Appendix A. Community Engagement Summary

Overview

As a part of the Solano Avenue Complete Streets and Corridor Revitalization Study, the City of Albany and project team (including Local Government Commission, Toole Design, and Opticos Design) led an extensive community and stakeholder engagement to explore options to improve safety and facilitate a walkable main street environment on Upper Solano Avenue from Masonic Avenue to Tulare Avenue.

Outreach and community engagement occurred from the spring through fall of 2018. Principal events included:

- Community Advisory Group Meetings (April 17 and September 21, 2018, and February 13, 2019)
- Walk Audit and Design Workshop, May 30, 2018
- Focus Groups and Business Pop-in Visits, May 30 – June 1, 2018
- Design Preview and Pop up Demonstration, September 22, 2018

Activities and outcomes are summarized below.

Publicity and Outreach

Public events were advertised through:

- City's website
- Social media
- Eblasts and press releases
- Flyers and posters displayed at businesses and public locations along Solano Avenue and City Hall
- Large banners at City Hall and the Albany Community Center

The City established a dedicated webpage titled "Solano Complete Streets" that included the project purpose and background, past and upcoming activities, Study documents, a comment portal for input and feedback, and other resources.

Community Advisory Group

Community outreach and engagement kicked-off with the formation of the Community Advisory Group (CAG). The purpose of the group was to:

- Provide ongoing feedback throughout the process
- Review the proposed corridor design and draft Study
- Assist with planning and publicizing community events
- Identify ways to encourage participation

The CAG met on April 17 and September 21, 2018, and February 13, 2019 at the Albany Community Center. Participants included residents, business owners along Solano Avenue, City staff, and representatives from the City of Berkeley, AC Transit, Solano Avenue Association, and Solano Avenue Strollers and Rollers.

Figure A.1. During their April 2018 meeting, the CAG participated in a site visit along Solano Avenue to identify existing conditions and initial recommendations.

The April 2018 CAG meeting took place in advance of the first public outreach events and focused on reviewing existing conditions, identifying issues to address in the Study, and discussing the timing and activities to engage stakeholders and the community. The meeting also included a site visit of the corridor (see Figure A.1). CAG members identified the need for:

- Improvements to and upkeep of pedestrian and bicycle facilities
- On-street parking with longer time limits
- Curbside access management
- Placemaking strategies that showcase that Upper Solano Avenue (east of Masonic Avenue) is a unique and distinctive part of Solano Avenue and the city
- Improvements such as gateway signage, artwork, lighting, and furniture on existing sidewalks
- Revitalization of underutilized space

CAG members met again in September 2018, following the May 2018 Design Workshop (described below) to preview preliminary design concepts and provide feedback on tools to gather community input. Key feedback included:

- Preference to improve existing park space over the addition of new park space
- Maintaining the southbound left-turning movements from Key Route Boulevard on to Solano Avenue
- Continued support for placemaking improvements on Solano Avenue

In February 2019, the CAG members met for their third and final meeting to review the draft Solano Avenue Complete Streets and Corridor Revitalization Study.

Walk Audit and Design Workshop

The City and project team held the first community event, a Walk Audit and Design Workshop, on May 30, 2018. Over 50 people attended the event. The Walk Audit was held prior to the Design Workshop, during

which members of the project team led to small groups on walks to observe and discuss existing conditions on Upper Solano Avenue and to discuss ideas for improvements and recommendations (see Figure A.2). After the Walk Audit, participants returned to the Albany Community Center to join others for the Design Workshop.

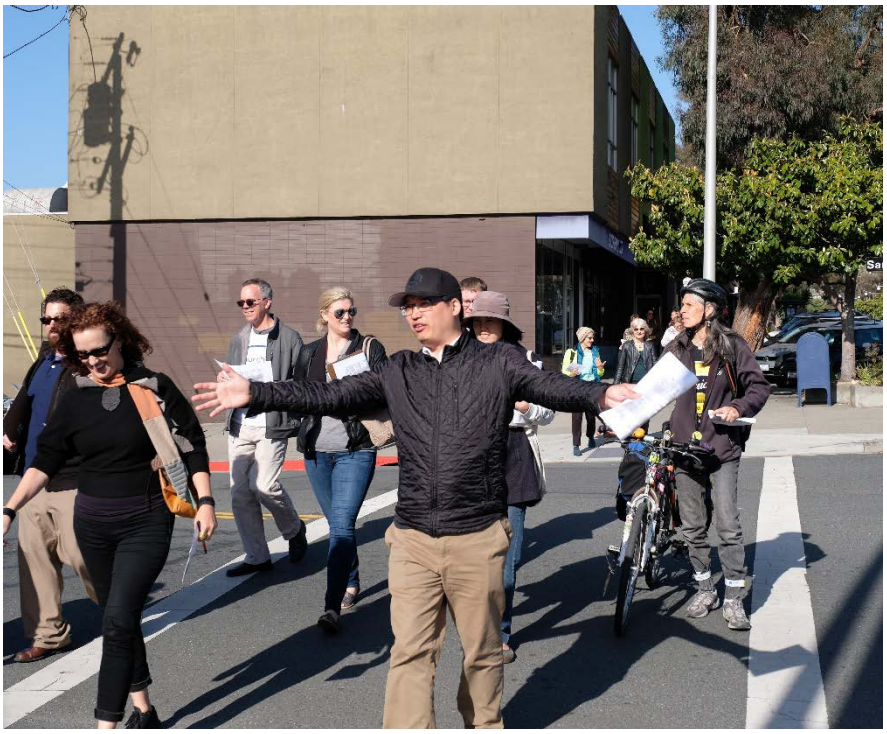


Figure A.2. Community members and the project team members participating in the May 2018 Walk Audit

The Design Workshop began with an introductory presentation and followed with a series of input activities. Attendees participated in real time digital polling in which they responded to questions using their cell phones with results immediately tabulated and displayed on a screen.

Afterwards they gathered around existing conditions maps of Upper Solano Avenue and were invited to leave comments on the maps about where they experience challenges and suggestions on how to improve the corridor (see Figure A.3). Participants also provided input via comment cards and on a poster in which they were prompted with the question: "What do you love about Solano Avenue?"

Several themes emerged as participants shared their input during the walk audit and Design Workshop and via comment cards, including:

Pedestrian Improvements

- Widen the sidewalks and remove tripping hazards/obstacles, such as newspaper boxes and street trees
- Clearly mark the crosswalks and install where missing
- Upgrade curb ramps to meet American with Disability Act (ADA) standards and align with crosswalks

Figure A.3. Participants providing comments on the existing conditions map during the May 2018 Design Workshop.

- Create more curb bulb-outs
- Install pedestrian-scale street lighting

Public Space Improvements

- Install more public/gathering spaces, including outdoor dining
- Plant more trees and indigenous landscaping
- Create more parklets and buslets
- Create public art, such as murals and sculptures

Additional Improvements

- Slow traffic and narrow the roadway
- Provide space for kids and families to bike safely
- Install more bike racks
- Expand the number of free parking spaces

Focus Group Meetings

In the days following the Design Workshop, the City and project team held three focus group meetings which included:

Orientation Center for the Blind – May 31, 2018: The City and project team members met with Orientation Center for the Blind staff for a walking assessment of Solano Avenue. After the walk, Center for the Blind staff provided recommendations for corridor-wide improvements which included:

- All traffic light crossings need to have audible signals.
- Pedestrian control buttons placed within easy reach of crosswalk.
- Face plate of APS control aligned with crossing.
- Curb cuts should have truncated dome crossing indicators located in the crosswalk rather than in-between the cross walks (to allow individuals who are blind or individuals who are wheelchair users to use the curb cuts for direct crossing which will avoid diagonal street crossings)
- Ample time to cross when the button has been pushed for someone who is slow to walk
- Repairs to uneven sidewalk pavement as this is dangerous for footing
- Trim vegetation that overhangs sidewalk
- After inclement weather, sidewalks need to be cleared of debris
- Diagonal wires and other large objects need to be more pedestrian friendly (vertical rather than diagonal) that would make it less likely to bump someone on the head or trip over
- No parking in a way that blocks the sidewalk, unless someone is there to warn travelers that need assistance (especially in resident areas)
- Tactile ridge for business-related driveways so people can tell when they are at a driveway
- Construction areas on public streets should be clearly marked with barriers reaching to the ground (detectable by a cane) and someone to help guide a person safely around the construction zone
- On busy street crossings, more tactile and color contrast for the actual crossing (similar to the Carlson and San Pablo crossings)
- Benches or seating every corner or two for those needing to rest when walking
- Provide tactile guidestrips the length of crosswalks to decrease chances of veering into traffic while crossing the street.

The Solano Avenue Association – June 1, 2018: The City and project team also met with representatives from the Solano Avenue Association who expressed key needs and concerns of Solano Avenue business owners. This included:

- Adequate parking for patrons and employees
- Repair and consistent maintenance of existing public facilities
- Motorist behavior such as excessive speed and illegal maneuvers

Police Department, Fire Department, and Public Works staff – June 1, 2018: Staff from the Community Development Department and the project team met with staff from the Police, Fire, and Public Works Departments to gather their initial feedback about the preliminary design concepts.

Business Pop-In Visits

On May 31, 2018, the project conducted 18 pop-in visits to businesses along the Upper Solano Avenue corridor. Owners and/or employees were asked:

- How long they have been in business on Solano Avenue
- Their perceptions about needed improvements and roadway safety
- The primary form of transportation used by employees and patrons
- The proportion of visitors from Albany versus outside the city
- To rank a list of amenities from very important to unimportant

The business owners and employees that were surveyed felt strongly that sidewalks and crosswalks need to be improved and noted that hazardous driving, such as illegal U-turns, is a common occurrence. They also felt that longer-term parking spaces are needed (longer than 90 minutes) and placemaking was needed to beautify the area and accommodate patrons.

A few businesses felt that more space for delivery trucks/delivery zones are needed, yet many business owners and employees surveyed did not indicate that delivery trucks is a major issue for their business operations or patrons.

Albany Strollers & Rollers Meeting

In June 2018, City and Toole Design staff met with members of the Albany Strollers & Rollers to discuss existing conditions for walking and biking on Solano Avenue and their vision for the future of the corridor. Below is an overview of the Strollers & Rollers comments that they shared during the meeting:

Corridor Design-Related Comments

- Bulb-outs: Great for pedestrians, but can be problematic for bicyclists. Consider reflective curbs.
- In-street bike corrals: The Study should identify good candidates for in-street bike corrals along corridor, maybe in conjunction with a parklet
- Sidewalk is constrained on the south side of Solano Avenue
- Consider using the space left behind when the bus stops are removed to off-set parking impacts elsewhere
- Back-in angled parking: works better for transit stops
- Santa Fe intersection: is it on recall? Remove buttons
- Include more red zones at intersections for sight distances
- Consider side streets for loading zones
- Align the curb cuts with crosswalks

Streetscape-Related Comments

- Bench at Ramona and Solano Avenues is in the middle of the sidewalk
- Consolidate newspaper boxes
- Consider locations for bikeshare stations
- Signage needed, especially at the Ohlone greenway
- Add bike racks east of Curtis street; Albany Strollers & Rollers will work with businesses to get them funded and installed

Programmatic Comments

- Increase parking from 90 minutes to 2-4 hours
- Parklets: make sure landscaping does not block sightlines

Design Preview and Pop-up

On September 22, 2018, the City and project team held a Design Preview at Flowerland Nursery to share the proposed corridor design and solicit community feedback on the proposed corridor design and design palette ideas (see Figure A.4). Below is a snapshot of what the attendees liked, had concerns about, and additional ideas.

Figure A.4. Attendees provide feedback on the proposed corridor design during the Design Preview event at Flowerland Nursery in September 2018.

What attendees liked:

Overall, the attendees were positive about the proposed corridor design and liked the changes, including narrowing the travel lanes and slowing vehicle traffic, prioritization of pedestrians and design improvements for increased pedestrian safety, and more opportunities for placemaking and public art. Below is an overview of specific comments.

- That the curb cuts are aligned with the painted crosswalks – Better for people with physical and visual impairments, seniors, people pushing strollers, etc.
- The realignment of Tacoma Avenue and the additional opportunity for public space
- Pedestrian push buttons on all legs of the intersection at Solano and Santa Fe Avenues
- Preference for the Key Route Alternative

What attendees were concerned about:

Some attendees were concerned about the impacts that the proposed design may have for motorist and parking. Below is an overview of specific comments.

- Pinchpoints for motorists and bicyclists at the pedestrian refuge islands
- Pinchpoints on side streets, especially for delivery trucks
- Removing parking along the corridor may impact parking on the side streets
- Placement of the crosswalks on side streets may limit the ability of motorists to see oncoming traffic on Solano Avenue

Additional ideas from the attendees:

Attendees also shared new ideas for safety and placemaking long Upper Solano Avenue, including:

- Improved lighting throughout the corridor
- Use native plants and trees as landscaping throughout the corridor
- More public restrooms
- Hire artists to create unique street furniture, lightings, etc. for the corridor
- Opportunities for placemaking along the Ohlone greenway and under the BART tracks

The event also featured a temporary pop-up event at the intersection of Solano Avenue and Pomona Avenue that illustrated the recommended design treatments using temporary materials (see Figure A.5). The highlighted treatments included curb extensions with a high visibility crosswalk and pedestrian crossing island. Cones, straw wattles, white tape, furniture and plants provided by nearby Flowerland Nursery were used to create the pop-up demonstration to help residents, visitors, and business owners visualize and test concepts to inform the Study.

Figure A.5. Temporary materials were used to demonstrate the proposed changes in the proposed corridor design.

Appendix B. Existing Conditions Report

The Solano Avenue Complete Streets and Corridor Revitalization Study develops streetscape and infrastructure recommendations for Upper Solano Avenue between Masonic and Tulare Avenues. In addition to the physical conditions, the City of Albany has several adopted plans and policies that influence the City's investments and priorities along Solano Avenue and the surrounding area. A review of these plans and policies are also included in this report, with an emphasis on those that are relevant to this project.

Introduction to Solano Avenue

Solano Avenue is the historical, social, and economic heart of Albany, running east-west at a three percent grade from the Berkeley Hills to the Union Pacific railroad tracks adjacent to Interstate 80 (see Figure B.2). Known as Main Street until the early 1900s, Solano Avenue continues to retain its main street function in the center of the Albany community. Mid-way along the corridor, the city boundary line between Albany and Berkeley runs for several blocks. Along this section, the City of Albany owns and maintains the sidewalks and roadway.

Figure B.1. The Flowerland Nursery is one of many local businesses unique to Solano Avenue.

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 (see Figure B.1). 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. 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 21st century 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. The improvements along Lower Solano Avenue serve as a guide for improvements along Upper Solano Avenue.

Land Use

The Solano Avenue 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 City's General Plan contains a broadly-defined goal for business districts within the City and a policy specific to Solano Avenue.

- **Goal LU-3:** Business Districts Maintain vibrant commercial districts that provide an attractive, walkable environment for shopping, dining, entertainment, and services.
- **Policy LU-3.3:** Solano Ave- Enhance the pattern of tightly clustered retail storefronts, active ground floor uses, and specialty shopping, dining, and personal services along the Solano Ave. corridor. Any future infill development on Solano Avenue should maintain and enhance this pattern.

The majority of properties abut the sidewalk with short or no setbacks. The AT&T switching station is an example of a beautiful building abutting the sidewalk, but currently the uses within do not contribute to the liveliness of Solano Avenue. Similarly, the PG&E substation, located between two commercial storefronts, creates a gap in the street frontage. Other properties such as the Safeway grocery store and 7-Eleven, are set back from Solano Avenue with surface parking lots and contribute to activity along Solano Avenue but do not provide a welcoming pedestrian environment.

Project Area Map

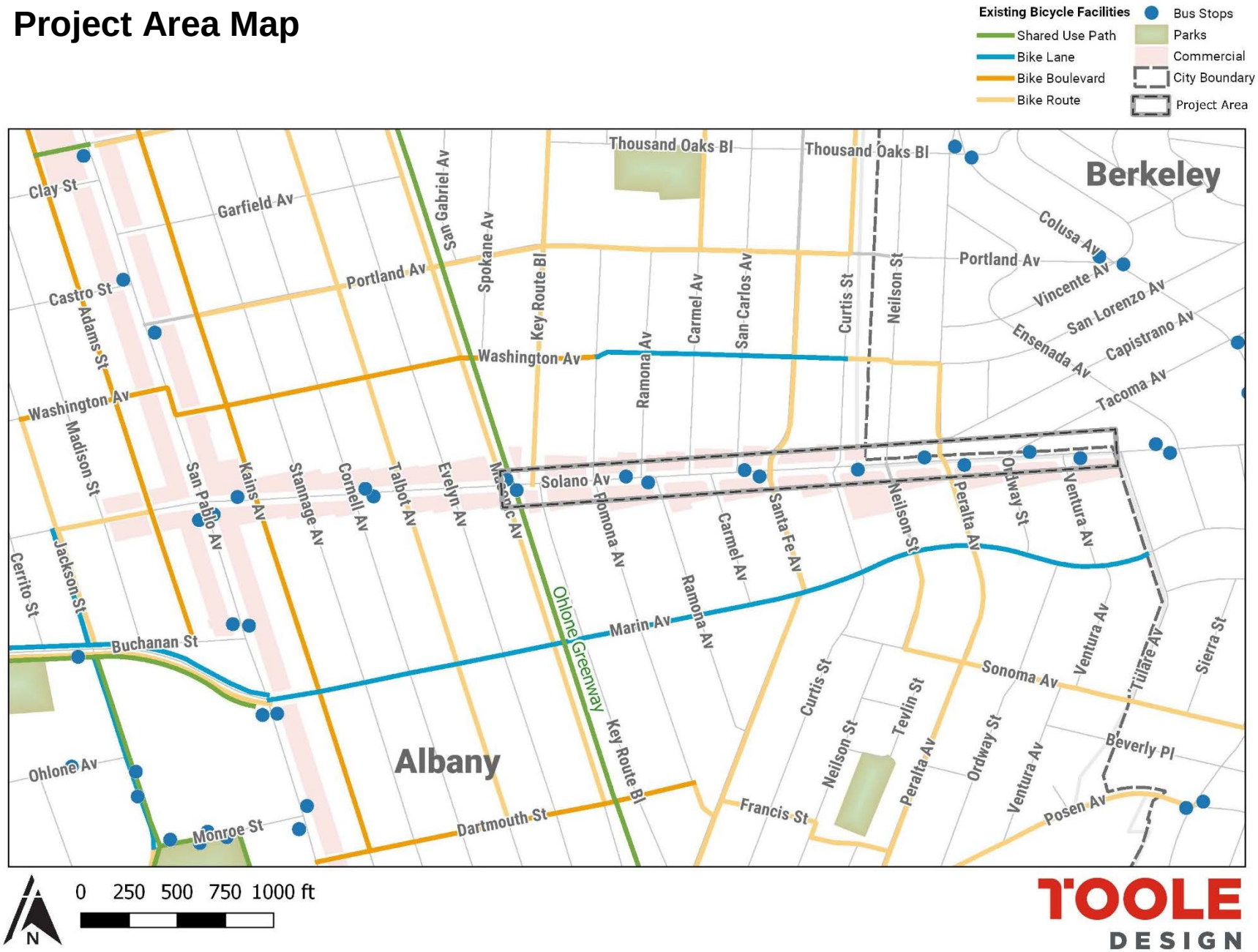


Figure B.2. Solano Avenue Complete Street Study Project Area

Circulation

Solano Avenue serves a variety of users, including pedestrians, transit riders, drivers, and bicyclists, either passing through or accessing the retail and residential properties along the corridor (see Figure B.3). This section provides an overview of the pedestrian and bicycle facilities, transit service, driving and circulation patterns, and parking, loading, and curbside activity.

Figure B.3. Typical cross section of Solano Avenue with businesses, angled parking, and marked crosswalks (Location: Ramona Avenue intersection).

A defining factor for circulation on Solano Avenue is the offset street grid which affects mobility throughout the corridor. Many of the intersections within the study area is either offset, skewed, or a T-intersection, as can be seen in Figure B.2. The irregular geometry poses a challenge to anyone crossing Solano Avenue, particularly pedestrians who must navigate long crossing distances and skewed crosswalks. Drivers must make indirect diagonal movements or two-stage turns (i.e., a left turn followed immediately by a right turn, or vice versa) when crossing Solano, even when remaining on the same cross street. Table B.1 details the intersection types along Solano Avenue; the intersections are organized from west to east.

Table B.1. Intersections within Solano Avenue Study Area

Cross Street	Intersection Type
Masonic Avenue	Signalized
Key Route Boulevard	Transition, side stop-controlled
Pomona Avenue	Side stop-controlled
Ramona Avenue	Offset, side stop-controlled
Carmel Avenue	Offset, side stop-controlled
San Carlos Avenue	T-intersection, side stop-controlled
Santa Fe Avenue	Signalized
Curtis Street	Offset, side stop-controlled
Neilson Street	Side stop-controlled
Peralta Avenue	Side stop-controlled
Ordway Street / Tacoma Avenue	Skewed, side stop-controlled
Ventura Avenue	T-intersection, side stop-controlled

Driving & Circulation Patterns

Solano Avenue is a two-way, two-lane roadway with high-demand angled parking on both sides of the street. The right-of-way ranges from 70 to 80 feet, and curb-to-curb width is approximately 60 feet. In

addition, 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. Figure B.4 illustrates the typical existing roadway dimensions along the corridor.

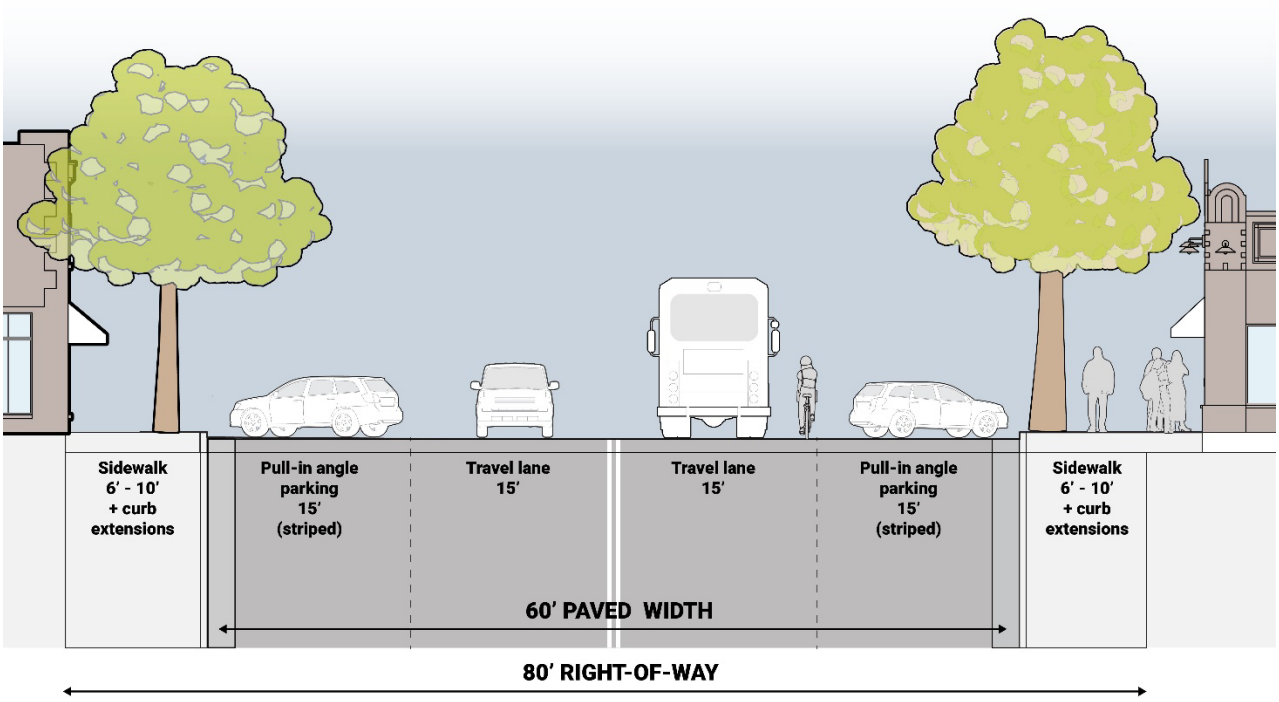


Figure B.4. Existing Conditions Cross Section

Intersections along on Solano Avenue are uncontrolled between Masonic and Tulare Avenues, except for traffic signals at Masonic and Santa Fe Avenues. The lack of controlled intersections makes it difficult for northbound and southbound vehicles and bicyclists to cross Solano Avenue, and drivers frequently edge into the roadway to make their way across. Additionally, Solano Avenue's travel lanes widen from approximately 12 feet on Lower Solano (west of Masonic Avenue) to 14 feet on Upper Solano (east of Masonic Avenue). This creates a visually wide street that, according to the project's Technical Review Committee, encourages higher vehicle speeds.

Curb cuts are located throughout the corridor, especially on the south side. During the May 2018 Community Workshop, some attendees shared that motor vehicles entering/exiting these driveways can create an uncomfortable walking environment.

Pedestrian Facilities

Sidewalks

Solano Avenue has sidewalks on both sides of the street, although the sidewalk is constricted (i.e., less than five feet in width) in several locations, particularly along the south side of the street (see Figure B.5). An example includes the sidewalk between Ramona Avenue and Pomona Avenue in front of Flowerland Nursey on the south side of the corridor. In addition, in some areas, the pedestrian path of travel is further encroached on by the location of street trees, utility poles, and landscaping.

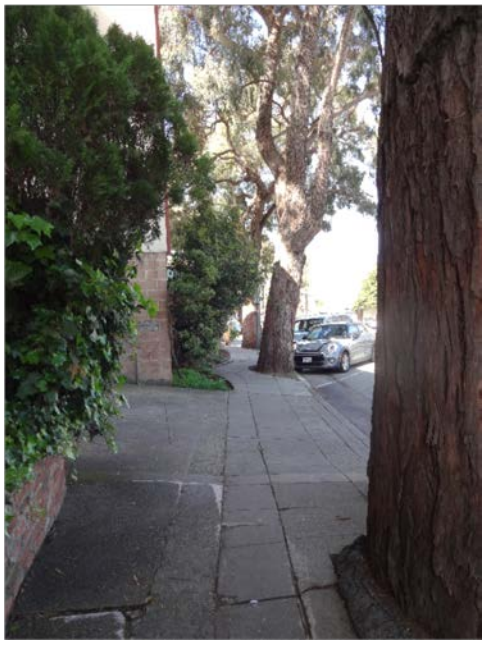


Figure B.5. Streets trees encroaching into sidewalk, resulting in narrow path for pedestrians.

Sidewalks are in poor condition in various areas along the corridor where tree roots have cracked the pavement or made the sidewalk uneven (see Figure B.6). For example, on the south side of Solano Avenue between Ventura Avenue and Ordway Street, the sidewalk is uneven and has many tripping hazards. These conditions create barriers for wheelchair and stroller users, visually-impaired people, and people who wish to walk side-by-side. Powerline poles, signal control boxes, fire hydrants, and other utility infrastructure are located along the corridor, sometimes obstructing a clear path along sidewalks.

The City of Albany conducts spot improvements of sidewalks through its Sidewalk Program and repairs the most damaged sidewalks in the Priority Sidewalk Network (identified in the City's 2012 Active Transportation Plan) via Measure P1, a parcel tax passed in November 2016. The sidewalk parcel tax provides approximately $200,000 per year for sidewalk improvements throughout the city. City staff have planned improvements for Upper Solano Avenue that will repair some of the most distressed areas of sidewalk.

Property owners are responsible for maintaining and repairing sidewalks not included in the Priority Sidewalk Network or less severely-damaged sidewalks that are adjacent to their properties.

At many intersections, sidewalk widths increase at corner bulb-outs, which reduce pedestrian street crossing distances and decrease vehicular turning speeds as drivers navigate corners with smaller radii. However, the corridor does have several wide intersections with long crossing distances, and many intersections are skewed due to Albany's offset street grid at Solano Avenue.

Figure B.6. Tree roots damaging the sidewalk.

Intersections

Most of the intersections along the corridor have marked crosswalks; however, some crosswalks are not well-marked or the paint is fading. Some intersections have legs that are unmarked, such as the:

- western leg at Ramona Ave
- eastern leg at Carmel Ave
- eastern leg at San Carlos Ave
- eastern leg at Tacoma Ave
- eastern leg at Ventura Ave

While curb ramps are located at most intersections along the corridor, the ramps are typically positioned diagonally into the street rather than aligning bi-directionally with the crosswalks (see Figure B.7). While this design enables one ramp to serve each corner's two crossings, it guides wheelchair or stroller users into the middle of the intersection, and they must course correct into the marked crosswalk to avoid entering the center of the intersection. Also, some curb ramps have vertical gaps at joints with street gutters.

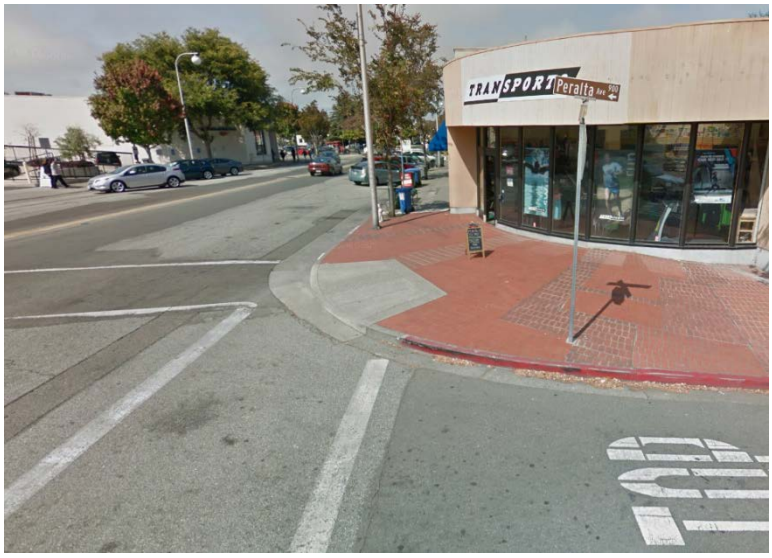


Figure B.7. A diagonal curb ramp serving both crossings lacks a tactile warning surface at Peralta Avenue.

Tactile warning strips are not present at all curb ramps, and there is inconsistency in their color. The City of Albany upgrades curb ramps as funding opportunities arise, as there is no master plan in place for these improvements.

Masonic and Santa Fe Avenues are the two signalized intersections along the corridor. At the intersections of Solano and Santa Fe Avenues, pedestrian signals are located on the north-south crossing across Solano Avenue; however, no pedestrian signals are located on the east-west crossing along Santa Fe Avenue. Pedestrian signals are installed for all crossing directions on Masonic Avenue.

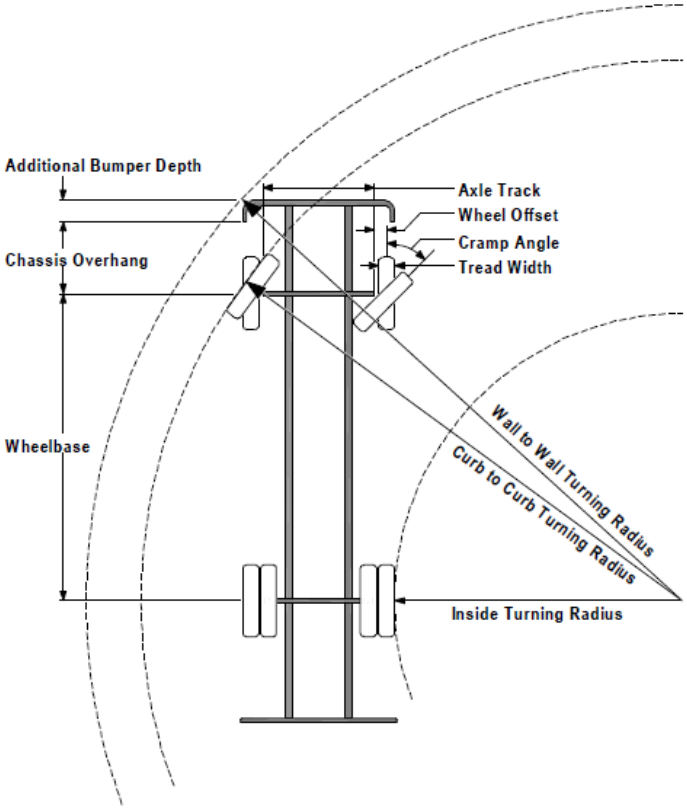
The pedestrian signals not located near curb ramps and are inconvenient or out of reach for people using wheelchairs or strollers. In addition, the pushbuttons do not include Accessible Pedestrian Signal (APS) technology that provides tactile or auditory feedback mechanisms that help visually-impaired pedestrians cross the street.

During the May 2018 Community Workshop, attendees shared the following feedback about specific intersections along the corridor:

- **Masonic Avenue:** Cars aggressively turn into crosswalk (left-hand turning movement from westbound Solano Ave onto southbound Masonic Ave)
- **Curtis Street:** Difficult for pedestrians to cross north-south; difficult for cars to cross/make left turn; many children crossing at Curtis Street to go to school
- **Santa Fe Ave:** Improve crosswalks
- **Ramona Ave:** Improve crosswalks

Emergency Vehicle Access

Currently, intersections within the study area can accommodate large Fire Department apparatus; Figure B.8 illustrates the emergency vehicle turning radius. Future improvements should be designed so that larger equipment can safely turn without entering an on-coming traffic lane. In addition, new signals shall include Opticom technology to allow emergency responders to over-ride normal signal phasing.



Parameters:	
Inside Cramp Angle:	45.00 °
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	17.70 in.
Chassis Overhang:	78.00 in.
Additional Bumper Depth:	19.00 in.
Front Overhang	97.00 in.
Wheelbase:	233.50 in.

Calculated Turning Radii:	
Inside Turn:	18 ft. 4 in.
Curb to Curb:	33 ft. 11 in.
Wall to Wall:	38 ft. 11 in.

Comments:

Aerial Application

20891

Figure B.8. Emergency Vehicle Turning Radius Detail

Bicycle Facilities

Albany has a well-developed, low-stress bicycle network. The Ohlone Greenway serves as the backbone of the bike network, and connects to multiple on-street routes throughout the city (see Figure B.9). Several bicycle routes cross Solano Avenue, and are described in Table B.2 and their locations are shown in Figure B.2.

Figure B.9. The Ohlone Greenway, a multi-use path under the BART tracks at the western end of the project area.

During the May 2018 Community Workshop, some attendees shared that, as adults, they feel comfortable bicycling on Solano Avenue; however, they do not feel comfortable having their children bike on Solano Avenue, and children often ride on the sidewalk.

Because of the north-south and 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 B.2. Bicycle Facilities near Solano Avenue

Facility/Road	Facility Type*	Connection to Solano Avenue
Ohlone Greenway	Class I Multi-Use Path	Links Berkeley to Richmond; Intersects Solano Avenue at Masonic Avenue
Masonic Avenue	Class III Bike Route	Runs north-south through Albany; intersects Solano at west end of project area
Key Route Boulevard	Class III Bike Route	Runs north-south through Albany; intersects Solano Avenue between Masonic and Pomona Avenues
Santa Fe Avenue	Class III Bike Route	Runs north-south through Albany; intersects Solano Avenue between San Carlos Avenue and Curtis Street
Peralta Avenue	Class III Bike Route	Runs north-south through Albany; intersects Solano Avenue between Neilson and Ordway Streets
Washington Avenue	Class III Bike Boulevard Class II Bike Lanes	Runs east-west through Albany one block north of Solano Avenue
Marin Avenue	Class II Bike Lanes	Runs east-west through Albany one block south of Solano Avenue

*Class III Bike Routes have no designated bicycle infrastructure. They are signed to provide bicyclists with wayfinding through Albany and alert drivers of the presence of bicyclists. Class III Bike Boulevards are low-speed, low-volume roadways with pavement markings and signage informing drivers and bicyclists that the corridor serves as a priority bicycle corridor.

Bicycle Parking

Solano Avenue is home to a variety of bicycle parking, ranging from art racks designed to resemble bicycles (installed by the Albany Rollers and Strollers, a local bicycling and walking advocacy organization) to standard inverted-U racks (see Figure B.10). Bicycle parking is not evenly distributed along the corridor. Some areas, such as the segment from Santa Fe Avenue to Curtis Street, have a disproportionately high number of racks, and other areas, such as the south side of Solano Avenue from Key Route Boulevard to Carmel Avenue, have few racks. In areas with minimal bike parking, bikes are often locked to signposts or benches, potentially blocking the sidewalk for pedestrians. The City has expressed interest in adding high-capacity sidewalk bike corrals along Solano Avenue to meet existing bicycle parking demand and encourage shopping and dining trips by bike.

Figure B.10. Art rack bicycle parking along Solano Avenue.

Collision Analysis

An analysis of UC Berkley Transportation Injury Mapping System (TIMS) data was performed to determine collision characteristics within the corridor in the past ten years (December 31, 2007 through December 31, 2017). Eleven pedestrian/vehicle collisions, eight bicycle/vehicle collisions, and 22 vehicle/vehicle collisions occurred on Solano Avenue in the study area (between Masonic Avenue and Ventura Avenue) during this period (see Table B.4). All but one of these collisions resulted in injuries, and one resulted in death (Collision #32 in Table B.4). Most collisions occurred under clear, daylight conditions.

The location of these collisions is illustrated in Figure B.11. As this map shows, the many of the collisions are concentrated at four intersections as shown in Table B.3.

Table B.3. High-Collision Intersections on Solano Avenue

#	Cross Street with Solano Avenue	Total number of collisions (including bicycles, pedestrians, and vehicles)	Notes
1	Masonic Avenue/Key Route Boulevard	10	Signalized intersection; bicycle route
2	Santa Fe Avenue	5	Signalized intersection; Bicycle route
3	Neilson Street	5	Non-signalized intersection
4	Peralta Avenue	7	Non-signalized intersection; Bicycle route

Table B.4. Collision Characteristics on Upper Solano Avenue

#	Cross Street	Classification*	Light Condition	Weather Condition
Pedestrian-Vehicle Collisions				
1	Masonic Avenue	Pedestrian Right-of-Way	Night	Clear
2	Masonic Avenue	Pedestrian Right-of-Way	Day	Clear
3	Key Route Boulevard	Pedestrian Right-of-Way	Dawn	Clear
4	Key Route Boulevard	Pedestrian Right-of-Way	Day	Clear

#	Cross Street	Classification*	Light Condition	Weather Condition
5	San Carlos Avenue	Not Stated	Day	Clear
6	Santa Fe Avenue	Pedestrian Right-of-Way	Night	Rain
7	Curtis Street	Pedestrian Right-of-Way	Night	Clear
8	Curtis Street	Pedestrian Violation	Night	Rain
9	Neilson Street	Pedestrian Violation	Day	Clear
10	Peralta Avenue	Pedestrian Right-of-Way	Day	Clear
11	Ordway Street	Unknown	Day	Clear
Bike-Vehicle Collisions				
12	Masonic Avenue	Traffic Signals and Signs	Day	Clear
13	Masonic Avenue	Other Hazardous Violation	Day	Clear
14	Key Route Boulevard	Lights	Night	Clear
15	Ramona Avenue	Automobile Right-of-Way	Day	Clear
16	Neilson Street	Improper Turning	Day	Clear
17	Peralta Avenue	Automobile Right-of-Way	Day	Clear
18	Peralta Avenue	Improper Passing	Night	Clear
19	Peralta Avenue	Not Stated	Night	Clear
Vehicle-Vehicle Collisions				
20	Masonic Avenue	Unsafe Speed	Day	Clear
21	Masonic Avenue	Traffic Signals and Signs	Dusk	Clear
22	Masonic Avenue	Unsafe Speed	Dusk	Clear
23	Pomona Avenue	Automobile Right-of-Way	Day	Clear
24	Carmel Avenue	Unsafe Speed	Day	Clear
25	Carmel Avenue	Unsafe Starting or Backing	Day	Clear
26	San Carlos Avenue	Unsafe Starting or Backing	Day	Clear
27	San Carlos Avenue	Unsafe Speed	Day	Clear
28	Santa Fe Avenue	Unsafe Speed	Day	Clear
29	Santa Fe Avenue	Traffic Signals and Signs	Day	Clear
30	Santa Fe Avenue	Unsafe Speed	Day	Clear
31	Santa Fe Avenue	Automobile Right-of-Way	Day	Clear
32	*Curtis Street (fatality)*	*Unsafe Starting or Backing*	*Night*	*Clear*
33	Neilson Street	Unsafe Speed	Day	Clear
34	Neilson Street	Unsafe Speed	Night	Clear
35	Neilson Street	Improper Passing	Day	Clear
36	Peralta Avenue	Improper Turning	Day	Clear
37	Peralta Avenue	Unsafe Speed	Day	Clear
38	Peralta Avenue	Unsafe Speed	Day	Clear
39	Ordway Street	Unsafe Speed	Day	Clear
40	Ventura Avenue	Driving Under Influence of Alcohol or Drug	Night	Clear
41	Ventura Avenue	Unsafe Speed	Day	Clear

*Pedestrian Right-of-Way collisions occur when a vehicle fails to yield to a pedestrian(s) crossing the street (usually when making a left or right turn, but occasionally when proceeding straight). Pedestrian Violation collisions occur when a pedestrian crosses outside of a designated crossing or crosses in a crosswalk when they do not have the right-of-way (e.g., during a “do not walk” phase at a signalized intersection). Automobile Right-of-Way collisions occur with the vehicle driver or bicyclist at fault for failing to yield to the other mode. Improper Turning and Improper Passing collisions are the result of bicyclists and drivers failing to safely conduct these maneuvers. Traffic Signals and Signs collisions are the result of a bicyclist or driver failing to follow sign directions, and Bicycle Lights collisions occur when a bicyclist riding at night does not have lights to enhance their visibility to drivers.

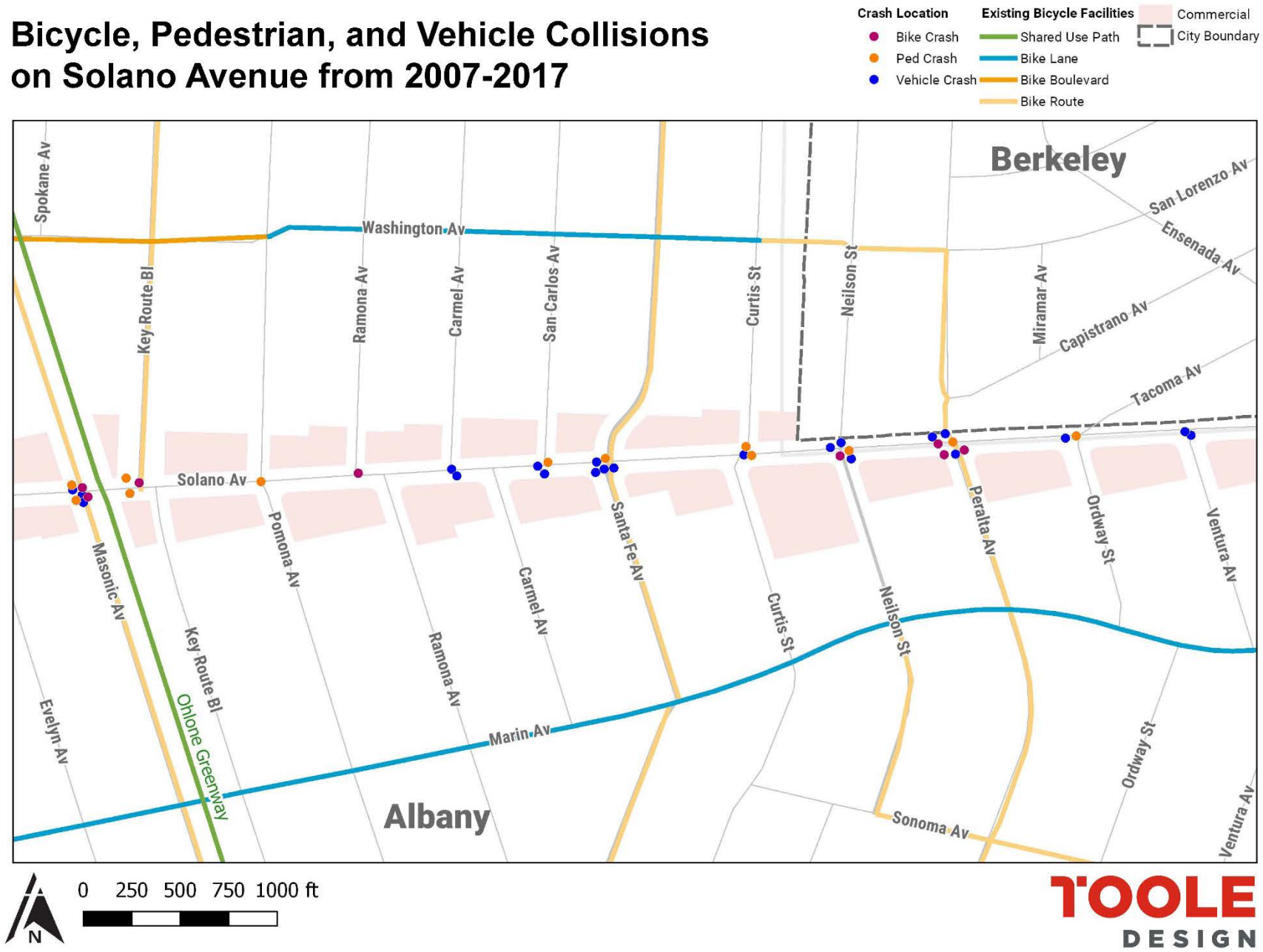


Figure B.11. Location of Collisions on Upper Solano Avenue

Transit Service

Solano Avenue is directly served by two bus routes running its length: AC Transit's G bus, a transbay route that connects Albany with San Francisco during peak periods, as well as the 18 bus, a local route that connects Albany with Berkeley and Oakland (see Figure B.12). Route 18 has headways of 12-30 minutes throughout the day. The 72, 72R, and 72M buses run between Richmond and Oakland via San Pablo Avenue, indirectly serving the Solano Avenue corridor with stops at the Solano/San Pablo intersection. All of these routes have high ridership in the Solano Avenue project area. Route information is presented in Table B.5 and bus stop locations can be seen on Figure B.2.

Figure B.12. AC Transit 18 bus picking up passengers along Solano Avenue.

Most bus stops have freestanding signs, benches, and some have additional amenities (e.g., trash bins, bus shelters at the Masonic Avenue eastbound and westbound stops). AC Transit is considering removing and/or rebalancing stops along Solano Avenue to decrease trip times (e.g., the Ramona Avenue stop).

Table B.5. Service and Ridership Information for AC Transit Bus Lines in Project Area

Bus Line	Service Type	Headways (minutes)	Approximate Service Period	Daily Ridership*
G	Limited Stop Transbay Weekday Service in Peak Direction (to San Francisco in morning, to Albany in evening)	20-66	5:30AM-10:00AM 4:30PM-8:30PM	8
18	Local Service	12-30	5:00AM – 1:00AM	41
72	Local Service	30	5:00AM – 1:00AM	48
72R	Limited Stop Service	12	6:00AM – 8:00PM	80
72M	Local Service	30	5:00AM – 1:00AM	44

* Average boardings and alightings per stop in project area

Parking

The 2015 Albany Parking Management Plan found that the parking along and adjacent to Solano Avenue serves a wide variety of community members, such as commercial/restaurant patrons and residents. Parking demand is the highest along the corridor at:

- Midday on weekdays (61 percent)
- Weekday evenings and weekends during the midday and afternoon (54 percent)

The Plan also found that there is a high-level turnover of parked vehicles along Solano Ave; 67 percent of vehicles park for two hours or less.

Solano Avenue has head-in, angled parking on both sides of the street. In Albany, on-street parking is free, and it is restricted to 90 minutes maximum from 8:00AM to 6:00PM (except Sundays and holidays). This limitation can make trip chaining (i.e., running errands, such as shopping and getting lunch) difficult. There are also 20-minute parking spaces; however, most trips take longer than 20 minutes, making these spaces less desirable. In the Berkeley section of the corridor east of Ventura Avenue, two-hour angled on-street parking is metered. Because of the popularity of Solano Avenue as a retail and dining corridor, residents on adjacent side streets are concerned with parking spillover during peak times.

Many accessible parking spaces along the corridor are not in compliance with current standards (e.g., spaces are blocked by loading zones and other barriers). Several accessible parking spaces are located so close to crosswalks that cars backing out from them enter the crosswalks, creating a hazard for pedestrians in the crosswalk (see Figure B.13).

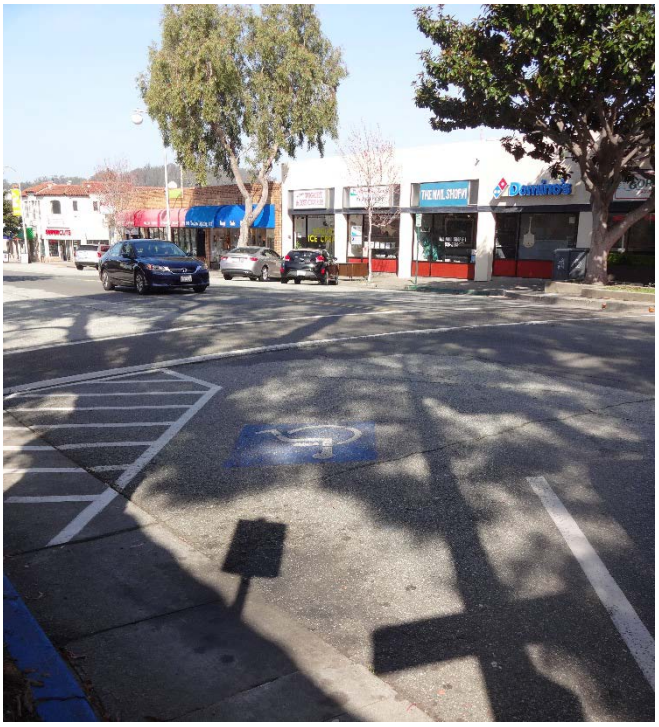


Figure B.13. Diagonal parking space with conflict at pedestrian crosswalk.

While Solano Avenue has many on-street spaces for cars, stalls for motorcycles and scooters are lacking in the corridor, resulting in the inefficient use of car-sized spaces by these smaller vehicles.

Figure B.14 illustrates parking occupancy from a 2015 parking management study that was prepared to assess on-street parking availability and utilization.

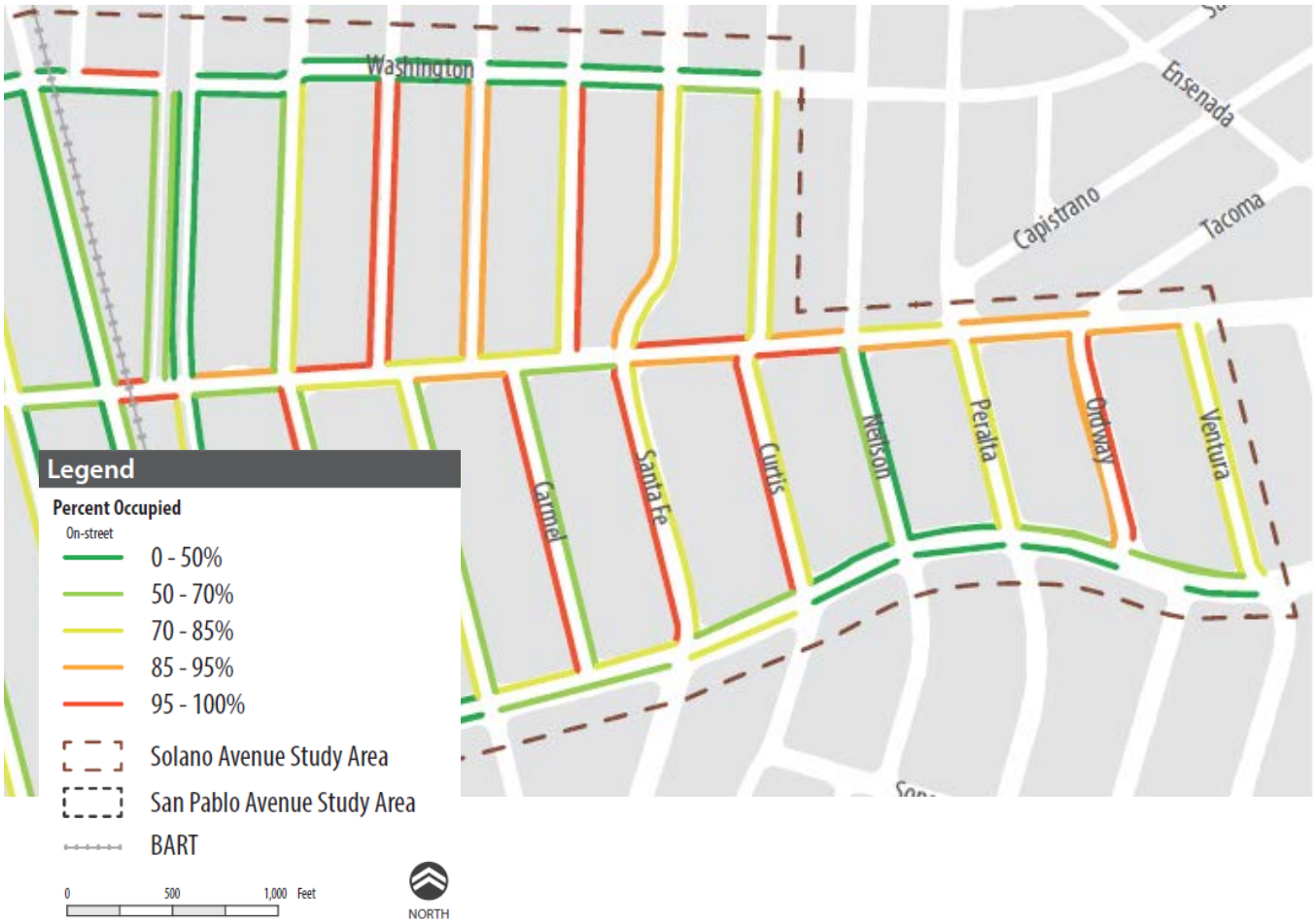


Figure B.14. Parking occupancy within the study area

Loading & Curbside Activity

Loading zones are located throughout the corridor, both on Solano Avenue and on adjacent side streets (see Figure B.15). Several of the zones conflict with through vehicle traffic and/or accessible parking. As part of this study, the City is interested in determining whether it is feasible to relocate all loading activity to side streets, reducing conflicts on Solano Avenue and freeing up space for other uses.

Another common curbside activity along the corridor is parking for food pick-up, both by residents and food delivery services. During the May 2018 Design Workshop, the project team conducted outreach to businesses and restaurants along the corridor, and many restaurant employees reported that they have a strong, and growing, take-out business.

Figure B.15. Loading zone along Solano Avenue.

Currently, rideshare services (such as Uber and Lyft) happen organically along the corridor or the side streets and do not cause disruption along the corridor.[1]

Public Realm

The Solano Avenue public realm consists of streetscape amenities, street trees, lighting, and utility infrastructure. The following provides an overview of these features of Solano Avenue.

Streetscape

As a busy retail corridor, the Solano Avenue streetscape consists of benches, planters, street trees, café and restaurant seating, magazine and newspaper boxes, mailboxes, trash and recycling bins, bike parking, and bus shelters located throughout the corridor (see Figure B.16). Historic plaques commemorate 12 locations of local history along Solano Avenue, and some businesses have landscaping adorning their storefronts, adding to the corridor's aesthetic. Multiple public spaces lie along Solano Avenue, including the Ohlone Greenway, Key Route Boulevard median, and Solano-Peralta Park (see Figure B.17). The City has expressed interest in better integrating these spaces into the corridor, as discussed in its 2004 Parks, Recreation, and Open Space Master Plan. For example, it calls for the Key Route Median to be redeveloped into a linear park equipped with a trail, landscaping, and site amenities.

Figure B.16. Street furniture along Solano Avenue

However, Solano Avenue would benefit from streetscape features that contribute more to the corridor's sense of place. The corridor lacks a gateway, or sense of arrival to the retail district (such as an archway, mural, or statue). There is limited wayfinding or public art along the corridor, making it difficult to know one's location along the corridor, and the format of street signs along Upper Solano Avenue does not match that of those installed along Lower Solano Avenue. Green space is limited to several small parks adjacent to the corridor and greenery on private property.

Figure B.17. Solano-Peralta Park

[1] During the May 2018 Design Workshop and walk audit, attendees, residents, and business owners did not comment on any disruptions or inconveniences they experienced from rideshare services blocking travel lanes.

As a means of transforming Solano into a more vibrant corridor, the City has expressed interest in Solano-branded signage or banners with images representing the retail district. The community has expressed an interest in adding to the street's visual experience, transforming blank walls into murals or vertical gardens and underutilized plazas (e.g., the sidewalk surrounding the California Bank & Trust at Santa Fe Avenue) into attractive public gathering areas. Wayfinding that highlights shops, restaurants, and other points of interest can help visitors travel along the street. Bus parklets, such as the one installed on Lower Solano Avenue outside of Hal's Office Coffee, can add greenery and character to the corridor while expanding the pedestrian realm (see Figure B.18).

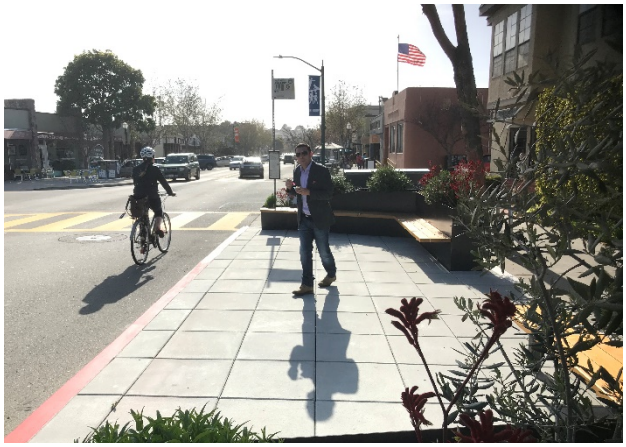


Figure B.18. Parklet located at AC Transit bus stop at intersection if Solano and Cornell.

Street Trees

Upper Solano Avenue is home to approximately 70 mature street trees, including magnolias, maples, and pines. The City's Urban Forestry Program recently conducted a survey to determine the condition of its street trees. The survey found that a majority of trees on Solano Avenue are healthy, with only a few classified as struggling, thinning, or stunted. The City is considering removing several of the unhealthy trees.

Trees do not consistently have grates, so some are more likely to encroach into pedestrian sidewalk space, given the narrow sidewalks. Albany has developed guidelines for street trees, including types to be planted and proper maintenance, and has a Tree Master Plan. However, the Tree Master Plan does not specifically guide street tree planning along the Solano Avenue corridor.

Lighting

Lighting along Solano Avenue is provided by luminaires scaled for vehicles within the roadway, rather than for pedestrians along the sidewalk. Light posts are typically spaced over 100 feet apart from one another, resulting in frequent dark areas along the corridor. These characteristics make Solano Avenue a less attractive retail corridor, for aesthetics and safety reasons. Business owners have expressed interest in electrical hook-ups to street lighting for string lighting to provide a more inviting corridor and pleasant walking experience, as can be seen on Lower Solano Avenue.

Public Art

The City adopted a Public Art Master Plan in 2010 which identifies potential locations within the city for public art installation. Table B.6 lists the policy excerpts identifying specific locations within the study area which create an opportunity for public art installation.

Table B.6. Public Art Opportunities Along Solano Ave

Policy No.	Opportunity	Details
5A	Eastern Gateway: Safeway area	Albany's easternmost point on Solano Ave. is the block between Ventura and Tulare avenues. However, for several blocks from its eastern border, the City of Albany occupies only the southern side of Solano Ave. with the City of Berkeley controlling the northern side. So the municipal identity of this four-block stretch of Solano is somewhat unclear. The first point where Albany controls both north and south sides of Solano Ave. is at the Safeway site between Curtis and Neilson streets. In this block, across Solano Ave. from Safeway, is an older sign made from black steel I-beams that reads "Welcome to Albany." This is an ideal location for a sign or gateway element demarcating entry into Albany for visitors from Berkeley and the Upper Solano district. As with both the southern and northern entry opportunities, a visitor's awareness that they have arrived into a distinct community is vague.
5B	Typical Pedestrian "Bulb-outs"	The City of Albany has developed a consistent pattern of corner "bulb-outs" along its stretch of Solano Ave., both Middle and Lower. The result is a series of small plazas frequented by pedestrians to congregate at adjoining businesses and cross Solano Ave. While these plazas provide focus areas for viewing, they are all "finished" in terms of construction, so that installation of any new public artwork will require close coordination with business owners as well as the Public Works Department.
5C	Mid-Solano Transit Stops	Multiple transit stops have been designed into the pedestrian "bulb-out" scheme in this Middle Solano area. Beyond benches and planters, typical furnishings here include bus shelters and bus informational signage. As cited above in 5A, the Safeway block also supports a transit stop, currently undeveloped. Given the preeminence of this location at Safeway, the transit stop could be redesigned in tandem with the Safeway store upgrade. Public art options could be addressed in the accommodating of a new pedestrian "bulb-out."

Utilities

Stormwater infrastructure along Solano Avenue consists of curbside drain inlets that move stormwater under curb bulb outs. Some of these local drain inlets are undersized and consist of arch-shaped catch basins that lack grates to prevent debris from entering and blocking stormwater infrastructure (see Figure B.19). The storm drains do not meet the City's current design criteria.

Figure B.19. Drainage infrastructure along Solano

Currently, Upper Solano Avenue does not have a stormwater pipeline that serves the entire area. Stormwater moves through the area as surface sheet flow. The closest stormdrain pipeline is an 18-inch pipeline located at the intersection of Solano Avenue and Masonic Avenue. The City does not have plans to install a stormdrain pipeline at this time.

Water infrastructure is owned and maintained by the East Bay Municipal Utility District (EBMUD). Water pipelines on Solano Avenue were installed in the 1920s, and a few sections of pipe were replaced in the 1960s and more recently. The EBMUD has not provided a timeline for replacing this pipeline.

Sewer infrastructure is owned and maintained by the City. Sewer pipelines on Upper Solano Avenue are made of vitrified clay. The City is under a consent decree with the Environmental Protection Agency to replace approximately 5,000 feet of pipeline each year including the pipeline in Upper Solano Avenue. City staff plans to replace this pipeline in 2019 or 2020 in anticipation of future street improvements.

Relevant Plans and Policies

The City of Albany's adopted plans, policies, and design guidelines provide direction and support for the development of the Solano Avenue Complete Street Study. The City's vision for Upper Solano Avenue as a walking-oriented "Main Street" that is safe for all users, served by high quality transit, supports local businesses, and encourages vibrant public spaces is tightly woven into multiple documents, including:

- 2035 General Plan (2016)
- Active Transportation Plan (2012)
- Complete Streets Resolution (2013)
- Albany Parking Management Plan (2015)
- Complete Streets Conceptual Design and Plan Report for San Pablo Avenue and Buchanan Street (2013)

In reviewing these documents, five key themes emerged:

- Improve quality of life
- Increase walking, biking, and transit trips
- Increase access and safety for all ages and abilities
- Develop context-sensitive designs
- Encourage new development

These themes should be considered the guiding policy framework for developing the Plan's vision and recommendations.

Improve Quality of Life

- The **Albany General Plan** established the City's vision of an "Urban Village by the Bay," and identified the policy of improving the local level of quality of life as a key element to achieving this vision. The Plan recommends accommodating mixed-use and transit-oriented development (TOD) along transit-rich corridors, such as Solano Ave, to improve the community's quality of life. The General Plan proposes that mixed-use developments and TODs can be used to encourage development densification, encourage walking and bicycling, and support local transit services; and, that such activities in turn build upon Albany's traditional urban street grid, supports walkable neighborhoods and flourishing pedestrian-oriented shopping districts.
- The **Albany Active Transportation Plan** refers to the City's 2007 Greenhouse Emissions Reduction Policy[2] as a guiding approach to improving the local quality of life by improving local air quality and lowering the community's impact on the environment.
- **Albany's Complete Streets Resolution** states that complete streets can improve the local quality of life by increasing mobility options for many community members, including people with disabilities and older adults, promoting physical activity, and reducing the production of greenhouse gases.
- The Vision for the **Albany's Complete Streets Conceptual Design and Plan for San Pablo Avenue and Buchanan Street** emphasizes building regional connectivity, fostering economic vitalization, promoting community identify, and creating a strong sense of place that serves both ecological and social functions.

Increase Walking, Biking, and Transit Trips

- The **Albany General Plan** encourages local mode shift to lower-impact modes, such as walking, bicycling, and public transit. The General Plan states that this policy approach can assist in reducing the growing traffic concerns on local, neighborhood streets. Additionally, this policy supports Albany's efforts to:
- Reduce the community's reliance on the automobile

[2] Albany's 2007 Greenhouse Emissions Reduction Policy calls for emissions levels to drop by 25 percent below 2004 levels, by 2020.

- Support public transit by improving access to the BART and AC Transit's systems
- Improve the City's pedestrian networks with the installation of bulb-outs, crosswalk improvements, pavement resurfacing, ramp installation, and landscaping improvements
- Improve the City's bicycle network networks, including the development of a bike route plan and additional bike parking facilities near high-volume bus stops.[3]
- The **Albany Active Transportation Plan** identifies Solano Avenue as an "Enhanced Neighborhood Commercial/Downtown Corridor" and provides recommended pedestrian treatments including improved street crossings, wider sidewalks, and streetscape amenities. The Plan also provides guidance for three bicycle facility types and recommends connections between the active transportation modes. In addition, the Plan establishes the community's local mode shift goal of increasing the combined bicycling and walking trip mode share to 15 percent by 2020.[4]
- **Albany's Complete Streets Resolution** calls for encouraging walking, bicycling, and transit trips through design and service improvements to the local active transportation networks. The Resolution highlights that designing safer, better connected streets with improved and reliable transit services will lead to more walking, biking, and transit trips.

Increase Access and Safety for All Ages and Abilities

- The **Albany General Plan** recommends that the City's Complete Streets efforts should improve the accessibility and safety of roadways for all ages and abilities; including, school-age youth, senior adults, and people with disabilities.
- The **Albany Active Transportation Plan** recommends providing walking and bicycling facilities for a variety of roadway users, to reflect Albany's diverse population of pedestrians and bicyclists.
- **Albany's Complete Streets Resolution** defines Complete Streets as "safe, comfortable, and convenient for travel for everyone, regardless of age or ability - pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, emergency responder's users and operators of public transition, seniors, children, youth and families."
- **Albany's Complete Streets Conceptual Design and Plan for San Pablo Avenue and Buchanan Street** defines a Complete Street as "a roadway designed and operated to enable safe, attractive, and comfortable multi-modal access and travel for all users, including pedestrians, bicyclists, motorists, and public transport users of all ages and abilities." The Plan recommends developing three discrete sidewalk zones (including an amenity zone, a sidewalk zone, and a frontage zone) to manage sidewalk space.

Develop Context-Sensitive Designs

- **Albany's Complete Streets Resolution** states that the City follow its own accepted or adopted policies and design standards, including the Climate Action Plan and the Active Transportation Plan. The Resolution also refers to the City's use of planning and engineering design standards from national, state and regional organizations, with the goal of providing for and balancing all user and travel mode needs. The Resolution encourages transportation design improvements to be sensitive to the quality of life of nearby residents, the function and vitality of nearby businesses and institutions; and to enhance the urban design of the surrounding area. In addition, it highlights the importance of reimagining existing streets that connect to additional jurisdictions in building out the community's network.
- **Albany's Complete Streets Conceptual Design and Plan for San Pablo Avenue and Buchanan Street** recommends the installment of pedestrian crossings, gateway treatments, enhanced pedestrian amenities, and bicycle boulevard. The project also recommended bike parking facilities and transit facilities improvements (including a site plan checklist).

[3] In commercially zoned areas such as Solano Avenue, the 2012 Albany Active Transportation Plan calls for increasing the ratio of automobile parking spaces to bicycle parking spaces to 1:1 by 2030.
[4] Albany's combined bicycling and walking trip mode share is at 11.5 percent: 2012-2016 ACS 5-Year Estimate: 6.1 percent bicycling, and 5.4 percent walking.

Encourage New Development

- The **Albany General Plan** identifies new housing development opportunities along Solano Avenue to increase density and to support mode shift and the local businesses that rely on foot-traffic. The General Plan also encourages new development plans to consider the community's changing priorities and to encourage and accommodate active transportation modes. The General Plan identified Solano Ave as an important bus corridor for the City and AC Transit and also identified the corridor as a Priority Development Area (PDA).[5] Solano Avenue's designation as a PDA is dependent on the corridor's frequency of transit service and, as such, encourages future development along the corridor to support transit ridership.[6] PDA designation also increases grant opportunities for capital improvements that support bus service, such as bus shelters, pullouts, and signal upgrades.

[5] PDA designation is approved at the regional level, through a partnership between the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC).
[6] The General Plan encourages the City to work with the County, regional organizations and AC Transit to increase Solano Ave's designation to that of a "major transit corridor" in county and regional transportation plan, and in AC Transit service plans.

Appendix C. Design Guidance

To develop the proposed corridor design, the project team assumed design guidance values for various design elements. Table C.1 outlines the values and design guidance used for the design elements.

Table C.1. Design Guidance used to develop the Solano Avenue Corridor Design

Design Element	Value Used	Guidance/Reasoning
Minimum Sidewalk width	7.5' Narrower in the most constrained areas	Per discussions with City staff
Curb ramp width	6' min.	US Access Board Chapter 4: Ramps and Curb Ramps[1]
Minimum travel lane width	11'	NACTO Urban Street Design Guide: Lane Width[2]
Pedestrian refuge island width	8'	NACTO Urban Street Design Guide: Pedestrian Safety Islands[3]
Minimum corner curb radius	10'	NACTO Urban Street Design Guide: Corner Radii[4]
Minimum corner curb radius with frequent heavy vehicle movements	25'	Texas Department of Transportation Minimum Designs for Truck and Bus Turns[5] AutoTurn Analysis, using WB-40 at the following intersections: - Solano/Santa Fe: NBR, SBR, EBR, WBR - Solano/Neilson: EBR, WBL - Solano/West Safeway Driveway: NBL, NBR Solano/Santa Fe is a major (signalized) intersection on the corridor, so all right-turn movements were analyzed. Safeway delivery trucks enter via Nielson and exit via the western Safeway driveway, so these movements were analyzed.
Accessible parking dimensions	5' minimum width for the access aisle	US Access Board Chapter 5: Parking Spaces[6]
Van accessible parking dimensions	8' minimum width for the access aisle	US Access Board Chapter 5: Parking Spaces[7]

[1] https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-4-ramps-and-curb-ramps
[2] https://nacto.org/publication/urban-street-design-guide/street-design-elements/lane-width/
[3] https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/crosswalks-and-crossings/pedestrian-safety-islands/
[4] https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/corner-radii/
[5] http://onlinemanuals.txdot.gov/txdotmanuals/rdw/minimum_designs_truck_bus_turns.htm
[6] https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-5-parking
[7] https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-5-parking

Design Element	Value Used	Guidance/Reasoning
Valley gutter width	2’ wide	City of Albany Standard Details & Specifications[8]
Bus stop dimensions	40’ minimum length 10’ minimum buffer from crosswalks and stop bars 5’x8’ front door and 11.5’x8’ rear door clear zones	AC Transit Multimodal Corridor Guidelines[9]
Beacon-enhanced intersections	Curtis St (school crossing), Peralta Ave (bike route crossing)	Request by City and public
Bus Stop Closures	WB at Tacoma Ave, EB at Ventura Ave, WB and EB at Ramona Ave	Direction from AC Transit

[8] http://www.albanyca.org/home/showdocument?id=27253
[9] http://www.actransit.org/wp-content/uploads/AC_Transit_Multimodal_Corridor_Guidelines_Final.pdf