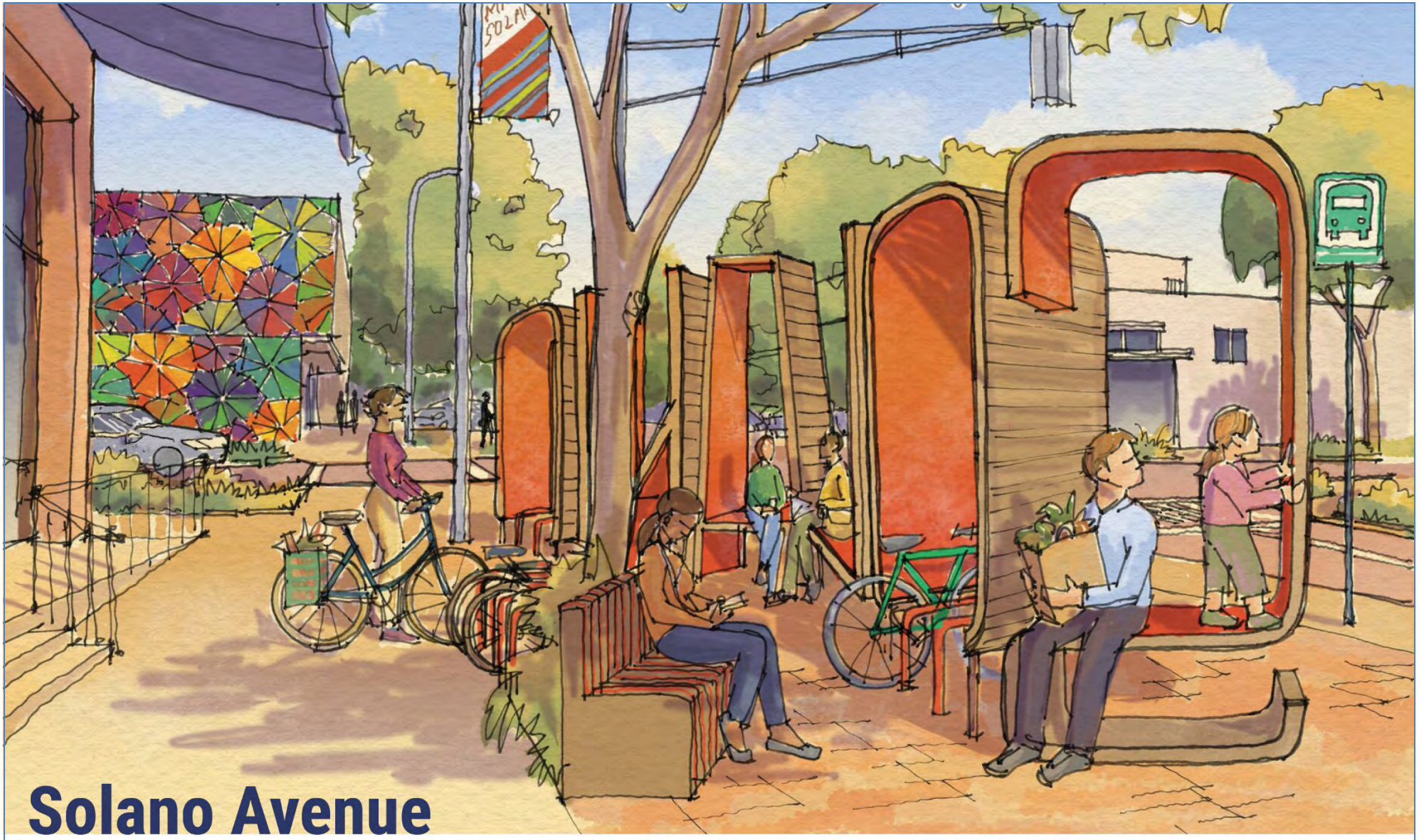

Solano Avenue

Complete Streets and Corridor Revitalization Study

Final Study, August 2019

CITY OF ALBANY
URBAN VILLAGE BY THE BAY
CALIFORNIA

TOOLE DESIGN | OPTICOS | Local Government Commission | Caltrans

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Table of Contents

Executive Summary

The Solano Avenue Complete Streets and Corridor Revitalization Study (the "Study") is the culmination of over a year of robust community engagement, existing conditions and data analysis, and planning and design. This Study provides a vision for the future of Solano Avenue, from Masonic Avenue to Tulare Avenue, and presents a proposed corridor design, design palette, and supportive strategies.

The Study proposes streetscape and mobility improvements to improve safety, enhance access, deliver a cohesive streetscape, and support economic development. This Study envisions modifying the existing corridor to better serve pedestrians, bicyclists, motorists, and transit riders.

Illustration of the reconfiguration of Tacoma Avenue, north of Solano Avenue.

Tell me more! What's included in this Study?

Chapter 1: Introduction. Overview of the Study purpose, how the Study was developed, and the Study goals.

Chapter 2: Corridor Conditions and Recommendations. Reviews the existing conditions, illustrates the proposed corridor design, and details the elements addressed by the design.

Chapter 3: Streetscape Design Palette. A tailored design palette that will guide the design of the specific corridor elements and supportive strategies.

Chapter 4: Implementation Strategy. Ideas for short, medium, and long-term implementation of the proposed corridor design as well as a funding and implementation plan for achieving the Study's vision.

Chapter 1: Introduction

Looking west on Solano Avenue at Key Route Boulevard

Figure 1.1. Upper Solano Avenue Today

Chapter 1: Introduction

Solano Avenue is the historical, social, and economic heart of Albany, running east-west from the Berkeley Hills to the Union Pacific railroad tracks adjacent to Interstate 80. The corridor is a designated truck route for commercial truck activity in Albany and Berkeley. Additionally, Solano Avenue is a bus route for AC Transit with local service on the 18 line and Transbay service on the G line. Known as Main Street until the early 1900s, Solano Avenue continues to retain its main street character as the heart of the Albany community (see Figure 1.1).

Throughout the year, Solano Avenue's eclectic coffee shops, antique stores, ethnic restaurants, and other businesses draw people from Albany and the surrounding communities of El Cerrito, Richmond, Kensington, Berkeley and beyond for quick errands and leisurely visits. The immensely popular Solano Avenue Stroll is the East Bay's largest street festival. Held on the second Sunday of September, it draws crowds from across the Bay Area.

Solano Avenue has retained its popularity despite an aging public realm and out-of-date infrastructure. Today, curb ramps, sidewalks, traffic signals, and crosswalks do not meet current standards, and upgrades are needed. In addition, the streetscape is dated with a 1950s feel; improvements are needed to upgrade this section of the corridor to meet current design standards and needs.

The City of Albany has already taken strides to improve Lower Solano Avenue, between San Pablo Avenue and Masonic Avenue, through streetscape improvements that include decorative light standards, new benches, and corner curb extensions. These improvements along Lower Solano Avenue served as a guide for improvements along Upper Solano Avenue.

Study Purpose

The Solano Avenue Complete Streets and Corridor Revitalization Study (the "Study") focuses on streetscape and mobility improvements along Upper Solano Avenue from Masonic Avenue to Tulare Avenue (see Figure 1.2). This Study incorporates innovative urban design and infrastructure upgrades to improve pedestrian safety and access, provide stronger connections to transit, enhance the public realm, implement spot improvements for bicyclists, manage curbside space, and improve predictability for motorists. The goal is a vibrant and accessible main street for Albany that is safe, comfortable, and enjoyable for all users -- whether they arrive by foot, by bike, in a wheelchair, on public transit, or in a car.

Study Organization

This Study is organized into four chapters and three appendices.

Chapter 1	Introduction
Chapter 2	Corridor conditions and recommendations
Chapter 3	Streetscape design palette
Chapter 4	Implementation strategy
Appendix A	Summary of community engagement activities
Appendix B	Overview of existing conditions and relevant plans and policies
Appendix C	Design guidance and assumptions

Study Process

The development of the Study began in February of 2018, and is the culmination of a year of community engagement paired with a data-driven existing conditions analysis and needs assessment. This process formed the basis of the Study's goals, proposed concept design, design palette, and implementation strategy.

Community Priorities

Over the course of a year, the City solicited ideas from the Albany community on what Solano Avenue is like today and how it could be improved in the future. Several common themes and priorities emerged from the community's feedback, including a desire for:

- Slower traffic and a narrower roadway
- Wider sidewalks free of tripping hazards
- Clearly marked crosswalks with curb ramps that align with people's path of travel
- More curb bulb-outs
- Pedestrian-scale street lighting
- More public gathering space (including outdoor dining) and parklets that incorporate public art
- More trees and landscaping that are appropriate for a main street
- Additional parking spaces
- Additional bicycle parking/racks
- Safer bicycling conditions

Highlights of the outreach efforts are discussed in this section; additional information can be found in Appendix A: Community Outreach Summary.

Current City Policies

2012 Albany Active Transportation Plan

The Albany Active Transportation Plan is a combined Bicycle Master Plan update and Pedestrian Master Plan that was adopted in 2012. The Plan identifies Solano Avenue as a priority walking corridor and recommends safety and streetscape improvements along the corridor.

The Plan envisions Solano Avenue as a walking-oriented “Main Street” that is safe for cyclists, pedestrians, and motorists, builds foot traffic for local businesses, encourages interaction in public spaces, and adds vibrancy to the community. The Plan’s recommendations have been carried forth into this Study.

Because Solano Avenue is a designated truck and transit route, and there are parallel east-west bicycle corridors in the vicinity of Solano Avenue, no bicycle facilities were proposed along Solano Avenue in the 2012 Albany Active Transportation Plan.

Table 1.1 captures the recommendations provided in the Active Transportation Plan for Solano Avenue and identifies how these are included in this Study. The City will likely pursue an update to the ATP within the next one to two years.

General Plan 2035

The Albany General Plan was adopted by City Council in April 2016. The Transportation Element contains Goal T-1 "Complete Streets" which seeks to "create and maintain a street network that accommodates all modes of travel, meetings the mobility needs of all travelers, and enhances Albany's sense of place." The following policies are identified in the General Plan that pertain to this Study:

- T-1.1: Balancing the Needs of All Users
- T-1.2: Context Sensitive Design
- T-1.3: Complete Streets Operating Procedures
- T-1.4: Complete Streets Design
- T-1.5: Connecting the City
- T-1.6: Accessibility
- T-1.7: Development Review
- T-3.G: Transit Corridors
- T-3.I: Bus Stop Improvements
- T-4.F: Pedestrian Crossings
- T-6.9: Levels of Service
- T-7.E: Solano Avenue Parking Management
- PROS-6.G: Key Route Median

Additional information about the City’s adopted plans and policies that influenced the development of this Study can be found in Appendix B: Existing Conditions Report.

Table 1.1. 2012 Albany Active Transportation Recommendations and Study Recommendations

	2012 Albany Active Transportation Plan Recommendation	2019 Solano Avenue Complete Streets and Corridor Revitalization Study Recommendation
	Corridor-wide Improvements (Masonic Avenue to Peralta Avenue)	
1	Install corner curb extensions with natural bio-swales where feasible.	Recommended
2	Install directional curb ramps on all corners and upgrade to meet current ADA standards.	Recommended
3	Install bicycling route directional signage at streets with designated bicycling routes or lanes (Santa Fe Avenue and Peralta Avenue).	Recommended – The Study recommends installing wayfinding signs for bicyclists on and off the Solano Avenue corridor.
4	Install bicycle parking in areas where none currently exists.	Recommended
5	Reconstruct sidewalks to provide an unobstructed seven-foot walking way width.	Recommended; the proposed corridor design establishes a minimum sidewalk width of 7.5 feet.
6	Conduct a pilot project to determine feasibility of back-in angled parking on Solano Avenue between San Pablo Avenue and Masonic Avenue. Depending upon results of pilot, implement back-in angled parking on Solano Avenue from Masonic Avenue to Peralta Avenue.	The Study recommends conducting a pilot project for back-in angled parking on Upper Solano Avenue and provides details about back-in angled parking.
7	Install streetscape enhancements (furniture, lighting, signage).	Recommended
	Intersection Improvements	
	At Masonic Avenue intersection	
8	The existing walking push button for crossing Masonic on the southeast corner is on the wrong (north) side of the pole. Relocate to south side, adjacent to the Masonic ramp.	The City is designing upgrades at this intersection which will include evaluating existing walking push buttons.
9	Provide countdown walking heads on the east crosswalk.	The City has installed these.
10	Implement Leading Walking Interval on the east crosswalk.	The City is designing upgrades at this intersection which will include leading pedestrian intervals.
11	Add Extinguishable Message Signs (a.k.a. blank-out signs) prohibiting northbound right turns and southbound left turns during the Leading Walking Interval.	The City is designing upgrades at this intersection which will include eliminating southbound left turn vehicle conflicts with greenway traffic with a protected left turn signal.
12	Provide crossing buttons that bicyclists can operate without dismounting or repositioning the bicycle from the normal approach. In some cases this may involve adding a button.	The City is designing upgrades at this intersection which will include evaluating existing walking push buttons.
	At Key Route Boulevard intersection	
13	Install walking median refuge islands within Solano Avenue crosswalks at realigned intersections on east and west approaches.	Refuge islands were considered in the preliminary design phase but removed due to community feedback.
14	Install walking in-street yield signage.	Recommended
15	Coordinate improvements with future improvements proposed to Key Route Boulevard and the Ohlone Greenway crossing at Masonic Avenue signal.	Recommended
16	Explore widening sidewalk on south side of Solano east of Key Route Boulevard	Recommended; the proposed corridor design establishes a minimum sidewalk width of 7.5 feet.
17	Install walking-only path within the existing median	Beyond the scope of this study.

	2012 Albany Active Transportation Plan Recommendation	2019 Solano Avenue Complete Streets and Corridor Revitalization Study Recommendation
18	Stripe and sign Key Route Boulevard as a Class III bicycling route with sharrows and signage	Beyond the scope of this study.
19	Install high-visibility, continental striped crosswalks for pedestrians	Recommended
20	Install signage alerting drivers to the new mid-intersection crossings and alerting pedestrians of on-coming traffic	N/A
21	Explore design alternatives to intersection. Explore creating a new pocket park. Design of the park should not impinge upon the existing Veterans memorial and should not impact parking for the businesses and the child care center	Recommended. The proposed corridor design realigns Key Route Boulevard and creates a new park that does not encroach upon the Veteran's Memorial and maintains parking in the area.
	At Santa Fe Avenue intersection	
22	Install directional signage for Class III bicycle route	Recommended. The Study recommends installing wayfinding signs for bicyclists on and off the Solano Avenue corridor.
23	Install bicycle boxes on the northbound and southbound approaches at the Solano Avenue signalized intersection.	Not recommended. Santa Fe Avenue is designated as a bicycle route, whereas bike boxes are designed in connection with dedicated bike lanes.
	At Peralta Avenue intersection	
24	Peralta Avenue is identified as a candidate bicycling route; therefore, add bicycling network guide signs at Solano Avenue	Recommended. The Study recommends installing wayfinding signs for bicyclists on and off the Solano Avenue corridor. In addition, Rectangular Rapid Flashing Beacons, or RRFBs, are proposed at the Peralta Avenue intersection to facilitate safe travel across Solano Avenue. Separate pushbuttons will be installed for pedestrians and bicyclists so the buttons are within reach when walking or biking, respectively.
	At Tacoma Avenue intersection	
25	Extend curb extensions	This Study recommends realigning the Tacoma Avenue intersection to create a 90-degree three-way junction.
26	Restrict northbound traffic (right out only)	Not recommended – The community did not express an interest in restricting northbound traffic on Tacoma Avenue.

Project Area Map

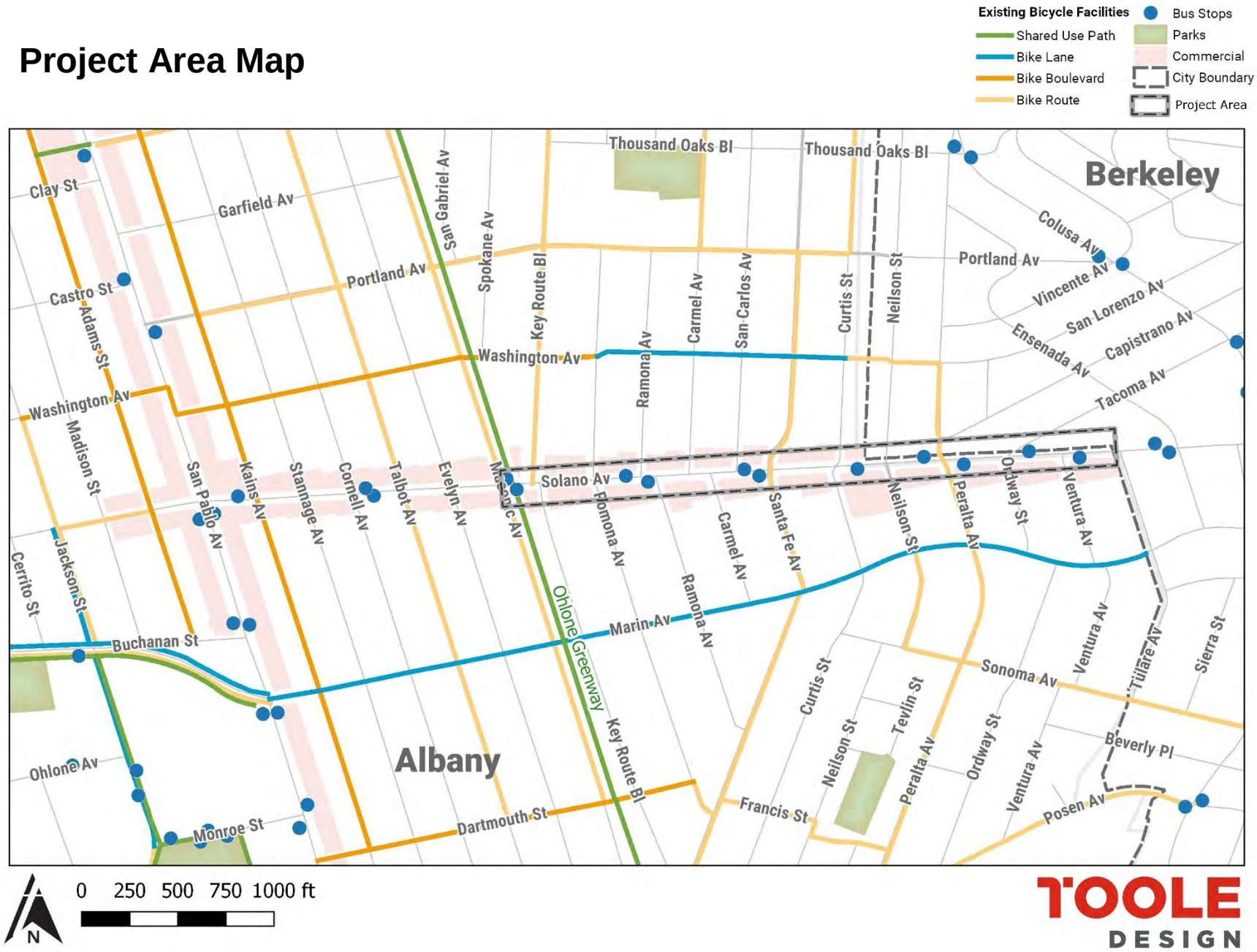


Figure 1.2. Project Area Map

Community Engagement

Throughout this process, the City of Albany was committed to inclusive and participatory outreach to engage all residents and visitors.

The City established a **Community Advisory Group (CAG)** which was comprised of key community stakeholders, such as the Solano Avenue Association, Albany Strollers & Rollers, AC Transit staff, City of Albany and City of Berkeley staff, local business owners, Albany residents, people with limited mobility, and others. City staff and the project team met with the CAG in April 2018, to gather their initial ideas for the corridor through a discussion and walk audit of the corridor; in September 2018, to receive feedback on the proposed corridor design and recommendations; and in February 2019, to review the draft Study.

Since the City limit between the City of Albany and the City of Berkeley runs for several blocks along Solano Avenue, the City of Albany actively included City of Berkeley staff in the planning for the Solano Avenue corridor. City staff and the project team conducted a walk audit with Berkeley Public Works staff to discuss the vision for Solano Avenue and identify potential issues. City staff continued to have ongoing conversations with City of Berkeley staff throughout the process.

Design Lab and Workshop

In May 2018, the City held a multi-day Design Lab which included a community walk audit, public workshop, and focus group meetings with the Center for the Blind, Albany Strollers & Rollers, and business owners (see Figure 1.3).

Participants shared their experiences about walking, biking, taking transit, driving, shopping, and visiting Solano Avenue. They were also asked to engage in an interactive exercise and identify favorite destinations along the corridor.

Figure 1.3. Community members provide comments on an existing conditions map of Upper Solano Avenue during the Design Lab.

Design Preview and Pop-Up

In September 2018, the City held a Design Preview and Pop-Up Event at Flowerland Nursery to solicit community feedback on the draft corridor design and design palette. Participants were invited to share their feedback on the draft design and their favorite design elements.

The City also held a temporary demonstration which simulated some of the corridor design recommendations at the intersection of Solano and Pomona Avenues (see Figure 1.4). Participants were invited to

walk, bike, and drive through the temporary demonstration and provide their feedback about the proposed changes.

Figure 1.4. Demonstration using temporary materials as a part of the September 2018 Pop-Up event to simulate the design recommendations along the Solano Avenue corridor.

City Commissions

Throughout the process, the Traffic & Safety Commission and the Planning & Zoning Commission had an important role in providing guidance and feedback on the project. Both Commissions received presentations during the Study development process and provided recommendations.

Traffic & Safety Commission – Advises the City Council on issues relating to traffic flow, safety, and management and transportation policy.

Planning & Zoning Commission – Advises the City Council on issues related to the General Plan and physical development of the city.

Study Goals

The Study's goals were developed to guide the Study recommendations and will be used to measure the City's progress towards Study implementation over time. These were collaboratively developed based on input from the community during the outreach events, the Community Advisory Group, and the City of Albany staff.

	Improve **safety** for all users
	Enhance **access**
	Promote a **cohesive streetscape**
	Support local **economic activity**

Chapter 2: Corridor Conditions and Recommendations

Solano Avenue at Key Route Boulevard

Chapter 2: Corridor Conditions and Recommendations

This chapter presents a summary of existing conditions and the proposed corridor design for the Upper Solano Avenue corridor from Masonic Avenue to Tulare Avenue. The corridor design was developed based on an analysis of the existing conditions (presented below and Appendix B), community and City staff input (presented in Chapter 1 and Appendix A), and on innovative techniques from urban design, planning, and engineering.

Existing Conditions

An existing conditions analysis and needs assessment was conducted to understand how Solano Avenue operates today and serves its visitors. This assessment establishes a basis upon which to develop the Study's recommendations. These findings are further documented in Appendix B: Existing Conditions Report.

The corridor is characterized by pedestrian-scale buildings with eclectic storefronts. Uses include general retail, specialty retail, restaurants, offices, personal services, gyms, banks, and miscellaneous office uses. The majority of properties abut the sidewalk with short or no setbacks.

Solano Avenue is a two-way, two-lane roadway with diagonal parking on both sides of the street. The building to building right-of-way ranges from 70 to 80 feet, and curb-to-curb width is approximately 60 feet. The corridor is a truck route, with many delivery vehicles traveling the corridor to serve its shops, restaurants, and other businesses, sometimes obstructing travel lanes or on-street parking. Upper Solano Avenue has two signalized intersections at Masonic Avenue and Santa Fe Avenue. Figure 2.1 illustrates the typical existing roadway dimensions along the corridor.

Solano Avenue serves a variety of transportation activity, including walking, transit, driving, and bicycling. Key mobility and streetscape issues include:

Pedestrian and bicyclist safety and access

- Wide travel lanes that encourage speeding
- Offset intersection design
- Constricted sidewalks (i.e., less than five feet in width) in several locations, particularly along the south side of the street
- Sidewalks in poor condition in various areas where tree roots have cracked the pavement or made the sidewalk uneven
- Long/exposed pedestrian crossings and poor visibility of crosswalks
- Non-compliant curb ramps and sidewalk impediments (such as poles, utility boxes, etc.) that limit accessibility
- Missing pedestrian push-buttons and crosswalks in some locations
- Sightline/visibility limitations when parking and backing out
- Lack of formal bicycle infrastructure

Transit access

Solano Avenue is directly served by two bus routes, AC Transit's Transbay G bus and the local 18 line. Existing bus access on Solano Avenue has:

- Inconsistent bus stop conditions
- Lack of coordination with bus stops and crosswalk locations
- Several bus stops with few boardings or alightings

Curbside activity

- Majority of curbside space is dedicated to vehicular parking which limits the opportunity for other uses, such as public spaces, outdoor dining, and in-street bicycle parking
- Lack of accessible parking spaces and motorcycle parking
- On-street parking limits are too restrictive
- Underground utilities

Streetscape elements

- Lack of landmarks and block-by-block legibility
- Narrow and damaged sidewalks
- Aging streetscape infrastructure
  Landscaping and trees are inconsistent and create challenges for some pedestrians (i.e., impeding or buckling the sidewalk)
- Lack of pedestrian-scale lighting
- Lack of aesthetic elements like appropriate plantings, lighting, murals, and art

Economic activity

- Social heart of Albany
- Many unique, locally owned businesses and restaurants
- Opportunities for placemaking and public gathering places

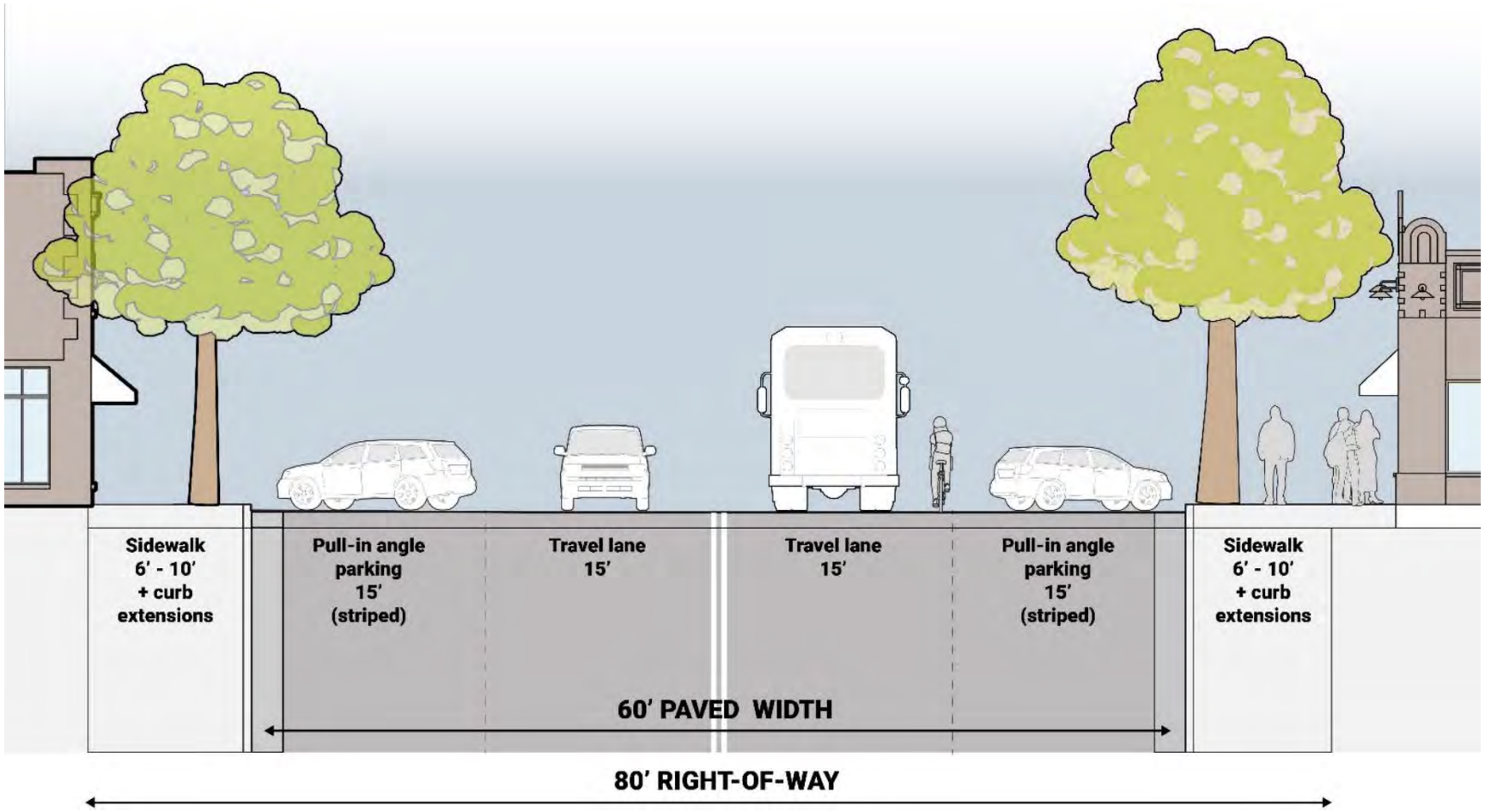


Figure 2.1. Existing Conditions Cross Section

Proposed Corridor Design

The proposed corridor design builds on Upper Solano Avenue's place as the historical, social, and economic heart of the Albany community. The design aims to create a more comfortable, safe, and enjoyable street for all users, whether they arrive by foot, wheelchair, bike, bus, or motor vehicle. See Figure 2.3 for the proposed corridor design. Figure 2.2 illustrates the proposed cross section for Solano Avenue.

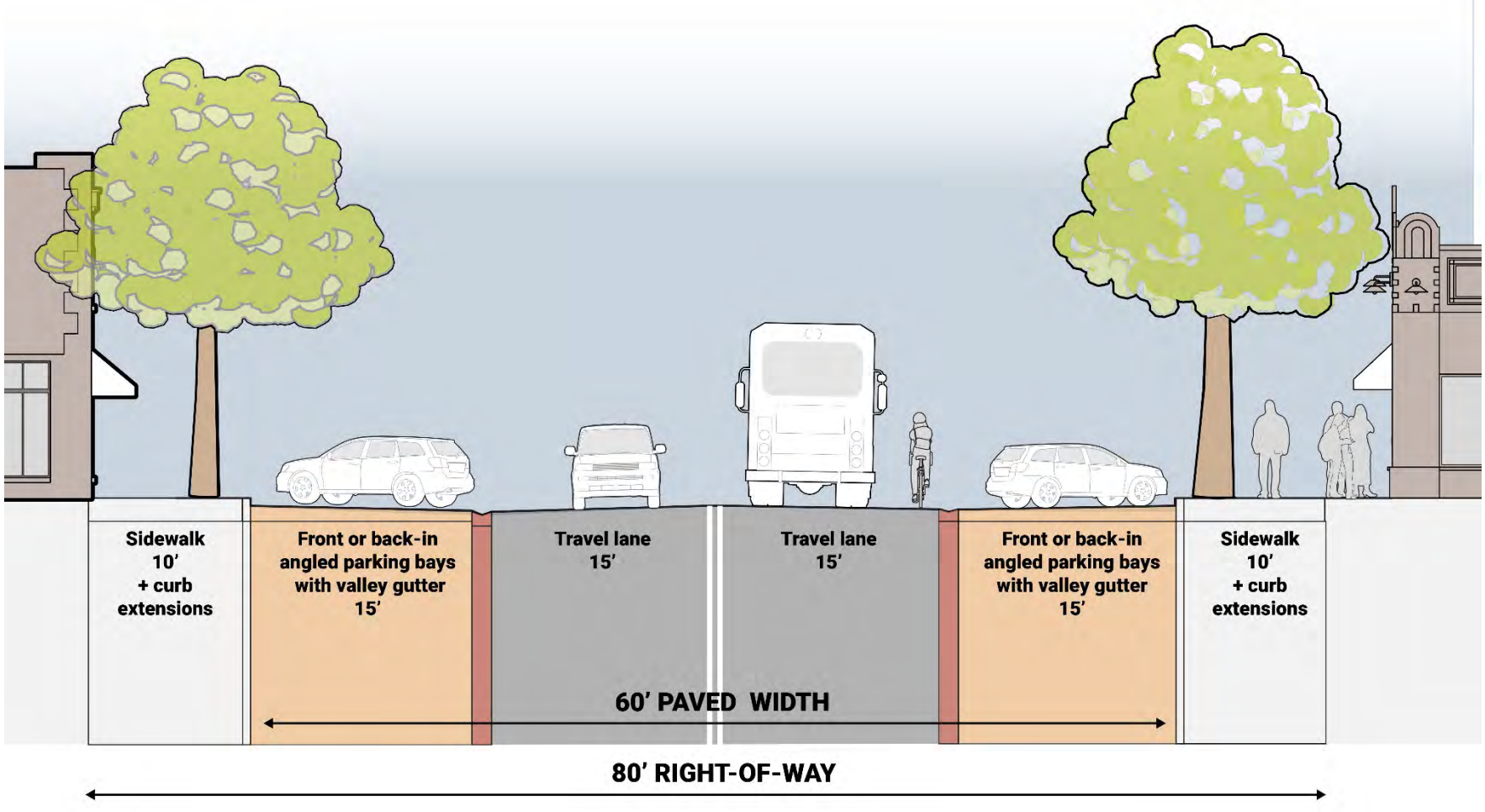
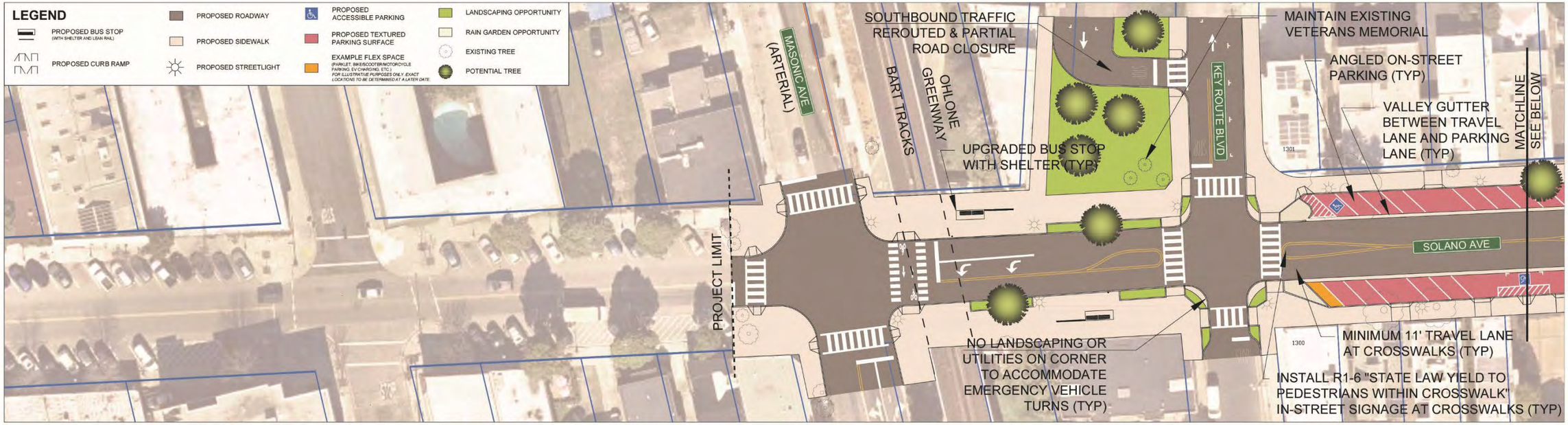


Figure 2.2. Proposed Cross Section

Figure 2.3. Proposed Corridor Design for Upper Solano Avenue – Page 1 of 3



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SOLANO AVENUE

MASONIC AVENUE TO TULARE AVENUE

ALBANY, CA

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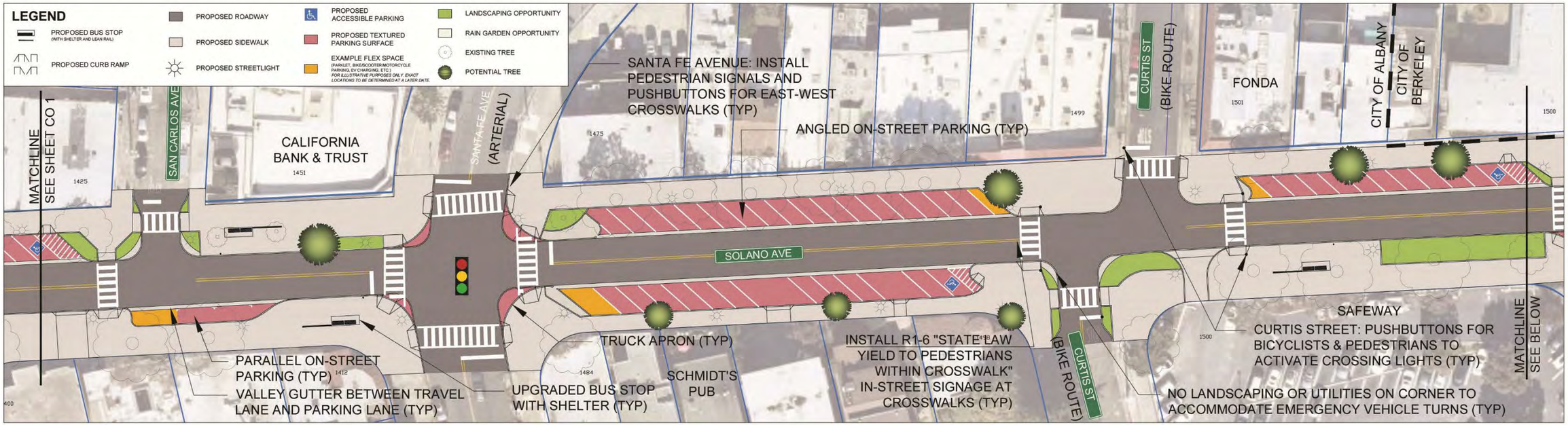
Figure 2.3. Proposed Corridor Design for Upper Solano Avenue – Page 2 of 3



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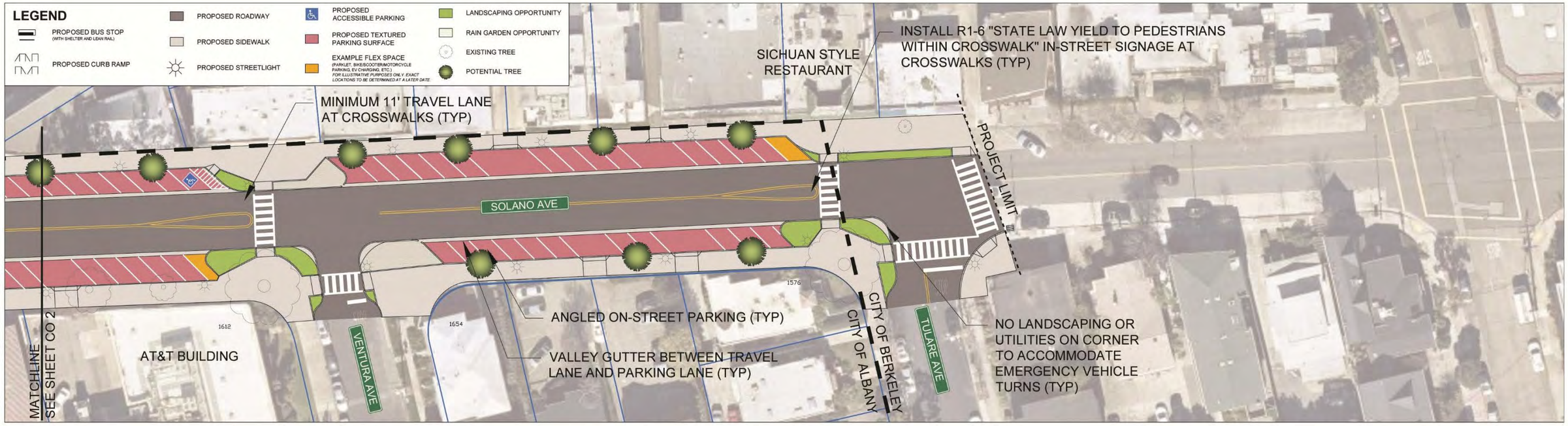
2 OF 3

Figure 2.3. Proposed Corridor Design for Upper Solano Avenue – Page 3 of 3



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Proposed Corridor Elements

In order to elevate the design and function of Solano Avenue, the corridor design addresses the following elements:

- Safety and Americans with Disabilities Act (ADA) accessibility
- Streetscape amenities
- Curbside uses
- Stormwater management

Details for each element are provided below. For the design guidance used for the design elements, see Appendix C: Design Guidance.

Safety and ADA Accessibility

Addresses project goals to:	
	Improve **safety** for all users
	Enhance **access**

Safety and accessibility for all users (including pedestrians, bicyclists, transit riders, and motorists) was a critical consideration for the development of the corridor design. The following safety and accessibility improvements are incorporated into the corridor design.

Improve Pedestrian Safety and ADA Accessibility

- Install crosswalks with high-visibility markings
- Add corner curb bulb-outs to shorten pedestrian crossing distances, minimize pedestrian exposure time to vehicles, and narrow travel lanes. The next phase of design will further analyze pedestrian desire lines and how these may affect crosswalk orientation and placement.
- Decrease curb radii at intersections to decrease vehicle turning speeds
- Realign and upgrade curb ramps and install truncated domes to meet ADA standards and provide better access for people using wheelchairs, pushing strollers, etc.
- Add accessible parking spaces, including van accessible spaces, to better accommodate all roadway users
- Install pedestrian push buttons and audible signals at all legs of the signalized intersections at Masonic Avenue and Santa Fe Avenue
- Repair uneven or broken sidewalks and widen narrow sidewalks
- Increase visibility at corners by removing and relocating parking, signs, and site furnishings within 15 feet of crossings
- Install rectangular rapid flashing beacons (RRFBs) at the Curtis Street and Peralta Avenue intersections
- Add pedestrian-scale lighting along the corridor, especially at crossings, to ensure that pedestrian safety and comfort is maintained and dark zones within and around crossings are eliminated
- Install tactile ridges at commercial driveways to alert people with visual impairments that motor vehicles may be present at these locations
- Adjust signal timings to provide additional walk time for people such as children and people with disabilities who may need more time to cross the street

Improve Bicyclists Safety and Access

- Improve bicycle connections across Solano Avenue by narrowing travel lanes and installing a RRFB at the Curtis Street and Peralta Avenue intersections
- Installing wayfinding signs for bicyclists on and off the Solano Avenue corridor
- Increasing available space for in-street bike corrals

Improve Vehicle Safety

- Install colored, textured ADA-accessible paving material for on-street parking to further reduce the perceived width of travel lanes

Reduce Conflicts Between Users

- Simplify intersection configurations
- Employ access management strategies (e.g., closing the western driveway from the Safeway parking lot onto Solano Avenue)
- Realign irregular or complex intersections into 90-degree three- or four-way junctions (e.g., working collaboratively with the City of Berkeley to “square up” the Tacoma Avenue intersection)

Streetscape Amenities

Addresses project goals to:	
	Improve **safety** for all users
	Enhance **access**
	Promote a **cohesive streetscape**
	Support local **economic activity**

Enhancing the streetscape is also a key component of this concept design. The design creates:

- Expanded bulb-outs which can be programmed with placemaking elements like benches, landscaping, parklets, and public art
- Areas for co-locating transit stops and pedestrian amenities to create additional bus parklets
- Spaces for adding landmark or gateway features, such as medians, iconic transit stops, gathering spaces, etc.
- Open space opportunities and areas for landscaping and stormwater plantings

Public Spaces

Both the Solano Avenue corridor and the surrounding community deserve thriving, fun public spaces. This Study envisions Solano Avenue not just as an important street, but a place where people linger to enjoy a cup of coffee, connect with old and new friends, or just take a well-deserved rest amid their daily errands. The proposed corridor design works to both enhance existing spaces and create new public spaces to enliven and engage the neighborhood.

Many public space opportunities already exist along the corridor, such as the bulb-out at the northwest corner of the Santa Fe intersection and Solano-Peralta Park.[1] This Study creates new public spaces by widening other bulb-outs throughout the corridor, making

Figure 2.4. Example of the new public open space and playground near Key Route Boulevard.

[1] The City of Albany will need to coordinate with the City of Berkeley on upgrades to Solano-Peralta Park since the park is within Berkeley City limits.

room for outdoor dining near restaurants and coffee shops and benches to relax among freshly landscaped areas and trees. Pop-up public art exhibits make each visit a unique experience even at familiar street corners. For additional ideas, see Chapter 3: Streetscape Design Palette.

The proposed corridor design creates a new public space near the intersection of Solano Avenue and Key Route Boulevard. The realignment of southbound Key Route Boulevard will make room for a new playground, park, or other potential amenities (see Figure 2.4). This new open space will enhance and seamlessly integrate with the existing Veterans' Memorial space. Pedestrian safety and convenience were also key in the proposed reconfiguration of the intersection, with shorter stop-controlled crossings that reduce pedestrian exposure and encourage drivers to yield to crossing pedestrians.

Murals and Green Walls

Opportunities exist throughout the corridor for murals to be painted and green walls to be installed on currently blank building faces. Green walls are walls that are partially or fully covered with greenery; these are also referred to as "living walls" or "vertical gardens." Candidate locations are illustrated on Figure 2.5.

Sidewalk Improvements

In many locations, especially on the south side of Solano Avenue, sidewalks are constricted in width and do not provide adequate accessible space for people with mobility impairments, families pushing strollers, or people walking side-by-side. The proposed corridor design establishes a minimum sidewalk width of 7.5 feet to address this issue (although the sidewalk may be narrower in the most constrained areas).

In addition, certain areas of the sidewalk are uneven or in poor condition where tree roots have cracked the pavement. Repairing and improving sidewalks is a critical component of this Study and of creating a welcoming and accessible pedestrian environment along Solano Avenue.

Crossing Improvements

To help pedestrians cross Solano Avenue safely, this Study recommends installing R1-6 'State Law Yield to Pedestrians within Crosswalk' signs centered within Solano Avenue on both sides of marked crosswalks. This signage helps alert motorists to the presence of pedestrians in the crosswalks.

As both a safety and an art element, this Study also recommends installing decorative crosswalks. These visually-enhanced crosswalks can also increase motorists' awareness of pedestrians in the crosswalks and can celebrate the local culture of Albany. See Chapter 3: Streetscape Design Elements for examples of decorative crosswalks.

Figure 2.5. Potential Mural or Green Wall Locations

Tree Removal and Replacement

Throughout the planning process, the community shared their concerns about trees on Upper Solano Avenue that:

- Break-up the sidewalks and cause tripping hazards
- Narrow the sidewalk
- Drop limbs

While trees provide many benefits, some trees are not appropriate for urban environments and should be removed, especially if dangerous. Street tree removal and replacement will be evaluated by the City Arborist on a case by case basis.

Bicycle Facilities

Many people, including families with young children, enjoy riding their bicycles to Solano Avenue. Improving bicycle access to and across Solano Avenue is a priority of this Study.

Due to Solano Avenue's designation as both a truck and transit route, the 2012 Albany Active Transportation Plan and the Albany 2035 General Plan (adopted 2016) identified bicycling routes on the adjacent, parallel streets: Marin Avenue and Washington Avenue. Similarly, the City of Berkeley designates Solano Avenue as a "Primary Transit Route" and a "High Priority Pedestrian Area" with no dedicated bicycle facilities.

As part of the study process, considerations for a dedicated bike facility along Solano Avenue were evaluated and discussed here. Table 2.1 provides an overview of these trade-offs. While dedicated bike facilities are not included in this study's proposed concept design, they should be considered as a part of the next update to the Active Transportation Plan.

Table 2.1. Trade-offs for Bikeways on Solano Avenue

Bikeway Type	Conventional Bike Lane	Buffered Bike Lane	Buffered Bike Lane	Separated Bike Lane
Parking Type	*Back-in angled*	*Back-in angled & parallel*	*Parallel*	*Parallel*
Safety	Low	Medium	Medium	High
Comfort	Low	Low	Low	High
Loss of Parking	Low	Medium	High	High
Construction Costs	Low	Medium	Medium	High
Construction Impacts	Low	Medium	Medium	High

Safety. Several bikeway options may be considered for Solano Avenue, including conventional bike lanes, buffered bike lanes, or separated bike lanes. Separated bike lanes provide the most protection for bicyclists by physically separating bicyclists from vehicle traffic. Separated bike lanes also enhance safety for pedestrians by separating the pedestrian space from vehicle space, serving as a de facto buffer that creates a more attractive pedestrian realm. However, separated bike lanes would require the reconfiguration of on-street parking from the existing "front-in" parking configuration to parallel parking, which would result in less parking. While conventional bike lanes and buffered bike lanes have less parking impacts, they offer less protection to bicyclists and pedestrians.

Comfort. A high comfort bikeway provides significant separation from motorized traffic and clear assignment of right-of-way at intersections. Bikeways that provide a high level of comfort are comfortable for people of all bicycling ages and abilities. On Solano Avenue, separated bike lanes would provide the highest quality bicycle facilities, with significant safety enhancements and very high

comfort facilities. Separated bikes lanes are the only design option that would be considered a “low stress” facility for all bicyclists.

Parking. Currently, the parking configuration along Solano Avenue is “front-in” angled parking. If bikeways are installed, this would require the reconfiguration of parking. Depending on the bikeway design type, parking would either be reconfigured as “back-in” angled parking, parallel parking, or a combination of both. Parking retention and impacts could be low or high, depending on the bikeway type. Regardless of whether there are dedicated bike facilities along Solano Avenue, back-in angled paring provides superior safety and comfort benefits for bicyclists.

Construction cost and impacts. Depending on the type of bikeway that is installed, the construction costs and impacts will vary. If conventional bike lanes are installed, the construction costs will be low and the design could be installed more quickly. If buffered bike lanes are installed, the costs and impacts would be slightly higher. If separated bike lanes are installed, the costs and impacts would be considerably higher because this would require reconstruction of the curb line and removing bulbouts.

Truck and transit route. Solano Avenue is a designated truck and transit route, and the design of the bikeways would need to consider the interaction with trucks and buses.

Given the multiple demands on the corridor as the city’s main street, the Albany community will need to consider these trade-offs if bikeways are implemented on Solano Avenue.

In the immediate-term, to facilitate safe travel across Solano Avenue, Rectangular Rapid Flashing Beacons, or RRFBs, are proposed at the following uncontrolled intersections with Solano Avenue:

- Peralta Avenue – a Class III bike route
- Curtis Street – a Class III bike route that also connects to a bike route in the City of Berkeley

The RRFBs will combine a pedestrian and bicycle crossing sign with a bright flashing beacon that is activated when a pedestrian or bicyclist pushes the pushbutton to activate the light (see Figure 2.6). By virtue of the Federal Highway Administration interim approval for the use of RRFBs, these beacons must be located at marked crossings, where drivers must yield to pedestrians and bicyclists alike. Separate pushbuttons will be installed for pedestrians and bicyclists so the buttons are within reach when walking or biking, respectively. It is important to ensure that pedestrian pushbuttons are placed at heights and in locations that are accessible for people in wheelchairs.

Figure 2.6. A Rectangular Rapid Flashing Beacon at an uncontrolled crosswalk in Berkeley that serves bicyclists and pedestrians.

The City is also planning upgrades for the intersections at Masonic/Solano Avenue and Masonic/Marin Avenue to improve bicyclist and pedestrian safety and operations along the Ohlone Greenway. These planned improvements include new traffic signals and controllers which will allow for:

- Leading pedestrian intervals
- Protected left-turn vehicle movements to reduce conflicts with users of the Ohlone Greenway
- Curb extensions to improve visibility and narrow crossings, where feasible

The back-in angled parking demonstration project will also be a valuable trial to determine how this parking configuration could work successfully along Solano Avenue.

Water Bottle Filling Stations

Water bottle filling stations are an additional amenity that could be included on Upper Solano Avenue. Prime locations include the Ohlone Greenway, near Solano-Peralta Park, new public spaces, and bike corrals.

Micromobility Devices

Micromobility devices, such as bikeshare and electric scooters ("e-scooters") are becoming increasingly popular ways for people to travel. Candidate locations for bikeshare docking stations on Upper Solano Avenue include the Ohlone Greenway and larger bulbouts along the corridor. The City could also create dedicated parking pads on-street or in pedestrian amenity zones for e-scooters and other micromobility devices (see Figure 2.7). Additionally, flex spaces (shown on design) can be configured to accommodate e-scooter parking.

Figure 2.7. Scooter parking pads in Long Beach, CA. These pads are removable and can easily be relocated based on demand.

Curbside Uses

Addresses project goals to:	
	Promote a **cohesive streetscape**
	Support local **economic activity**

Currently, much of the curbside space along Solano Avenue is dedicated to vehicle parking. However, the street curb can serve many other uses that support other mobility needs and contribute to a more vibrant street life. In the context of Solano Avenue, opportunities for buslets, parklets, outdoor dining, bicycle parking, and motorcycle parking should be pursued.

Figure 2.8 illustrates how curbside spaces could be transformed into a parklet and a bicycle corral on the northern block of Solano Avenue between Neilson Street and Peralta Avenue.

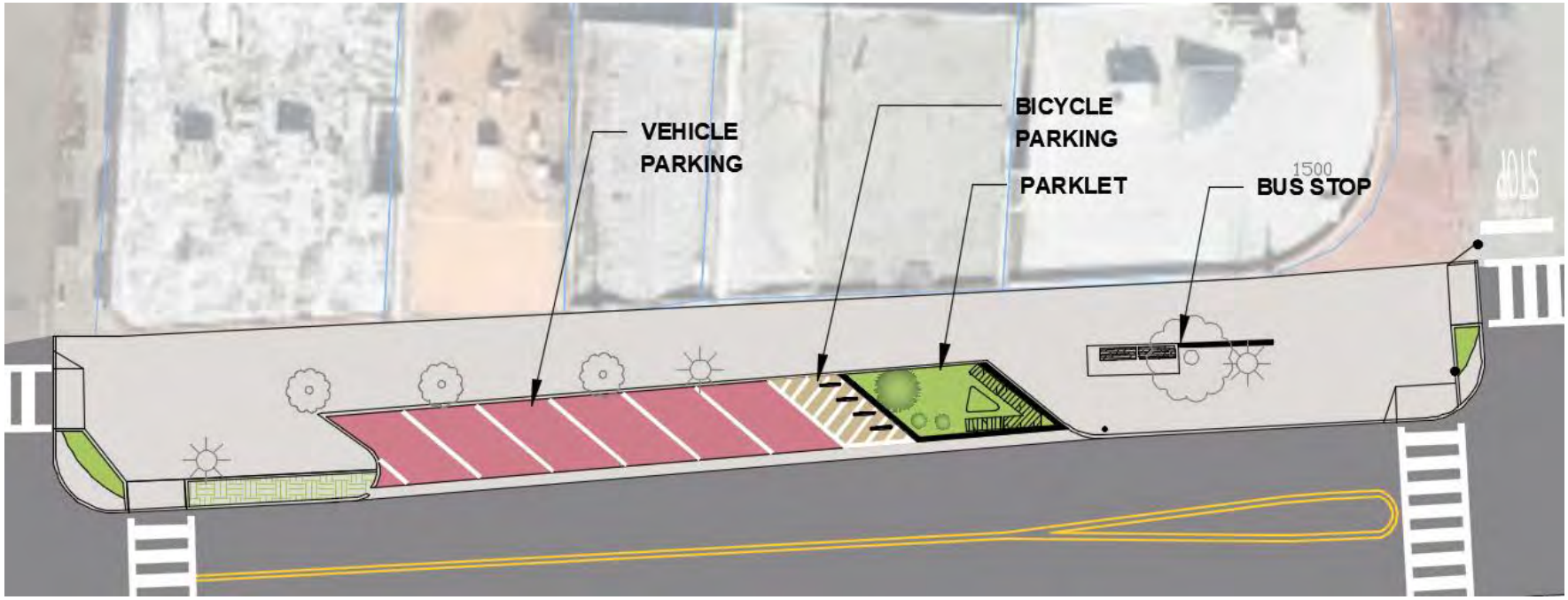


Figure 2.8. Example of using curbside spaces for parklets or bike parking corral

Bus Stops

During the development of this Study, AC Transit conducted an analysis of bus stop activity along Solano Avenue and determined that certain bus stops which have low ridership and usage and can be eliminated. Stops to be removed include:

- Tacoma Avenue (north side)
- Ventura Avenue (south side)
- Ramona Avenue (north and south sides)

The removal of these bus stops provides an opportunity for additional public space, such as parklets or outdoor dining, and bicycle parking.

Buslets and Parklets

Buslets are bus stops combined with parklets, or small curbside parks. An example buslet is located on Lower Solano Avenue at 1207 Solano Avenue (see Figure 2.9). Parklets can also include other amenities such as bike racks and in-street bike corrals.

Figure 2.9. Popular "buslet" on Lower Solano Avenue.

Outdoor Dining

The City has an encroachment permit process to allow businesses to use the four to five feet along the sidewalk adjacent to their establishment for café seating. Business owners could install additional outdoor dining spaces to serve customers and enliven Upper Solano Avenue.

Bicycle Parking

Bicycle parking is important to the Solano Avenue corridor since many people access local shops, restaurants, businesses and other destinations by bike. There are two types of bicycle parking: short-term and long-term. Short-term parking is most useful to bicyclists running errands and doing other activities that do not require parking their bikes longer than an hour or so. It should be convenient and easy to use, and it includes bike racks, bicycle corrals, and other on-street options. Conversely, long-term bike parking caters to employees of local businesses, people commuting on transit outside of Albany, and others who need to leave their bikes unattended for multiple hours at a time. It should be secure and sheltered and may include bike stations, bike lockers, or facilities provided by employers within businesses.

The corridor currently has 94 bike racks (see Table 2.2). Many of these racks have been installed via the "Bike Bike Rack" program organized by the Albany Strollers & Rollers community organization since 2012 (see Figure 2.10). These spaces are brightly colored bike-shaped racks that can accommodate two bicycles each.

In-street bicycle corrals are another bike parking configuration that complement bike racks. Corrals provide high-capacity bicycle parking in areas where sidewalk space is limited and additional bicycle parking is needed (see Figure 2.11). Bike corrals are located in-street and adjacent to the curb. Bicycle corrals are typically used for short-term parking needs and typically fit approximately eight to 12 bicycles. On Solano Avenue, bike corrals would supplement the existing sidewalk bicycle racks that are located throughout the corridor. One consideration that may affect the location of on-street bicycle corrals is street sweeping.

Figure 2.10. Bicycle-shaped racks have been installed throughout Albany, many of which are along Solano Avenue.

Since existing bicycle parking on the corridor is primarily geared towards short-term bicycle parking, long-term parking additions would also be useful, and could encourage more trips to Solano Avenue by bike According to Association of Pedestrian and Bicycle Professionals Bicycle Parking Guidelines, at a minimum there should be one bicycle parking space for every 5,000 square feet of retail space in a commercial area like Solano Avenue. Given these parameters, each block face should have a minimum of three to four bicycle parking spaces. Table 2.2 summarizes the existing and proposed number of bike parking spaces for Solano Avenue within the study area. Specific destinations that attract a lot of people by bicycle may warrant additional bicycle parking.

Figure 2.11. An in-street bike corral in San Francisco. Photo credit: SFMTA

Vehicle Parking

Solano Avenue is a regional destination, and many businesses depend on visitors beyond Albany's City limits that travel to the corridor by car. In 2015, the City conducted a vehicular parking study to assess the existing conditions around parking on Solano Avenue. The study found that Solano Avenue has high parking demand throughout the corridor.

In the proposed corridor design, the existing diagonal parking configuration is maintained; however, the parking stall angle has been adjusted so that all stalls are consistently 45-degrees (currently, the parking stalls have inconsistent angles throughout the corridor).

The concept design includes four new accessible vehicle parking spaces which comply with the American with Disabilities Act (ADA) regulations (see Table 2.2). Two of the four new accessible spaces are van accessible. These spaces include three feet of additional width in the adjacent vehicle access aisle to accommodate vans. Additional accessible spaces can be configured to accommodate vans; however, due to the increased width requirement, this may result in the loss of standard parking spaces or flex spaces. Some parking spaces could be designated as vehicle charging stations, and spaces that are currently dedicated to vehicular parking could be repurposed for other uses in subsequent design phases.

One recommendation in the 2017 Economic Development Implementation Plan, and suggested by Albany residents throughout this process, is to increase parking time limits along Upper Solano Avenue. Currently, parking is restricted to 90 minutes. Increasing the parking limits would allow Solano Avenue visitors to have lunch, go shopping, and run errands without being limited by their parking.

As a part of the 2017 Economic Development Implementation Plan implementation, this Study also recommends that some parking spaces be designated as short-term parking (e.g., 20-minute zones), especially near popular take-out restaurants.

Table 2.2. Summary of Existing and Proposed Parking

	Existing Parking	Proposed Parking	Number of Spaces Added
Regular vehicle spaces	179	175	-4
Accessible vehicle spaces	6	10 (2 of which are van accessible)	4
Total vehicle spaces	**185**	**185**	**0**
Bicycle spaces	94	To be determined, based on requests	-
Flex spaces, such as bicycle/motorcycle parking, parklets, etc.	1	14	13

Note: These parking counts are within the project limit which encompasses the west side of Masonic Avenue to the east side of Tulare Avenue.

Back-In Angled Parking

During the planning process, some community members as well as the Traffic & Safety Commission expressed interest in exploring the feasibility of converting the current front-in angled parking spaces to back-in angled parking. The primary advantage of this parking configuration is that it provides motorists with an unobstructed view of oncoming motor vehicles and bicycles when they are pulling out of the space back onto the roadway (see Figures 2.11 and 2.13). By comparison, front-in angled parking requires that motorists back their cars out of the parking stall into oncoming traffic without being able to see that traffic; this poses significant safety hazards to oncoming motor vehicles and bicycles.

With back-in angled parking, a motorist drives just past the parking space and then backs into the space, similar to parallel parking but typically with only a single maneuver.

Additional advantages of back-in angled parking include:

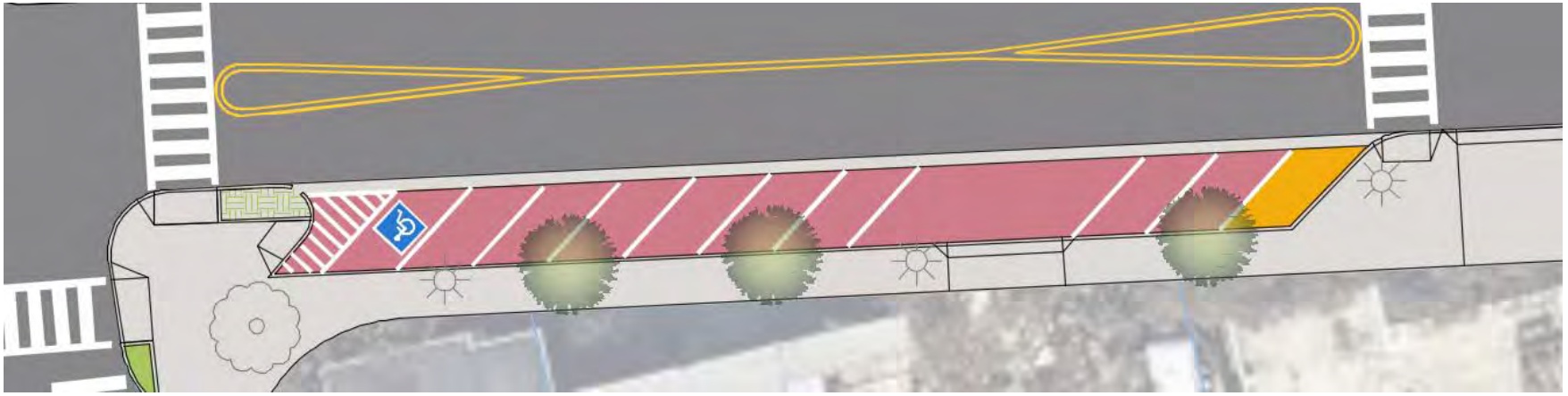
- Easy loading from vehicle trunks, rear hatches, delivery vans, and pickup beds directly to the sidewalk
- Safer unloading of children from vehicles since the vehicle's open door directs a child toward the sidewalk

Solano Avenue has a three to four percent road grade, which may warrant the consideration of using uphill back-in parking and downhill front-in parking.

The proposed design presented in this Study is a preliminary concept and illustrative in regard to parking. This Study recommends conducting a demonstration project with additional stakeholder engagement to determine the future configuration of angled parking along Solano Avenue. Back-in angled parking should be considered as a part of the development of 30 percent engineering designs. Engineering designs will be required for review at approximately 30, 60, and 90 percent design levels prior to any permanent implementation and construction.

Figure 2.12. Example of back-in angled parking in Seattle,

Figure 2.13. Back-in angled parking example



Loading and Unloading Locations

The dominant land use along the Solano Avenue corridor includes commercial and retail uses. The majority of businesses rely on the delivery of goods, groceries, and other supplies for their operations.

Currently, Solano Avenue lacks designated loading and unloading zones, and this activity often occurs in the street or on side streets.

There are many competing needs for curbside space along the corridor such as bicycle, motorcycle, and vehicular parking, public spaces, and bus stops. These uses will need to be balanced to create an environment that serves all users; therefore, this Study recommends that side streets be used for dedicated loading and unloading spaces.

Most side streets have either “No Parking” zones (red zones) or 20-minute parking zones (green zones) near the intersection with Solano Avenue. These spaces could be extended and repurposed into designated loading/unloading zones for deliveries. Figure 2.14 identifies possible locations for loading and unloading zones on side streets. This Study recommends conducting additional review of possible loading and unloading zones as a part of the City’s 2017 Economic Development Implementation Plan.

When implementing the loading and unloading zones on side streets, the City will seek to minimize the number of trucks and larger vehicles using the loading and unloading zones to limit the traffic on side streets.

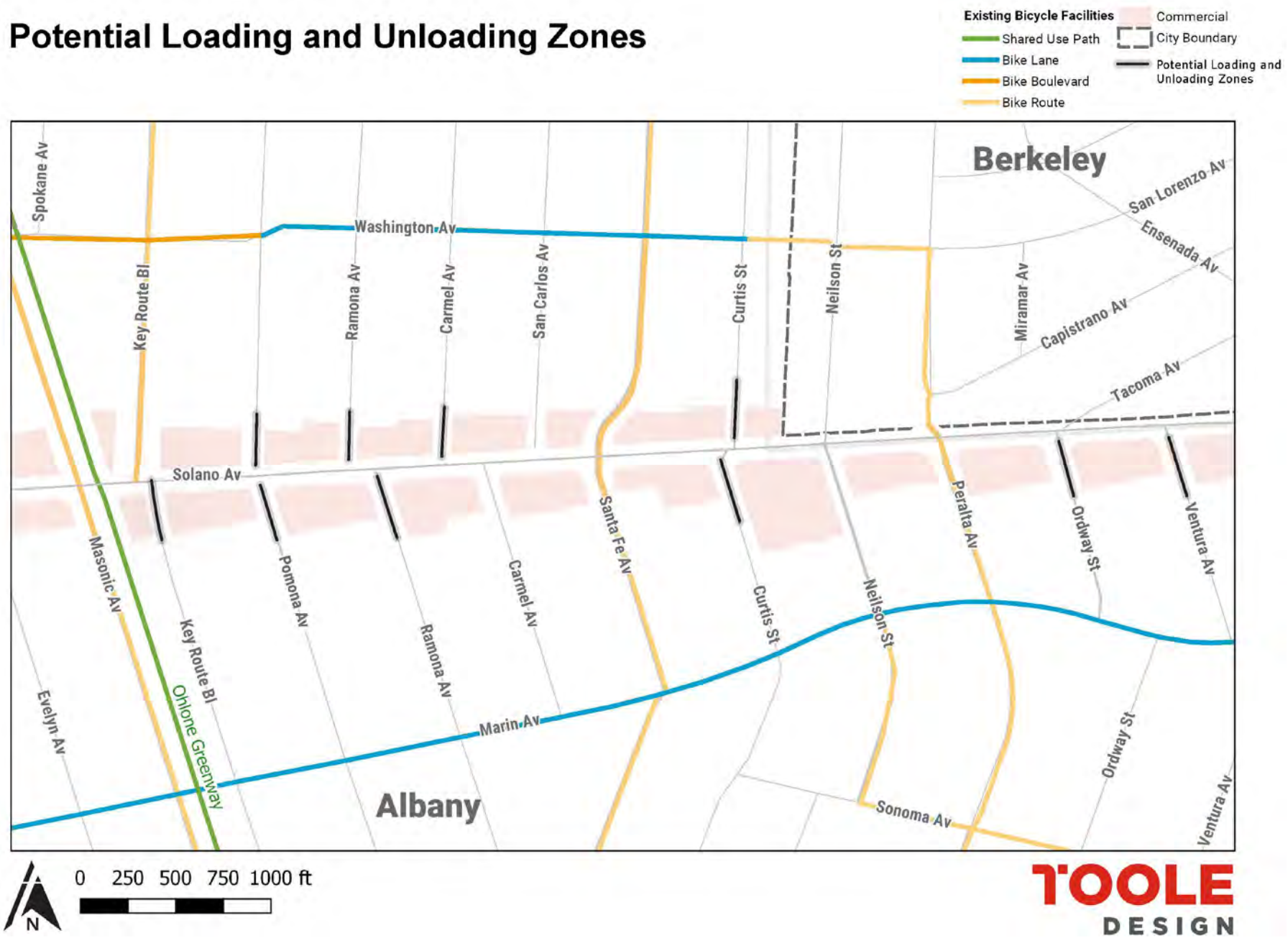


Figure 2.14. Candidate Locations for Loading/Unloading Zones on Side Streets

Stormwater Management

Addresses project goals to:	
	Promote a **cohesive streetscape**

The concept design maintains the existing stormwater management system and recommends installing valley gutters. Valley gutters are installed between the vehicle travel lane and on-street parking (see Figure 2.15). The gutters manage stormwater by directing water into existing inlets and can be integrated with the street landscaping and bioswales (see Figure 2.16). Valley gutters do not inhibit pedestrians crossing the street, and they also do not present an issue for a bicyclists' path of travel.

Typically, streets with valley gutters have slower operating speeds (compared to streets that are conventionally crowned) due to the optical narrowing and traffic calming provided by the valley gutter. This Study proposes using different materials for the travel lane and the area designated for parking which will also help in slowing vehicle speeds due to the visual narrowing of the roadway.

Valley gutters locate the drainage of water away from the curb; thus, when people are entering or exiting their parked vehicles, they are less likely to interact with potential standing water. Valley gutters can require a substantial cut/fill of the existing roadway to retrofit it. These cost implications will be an important consideration for subsequent design phases.

Additional information is provided in Chapter 3: Streetscape Design Palette.

Figure 2.15. Valley gutters on Main Street in Sulphur Spring, TX.

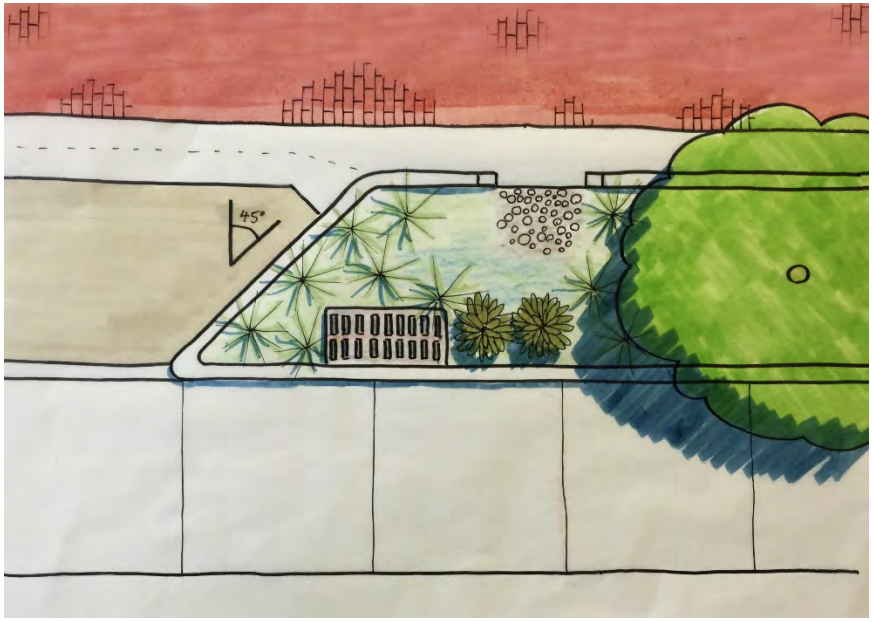


Figure 2.16. Illustration of valley gutter's interaction with landscaping and bioswales

Chapter 3: Streetscape Design Palette

Chapter 3: Streetscape Design Palette

This chapter provides guidance on design considerations for building upon Solano Avenue's character and identity as a gathering space in Albany and Berkeley.

The chapter is organized into three sections focusing on different design elements for the corridor, including:

1. Sense of Place Design Elements
Design elements such as branding, public art, and retail and commercial signage can provide a unifying theme to Solano Avenue.

2. Sidewalks and Public Spaces Design Elements

Design elements located in the sidewalk and public spaces can provide a sense of arrival and identity to the central portion of Solano Avenue. This includes plazas, bus stops, bike racks, streets and plantings, rain gardens, site furnishings, lighting, trash cans and compost bins, and paving materials.

3. Roadway Design Elements

Design elements located within the roadway, such as parking area pavers, valley gutters, and truck aprons, provide safety, access, and identity to Solano Avenue.

Sense of Place Design Palette Element: Branding

Branding strengthens...

a neighborhood's identity. Solano Avenue already has several beloved, well-recognized nodes, in "Upper-" and "Lower-Solano." Does the future hold a "Mid Solano," or "Heart of Solano," too?

Coordinated streetscaping (like signage, street furniture, or public art) tells visitors they have entered a special, distinct place. Use style consistency to prevent clutter.

Design Considerations:

celebrate uniqueness, co-located with other streetscape elements (e.g. lighting).

Sense of Place Design Palette Element: Public Art and Murals

Public art is...

cultural infrastructure that creates viability and a sense of place on Solano Avenue. When community members develop and participate in creating public art, murals can become photo backdrops, political commentary, or ways to show local pride. Public art is flexible and can change over the years, or it can become permanent.

Design Considerations:

eco-friendly paint, themed art/colors to create unified character, involve local artists and the community.

Sense of Place Design Palette Element: Retail and Commercial Signs

Good signage benefits...

the pedestrians on the street and the commercial shops it advertises. Walking down a street should be a fun experience - one you want to do again. If shops create unique signage, people are more likely to enjoy the street, return more often, and spend more money.

Design Considerations:

a variety of media, unique character for each sign, legibility, pedestrian-scale height and size.

Sidewalks and Public Spaces Design Palette Element: Plazas

Plazas contribute...

to the public good. Plazas are where people of all stages of life come to sit, to walk their dog, or to meet friends.

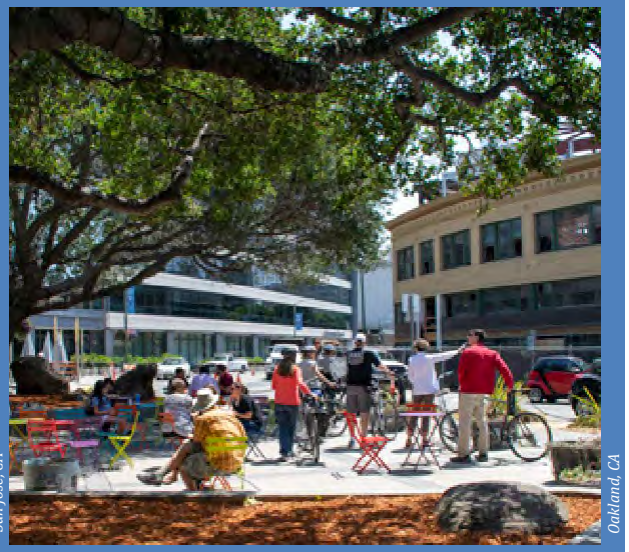
Design Considerations:

place-relevant, visitors of all ages (including kids, tweens, adults, and seniors), use of street furniture, use of green space, size of plaza, proximity of plaza to strong visual destinations.

San Francisco, CA

Stapleton, CO

San Jose, CA



Oakland, CA

Sidewalks and Public Spaces Design Palette Element: Bus Stops

Bus stops should...

offer comfortable, protected rest spaces, while providing visibility to make transit access easy and attractive. They can also contribute to creative placemaking, through landscaping, art, or interactive features. Given their regular spacing along a corridor, they can help shape the identity of a place.

Design Considerations:

seating for all abilities, shelter from wind and rain, grime-resistant material, unique.

Sidewalks and Public Spaces Design Palette Element: Bike Racks

Bike racks are...

appearing in colorful and memorable forms on Solano Avenue, and the existing racks can be supplemented by additional racks that are multi-use. A bike rack can be a playground, make a statement, add an old-time flair, or become a canvas for art competitions.

Design Considerations:

convenient, near building entrances, visible, space to secure bike in two places, not blocking pedestrian walkways, bike parking stalls in-street.

Sidewalks and Public Spaces Design Palette Element: Street Trees + Plantings

Trees and plants thrive...

in the Bay Area. Varied combinations of all shapes and sizes provide a balance of light and shade while adding visual interest and natural drainage. With thoughtful species selection, such welcoming natural elements can also be implemented with tolerance for drought.

Design Considerations:

local plants, xeriscaping, space trees on average 25-30 ft on center, suspended pavement system for tree roots.

Sidewalks and Public Spaces Design Palette Element: Rain Gardens

Rain gardens clean...

stormwater as it filters through the soil and help to reduce the amount of pollution in water runoff. Bioretention also prevents street flooding during larger rain events, and contributes unique, attractive, functional zones for nature to flourish in an urban setting.

Design Considerations:

detailed "French" drain grates, sunken growing area, bridges over channels, plant selection coordinated with other design of streetscape.

Sidewalks and Public Spaces Design Palette Element: Site Furnishings

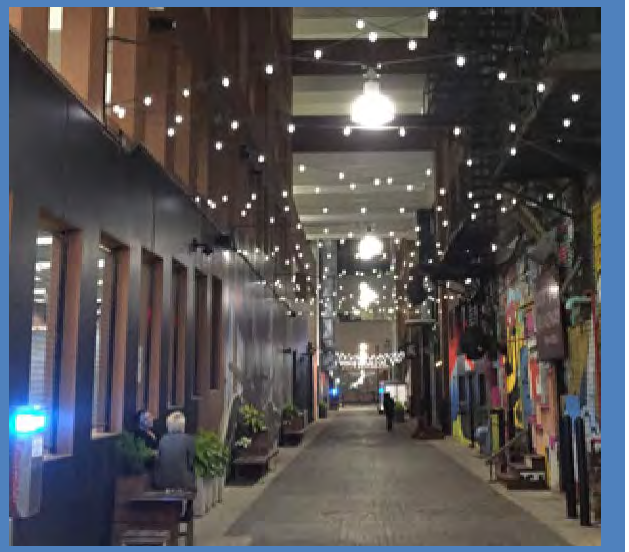
Site furnishings offer...

spots to rest, eat, meet up, or even charge technology. Walkability starts with offering places for people to stop and enjoy themselves, which improves the livability, safety, and local economy. These needs can be met in fun ways to create welcoming environments for both individuals and groups.

Design Considerations:

variety of seating types, attractive and functional benches, integrated plants/ shade, incorporate solar, arrangements to facilitate use by groups.

Sidewalks and Public Spaces Design Palette Element: Lighting



Lighting is...

important for security and pedestrian safety. Multi-sided lighting especially helps to illuminate walkers from the side or bottom, rather than just spotlighting them from above. But lighting can also contribute more dynamically to the sense of a place, whether creating uplighting accents, highlighting art, or setting a twinkling "roof" over a space.

Design Considerations:

side/bottom light sources, pedestrian-oriented, minimized light pollution/spill, color-balance lamps.

Sidewalks and Public Spaces Design Palette Element: Trash Cans + Compost Bins

Trash/Compost Bins nudge...

people to make intentional daily choices. Ever-present, trash bins can either simply fulfill their role or can actively improve an area's aesthetic. They gently educate and remind a city's in habitants of the importance of recycling.

Design Considerations:

position near bus stops and street corners, integrate the community's aesthetic, incorporate solar, color code for easy use, allow water to drain, simple and enduring, accessible height.

Sidewalks and Public Spaces Design Palette Element: Paving Materials

Paving changes add...

texture and color. They often demarcate special pedestrian areas, such as transitions from sidewalk to plaza or walking area to seating area. On a curbless street design, paving can even demarcate sidewalk and vehicular zones, all while giving the sense that the entire space is "shared" and pedestrian-friendly.

Design Considerations:

ADA accessible, drainage and permeable pavers, slip-resistance, movement over time, local materials, durability.

Roadway Design Palette Element: Parking Area Pavers

Parking area pavers assist...

with visually narrowing the street to reduce traffic speeds and with watershed in urban areas. Permeable pavers allow water to percolate naturally rather than relying on water management systems. This percolation even filters pollution from the stormwater.

Design Considerations:

ADA accessible, non-slip materials, local materials, size and color, effect on wheel accessibility, soil conditions.

Roadway Design Palette Element: Valley Gutters

Valley gutters direct...

water flow and benefit street drainage. Valley gutters are key when using multiple paving patterns on one street, and provide a separation between parking and street or curbless street design.

Design Considerations:

include drains in areas with intermittent rain, can drain into rain gardens or landscaping, 6' maximum width.

Roadway Design Palette Element: Truck Aprons

Truck Aprons enable...

large vehicles to pass through a small, space-limited turn. Trucks use truck aprons, a slightly-raised addition to the road, to successfully exit a turn. Truck aprons ensure a street's accessibility while maintaining ideal traffic flow.

Design Considerations:

distinguishable from road and sidewalk, raised 3 inches from roadway.

Chapter 4: Implementation Strategy

Southbound Tacoma Avenue

Chapter 4: Implementation Strategy

The Study recommendations will support the City of Albany in creating a Solano Avenue that is an engaging, welcoming place for all residents and visitors. This chapter presents strategies for implementing the corridor design vision and placemaking elements. This includes phased strategies, a funding plan, and coordination with internal departments, agencies, and other supporters.

Phased Strategies

The changes illustrated in the proposed corridor design will take time for the City to implement, and not all of the changes can happen at once. Some features may also be upgraded overtime based on funds available. For example, a curb extension could begin as a temporary installation with paint and posts and morph into a permanent concrete structure over the course of a few years (see Figure 4.1).

Temporary installations also give the community time to interact with the new features and provide feedback which can be incorporated into future improvements.

Table 4.1 presents strategies for phasing changes over time.

Figure 4.1. Example of the lifecycle of a curb extension: Short-term - temporary installation with paint. Medium-term - concrete repaving without moving the curb line. Long-term - permanent curb extension with shifted curb line.

Table 4.1. Potential Short, Medium, and Long-Term Phasing of Improvements

	Expanded Space for Pedestrians and Placemaking	Traffic Calming and Safety	Street Trees and Plantings
Short	*Use temporary treatments to extend the existing curb.*	*Use temporary treatments to better define the roadway.*	*Repair sidewalks and localized damage due to tree roots while maintaining the existing curb line and trees.*
	• Use paint and post treatments to create curb extensions or walking areas. • Use temporary posts or fencing to extend the sidewalk into the travel lane.	• Install high-visibility crosswalks. • Install painted medians and parking lanes to narrow vehicle lanes. • Conduct a demonstration of back-in angled parking.	• Bevel, or cut down the raised edge, shim, or wedge (bridge) uneven edges with asphalt if uplift is under one inch. • Replace damaged panels with pavers made of rubber or composite plastics to provide accessible surfaces that are more accommodating of tree root growth.
Medium	*Expand space for pedestrians and placemaking while working with the existing curbs.*	*Maintain the existing curbs and make changes within the roadway to slow vehicle speeds and improve safety.*	*Move plantings out of the pedestrian access route while maintaining the existing curb line.*
	• Use parklets and light-duty construction to extend the existing curb. • Install bollards or other semi-permanent barriers to widen the sidewalk.	• Install mountable curbs or truck aprons to extend the curb. • Install raised crossings.	• Add new planting beds adjacent to, but set back from, the curb, using either a gap or trench drain to maintain the surface drainage.
Long	*Reconstruct the curb to create more public spaces.*	*Rebuild Solano Avenue to be a narrower roadway.*	*Reconstruct the curb line to include space for trees and plantings.*
	• Install new corner or curb extensions for seating, site furnishings, plants, and bus stops.	• Create new or larger curb extensions to narrow crossings. • Creating parking bays in contrasting surfacing to visually narrow the travel lane. • Explore the feasibility of back-in angled parking.	• Rebuild wider sidewalks without street trees and creating parking bays with curb extensions large enough to accommodate street trees. • Create rain gardens at curb extensions.

Funding Plan

In order to implement the proposed recommendations in this Study, the City will need to identify and seek dedicated funding. While some elements of the project will be eligible for grant funding, other elements may not be competitive and will need to be funded through other mechanisms, such as through the City's Capital Improvement Program (CIP) or private development. Give these funding constraints, the recommended projects will likely be implemented in phases over several CIP cycles. Potential funding opportunities are identified in Table 4.2.

Table 4.2. Potential Funding Opportunities

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
Federal Funding Sources					
Fixing America's Surface Transportation (FAST) Act	U.S. Department of Transportation	Annually; Local match is required.	The FAST Act funds include several bicycle-related programs, such as the Surface Transportation Block Grant Program; Transportation Alternatives Program; Congestion Mitigation and Air Quality Improvement Program; and others.	Bicycle-parking facilities, bicycle-activated control devices, equipment for transporting bicycles on transit, and roadway infrastructure improvements	https://www.fhwa.dot.gov/fastact/funding.cfm
State Funding Sources					
Highway Safety Improvement Program	Caltrans	Varies; most recent call for projects was in the summer of 2018.	For projects and programs that reduce traffic fatalities and serious injuries by correcting or improving a specific problem. Highly competitive at the state level.	Bicycle and pedestrian facilities, correction or improvements to safety in the roadway, traffic calming, traffic signs, sight distance improvements, pavement markings, and roadway realignment	www.dot.ca.gov/hq/LocalPrograms/hsip.html
Affordable Housing and Sustainable Communities Program	California Strategic Growth Council	Annually; next call for projects is February 2019.	For projects that focus on land use, housing, transportation and land preservation projects and support infill, compact development, and reducing greenhouse gases.	Sustainable transportation infrastructure and transportation-related amenities	www.sgc.ca.gov/Grant-Programs/AHSCProgram.html
Infrastructure State Revolving Fund Program	California Infrastructure and Economic Development Bank	Applications accepted continuously	Cities, counties, and joint power authorities can apply for low-cost financing ranging from $50,000 to $25 million with terms of up to 30 years through the ISRF program for a wide variety of infrastructure projects.	City streets; drainage, water supply and flood control; educational, cultural, and social facilities; environmental mitigation measures; parks and recreational facilities	http://www.ibank.ca.gov/infrastructure-state-revolving-fund-isrf-program/
Regional Funding Sources					

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
Regional Active Transportation Program	Metropolitan Transportation Commission	Varies; the current cycle (Cycle 4) covers fiscal years 2019-20 through 2022-23	Funds a wide range of capital and non-capital projects, including the development of plans, infrastructure projects, and education and outreach programs promoting walking, biking, and safe routes to school by using active modes of transportation. The state program is competitive among jurisdictions statewide; the regional program is competitive among Bay Area jurisdictions.	Bicycle and pedestrian paths, bicycle racks, and other projects that facilitate safe, easy, and convenient walking and biking	www.mtc.ca.gov/funding/ATP
Bicycle Rack Voucher Program	Bay Area Air Quality Management District	Ongoing; last cycle closed in June 2016	Vouchers for up to $60 per bicycle parking space created (up to $15,000 per applicant per year. Racks must be installed within one-tenth of a mile of at least one major activity center and maintained in service for at least three years. Available only to public agencies.	Bicycle parking racks	http://www.baaqmd.gov/grant-funding/public-agencies/brvp
County Funding Sources					
One Bay Area Grants	Alameda County Transportation Commission	OBAG current round of funding funds projects from 2017/18 - 2021/22	Infrastructure projects that reduce vehicle trips, including pedestrian and bicycle facilities, and projects that are a catalyst for medium- and high-density housing development.	Local street and road maintenance; streetscape enhancements; bicycle and pedestrian improvements; transportation planning; Safe Routes to School projects	https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/focused-growth/one-bay-area-grants
Alameda County Measure BB Bicycle and Pedestrian Program	Alameda County Transportation Commission	Funding allocated monthly to Alameda County	Funded through a half-cent transportation sales tax	Expanding bicycle and pedestrian paths and facilities; upgrade local transportation infrastructure; and innovative technologies.	https://www.alamedactc.org/app_pages/view/17260
Alameda County Measure B Funds	Alameda County Transportation Commission	Ongoing	Funds are distributed through competitive and non-competitive programs. The non-competitive program (pass-through payments) is distributed to jurisdictions based	Local streets and roads, bicycle and pedestrian projects, transit, and paratransit	https://www.alamedactc.org/funding/fund-sources/measure-b/

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
			on population. The competitive portion includes all modes of transportation and is implemented in cycles throughout the county.		
Vehicle Registration Fee Funding	Alameda County Transportation Commission	Ongoing	Program's goal is to sustain the county's transportation network, reduce traffic congestion, and vehicle-related pollution.	Program has four categories of projects: Local Road Improvement and Repair Program; Transit for Congestion Relief; Local Transportation Technology; and Pedestrian and Bicyclist Access and Safety Program	https://www.alamedactc.org/funding/fund-sources/vehicle-registration-fee/
Transportation Development Act Article 3	Metropolitan Planning Commission/ Alameda County Public Works Agency	Every 2–3 years; the most recent submittals were due in January 2018	Funds plans, safety education, and design and construction of capital projects. Each county coordinates a consolidates annual request for projects to be funded in the county.	Design and construction of walkways, bicycling paths and bicycling lanes, and safety education programs	https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/transit-21st-century/funding-sales-tax-and-0

Local Funding Opportunities

In addition to the federal, state, regional, and countywide funding opportunities identified in Table 4.2, the City of Albany has local funding sources that may be used to implement the recommendations in this Study. These funding sources include:

- Capital improvement impact fee program
- Sidewalk parcel tax
- Sewer and stormwater drain improvements tax
- Public art fund

For additional funding needs, the City could consider updating its development impact fee program to reflect the recommendations in this Study and in other recently competed policy documents such as the Albany 2035 General Plan.

In partnership with the Solano Avenue Association, the City could also explore the potential for a business improvement district to fund improvements that support the economic vitality of local businesses along Solano Avenue.

Project Funding Matrix

Table 4.3 summarizes the changes identified in this Study and possible funding sources.

Table 4.3. Project Funding Plan

Projects	Funding Opportunities												
	City's Capital Improve-ment Program	Other City taxes and funds	Fixing America's Surface Transportation Act	Highway Safety Improve-ment Program	Affordable Housing and Sustainable Comm-unities Program	Infra-structure State Revolving Fund Program	Regional Active Transport-ation Program	Bicycle Rack Voucher Program	One Bay Area Grant County Program	Measure BB Bicycle and Pedestrian Program	Alameda County Measure B Funds	Vehicle Registra-tion Fee Funding	Trans-portation Develop-ment Act Article 3
Roadway infrastructure improvements	X		X	X		X				X	X	X	X
Traffic calming	X			X	X	X	X			X	X	X	
Crossing improvements (signs, markings, RRFBs)	X	X		X	X		X		X	X	X	X	X
Curb extensions/ bulb-outs	X	X		X	X				X	X	X	X	
Bicycle crossing improvements	X		X	X	X		X		X	X	X	X	X
Bicycle racks and corrals	X		X				X	X					
Streetscape/ landscape improvements	X	X											
Lighting	X	X											
Public art and murals	X	X											

Agency Coordination and Support

In order to implement this Study, the City of Albany will need to develop partnerships and facilitate coordination amongst multiple stakeholders and organizations, including internally and externally.

Internally, many departments were engaged in the development of this Study and will continue to be involved throughout implementation. This includes the Community Development Department, Public Works Department, Police Department, and Fire Department, and Recreation & Community Services Department. Partner agencies will also need to have continued involvement, such as AC Transit and the City of Berkeley.

The City and other governmental agencies cannot implement this vision all on their own and will need the partnership and support of Solano Avenue business and property owners, the Solano Avenue Association, the Albany Strollers & Rollers, and nearby residents and visitors. With the support of the Albany community, and those beyond, Upper Solano Avenue will continue to be both a local and regional draw that serves all users.

So Let's Get Going!

Now that the Study is done, the fun work begins – implementing the physical improvements and supportive strategies outlined in this Study. As a start, the City can consider which improvements could be made in the short-term, using the Phased Strategies as a guide.

The design presented in this Study is a concept design; the next step will be 30/60/90% designs. It should be noted that design details, such as underground utilities, were not considered during this conceptual stage of design. Engineering details – including utilities, drainage, driveway relocation and consolidation, streetscaping and landscaping alternatives, and on-street parking inventory changes – will be determined as the design advances through design.

This Study provides a vision of Upper Solano Avenue as a place that is safe for all users, including pedestrians, bicyclists, transit riders, and motorists; supports local economic activity; and has dynamic and distinctive streetscape and placemaking. This Study also provides the tools to implement this vision. So let's get going, Solano Avenue – we're excited to see where you'll go!