arm, black powder coat finish.

See Appendix C for reference drawings.

Figure 3-24. Pedestrian and Roadway Light

lights help define the plan area as a unique neighborhood.

Poles and luminaires should be Lumec Urbanscape to align with the modern eclectic style. Lights should meet the City’s lighting system operational and performance requirements.

Street Trees

Street trees should be provided for shade, shelter from the street, and to create a more human-scale pedestrian experience. Tree

species should be selected with respect to the scale of the roadway and to complement or match the existing species that appear to be doing well. The species along each corridor provide diversity but also reinforce a sense of spatial organization and are spaced every 30'-0" to 35'-0" depending on its size and as determined by lighting spacing. Tree wells are composed of stabilized decomposed granite. Trees not only beautify the area, but they also provide wildlife habitat and help manage stormwater.

Existing trees along Aster Avenue

4 RELATION TO EXISTING POLICIES

The objectives this report aims to achieve are directly related to existing City and City-endorsed policies.

Land Use and Transportation Element (LUTE)

A selection of related policies from the Sunnyvale General Plan Land Use and Transportation Element is listed below.

Policy LT-1.4 Coordinate with adjacent cities on local land use and transportation planning.

Policy LT-1.5 Recognize and plan so that neighborhood villages may cross borders into adjacent cities.

Policy LT-1.6b Support regional efforts which promote higher densities near major transit and travel facilities.

Policy LT-1.7 Emphasize efforts to reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.

Policy LT-2.3 Accelerate the planting of large canopy trees to increase tree coverage in Sunnyvale in order to add to the scenic beauty and walkability of the community; provide environmental benefits such as air quality improvements, wildlife habitat, and reduction of heat islands; and enhance the health, safety, and welfare of residents.

Policy LT-2.5 Recognize the value of protected trees and heritage landmark trees (as defined in City ordinances) to the legacy, character, and livability of the community by expanding the designation and protection of large signature and native trees on private property and city parks.

Policy LT-3.1 Use land use planning, including mixed and higher-intensity uses, to support alternatives to the single-occupant automobile such as walking and bicycling and to attract and support high investment transit such as light rail, buses, and commuter rail.

Policy LT-3.2 Refine land use patterns and the transportation network so they work together to protect sensitive uses and provide convenient transportation options throughout the planning area.

Policy LT-3.6 Promote modes of travel and actions that provide safe access to city streets and reduce single-occupant vehicle trips and trip lengths locally and regionally.

Policy LT-3.8 Prioritize safe accommodation for all transportation users over non-transport uses. As City streets are public spaces dedicated to the movement of vehicles, bicycles, and pedestrians, facilities that meet minimum appropriate safety standards for transport uses shall be considered before non-transport uses are considered.

Policy LT-3.9 As parking is the temporary storage of transportation vehicles, do not consider parking a transport use of public streets.

Policy LT-3.10 Prioritize street space allocated for transportation uses over parking when determining the appropriate future use of street space.

Policy LT-4.1 Preserve and enhance an attractive community, with a positive image, a sense of place, landscaping, and a human scale.

Policy LT-4.2 Encourage nodes of interest and activity, public open spaces, well-planned development, mixed-use projects, signature commercial uses, and buildings and other desirable uses, locations, and physical attractions.

Policy LT-5.1 Strengthen the image that the community is composed of cohesive residential neighborhoods, each with its own individual character and village center; allow change and reinvestment that reinforces positive neighborhood concepts and standards such as walkability, positive architectural character, site design, and proximity to supporting uses.

Policy LT-5.2 Preserve and enhance the character of Sunnyvale's residential neighborhoods by promoting land use patterns and transportation opportunities that support a neighborhood concept as a place to live, work, shop, entertain, and enjoy public services, open space, and community near one's home and without significant travel.

Policy LT-6.1 Improve and preserve the character and cohesiveness of existing residential neighborhoods.

Policy LT-7.4 Promote new mixed-use development and allow higher residential density zoning districts (medium and higher) primarily in village centers, El Camino Real nodes, and future industrial-to residential areas.

Policy LT-8.4 Promote compact, mixed-use, and transit-oriented development in appropriate neighborhoods to provide opportunities for walking and biking as an alternative to auto trips.

Policy LT-8.5 Promote walking and bicycling through street design.

Policy LT-9.1 Ensure that the planned availability of open space in both the city and the region is adequate.

Policy LT-9.5 Maintain existing park and open space tree inventory through the replacement of trees with an equal or greater number of trees when trees are removed due to disease, park development or other reasons. (previously Open Space and Recreation Policy 2.2.A.4)

Policy LT-9.11 Facilitate and encourage pedestrian traffic in public recreational open spaces and utilize the Santa Clara Valley Transportation Authority's pedestrian technical design guidelines whenever appropriate and feasible. (previously Open Space and Recreation Policy 2.2.A.10)

Policy LT-9.18 Improve accessibility to parks and open space by removing barriers.

Policy LT-10.4 Support a regional path system by coordinating with adjacent jurisdictions to facilitate path connections wherever possible. (see also City of Sunnyvale Bicycle

Class I Shared-Use Path at Intuitive Surgical

Plan.) (previously Open Space and Recreation Policy 2.2.C.4)

Policy LT-14.1 Prepare specific area plans and special zoning tools (including but not limited to specific plans, precise plans, design guidelines, specialized zoning, and sense of place plans) to guide change in areas that need special attention.

Policy LT-14.2 Support the following adopted specialized plans and zoning tools, and update them as needed to keep up with evolving values and new challenges in the community: Downtown Specific Plan, Lakeside Specific Plan, Arques Campus Specific Plan, Lawrence/101 Site Specific Plan, Precise Plan for El Camino Real, Moffett Park Specific Plan, Peery Park Specific Plan, and Lawrence Station Area Plan.

Community Character Element

A selection of related policies from the Sunnyvale General Plan community character element is listed below.

Policy CC-1.1 Identify the boundaries of the City with attractive and distinctive features. (Previously Community Design Policy A.1)

Policy CC-1.4 Support measures which enhance the identity of special districts and residential neighborhoods to create more variety in the physical environment. (Previously Community Design Policy A.3)

Policy CC-1.6 Maintain City neighborhoods as safe, healthy places to live. (Previously Socio-Economic Policy A.5)

Policy CC-2.1 Maintain and provide attractive landscaping in the public right-of-way to identify the different types of roadways and districts, make motorists more comfortable and improve the enjoyment of residential neighborhoods. (Previously Community Design Policy B.1)

Policy CC-2.2 Minimize elements which clutter the roadway and look unattractive. (Previously Community Design Policy B.3)

Policy CC-4.1 Ensure that Sunnyvale's public facilities are easily identified, accessible, attractive and representative of the community's values and aspirations. (Previously Community Design Policy D.1)

Lawrence Station Area Plan

A selection of related goals, policies, and urban design guidelines from the Lawrence Station Area Plan is listed below. This list is not all-inclusive, but instead highlights those that are most directly related to this report. Goals and guidelines are listed in the order shown in the LSAP. Several guidelines in the LSAP also directly reference this plan.

CF-G3 Create a new Loop Road that provides a variety of vehicular access options and is scaled to bicycles and pedestrians.

CF-G4 Provide improved north-south access throughout the Plan area.

CF-P2 Prioritize the provision of improved north-south access for pedestrians and bicyclists between the northern and the southern portions of the Plan area.

CF-P3 Establish a secondary bicycle/pedestrian network through private property of publicly-accessible north/south and east/west paths.

CF-P5 In the area north of the Caltrain tracks, develop a Loop Road that will provide direct north-south access to Lawrence Station from Kifer Road on both the east and west sides of Lawrence Expressway.

CF-P6 Locate the Loop Road to align with Corvin Road on the east and to intersect with Kifer Road and Semiconductor Drive/Santa Vittoria Terrace, west of Lawrence Expressway.

CF-P11 Provide a wide, landscaped pedestrian sidewalk zone, continuous Class II bicycle lanes, and transit stops continuously along Kifer Road in the Plan area.

P-P1 Promote walking access through new street connections.

P-P7 For new sidewalks in the Plan area, provide a minimum sidewalk width of ten feet inclusive of a minimum paved pedestrian travel zone width of six feet and a landscaped four-foot street buffer zone. Exceptions may be approved by the City's Public Works Department based on site-specific conditions, such as preserving existing mature trees.

B-P3 Provide two new primary Class I shared-use paths at the east and west ends of the LSAP boundaries with access to Lawrence Station.

Calabazas Creek at Kifer Road

B-P4 Provide Class IIB (or Class II where determined by the City) bicycle access on the Loop Road.

CON-P1 Carry out the Sense of Place Plan's publicly-accessible framework of the Loop Road, shared-use paths, and pathways scaled to pedestrian and bicycle users, with the Loop Road accessible to all modes of travel.

CON-UDG1 Where the Sense of Place Plan identifies the location of the new loop road and shared-

use paths, development projects on these properties shall be required, at a minimum, to provide a public access easement for their future construction. Development incentives may be provided for the construction of the improvements.

CON-UDG2 The Loop Road, shared-use paths, and pathways should follow the locations, cross sections, and alignments shown in the Sense of Place Plan.

CON-UDG3 If, upon development review, the City determines that creating the Loop Road through a property identified on the Sense of Place Plan is not immediately feasible, property owners shall construct an initial shared-use path per the locations, cross sections, and alignments shown in the Sense of Place Plan and reserve public space for future implementation by recording a public access easement.

CON-UDG4 Ensure that the Loop Road connects to Kifer Road and Corvin Drive east of Lawrence Expressway and Kifer Road and Semiconductor Drive/Santa Vittoria Terrace west of Lawrence Expressway, with direct access to Lawrence Station.

TSW-UDG1 Provide a new primary Class I shared-use path linkage between the Kifer West subarea and the existing shared-use path on the property at 1020 Kifer Road.

TSE-UDG1 Provide right-of-way dedications along Uranium Drive, where determined by the City to be consistent with Uranium Drive cross section in the Sense of Place Plan, to install new sidewalk and bicycle lane improvements.

LRW-UDG2 Site planning should prioritize enhanced bicycle and pedestrian access to Lawrence Station by providing a north-south shared-use path from Reed Avenue to Willow Avenue as shown in the Sense of Place Plan circulation diagram.

LRW-UDG3 Provide right-of-way dedications along Willow Avenue, where determined by the City to be consistent with the Willow Avenue cross section of the Sense of Place Plan, to install new sidewalk and bicycle lane improvements.

STP-UDG2 Locate street trees in the curb zone of the street (within 4-6 feet of the curb, depending upon sidewalk width) unless the width of the sidewalk and/or right-of-way prevents planting in that area. In such cases, locate street tree planting within the front setback of private parcels if possible.

STP-UDG3 Where feasible in on-street parking areas, plant trees in bulbouts to soften the visual impact of parking.

L-UDG1Utilize the LSAP lighting standard identified in the Sense of Place Plan, Figure 3-24 along public streets in order to create a unique district within the City. Refer to Figure 3-23 in the Sense of Place Plan for the locations of the LSAP lighting standard placement.

L-UDG2 On publicly-accessible shared-use paths and pathways,

Mature redwood trees and cedars on Sonora Court

utilize the lighting standard identified in the Sense of Place Plan, Figure 3-24.

SF-P1 Provide well-designed furnishings along publicly-accessible private streets, shared-use pathways, and paths that are:

- Useful and comfortable for pedestrians
- Meet the functional needs of utilities and services
- Attractive
- Generally consistent throughout the Plan area.

SF-UDG6 Install seating that is user-friendly, but does not encourage long term use and sleeping. Refer to Figure 3-19 of the Sense of Place Plan for thematic design.

SF-UDG7 Provide two trash receptacles at diagonally opposite corners of each private street intersection in areas with high pedestrian circulation, such as Santa Vittoria Terrace. Refer to Figure 3-19 of the Sense of Place Plan for thematic design.

SF-UDG9 Provide bicycle parking facilities on each side of private streets in each block per VTA guidelines. Refer to Figure 3-19 of the Sense of Place Plan for thematic design.

OSW-G1 Implement the Sense of Place Plan's coordinated signage program that:

- Clearly and attractively directs people to Lawrence Station and other neighborhood destinations, services and amenities.
- Reinforces a sense of place with design elements that give the neighborhood a unique identity.
- Provides gateway signs to highlight entry into the Plan area.

OSW-UDG1 Follow the Sense of Place Plan that includes a larger gateway signage at key intersections and Plan area entrances (Figure 3-20) and smaller directional signage

(Figures 3-21 and 3-22) as shown in the Streetlife and Wayfinding Plan (Figure 3-17).

ID-UDG1 As identified by the City's Transportation and Traffic Manager, provide highly visible crosswalks at key intersections in accordance with City standards and the Sense of Place Plan.

The following LSAP goals and guidelines for specific streets directly reference the Sense of Place Plan:

- LR-UDG2
- SV-UDG2
- SC-UDG3
- KR-UDG2
- NI-P2
- PT-P1
- PP-P1
- WS-UDG1
- RA-UDG1
- UD-UDG2

Community Design and Transportation Program

The Sunnyvale City Council officially endorsed the Santa Clara Valley Transportation Authority (VTA) Community Design and Transportation (CDT) Program on September 30, 2003.

The City's endorsement conveys support for the following CDT principles:

• Principle 1: Target growth to cores, corridors and station areas.

• Principle 3: Provide a diverse mix of uses.

• Principle 4: Design for pedestrians: comfortable, easy access to buildings, transit, wide sidewalks and pedestrian amenities.

• Principle 5: Design in context: create unique place identities via materials, design details, architectural styles, walks, streets and spaces.

• Principle 6: Focus on existing areas: infill versus outlying development, maintenance of existing communities.

• Principle 7: Create a multi-modal transportation system: balance walking, biking, and transit with vehicle movement.

• Principle 8: Establish streets as places: de-emphasize arterial network, provide wide sidewalks and landscaping.

• Principle 9: Integrate transit: locate transit stations within community cores, integrate transit stops and features into site designs.

• Principle 10: Manage parking: do not let parking dominate mode choice decisions, provide Transportation Demand Management (TDM) programs to heighten attractiveness of other modes.

City-Wide Design Guidelines

The City-Wide Design Guidelines were adopted by the City Council in June 1992 in order to implement

the Community Design Sub-Element goals and policies and provide detailed direction on site and building design issues. They mainly address development projects on private properties and are intended to: enhance the overall image of the City, protect and preserve the existing character of the community, communicate the image the community desires, and achieve a higher design quality. The guidelines were last amended in 2014.

All site layout and design guidelines provided in this Plan are consistent with existing City-Wide Design Guidelines.

Toolkit for Mixed-Use Development

The majority of the SOP plan area is zoned as mixed-use. Council adopted The Toolkit for Mixed-Use Development in July 2015 to guide the form and character of mixed-use developments in the City, and additional area-specific guidelines are noted in the LSAP.

5 FUNDING OPPORTUNITIES

Some of the improvements discussed would be funded through the Sense of Place fees, and others would be funded through developer fees. Grant funding opportunities through county, state, and transportation agencies may be a third source of funding for improvements. A selection of potential grant opportunities are discussed in this section.

2016 Measure B Bicycle & Pedestrian Program

Voters in Santa Clara County approved 2016 Measure B, a 30-year, half-cent countywide sales tax to enhance transit, highways, expressways, and active transportation. One of the Measure B programs is the Bicycle and Pedestrian Program, which funds significant pedestrian and bicycle projects within the county. The program prioritizes projects that connect to transit, schools, and employment centers. It will fund projects that fill gaps in the existing pedestrian and bicycle networks and make these networks safer and more convenient. This program is administered by VTA and the application deadline for 2021 has passed, but additional cycles are anticipated.

One Bay Area Grant Program

The Metropolitan Transportation Commission's (MTC) One Bay Area Grant (OBAG) program was first established in 2012 to target regional transportation priorities, land-use, and housing goals. Its first round of funding, known as OBAG 1, guided the allocation of $827 million in federal funds over a five-year period, from 2012-2013 to 2016-2017. OBAG 2 was adopted in 2015 and is projected to total $916 million to fund projects from 2017-18 through 2021-22. MTC manages OBAG 2's Regional Program and the nine Bay Area Congestion Management Agencies (CMAs) manage its County Program.

Priority Development Areas (PDAs) are a priority for both the Regional and County programs, and the County Program may be used on improvements to pedestrian and bicycle facilities. According to the program timeline, CMAs submitted a list of recommended projects for County Program funding to MTC in July 2017, and all County Program funds will be allocated by January 2023.

The study area is part of the Lawrence Station Transit Village PDA, and the plan includes pedestrian and bicycle facility improvements, so implementation may be eligible if OBAG has a third round of funding.

Transportation Development Act Article 3

Transportation Development Act Article 3, also known as TDA 3, provides funding for bicycle and pedestrian projects annually. The City or County Bicycle Advisory Committee must review any proposed projects. In addition, the city must request that the county

recommend the proposed projects so that the projects can be included when the county submits an annual request for project funding to MTC for consideration.

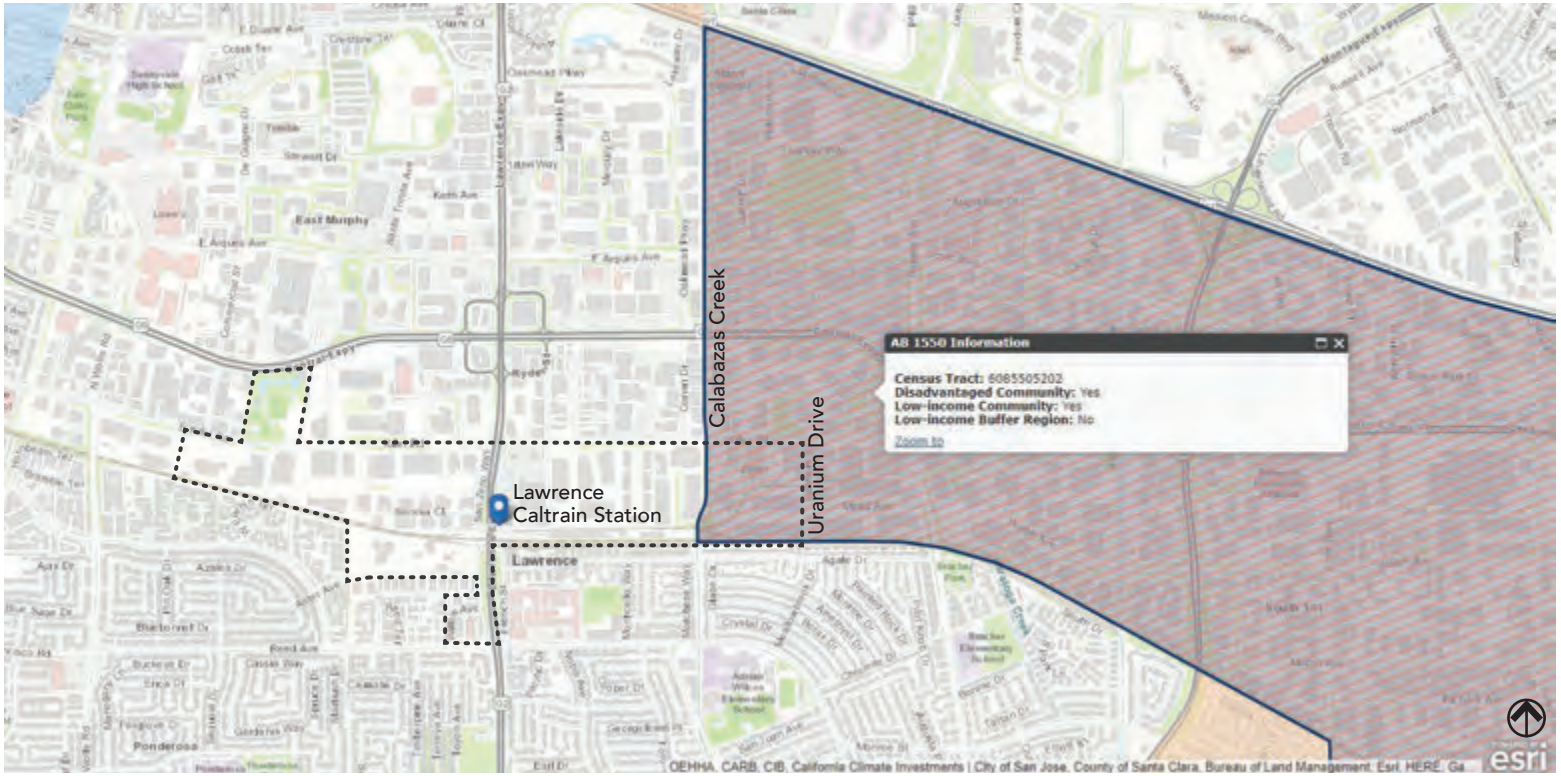
Transportation Fund for Clean Air

The Bay Area Air Quality Management District (BAAQMD) manages the Transportation Fund for Clean Air (TFCA), and the Air District's Board of Directors approve the allocation of funds on an annual basis to projects that reduce on-road motor vehicle emissions. The funds are generated through a $4 surcharge on vehicles registered within BAAQMD's jurisdiction, and 40% of the funds are disbursed by the nine Bay Area counties while the remaining 60% is awarded through the TFCA Regional Fund. Projects eligible for TFCA funding include the operation of commuter shuttles, construction of clean air vehicle infrastructure, and installation of bike parking facilities. Public agencies are eligible to apply for funding to implement plan improvements such as the construction of new bikeways.

Urban Greening Program

The California Natural Resources Agency's Urban Greening Program is funded by the Greenhouse Gas Reduction Fund to support the development of green infrastructure programs that reduce greenhouse gas (GHG) emissions and provide multiple benefits. The Urban Greening Program was created when Senate Bill (SB) 859 was signed into law on September 14, 2016, and the program's goal of reducing GHG emissions is consistent with Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. Eligible projects must perform at least one of the following: sequester and store carbon by planting trees, reduce building energy use by planting trees to shade buildings, or reduce community vehicle miles traveled by constructing bicycle and pedestrian facilities that provide safer routes between residences, workplaces, commercial centers, and schools. Funding prioritizes investments in disadvantaged and low-income communities, and Round 4 allocated a minimum of 80% of available funds to these neighborhoods in California. The Round 4 application period closed in 2020, and future funding cycles are contingent upon the number of competitive applications received.

According to the metrics defined in the program, the area east of Calabazas Creek lies within a disadvantaged and low-income census tract as shown in Figure 5-1, so pedestrian and bicycle facility improvements, tree planting, and park and open space projects in this area could be a candidate for potential future funding cycles of the program.



Adapted, Source: California Air Resources Board Priority Populations Map, 2020

Legend

- SB 353 Disadvantaged Communities and AB 1550 Low-Income Communities
- Project Limits

Figure 5-1. Disadvantaged and Low-Income Community Census Tract

6 IMPLEMENTATION

Implementation Process

The goals of the Lawrence Station Sense of Place Plan shall be implemented primarily through the private development approval process by constructing improvements in conjunction with projects and payment of Sense of Place fees. Grant-funded public improvement projects may also be pursued.

Improvements fronting a parcel will primarily be funded and constructed by the developer as part of the project development approval process. The minimum required frontage improvements upon site redevelopment are construction of curbs, curb ramps, gutters, driveway approaches, street pavement and striping, street signs, sidewalks, street trees and landscaping, and street lights on street(s) along the project frontage(s) in accordance with this Sense of Place Plan. Other public utilities not addressed in this plan, such as utility extensions and connections and meters/vaults may also be required. If warranted by a City study, traffic signal installation/ fair-share funding or modification may also be required.

After development applications are submitted for projects located within the plan area, City staff will review the development proposals and verify that they are consistent with the design guidelines described in this document. City staff will then recommend that Conditions of Approval be applied to the approval of Planning Applications, Building Permits, and encroachment permits. The Conditions of Approval may include modifications to address deviations from the SOP plan.

The City of Sunnyvale may also consider competing in grant funding programs such as those listed in Chapter 5 to fund improvements in the public right-of-way. Funding opportunities for areas that do not currently have pedestrian access or that pose existing pedestrian safety issues will be prioritized. Improvements that enhance safety should be prioritized.

Sense of Place Fees

The streets and pedestrian facilities in the Plan area are critical elements of the overall neighborhood environment in which commerce, travel, and community networking takes place, and in large measure will determine its livability and attractiveness for new development. The high density development anticipated by the LSAP will place new demands on streets and pedestrian facilities as new residents and businesses make use of the public realm. The present design of the circulation elements discourages pedestrian and bicycle mobility due to gaps in the sidewalk and bicycle lane network, wide, auto-oriented streets, large blocks, and inconsistent frontage amenities. Additionally, access to Lawrence Station is constrained by current conditions, which do not promote transit use. Creating a more pedestrian and bicycle-friendly environment is essential to reduce automobile trips by new residents and employees in the area, which

prepared for
City of Sunnyvale

Estimate of Probable Construction Costs
Sense of Place Plan
Preliminary Plan

prepared on: 7/27/2021
prepared by: MW
checked by: MM

Item #	Description	Unit	Cost	TOTAL Qty	TOTAL Item Total	TOTAL Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	1	$1,000,000	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	1	$2,250,000	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$3,575,000	
						$6,825,000
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	9,040	$361,600	
2.	Curb	LF	$60	7,240	$434,400	
3.	Chatter bars	LF	$35	800	$28,000	
4.	Landscaping and irrigation	LF	$180	3,620	$651,600	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,623,200	
						$3,099,000
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	4	$200,000	
2.	Directional sign	EA	$1,000	15	$15,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	4	$160,000	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$412,500	
						$788,000
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	6,300	$15,750	
2.	Demolition (existing markings)	EA	$110	15	$1,650	
3.	Pavement markings	EA	$84	31	$2,604	
4.	Slurry seal	SY	$3	18,000	$54,000	
5.	Bike lane striping	LF	$2.75	47,700	$131,175	
6.	Buffer striping	LF	$5	20,200	$101,000	
7.	Signs and sign posts	EA	$425	46	$19,550	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$336,700	
						$663,000
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$1,500,000	
2.	PG&E service to traffic signal	EA	$30,000	1	$30,000	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,683,000	
						$3,213,000
F	**ESTIMATED PROJECT TOTAL**					$14,588,000

is necessary to reduce the impacts of higher intensity development on traffic, greenhouse gas emissions, and noise.

Imposing appropriate Sense of Place fees will ensure that new development contributes its fair share of funding for streetscape improvements necessary to mitigate the impacts of increased development and support for the Plan area as a vibrant, attractive, and transit-oriented neighborhood for current and future residents and employees.

Funds for common improvements that span across multiple frontages such as bike lanes and other priority elements identified on the plans, such as completing the landscaped median on Kifer Road, will be generated through a Sense of Place fee. This fee will be applied to redevelopment projects on a per unit or per net new nonresidential square foot basis. Voluntary construction of improvements included in the fee can be made in lieu of Sense of Place fee payments.

Estimate of Costs

A summary of the estimated probable costs of construction and implementation are provided on the following page, and a more detailed breakdown is available in the appendix for reference. The cost estimate reflects the priority improvements as described in the Sense of Place Plan and does not include improvements that are typically required for new development along individual project frontages. It also does not include improvements that developers can receive density incentives for constructing. City priorities in the cost estimate are a contiguous landscaped median on Kifer Road, bike lanes throughout the plan area, gateway and directional signage, Calabazas Creek shared-use path crossings, and a new traffic signal at Kifer Road and Uranium Drive. This estimate is considered preliminary and subject to change as it has been developed without the benefit of detailed drawings.

The total cost of the improvements are assigned to net new residential and office/R&D development based on a percentage of the total square feet associated with each. The plan buildout includes 5,935 residential units and 1.2 million square feet of office/R&D. Residential units were converted to square feet (s.f.) by multiplying the average unit size of recent LSAP projects (960 s.f.) by 5,935. The result is an 82.6% share for residential and 17.4% for office/R&D. The total cost is then multiplied by each percentage to obtain the cost per net new unit and net new office/R&D square footage.

Estimating Assumptions

1) The items, amounts, quantities, and related information are based on Callander Associates' judgment at this level of document preparation and is offered as reference data.

2) The following are excluded from the cost estimate:

- Permitting costs from other agencies
- Improvements within County right-of-way, including the costs of the potential future grade separation of Lawrence Expressway as identified in the

Lawrence Expressway Grade Separation Concept Study

- Improvements within City of Santa Clara right-of-way (sidewalk and roadway striping on Kifer Road, Uranium Drive, and French Street)
- Santa Vittoria Terrace (existing)
- Aster Avenue (existing and under construction)

3) Start-up costs include 20% of construction costs for bonding, mobilization, SWPPP, grading, tree protection, traffic control, and construction staking. Design assumes 40% of construction costs for professional service fees, and inspection assumes 10% of construction costs for City review and construction inspection. Estimating contingency is assumed as 40% of construction costs and includes the following: 10% construction/change order contingency, 20% level of estimate contingency, and 10% design contingency.

4) Bike lane cost assumes 6'-0" minimum width. Buffer assumes 3'-0" width. Striping and slurry seal costs exclude vehicular travel lanes.

5) Landscaping and irrigation costs for parkway strips assume a 4'-0" wide planted area with groundcover and drip irrigation system with water and electrical service. Street tree and irrigation costs assume a 24" box tree at 30' o.c. spacing and two tree bubblers per tree.

6) The future path crossings at Calabazas Creek are being studied as a part of the City of Santa Clara's Creek Trail Network Expansion Master Plan. The cost estimate assumes that the crossings will be undercrossings. The costs shown assume 25% of the total estimated costs for these crossing improvements, which is anticipated to be the City's share between the City of Santa Clara and Valley Water.

Timing

Improvements shall be implemented as development projects are approved and as funding becomes available. Some segments of the plan have been implemented, or are currently under construction.

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7 APPENDICES

APPENDIX A

Meeting Summaries

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Recreate
Educate
Live+Work
Connect
Sustain

Via Email Only

April 4, 2019

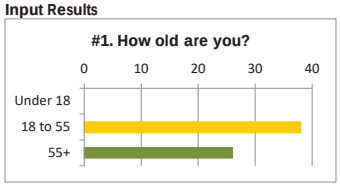
Input Summary
Lawrence Station Sense of Place Plan
RE: Compiled Input #1
Date: March 6-31, 2019

Number of attendees who signed in at Community Workshop #1: 50
Number of questionnaires received at Community Workshop #1: 28
Number of online survey respondents: 37

This summary encompasses the input received from Community Workshop #1 on March 6, 2019, and the online survey that was open from March 18-31, 2019.

The purpose of this meeting was to introduce the project, present existing conditions, and receive feedback from the public. The first part of the meeting was a presentation introducing the project goals and objectives and the layout of the stations, and the second part was time for attendees to visit the stations. Attendees had opportunities to ask questions and provide comments after the presentation. Station A displayed background project information, Station B displayed potential motifs and architectural styles, Station C displayed an aerial map of the Plan Area, and Station D displayed existing road sections. Attendees voted on motifs, architectural aesthetic, and pedestrian/bike improvements for the Sense of Place Plan Area. They also had the opportunity to identify problem areas and to mark their typical route to and through the Plan Area. Attendees were also asked to complete a questionnaire in order for the project team to better understand the demographics and preferences of attendees.

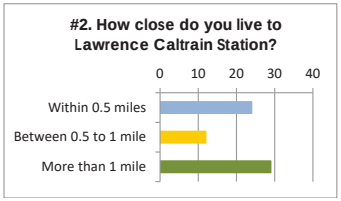
Input Results

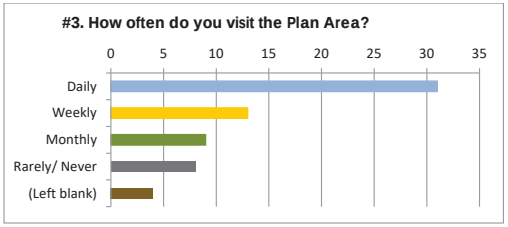


BURLINGAME
1633 Bayshore Highway, Suite 133
Burlingame, CA 94010
650.375.1313

GOLD RIVER
12150 Tributary Point Drive, Suite 140
Gold River, CA 95670
916.985.4366

SAN JOSE
2025 Gateway Place, Suite 285
San Jose, CA 95110
408.275.0565

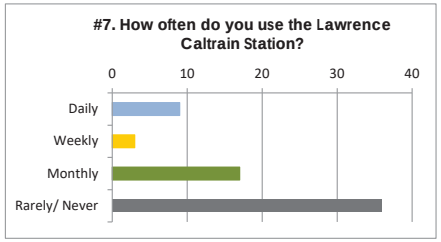


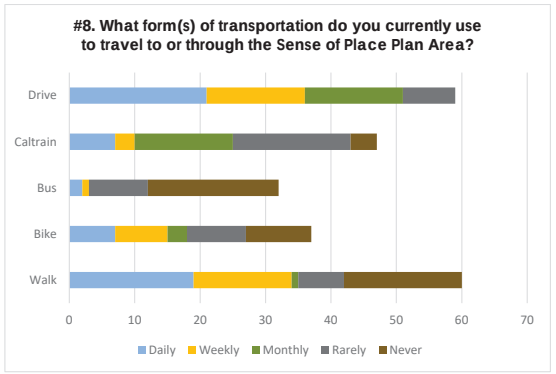


#4. What do you like about the Area?
Attendees primarily like the proximity to Lawrence Caltrain station. They also like the trees on Sonora Court and along Willow Avenue, as well as the existing and proposed open spaces within the Plan Area. Some respondents like how the Plan Area used to have a quiet peaceful small-town vibe, while others feel that the adjacent residential neighborhood is currently safe, peaceful, and walkable.

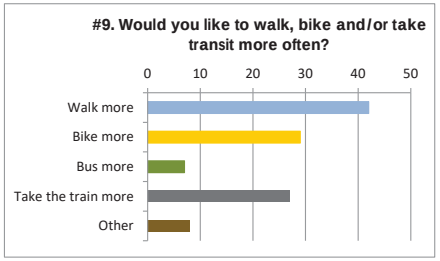
#5. What do you dislike about the Area?
Several attendees stated dislike for the traffic congestion. The next most common responses were insufficient bike and pedestrian infrastructure, the presence of high-density housing developments, and the industrial and commercial feel of the area. Other comments included not having enough parks and open space, lighting, and walkable destinations. Additional responses included burglaries and noise.

#6. How can this neighborhood be improved?
The most commonly stated improvements attendees would like to see are better pedestrian and bike infrastructure. Several attendees stated a preference for more parks and open space in the plan area, as well as local walkable and bikable food and retail destinations, community spaces, and more affordable housing. Some attendees like the potential for high-density housing in the area, but are concerned about whether the existing road infrastructure will be sufficient. Additional changes attendees would like to see include less traffic, better landscape maintenance along sidewalks, more parking at Lawrence Station (southern side), and a consideration for more schools.





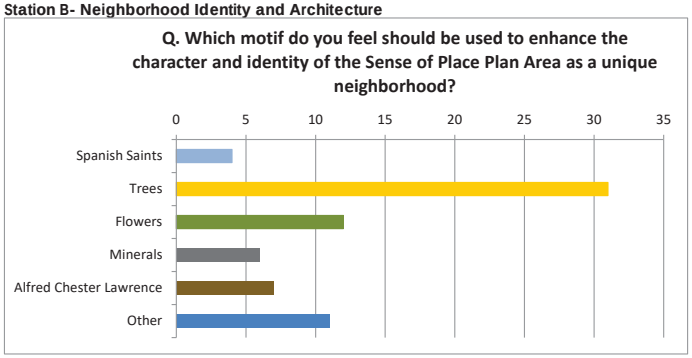
Meeting Summary
Lawrence Station Sense of Place Plan
RE: Compiled Input #1
March 6-31, 2019



Station A- Project Background

- Attendee walked to Costco before, and would like to be able to walk to Costco all the time but there is no sidewalk on parts of Aster Ave so it's not very safe
- Provide more lighting at station underpass
- Provide more lighting along Willow Ave
- Need stop light at the intersection of Willow/Reed
- Traffic will pick-up on E Evelyn Ave and create a big bottleneck at the new development on Aster Ave because there will be a high density of people trying to leave at the same time
- No existing sidewalk on Wolfe Rd
- Intuitive Surgical gives employees go passes for taking transit, and it would be great if other companies also offered public transit passes

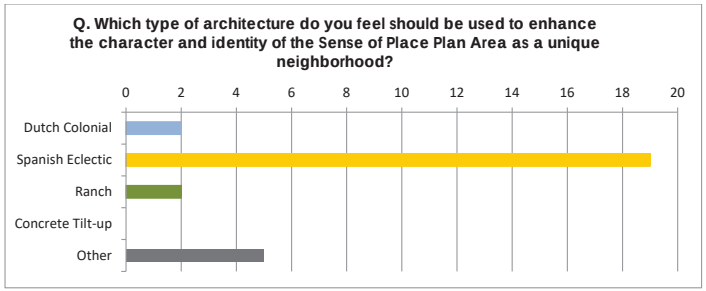
Station B- Neighborhood Identity and Architecture



18054_SUM_CompiledInput#1

Neighborhood Identity Comments:

- Native trees and shrubs (2)
- Farming history of the Valley of Heart's Delight – some cherry trees
- Name structure/center for more recent California politicians e.g. Edmund "Jerry" Brown
- Spanish cities, to match the architecture
- Natural elements to calm the higher density near Caltrain, keep feeling of open space
- Things related to trains- car (have a train car to play on in the park)
- Rock/mineral displays-art on corners, benches, etc.
- Green everything



(The question on neighborhood architecture was not included in the online survey.)

Neighborhood Architecture Comments:

- Pueblo (2)
- Indigenous people place names (2)
- Santa Clara Marketplace Architecture
- Biophilic design (that brings the outside in and creates a sense of place)
- Modern eclectic (similar to Santana Row)

Station C- Routes and Destinations, Opportunities

Attendees were asked to mark their typical routes and destinations and any problem areas within the Plan Area. The main destination for attendees is Costco, and the main area in need of improvements is the area surrounding Lawrence Caltrain Station. The intersections of Lawrence/Reed, Timberpine/Reed, Kifer/Lawrence were also considered problem areas by several attendees. Timberpine Ave, Willow Ave, and Sonora Ct are primarily used when attendees walk, bike, or take transit through the Plan Area. Aster Ave, French St, Monroe St, and the residential streets southwest of the station are also used when attendees are not driving. Primary vehicular routes used by attendees are Lawrence Expy, Timberpine Ave, Kifer Rd, Reed Ave, Monroe St, Central Expy, and Wolfe Rd.

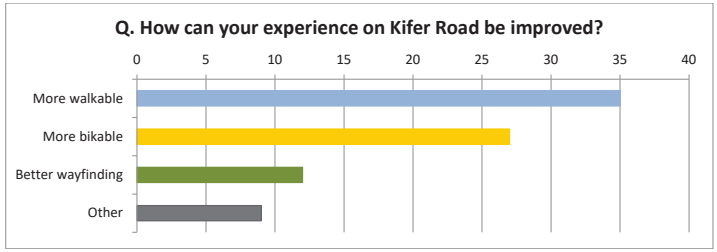
Routes and Destinations Plan Comments:

- Signal wait time at the intersection of Reed/Lawrence is long, 3 cycles (5)
- Hard to cross *(from Willow Ave across Reed Ave)* (5)
- Poor lighting at underpass, poor visibility *(at Lawrence Station and San Zeno Way)* (3)
- Would like bike lane to continue *(on Monroe St, just east of Lawrence Expy)*
- Traffic backup to Wilcox on Monroe St
- Left turn has a short stacking lane so overflow of left-turning vehicles impacts through lanes from northbound Lawrence Expy turning west onto Reed Ave
- Future "No left turn" restriction *(at the intersection of Willow/ Reed)* will push traffic westward to Timberpine Ave
- Unsafe for pedestrians and bicyclists to cross Reed Ave at Timberpine Ave
- Intersection at Evelyn and Reed Ave lacks 4th crosswalk leg
- Lack of baby bullet train service at Lawrence Station depresses ridership
- Mistake to build *(shopping plaza on Monroe St, adjacent to Monticello apartment homes)* away from train
- *Bike lane desired along Calabazas Creek, southward, and then westward adjacent to Caltrain tracks*
- The development at the Kifer/Lawrence intersection in the City of Santa Clara will put pressure on Lawrence Expy
- Bike lanes on high speed road do not feel safe *(on Kifer Rd)*
- Bike lane too narrow and messy, bushes block bike lane *(on Kifer Rd)*
- Need sidewalk *(on Kifer Rd, heading westward toward Wolfe Rd and on Wolfe Rd)*
- Need speed reduction along Kifer Rd to make it more comfortable for pedestrians and cyclists
- Intuitive Surgical employees drive between buildings, need better non-car option to reduce congestion
- Poor sidewalk maintenance, brambles grow in cracks in sidewalk
- VTA ACE shuttle stop *(sign and light post)* is in sidewalk *(on Kifer Rd at Commercial St)*
- Attendee bikes through the neighborhood because biking on Wolfe Rd and Kifer Rd is not safe
- Curb too tall *(at end of Sonora Ct)*
- Narrow pass with bollards *(in the 1090 Kifer parking lot)*
- Three speed bumps *(in the 1090 Kifer parking lot)*
- Evelyn Ave to Wolfe Rd signal is too short, so people avoid the intersection by taking a shortcut through the residential neighborhood
- *(Biking along residential streets including Sequoia Dr and Azalea Dr is a)* safer route than Evelyn Ave
- More midblock crossings would be great *(in the residential areas southwest of the station)*
- No crosswalks between Evelyn Terrace and Wolfe Rd, so there is a lot of jaywalking
- Wolfe Rd overpass over the train tracks needs sidewalks
- Street frontage on Evelyn Ave at Pine Cone Lumber is missing sidewalks
- Change from duplex to condo development creates a parking concern *(at intersection of Evelyn/ Wolfe)*
- How will people exit *(the new development at Peninsula Building Materials)*?
- Attendee wants trees along Aster Ave
- Attendee doesn't walk because it's not safe nor pleasant to walk *(in the Plan Area)*
- Are schools being considered in traffic demand?

Opportunities Plan Comments:

- Linear park *(along future Loop Road, along the southward extension of Corvin Rd)*
- Bike/ped crossing and path *(along Calabazas Creek to cross the Caltrain tracks)*
- Park and potential retail and dining destinations *(along the section of Sonora Ct on the future Loop Rd)*
- Sidewalk *(along Aster Ave)*
- Railroad under/overcrossing and trail *(along the western boundary of the Olympic Residential Group Townhomes development on Aster Ave and then connecting northward across the Caltrain tracks to Sonora Court)*
- Keep the existing park *(Intuitive Surgical Park at 945 Kifer Rd)*
- Bike path *(on Commercial St)*
- Extend trails so they are networked together so it is easy to connect north-south, east-west
- 2-acre park *(at Corn Palace development)*
- Bike/ped friendly *(at the intersection of Lawrence Expy and Reed Ave) (marked on Existing Conditions Plan)*
- Can these improvements link to Calabazas Creek Trail? *(marked on Existing Conditions Plan)*

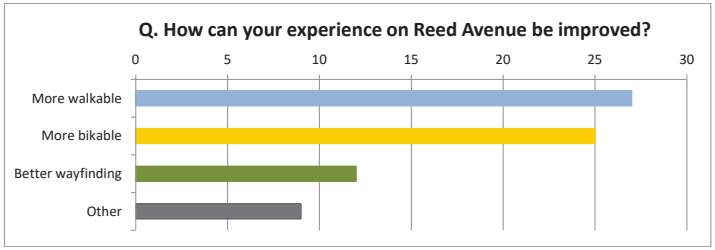
Station D- Existing Road Sections & Conceptual Road Sections



Kifer Road Comments:

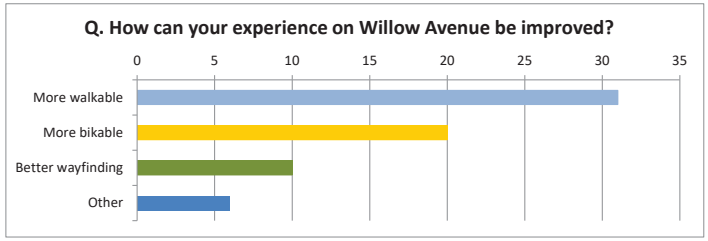
- 10' foot traffic lanes (2)
- El Camino Storm Drain – trail possibility (2)
- Protected Class IV bike lanes (2)
- Protected bike lanes (2)
- Grass between sidewalks and roads
- Wider bike lane
- Protected bike lane
- Bike lane should be minimum of 8' given 45 mph speeds on Kifer, 6' bike lane + 2' protected buffer
- Lower speed limit!
- Reduce travel lane to 10' to slow cars
- Add traffic calming speed table mid-block
- Add street trees for walking

- Repurpose 2-3 car lanes for: wider sidewalk, wider bike lane (+ separation), shorter crosswalks
- Unnecessary *(existing double left-turn lane)*
- Flip so bicycle lane is protected *(existing bike lane and existing landscape in public right-of-way)*
- Bike lane too narrow, gutter should not be included in width
- Need consistent sidewalk, fill gaps
- *(Bike lane)* too narrow, too much debris
- Take advantage of new sign opportunities



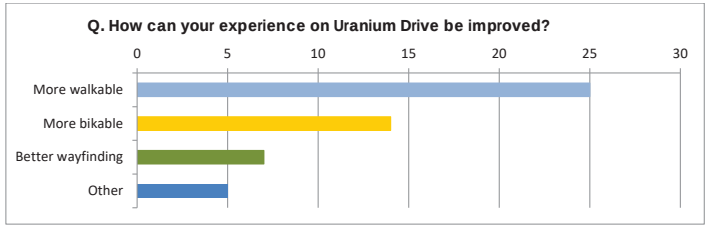
Reed Avenue Comments:

- Parking protected bike lane (5)
- Add gap between parking and bike lane for door zone (2)
- Why are these 18' lanes? (2)
- 18' lane needs → 11' (2)
- 11' lane, 8'-6" parking, 7' trees, 5' bike, 6' sidewalk
- Rethink *(locations of sidewalk, landscape, and parking)* for protected bike lane
- Red light cameras
- Narrower streets for calmer traffic, better bike & pedestrian safety
- Streets not designed for modern volumes- Timberpine, Reed/Lawrence interchange
- Need coordinated traffic control, falling apart
- Add center Class 4 bikeway
- Crosswalk lights @ Timberpine/Reed intersection, cars blow through light



Willow Avenue Comments:

- 12 ft lanes in residential areas are too wide- encourages speeding
- Remove street parking, add bike lanes
- Reed/Willow intersection currently dangerous to cross as a pedestrian. Too wide, no crosswalk.



Sonora Court Comments:

- Very popular bike route here. Please mark it safe for biking! Don't put bike lane in the door zone (where parked cars open doors/don't let cars park here) (2)
- 10' lanes, parking protected contraflow bike lane
- Why is there parking here? *(on-street parking on Sonora Court to create a parking-protected bike lane)*
- 10-11' travel lanes
- Go for Gold. Require Class 1 bikeways on each property as it redevelops.
- Let cars keep parking here!
- Put bike lanes inside the trees next to sidewalk (away from auto traffic)
- Most beautiful street in Plan Area
- Buses would be great

Aster Avenue Comments:

- 1) Need Class 1 or Class 4 on Aster. Major route to Lawrence Station, 2) Put bike lanes next to sidewalks, not in roadway
- Protect pedestrians from cyclists!

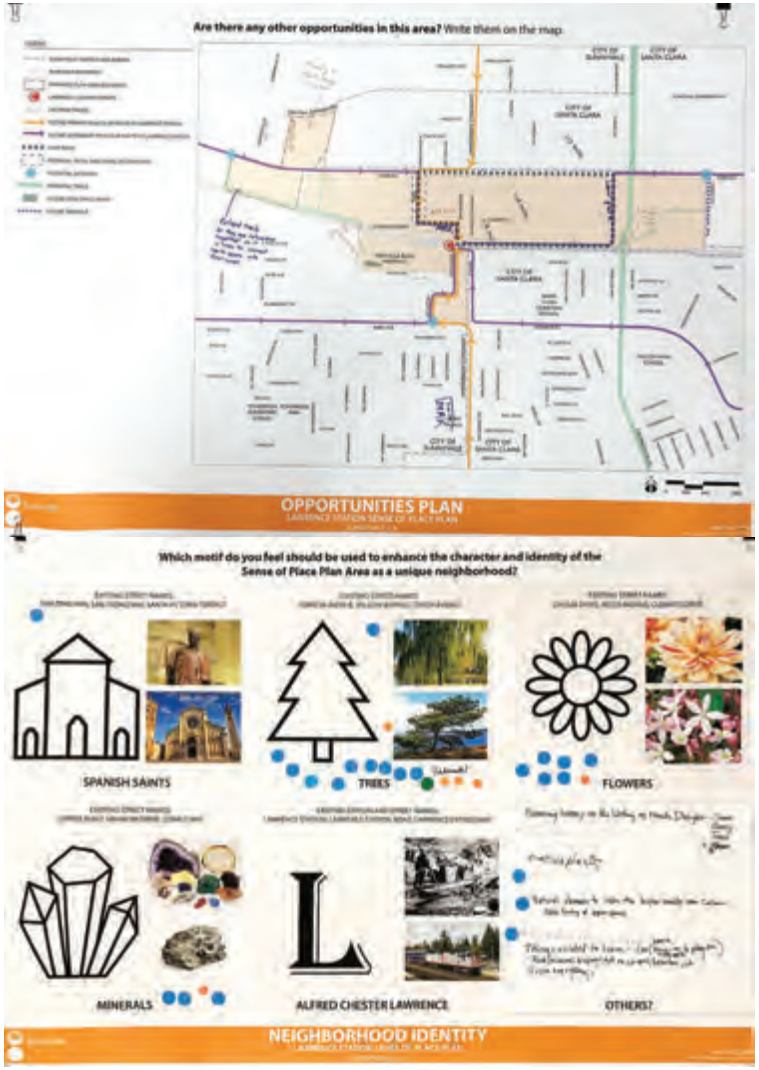
- Please retain the trees along Aster

Additional questions and comments:

- What kind of trees are proposed? Preference for no liquidambar and no maples
- Has the City been working/ communicating with Santa Clara? Development pattern (historically) doesn't seem to be coordinated.
  - City of Sunnyvale Vice Mayor Russ Melton offered to answer questions about coordination with City of Santa Clara.
- Which station discusses housing?
  - There will be a separate meeting for housing this year, date has not been set
- Is this for new or existing development?
  - This is to set the table for what type of improvements would happen
- How many property owners are there and how will park spaces be identified?
  - Developers must follow City open space requirements.
- Has there ever been a study to do a tunnel grade separation on Lawrence?
  - Yes, a study is being led by the County.
- Will plan look at parking at Lawrence station?
  - Plan will evaluate options for on-street parking.
- Will there be additional parking at station such as a new garage?
  - There are no current plans for additional parking at the station.
- If you want to build/create a sense of place, consider looking at the lifestyle of the demographic. In old European cities, people walked everywhere-- to the market, trains stations, and city centers.

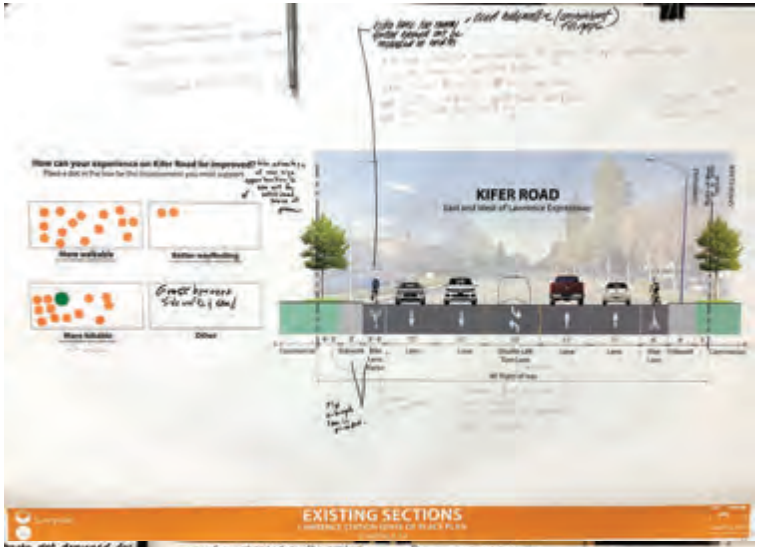
Attachments:

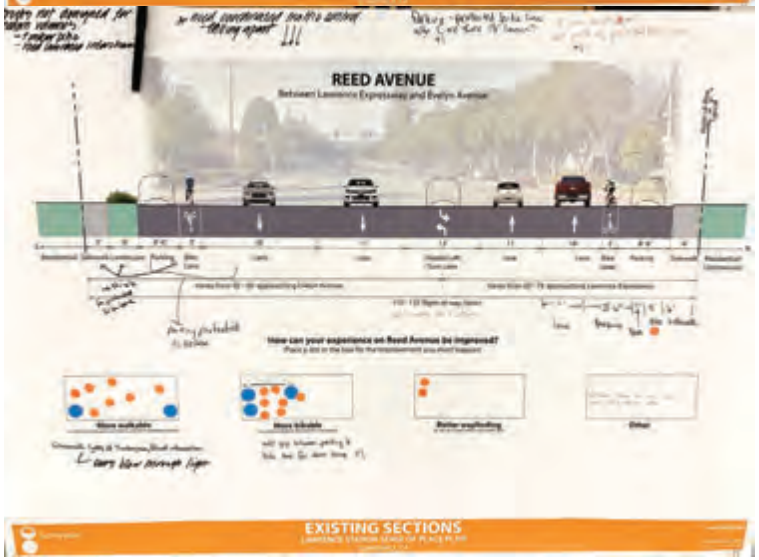

The following diagrams expand on the LSAP's Sonora Court pedestrian improvements.
Each scenario highlights how an accessible path can be provided given varied site conditions.
SCENARIO A
SCENARIO C
SCENARIO B
PROJECT BACKGROUND
EXISTING CONDITIONS PLAN

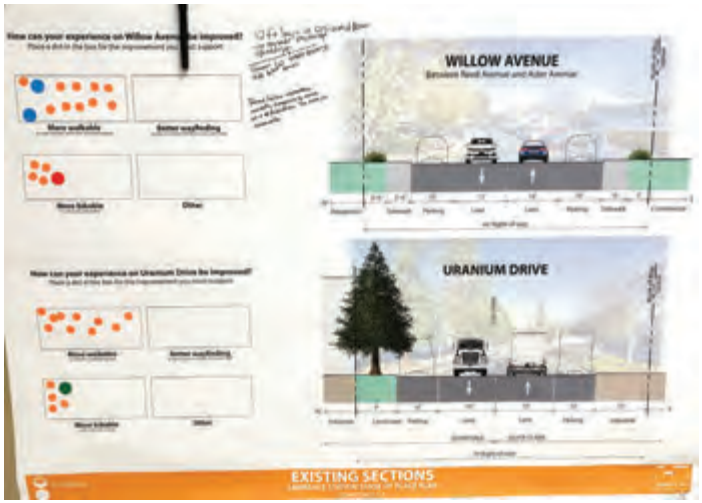

Are there any other opportunities in this area? Write them on the map.
OPPORTUNITIES PLAN
Which motif do you feel should be used to enhance the character and identity of the Sense of Place Plan Area as a unique neighborhood?
SPANISH SAINTS
TREES
FLOWERS
MINERALS
ALFRED CHESTER LAWRENCE
OTHERS?
NEIGHBORHOOD IDENTITY


type of architecture do you feel should be used to enhance the character and identity of the Sense of Place Plan Area as a unique neighborhood? Place a dot on your preference
DUTCH COLONIAL
SPANISH ECLECTIC
RANCH
CONCRETE TILT-UP
OTHERS?
NEIGHBORHOOD ARCHITECTURE


Where do you go and what route do you take?
Lawrence Station
ROUTES AND DESTINATIONS


KIFER ROAD
EXISTING SECTIONS


REED AVENUE
EXISTING SECTIONS



The information above is Callander Associates' understanding of input received. Callander Associates is proceeding with the project based on this understanding.

Submitted by: Melinda Wang

Callander Associates

cc: All attendees

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Recreate
Educate
Live+Work
Connect
Sustain

Via Email Only

March 20, 2020

Meeting Summary
Lawrence Station Sense of Place Plan
RE: Planning Commission Study Session #1
Date: March 9, 2020
Time: 6:00 p.m. to 8:00 p.m.

Attendees:

City of Sunnyvale Planning Commission:
Daniel Howard, Chair (Howard)
David Simons, Vice Chair (Simons)
Sue Harrison (Harrison)
John Howe (Howe)
Ken Olevson (Olevson)
Ken Rheaume (Rheaume)
Carol Weiss (Weiss)

City of Sunnyvale (City):
George Schroeder (GS), Planning, gschroeder@sunnyvale.ca.gov
Andy Miner (AM), Planning, aminer@sunnyvale.ca.gov
Amber Blizinski (AB), Planning, ablinzinski@sunnyvale.ca.gov
Lillian Tsang (LT), Transportation, ltsang@sunnyvale.ca.gov

Callander Associates (CALA):
Marie Mai (CALA), mmai@callanderassociates.com
Melinda Wang (CALA), mwang@callanderassociates.com

Community Members:
Cliff Bargar, employee at Intuitive Surgical
Blake Reinhardt, VP of Construction for Intuitive Surgical
Richard Mehlinger, chair of the BPAC
James Viso, real estate broker at Kidder Matthews
Richard Scott, PS Business Parks, 1310-1380 Kifer Rd

The purpose of this meeting was to receive feedback from the Planning Commission regarding the LSAP Area updates including the Boundary Expansion, Housing Study, and the Sense of Place Plan. This summary focuses on the items discussed that pertain to the Sense of Place Plan.

BURLINGAME
1633 Bayshore Highway, Suite 133
Burlingame, CA 94010
650.375.1313

GOLD RIVER
12150 Tributary Point Drive, Suite 140
Gold River, CA 95670
916.985.4366

SAN JOSE
2025 Gateway Place, Suite 285
San Jose, CA 95110
408.275.0565

Item	*Action to take*
1. Reconsider Kifer road diet, which had been previously approved by City Council and had been shown in the LSAP report from 2015.	Pending City direction
2. The Environmental Review excludes the Kifer road diet. The former Public Works Director of Sunnyvale and Public Works Director of Santa Clara both felt the Kifer road diet was not a good idea given the anticipated increase in vehicular demand. (AM)	Noted
3. Consider Class IV bikeways on major roads, or at least in one part of the City. (Weiss)	Pending City direction. Previously evaluated by CALA.
4. Consider establishing standards for architectural styles for this Plan Area. (Simons)	Pending City direction
5. Consider splitting SOP plan into multiple maps to make content easier to consume. (Howard)	CALA
6. Evaluate how kids (K-8th) can get to school if walking or biking. (Howe)	CALA
7. Consider in-road crosswalk warning lights and/or HAWK (High-intensity Activated crossWalK) beacon to increase pedestrian visibility.	Pending City direction
8. Include specific, firm language in report stating that no tree removals are allowed along Sonora Ct.	CALA
9. Lighting style and signage style do not match. Consider lighting and signage that are more similar in style. (Rheaume)	Pending City direction
10. Consider making the wayfinding signage lower in height so that it is more pedestrian-scale. (Howard)	Pending City direction
11. Consider a gateway arch over the street for the plan area similar to the Murphy Ave sign. (Howard)	Pending City direction
12. Consider signage style or graphics that speak to local history. (Rheaume)	Pending City direction
13. Consider font size variation in signage. (Simons)	CALA

14. Confirm tree sizes in road section graphics are realistic and appropriate to context. (Simons)	CALA
15. For the gateway signage preferences, the first-choice picks were as follows: Option A1 (dimensional letters): 2 votes, Option B: 1 vote, Option C: 2 votes.	Noted
16. Class I trail and Loop Road are desirable improvements. Reconsider Kifer Rd road diet to make Kifer Rd safer for pedestrians and cyclists. Intuitive Surgical (IS) employees often need to cross Kifer Rd to other campus buildings. (Bargar)	Noted
17. Prioritize pedestrians and reconsider the Kifer Rd road diet. Consider a median or other enhancements on Reed Ave to decrease the crossing distance and improve pedestrian access and crossing ease. (Mehlinger)	Noted

The information above is Callander Associates' understanding of items discussed at the meeting. Callander Associates is proceeding with the project based on this understanding.

Submitted by: Melinda Wang

Callander Associates

cc: All attendees

18054_SUM_StudySession#1

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APPENDIX B

				Kifer Road		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	1	$1,000,000	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,100,000	
						$2,100,000
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	9,040	$361,600	
2.	Curb	LF	$60	7,240	$434,400	
3.	Chatter bars	LF	$35	800	$28,000	
4.	Landscaping and irrigation	LF	$180	3,620	$651,600	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,623,200	
						$3,098,800
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	3	$150,000	
2.	Directional sign	EA	$1,000	2	$2,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	3	$120,000	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$299,200	
						$571,200
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	4,100	$10,250	
2.	Demolition (existing markings)	EA	$110	9	$990	
3.	Pavement markings	EA	$84	9	$756	
4.	Slurry seal	SY	$3	5,900	$17,700	
5.	Bike lane striping	LF	$2.75	16,200	$44,550	
6.	Buffer striping	LF	$5	8,100	$40,500	
7.	Signs and sign posts	EA	$425	14	$5,950	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$126,200	
						$246,896
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$0	
2.	PG&E service to traffic signal	EA	$30,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
F	**ESTIMATED PROJECT TOTAL**					$6,017,000

				Willow Avenue		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	0	$0	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	0	$0	
2.	Curb	LF	$60	0	$0	
3.	Chatter bars	LF	$35	0	$0	
4.	Landscaping and irrigation	LF	$180	0	$0	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	0	$0	
2.	Directional sign	EA	$1,000	1	$1,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	0	$0	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,100	
						$2,100
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	1,600	$4,000	
2.	Demolition (existing markings)	EA	$110	4	$440	
3.	Pavement markings	EA	$84	4	$336	
4.	Slurry seal	SY	$3	1,600	$4,800	
5.	Bike lane striping	LF	$2.75	4,000	$11,000	
6.	Buffer striping	LF	$5	1,600	$8,000	
7.	Signs and sign posts	EA	$425	6	$2,550	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$31,400	
						$62,526
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$0	
2.	PG&E service to traffic signal	EA	$30,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
F	**ESTIMATED PROJECT TOTAL**					$65,000

				Reed Avenue		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	0	$0	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	0	$0	
2.	Curb	LF	$60	0	$0	
3.	Chatter bars	LF	$35	0	$0	
4.	Landscaping and irrigation	LF	$180	0	$0	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	1	$50,000	
2.	Directional sign	EA	$1,000	0	$0	
3.	Electrical service and gateway sign lighting	EA	$40,000	1	$40,000	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$99,000	
						$189,000
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	600	$1,500	
2.	Demolition (existing markings)	EA	$110	2	$220	
3.	Pavement markings	EA	$84	2	$168	
4.	Slurry seal	SY	$3	1,200	$3,600	
5.	Bike lane striping	LF	$2.75	3,400	$9,350	
6.	Buffer striping	LF	$5	1,200	$6,000	
7.	Signs and sign posts	EA	$425	2	$850	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$22,900	
						$44,588
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$0	
2.	PG&E service to traffic signal	EA	$30,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
F	**ESTIMATED PROJECT TOTAL**					$234,000

				Class I Shared-Use Path		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	0	$0	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	1	$2,250,000	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$2,475,000	
						$4,725,000
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	0	$0	
2.	Curb	LF	$60	0	$0	
3.	Chatter bars	LF	$35	0	$0	
4.	Landscaping and irrigation	LF	$180	0	$0	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	0	$0	
2.	Directional sign	EA	$1,000	9	$9,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	0	$0	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$9,900	
						$18,900
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	0	$0	
2.	Demolition (existing markings)	EA	$110	0	$0	
3.	Pavement markings	EA	$84	0	$0	
4.	Slurry seal	SY	$3	0	$0	
5.	Bike lane striping	LF	$2.75	0	$0	
6.	Buffer striping	LF	$5	0	$0	
7.	Signs and sign posts	EA	$425	0	$0	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$0	
2.	PG&E service to traffic signal	EA	$30,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
F	**ESTIMATED PROJECT TOTAL**					$4,744,000

				Sonora Court		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	0	$0	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	0	$0	
2.	Curb	LF	$60	0	$0	
3.	Chatter bars	LF	$35	0	$0	
4.	Landscaping and irrigation	LF	$180	0	$0	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	0	$0	
2.	Directional sign	EA	$1,000	1	$1,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	0	$0	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,100	
						$2,100
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	0	$0	
2.	Demolition (existing markings)	EA	$110	0	$0	
3.	Pavement markings	EA	$84	4	$336	
4.	Slurry seal	SY	$3	0	$0	
5.	Bike lane striping	LF	$2.75	4,700	$12,925	
6.	Buffer striping	LF	$5	0	$0	
7.	Signs and sign posts	EA	$425	6	$2,550	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$14,600	
						$30,411
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$0	
2.	PG&E service to traffic signal	EA	$30,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
F	**ESTIMATED PROJECT TOTAL**					$33,000

				Loop Road (includes Santa Vittoria Terrace)		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	0	$0	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	0	$0	
2.	Curb	LF	$60	0	$0	
3.	Chatter bars	LF	$35	0	$0	
4.	Landscaping and irrigation	LF	$180	0	$0	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	0	$0	
2.	Directional sign	EA	$1,000	2	$2,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	0	$0	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$2,200	
						$4,200
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	0	$0	
2.	Demolition (existing markings)	EA	$110	0	$0	
3.	Pavement markings	EA	$84	9	$756	
4.	Slurry seal	SY	$3	8,200	$24,600	
5.	Bike lane striping	LF	$2.75	17,300	$47,575	
6.	Buffer striping	LF	$5	8,200	$41,000	
7.	Signs and sign posts	EA	$425	14	$5,950	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$125,300	
						$245,181
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$0	
2.	PG&E service to traffic signal	EA	$30,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
F	**ESTIMATED PROJECT TOTAL**					$250,000

				Uranium Drive		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	0	$0	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	0	$0	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	0	$0	
2.	Curb	LF	$60	0	$0	
3.	Chatter bars	LF	$35	0	$0	
4.	Landscaping and irrigation	LF	$180	0	$0	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	0	$0	
2.	Directional sign	EA	$1,000	0	$0	
3.	Electrical service and gateway sign lighting	EA	$40,000	0	$0	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$0	
						$0
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	0	$0	
2.	Demolition (existing markings)	EA	$110	0	$0	
3.	Pavement markings	EA	$84	3	$252	
4.	Slurry seal	SY	$3	1,100	$3,300	
5.	Bike lane striping	LF	$2.75	2,100	$5,775	
6.	Buffer striping	LF	$5	1,100	$5,500	
7.	Signs and sign posts	EA	$425	4	$1,700	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$16,300	
						$32,827
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$1,500,000	
2.	PG&E service to traffic signal	EA	$30,000	1	$30,000	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,683,000	
						$3,213,000
F	**ESTIMATED PROJECT TOTAL**					$3,246,000

				TOTAL		
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	**Class I Shared-Use Path**					
1.	Pedestrian/bicycle crossing near Calabazas Creek at Kifer Rd	EA	$1,000,000	1	$1,000,000	
2.	Pedestrian/bicycle crossing near Calabazas Creek at Caltrain tracks	EA	$2,250,000	1	$2,250,000	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$3,575,000	
						$6,825,000
B	**Landscaped Median**					
1.	Demolition (sawcutting, AC)	LF	$40	9,040	$361,600	
2.	Curb	LF	$60	7,240	$434,400	
3.	Chatter bars	LF	$35	800	$28,000	
4.	Landscaping and irrigation	LF	$180	3,620	$651,600	
5.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,623,200	
						$3,099,000
C	**Wayfinding**					
1.	Gateway sign	EA	$50,000	4	$200,000	
2.	Directional sign	EA	$1,000	15	$15,000	
3.	Electrical service and gateway sign lighting	EA	$40,000	4	$160,000	
4.	Start-up, design, inspection, contingencies	LS	110%	Allow	$412,500	
						$788,000
D	**Bike Lane**					
1.	Demolition (existing striping)	LF	$2.50	6,300	$15,750	
2.	Demolition (existing markings)	EA	$110	15	$1,650	
3.	Pavement markings	EA	$84	31	$2,604	
4.	Slurry seal	SY	$3	18,000	$54,000	
5.	Bike lane striping	LF	$2.75	47,700	$131,175	
6.	Buffer striping	LF	$5	20,200	$101,000	
7.	Signs and sign posts	EA	$425	46	$19,550	
8.	Start-up, design, inspection, contingencies	LS	110%	Allow	$336,700	
						$663,000
E	**Enhanced Intersection**					
1.	Traffic signal, new	LS	Allow	Allow	$1,500,000	
2.	PG&E service to traffic signal	EA	$30,000	1	$30,000	
3.	Start-up, design, inspection, contingencies	LS	110%	Allow	$1,683,000	
						$3,213,000
F	**ESTIMATED PROJECT TOTAL**					$14,588,000

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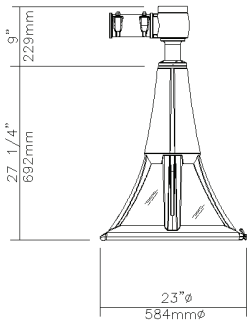
APPENDIX C



EPA: 1.9 sq ft / weight: 52 lb (23.6 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Type	**Roadway Combo pole**
Qty	**1**	Luminaire	**[MSC-002]-55W32LED4K-G3-LE3F-UNV-DMG-[SMB-024]-DH-[RCD7-029]-BKTX**

Description of Components:

Guard: In a round shape, this guard is made of four cast aluminum 356 decorative arms welded to the housing and to the access-mechanism.

Housing: In a round shape, this housing is made of cast 356 aluminum, c/w a watertight grommet, mechanically assembled to the bracket with four bolts 3/8-16 UNC. This suspension system permits for a full rotation of the luminaire in 90 degree increments. The housing is complete with a watertight access cap mechanically secured with two captive Allen head screws, giving access to the driver. Rated IP66.

Access-Mechanism: Made of cast aluminum 356 technical ring with latch and hinge. The mechanism shall offer tool-free access to the Light engine.

Light Engine: LEDgine composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**
Electrical components are RoHS compliant.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Lens: Made of soda-lime tempered glass lens, mechanically assembled and sealed onto the ring of the access mechanism.

LED Module: Composed of 32 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

MSRP Arterial w/ Median -Sunnyvale / Lumec Combo Pole (MSC 55w LE3F & MSC-C 30w type 2)

Optical System: (LE3F), IES type III (asymmetrical). Composed of high-performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated.0% uplight and U0 per IESNA TM-15.

Driver: High power factor of 90% minimum. Electronic driver, operating range 50/60 Hz. **Auto-adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class 1**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees.Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees. **Driver comes with dimming compatible 0-10 volts.**

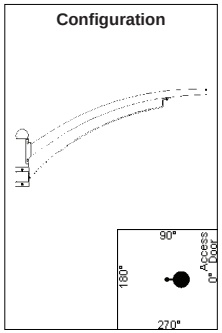
The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

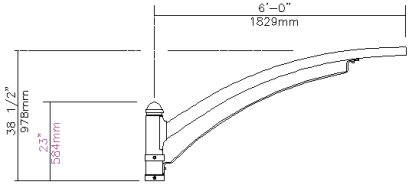
Driver Options: (DMG), Dimming compatible 0-10 volts. For applicable warranty, certification and operation guide see Lumec dimmable luminaire specification document for unapproved device installed by other. To get document, click on this link: Specification document or go on web site on this address: https://www.signify.com/b-dam/signify/en-us/brands/lumec/Lumec-un-approved-control-device-installed-by-others-7_d.pdf

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Adaptor: (SMB), Made of cast 356 aluminum, complete with a block connector, mechanically assembled to the bracket. Can be mounted on a 1.66"(42mm) to 2.38"(60mm) outside diameter bracket arm tubing that slip fits 6.5" (165mm) long inside the adaptor, permits an adjustment of ± 5°.

Luminaire Options: (DH), Decorative Hood, made of satin clear acrylic, mechanically assembled. **(RCD7)** Receptacle with 7 pins enabling dimming and with two extra connections for future use (these connections are capped off at the factory requires connections to be made in the field), can be used with a twist lock control device or photoelectric cell or a shorting cap. Use of photocell or shorting cap is required to ensure proper illumination. **Receptacle connections to control the main and mid-pole luminaire and dimming functions will be the same for the main mid-pole luminaire. (MSC-002)** Fixture with dimming wires coming out of the fixture.





		Type	**Roadway Combo pole**
Qty	**1**	Bracket	**AC6-1A-R5 9/16-BKTX**

Description of Components:

Arm: Shall be made from spun and tapered aluminum 6063-T4, tempered to T6 after welding. The tapered arm is formed into a vertically oriented ellipse of 4" (102mm) by 2 7/8" (73mm) welded onto a plate and mechanically assembled to central adaptor. The bracket end is of 2 3/8" (60mm) O.D.

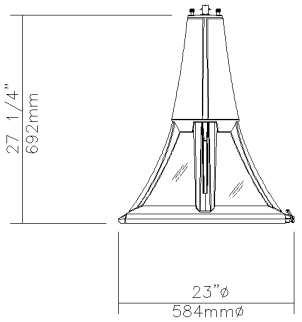
Decorative Element: Flat made of bent aluminum, 2" (51mm) wide, 0.375" (10mm) thick, mechanically assembled.

Central Adaptor: Made of cast 356 aluminum, complete with a top decorative cap. Slip-fits 9" (229mm) over a 5 9/16" (141mm) outside diameter pole or tenon. Mechanically fastened to the pole or tenon.

Note: The AC6 bracket meets the AASHTO 2001 standard specifications for structural support for luminaires.

Bracket Properties (Weight and EPA): 24 lbs (10.9 kg), 3.15 ft²

MSRP Arterial w/ Median -Sunnyvale / Lumec Combo Pole (MSC 55w LE3F & MSC-C 30w type 2)



		Type	**Roadway Combo pole**
Qty	**1**	Mid-Pole Luminaire	**[MSC-C-001]-140L650NW-G1-2-UNV-DMG-DH-BKTX**

Description of Components:

Guard: In a round shape, this guard is made of four cast aluminum 356 decorative arms welded to the housing and to the access-mechanism.

Housing: In a round shape, this housing is made of cast 356 aluminum, c/w a watertight grommet, mechanically assembled to the bracket with four bolts 3/8-16 UNC. This suspension system permits for a full rotation of the luminaire in 90 degree increments. The housing is complete with a watertight access cap mechanically secured with two captive Allen head screws, giving access to the driver. Rated IP66.

Access-Mechanism: Made of cast aluminum 356 technical ring with latch and hinge. The mechanism shall offer tool-free access to the Light engine.

Light Engine: Light guide technology provides low-glare, uniform illumination. Composed of 140 LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine frame ensures contact with housing to provide heat conduction and sealing against the elements. Light engine is RoHS compliant. Maximum ambient operating temperature up to 40C(104F) degrees.

LED Module: Composed of 140 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (4000K +/- 130K), CRI 70 Min.

Optical System: The advanced LED comfort optical system provides IES type II (asymmetrical) distribution. Composed of high performance UV-stabilized optical grade lens with molded micro-optics to achieve desired distribution optimized to get a

exceptional lighting uniformity. System is rated IP66. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated.0% uplight and U0 per IESNA TM-15.

Driver: High power factor of 95% min. Electronic driver, operating range 50/60 Hz. Auto-adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class 2, THD of 20% max.

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Driver: Driver comes with dimming compatible 0-10 volts. RoHS compliant.

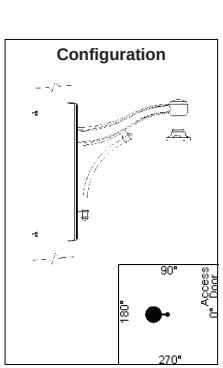
The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 6kV (min).

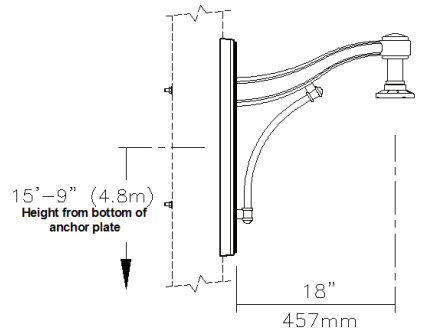
Driver Options: (DMG), Dimming compatible 0-10 volts. For applicable warranty, certification and operation guide see Lumec dimmable luminaire specification document for unapproved device installed by other. To get document, click on this link: Specification document or go on web site on this address: https://www.signify.com/b-dam/signify/en-us/brands/lumec/Lumec-un-approved-control-device-installed-by-others-7_d.pdf

Luminaire Options: (DH), Decorative Hood, made of satin clear acrylic, mechanically assembled. **(MSC-002)** Fixture with dimming wires coming out of the fixture.

Driver: Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

MSRP Arterial w/ Median -Sunnyvale / Lumec Combo Pole (MSC 55w LE3F & MSC-C 30w type 2)





		Type	**Roadway Combo pole**
Qty	**1**	Mid-Pole Bracket	**VC-F-180deg-BKTX**

Description of Components:

Arm: Made of cast 356 aluminum, welded to mounting plate.

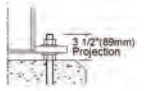
Decorative Element: Made of cast 356 aluminum, welded assembly.

Mounting Plate: Made of cast 356 aluminum, mechanically assembled to pole by two through bolts.

Bracket Properties (Weight and EPA): 16 lbs (7.3 kg), 1.7 ft²

NOTE: No bracket to be installed.

Base & Bolts Information



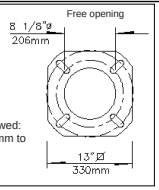
Comes with 4 steel anchor bolts, 1" X 33" + 3" J Type Bolts, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

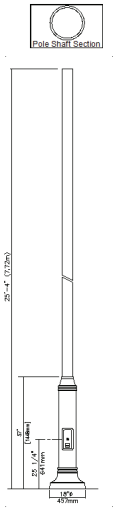
Anchor Plate

-Bolt Circle: 11" (279mm)

-Thickness: 1"(25mm)

-NOTE: Bolt Circle Allowed: 11" to 13" 279mm to 330mm





		Type	**Roadway Combo pole**
Qty	**1**	Pole	**SSM8V-25.34-IP-MPL-15.75-BKTX**

Description of Components:

Pole Shaft: Shall be made from a 5 9/16" (141mm) round high tensile carbon steel tubing, having a 0.250" (6.4mm) wall thickness, welded to the pole base.

Joint Cover: Two-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Base: Shall be made from a 8 5/8" (219mm) round high tensile carbon steel tubing base having a 0.180" (4.6mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 25 1/4" (641mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Options: (IP) The pole inner wall will be painted.
(**MPL**) Mid-Pole Luminaire.

Note: A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

IMPORTANT: Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

Pole Weight: 363 lbs (165 kg)

MSRP Arterial w/ Median -Sunnyvale / Lumec Combo Pole (MSC 55w LE3F & MSC-C 30w type 2)

Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, **wiring included without connector for Mid-pole luminaire**. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening. **Wiring will be shipped in a separate box and will be installed by others.**Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding the bracket.

Hardware: All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Anchor Bolts: Anchor bolts made of ASTM F1554 grade 55 steel with a minimum yield strength of 55,000 psi. Nuts made of ASTM F1554-99 grade A steel or better. The thread adjustment is ANSI class 2B regardless of the diameter of the bolts. Washers made of ASTM grade F-844 steel or better. All galvanized parts are hot-dip galvanized with minimum requirement the ACNOR G-164 standard.

Finish: Color to be **black textured RAL9005TX (BKTX)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

Pole Information: (R5 9/16), Bracket to be mounted on top of a 5 9/16" (141mm) outside diameter round pole or tenon.

LED products manufacturing standard: The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

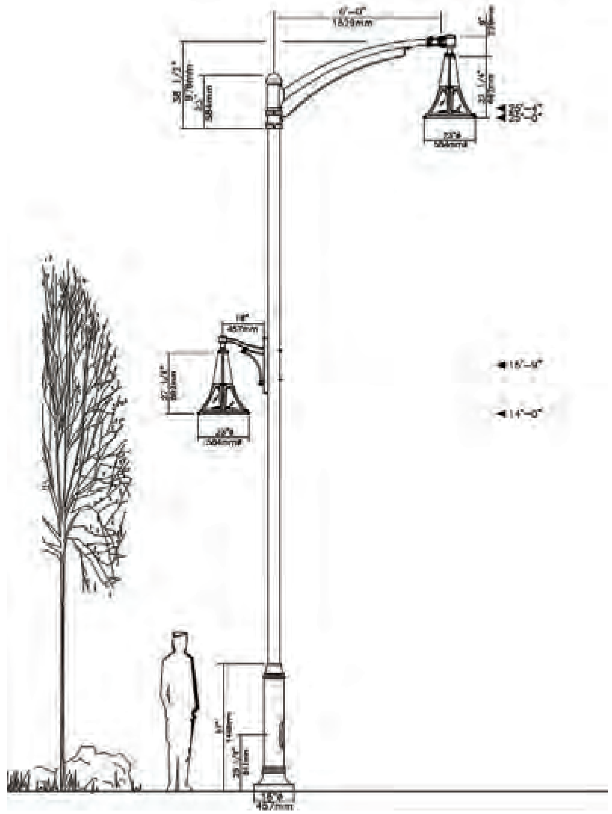
Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Vibration Resistance: The MSC meets the **ANSI C136.31, 2010**, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100 000 cycles)

Mechanical resistance: This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessories and foundation under the given site conditions and intended usage. The addition of any other item to the pole may dramatically impact the wind load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Lumec assumes no responsibility for such complete analysis or product selection. Failure to insure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

Web site information details: / cULus Certification / CSA Pole Certification

MSRP Arterial w/ Median -Sunnyvale / Lumec Combo Pole (MSC 55w LE3F & MSC-C 30w type 2)



Lumec MSC 55w LE3F 30w type 2 combo 1.doc
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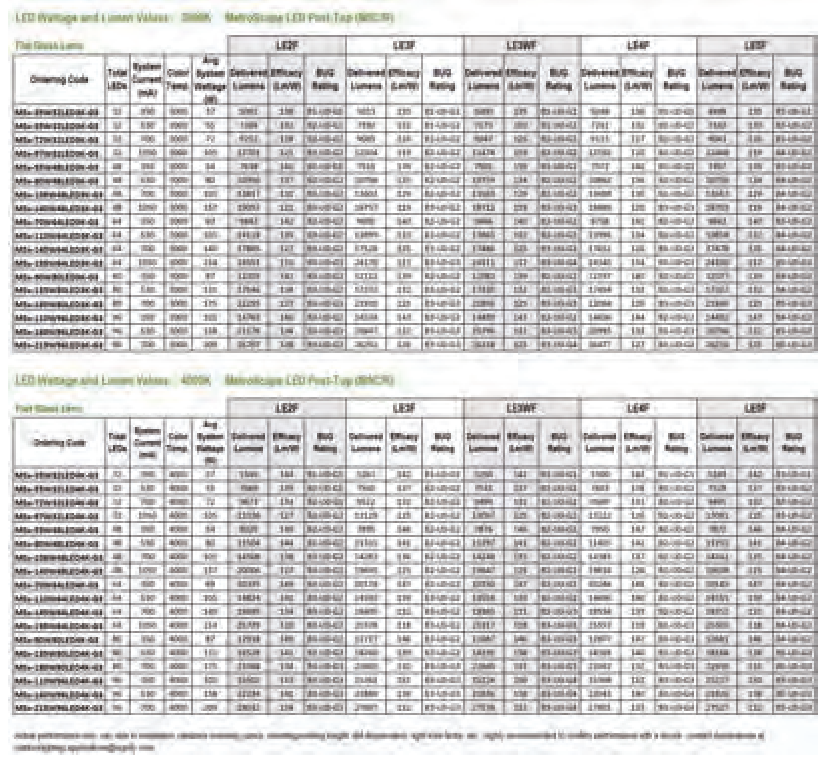

LED Wattage and Lumen Values - 3000K MetroScape LED Post-Top (MSCR)

Flat Glass Lens

Ordering Code	Total LEDs	System Current (mA)	Color Temp	Avg System Wattage (W)	LE2F Delivered Lumens	LE2F Efficacy (Lm/W)	LE2F BUG Rating	LE3F Delivered Lumens	LE3F Efficacy (Lm/W)	LE3F BUG Rating	LE3WF Delivered Lumens	LE3WF Efficacy (Lm/W)	LE3WF BUG Rating	LE4F Delivered Lumens	LE4F Efficacy (Lm/W)	LE4F BUG Rating	LE5F Delivered Lumens	LE5F Efficacy (Lm/W)	LE5F BUG Rating
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LED Wattage and Lumen Values - 4000K MetroScape LED Post-Top (MSCR)

Flat Glass Lens

Ordering Code	Total LEDs	System Current (mA)	Color Temp	Avg System Wattage (W)	LE2F Delivered Lumens	LE2F Efficacy (Lm/W)	LE2F BUG Rating	LE3F Delivered Lumens	LE3F Efficacy (Lm/W)	LE3F BUG Rating	LE3WF Delivered Lumens	LE3WF Efficacy (Lm/W)	LE3WF BUG Rating	LE4F Delivered Lumens	LE4F Efficacy (Lm/W)	LE4F BUG Rating	LE5F Delivered Lumens	LE5F Efficacy (Lm/W)	LE5F BUG Rating
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