



Contra Costa College Mobility Hub Plan

Final Draft | Final Study Report
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Executive Summary



1. Introduction

The City of San Pablo is geographically small but has a dynamic mix of residential, commercial, industrial, and institutional land uses. One of the most prominent activity centers in the City is Contra Costa College (“College”), located in the northeastern portion of the City. The City is challenged by a highly congested and disconnected transportation network where vehicles flow from western Contra Costa County and Solano County to the inner Bay Area. With numerous development opportunity sites and significant growth planned in the area around the College, the City applied and received a generous grant from the Measure J Transportation for Livable Communities (TLC) Program, administered by the Contra Costa Transportation Authority (CCTA), to identify opportunities to create a mobility hub in the College area. The mobility hub is planned to improve mobility of existing and future City residents, workers, and students by reducing reliance on personal automobiles and improving the safety of alternative transportation modes. It also is intended to encourage transit-oriented development in the College area to meet the City’s housing goals and improve livability.

In mid-2022, the City launched the Contra Costa College Mobility Hub Planning Study (“Study”). The Study aimed to identify improvements and steps to implement those improvements to create a mobility hub at and around the College, including the College Transit Center, one of the major transit hubs in Western Contra Costa County.

The Study assessed existing corridor conditions and identified needs and opportunities for multimodal and safety improvements. The project team completed two rounds of community engagement at major milestones to share findings and to solicit input. The project team engaged key agency stakeholders at three checkpoints over the course of the project to develop a united vision and consensus around a set of improvements for the area.

The Study developed and packaged a set of recommended improvements to create the mobility hub. The Study findings build upon and advance related transportation planning efforts previously completed for the surrounding area. These recommendations would collectively enhance the safety and comfort for all users of the corridor and expand multimodal options for the residents, students, and faculty in the area. A project schedule with key milestones can be found in **Figure 1** below. This report documents the project process, its key findings, and proposed recommendations of the Study.



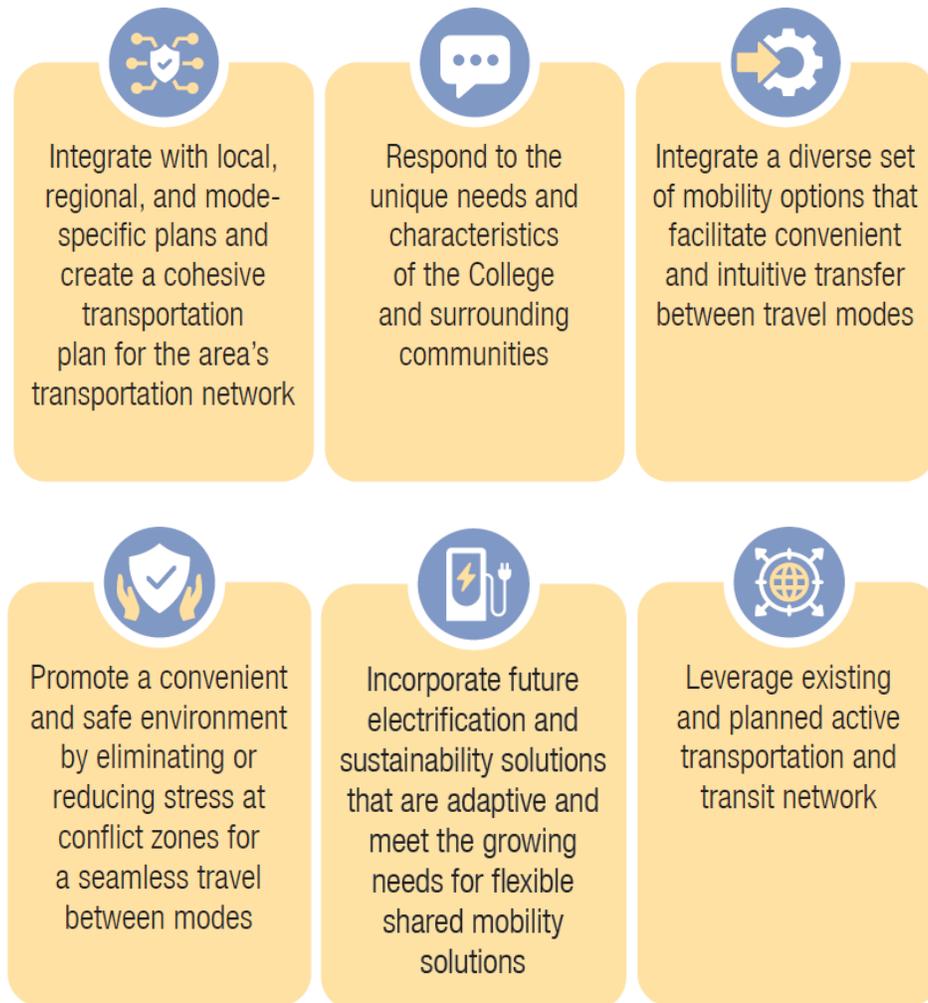
Figure 1. Project Timeline



2. Project Purpose and Objectives

The Study identified opportunities to provide enhanced connections between the College Transit Center and nearby residents, community spaces, development opportunity sites, and the broader multimodal network.

The consultant team and City staff worked together at the outset of the project to establish a set of project objectives. These are described below:



With the guiding objectives established, the project team advanced four related strategies for the completion of the Study:

- Identify mode-specific improvements needed to create a multimodal network in the area;
- Identify feasible and accessible connections to planned and in-development projects;
- Identify opportunities to implement shared mobility services in the area; and
- Obtain public feedback on the overall vision for improving multimodal access in the area and mobility hub elements.



3. Study Area Context

The Study Area consists of the College campus, the College Transit Center, the area north of El Portal including the Moraga Road and Castro Road loop, the College Center Shopping Plaza, and the commercial area along San Pablo Avenue between Road 20 and Rivers Street. The Study Area boundary is shown in **Figure 2**.

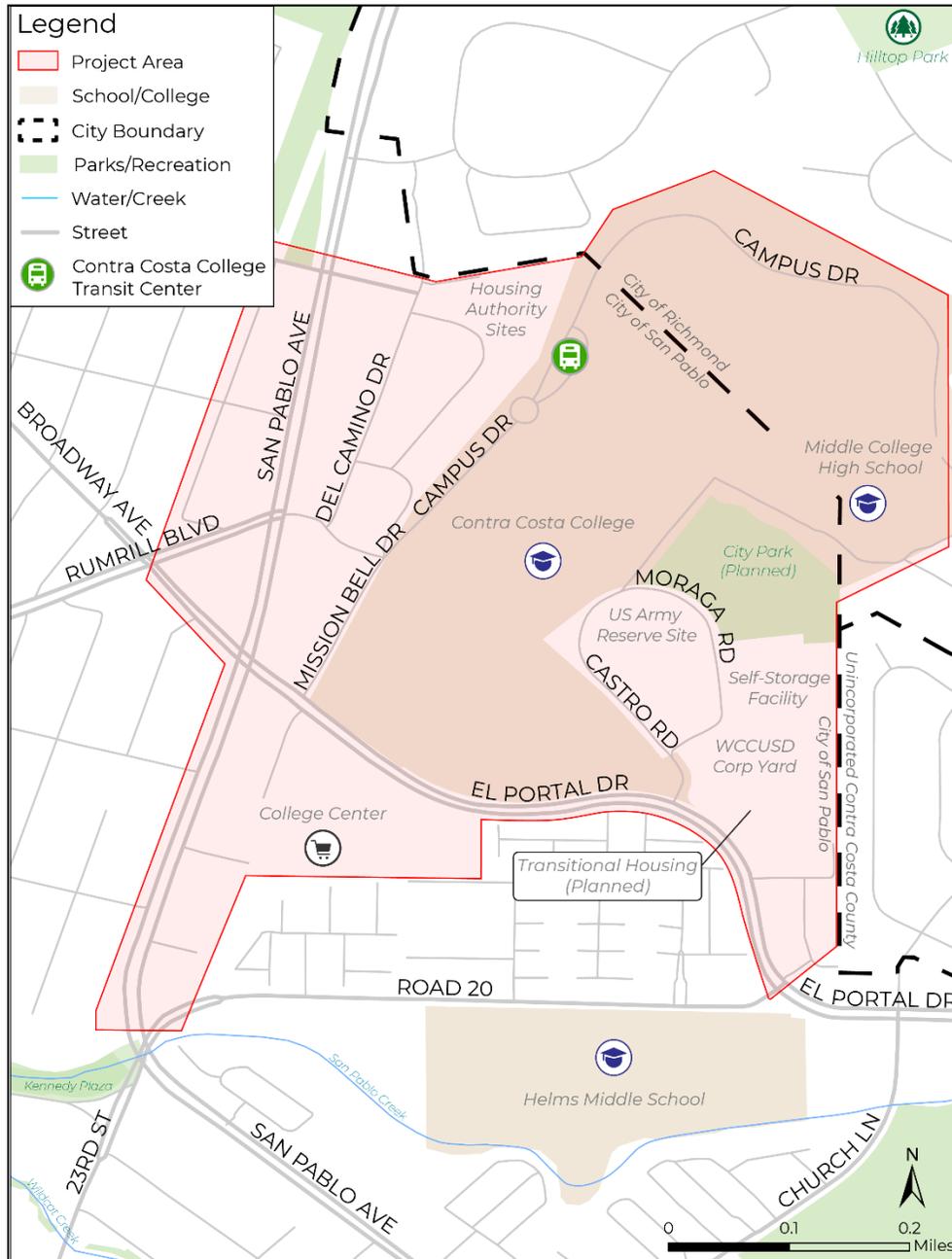


Figure 2: Study Area



3.1. Contra Costa College

Contra Costa College is a public community college serving the diverse communities of West Contra Costa County. This is an accredited institution recognized by the Commission on Recognition of Postsecondary Accreditation and the U.S. Department of Education. The College also offers several programs that are separately accredited by external professional and governmental organizations such as the California Board of Registered Nursing and the California Board of Vocational Nurse Examiners. The College serves over 7,000 students each year, the majority of whom are of Latin American, Black/African American, and Asian descent. The College employed 948 full-time and part-time employees in FY 2016-17.

The College is located on approximately 83 acres in both the City of San Pablo and City of Richmond, east of Campus Drive and north of El Portal Drive. The College's main access points are along Mission Bell Drive, College Lane, and Castro Road.



Image: Contra Costa College at El Portal Drive and Mission Bell Drive

There are 1,573 parking spaces on campus that serve students and faculty. There are bike racks and bike lockers available on campus.

College capital improvements are currently guided by a Facility Master Plan (2018) and a Five-Year Construction Plan. In recent years, the campus has undergone major facility renovations, such as the Athletics Complex renovation, Science Center construction, new campus Safety Center construction, and new Arts Building. No major transportation infrastructure projects are currently planned. The College will be updating its Facility Master Plan in 2024.



3.2. Adopted City Plans and Policies

The Study reviewed and incorporated the City’s adopted policies guiding land-use development and transportation, including:

- San Pablo General Plan 2030
- 2023-31 Draft Housing Element
- San Pablo Avenue Specific Plan (Adopted September 2011)
- Transit Oriented Development (TOD) Master Plan (Plan initiated Spring-Summer 2022; projected completion in late 2023)
- San Pablo Avenue Multimodal Corridor Plan

The San Pablo Avenue Specific Plan, adopted in September 2011, serves to foster the revitalization of the San Pablo Avenue corridor to transform it into a pedestrian- and transit-oriented boulevard. The document plans out higher-intensity mixed-use development to establish the area for housing growth and as key regional destination with amenities.

The TOD Master Plan identifies blocks, nodes, and corridors within the City of San Pablo that are primed for transit-oriented development. Complete streets principals are applied to the identified areas to connect communities within the City.

The City of San Pablo General Plan 2030 was adopted in 2011 and serves as the City’s guiding document for its transportation and land use goals.

Table 1, with information obtained from the General Plan, shows the full land use categorical breakdown. The City has a predominately residential land use. Within the City, the largest land usage category is low density residential, encompassing 34%, or 601 acres, and of the total planning area.

Table 1. Land Use Category Breakdown of all Parcels in the City of San Pablo

Land Use by Category in San Pablo		
*Category	Acreage	Total
Residential (high, medium, low)	837	47%
Commercial/Office	162	9%
Industrial	31	2%
Public/Institutional	250	14%
Roads	415	23%
Other	95	5%
Total	1790	100%

The parcels surrounding San Pablo Avenue are specifically called out in the General Plan as a special planning subarea. The subarea is split between a north and south section, with the dividing road being the intersection at 23rd Street. The north section of the San Pablo Avenue subarea is encompassed fully by the Study Area.



The development envisioned the north San Pablo Avenue subarea as a new pedestrian-friendly mixed-use district. This area will be home to local businesses and office space on the first levels of its buildings, with residential development on the upper levels.

Within the Study Area, most of the land use is dedicated to the College and thus falls into the public/institutional category. Additional land uses include neighborhood commercial, medium density residential, and mixed-use zones. The neighborhood commercial land use primarily consists of the College Center shopping plaza, which is situated directly across El Portal Drive from the College and is home to businesses, restaurants, and the San Pablo Supermarket. See **Figure 3** for a land use map of the City of San Pablo.

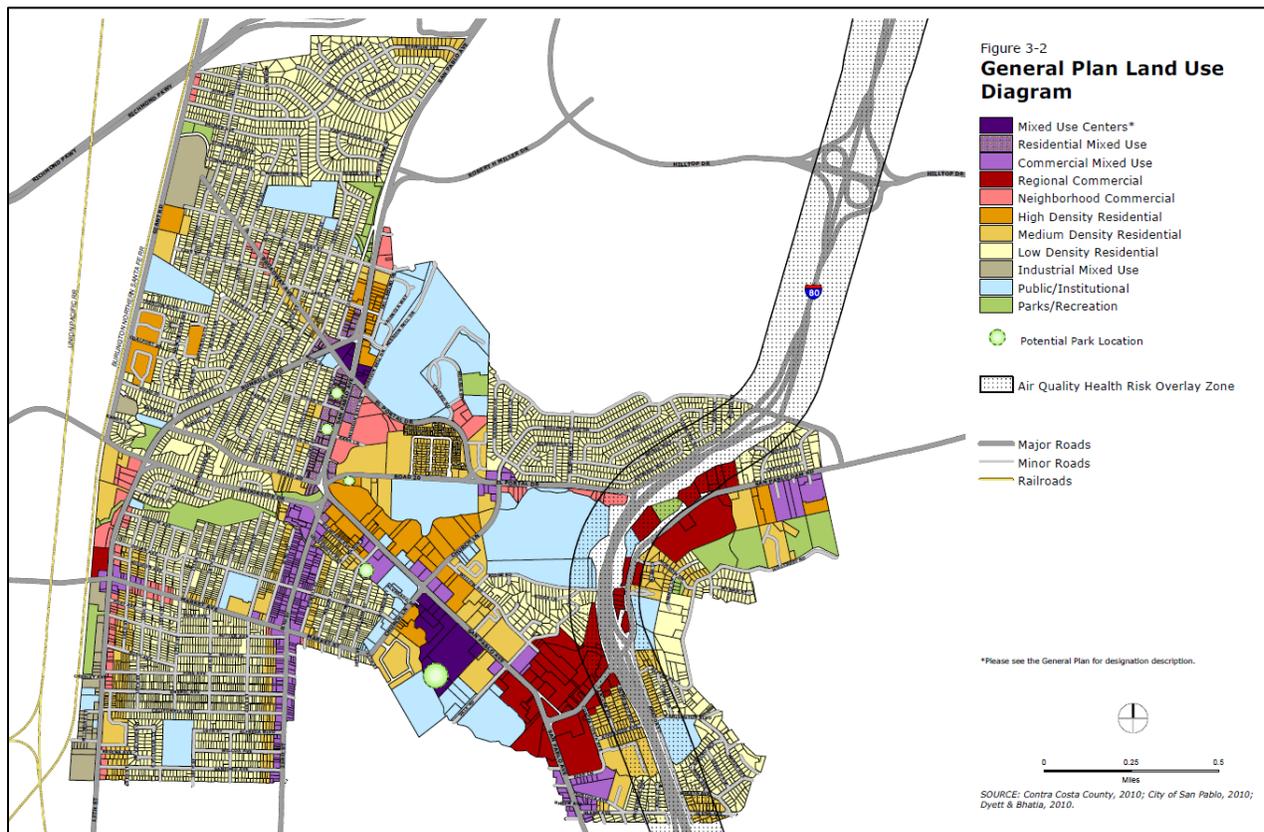


Figure 3. General Plan 2030 Land Use Map

The City of San Pablo recently published the Draft 2023-2031 Housing Element. The updated Housing Element documents additional planned land use changes and identifies potential sites for transit-oriented development in the City (**Figure 4**). The City is required by state law to update its housing element every eight years.

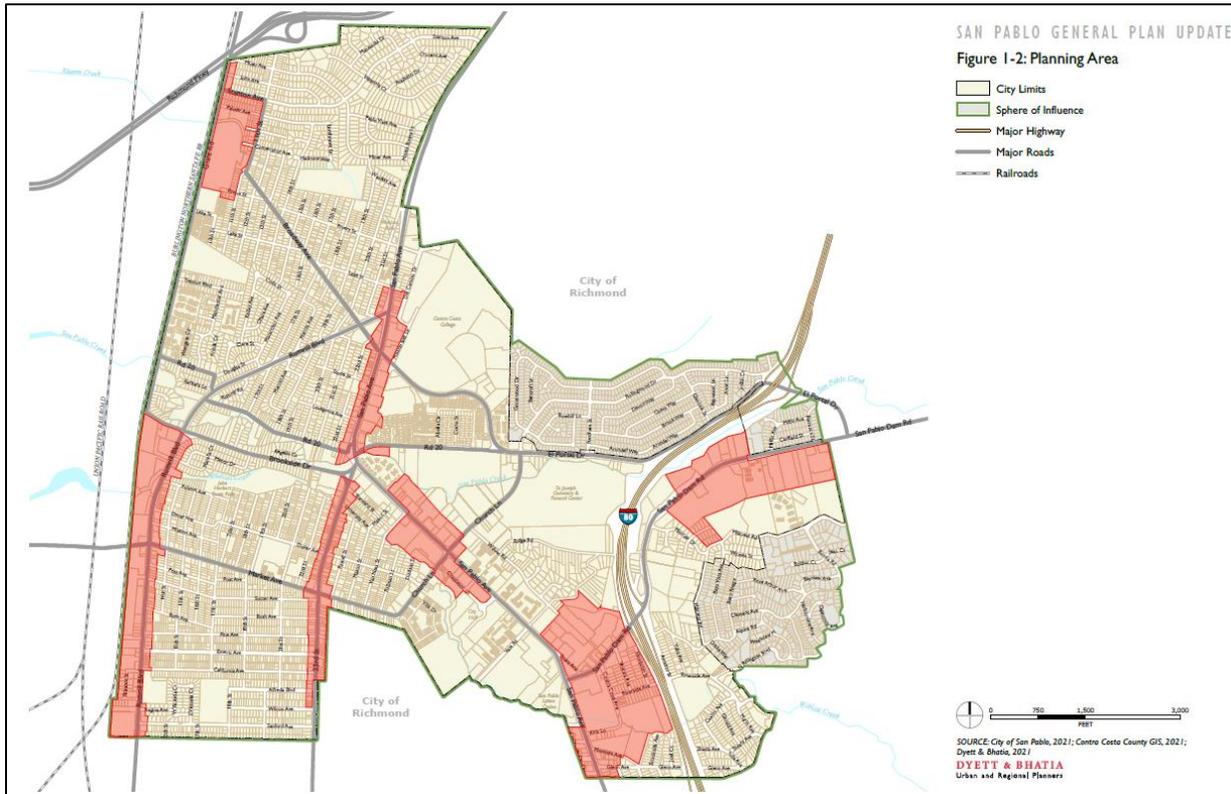


Figure 4. General Plan Update Specific Plan Areas

Six planned development projects, listed in



Table 2 and shown in **Figure 5**, are identified within the Study Area, including a new City Park, a multi-story personal self-storage facility and a permanent supportive housing project. Besides the City Park, the permanent supportive housing project is currently under construction and the self-storage facility construction is close to completion. The four planned housing development projects are estimated to add over 158 housing units to the City. These projects will generate increased mobility demands in the area.



Table 2: List of Planned, Approved, or In Progress Developments in San Pablo

Planned Development Projects				
Label	Project Name	Future Land Use	Status	Description
1	Community Care Facility 2523 El Portal Drive	High Density Residential	Early Planning	Therapeutic residential facility for behavioral health housing up to 32 residents.
2	City Park Project	Parks/Recreation	Planned	Future Park Location at 2600 Moraga Road
3	Self-Storage Project 2622 Moraga Road	Neighborhood Commercial	Under Construction	124,000 sq. Foot Self-Storage Facility
4	Supportive Housing 2555 El Portal	High Density Residential	Under Construction	54 Units of Permanent Supportive Housing
5	Residential Housing 2432-2442 22 nd Street	Residential	Approved	8 Above Moderate-Income Residential Units
6	Mid-Rise Housing 2364 Road 20	High Density Residential	Approved	58 Above Moderate-Income and 6 Low Income Residential Units
7	Contra Costa Housing Authority Office 2324 College Lane	Neighborhood Commercial	Approved	Future Section 8 office site location



The City of San Pablo Draft 2023-31 Housing Element identified a list of parcels as opportunity sites for future housing development projects within the Study Area, shown in **Table 3**. These sites accommodate the state of California Regional Housing Needs Allocation (RHNA) requirements on available land, and the selection of sites conforming to Affirmatively Furthering Fair Housing (AFFH) requirements. In total, the housing element has identified up to 158 housing units that can be built within the Study Area, including 99 low-income housing units.

Table 3. Draft List of Housing Opportunity Sites within the Project Study Area

Draft Housing Opportunity Sites					
Location	Current Zoning Designation	Current Land Use	Parcel Size (Acres)	# of Units	Income Level
14560 San Pablo Ave	High Density Residential	Church/Religious Facility	1.29	78	Low Income
14451 San Pablo Ave	Residential Mixed Use	Vacant	0.12	3	Above Moderate Income
(Unidentified) San Pablo Ave	Residential Mixed Use	Vacant	0.06	3	Above Moderate Income
(Unidentified) San Pablo Ave	Residential Mixed Use	Vacant	0.06	3	Above Moderate Income
14433 San Pablo Ave	Residential Mixed Use	Vacant	0.06	3	Above Moderate Income
14400 San Pablo Ave	Residential Mixed Use	General Commercial	0.58	21	Low Income
14375 San Pablo Ave	Residential Mixed Use	General Commercial	0.24	8	Above Moderate Income
14341 San Pablo Ave	Residential Mixed Use	General Commercial	0.27	8	Above Moderate Income
14260 San Pablo Ave	Residential Mixed Use	General Commercial	0.44	14	Above Moderate Income
14237 San Pablo Ave	Residential Mixed Use	General Commercial	0.39	8	Above Moderate Income
14205 San Pablo Ave	Residential Mixed Use	General Commercial	0.36	9	Above Moderate Income

Figure 5 depicts a map of the locations of the planned development projects outlined in blue, draft housing opportunity sites outlined in green, priority development areas highlighted in red, and planned land use by parcel.

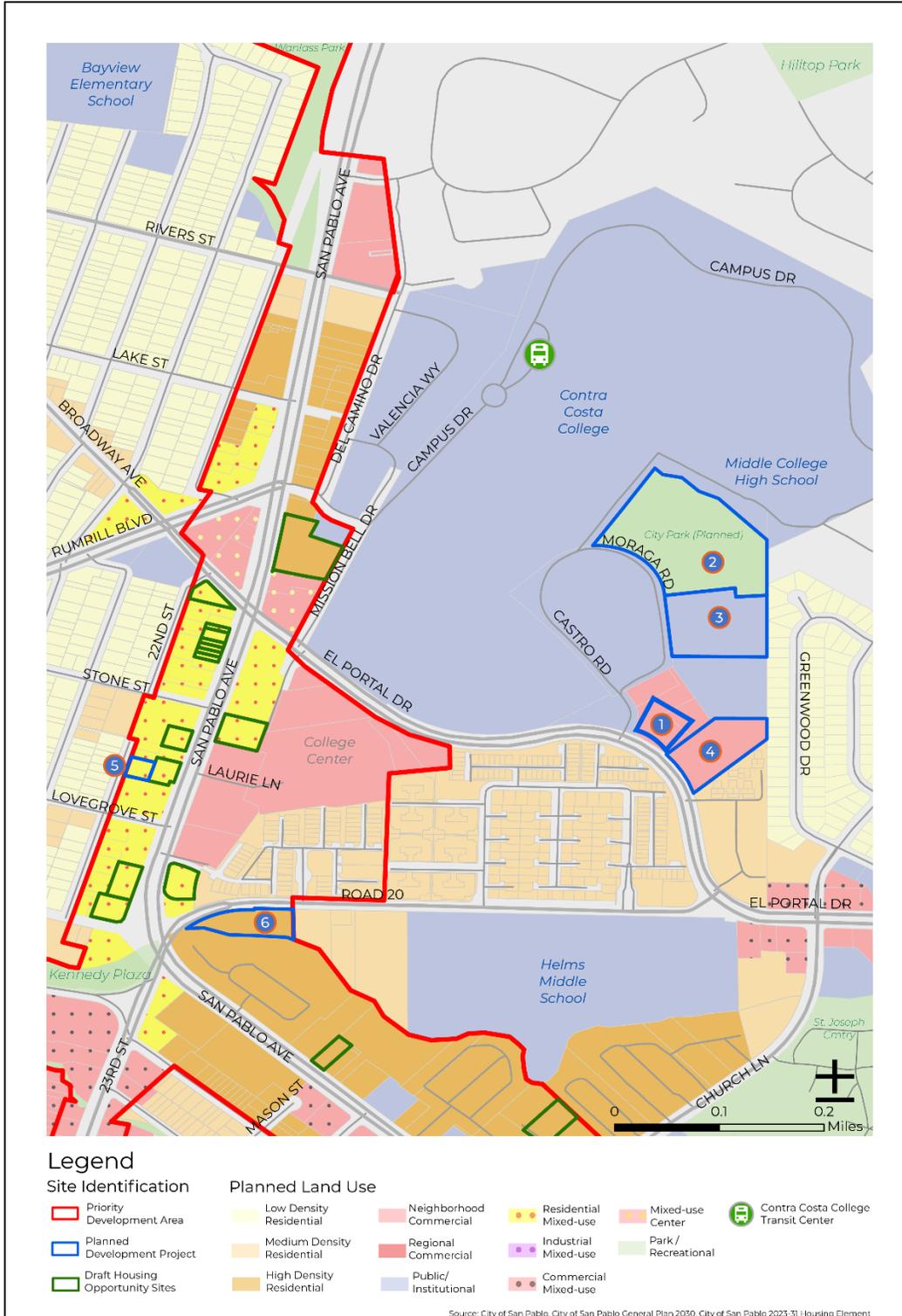


Figure 5: Study Area Land Use and Potential TOD Housing Opportunity Sites



In response to the increased mobility needs generated by the planned housing and development projects, the City has identified over 20 transportation projects within the Study Area to enhance the existing transportation network. Six of those projects have a prominent effect on the travel patterns and mobility options in the Study Area. Therefore, the Study considered previously identified potential enhancements to the baseline network prior to developing additional recommendations. The projects are shown in **Figure 6** and described below:



Figure 6. Planned Transportation Projects within the Study Area



Details on the planned transportation projects are included below. Three of these projects (El Portal Drive, Rumrill Boulevard, and Broadway Avenue) have received funding for the implementation of improvements. The San Pablo Bridge Replacement project is funded through planning and design.

1. **San Pablo Avenue Multimodal Corridor Project** was started in 2017, via a joint effort by Alameda CTC, WCCTAC, and CCTA. The 13.4-mile segment of San Pablo Avenue between Hilltop Mall in Richmond and downtown Oakland was studied to evaluate the feasibility of multimodal complete streets improvements. Elements of the Project include improving multimodal mobility, efficiency, and safety to sustainably meet current and future transportation needs.

Phase 1, concluded in 2020, identified short- and long-term improvements to address the increasing multimodal demands along the San Pablo Avenue corridor. Phase 1 concluded by identifying that additional location-specific design development and evaluation are needed to advance concepts in Contra Costa County due to: (1) greater variability in geometric and operational characteristics of the corridor; (2) different mode splits and travel needs; and (3) varying attitudes toward preferred improvements.

Phase 2 was completed earlier in 2023 and focused on identifying feasible and jurisdiction-supported improvement alternatives for San Pablo Avenue in Contra Costa County. Alternatives include dedicated transit lanes, protected bicycle lanes, and additional pedestrian and multimodal safety improvements. Phase 2 identified potential next steps as a pilot to create dedicated transit lanes on a portion of the corridor and advancement of a series of safety spot improvements throughout the corridor. WCCTAC and CCTA are currently strategizing on next steps for the effort.

2. **San Pablo Bicycle and Pedestrian Corridor Study** was completed in 2022 as an assessment of 10 bicycle and pedestrian corridors identified in the 2017 San Pablo Bicycle and Pedestrian Master Plan (BPMP). The study sought to increase residents' access to comfortable and connected walking and bicycling infrastructure throughout the City. Concept-level designs and cost estimates were developed for each corridor and will serve as a guide for future projects. Three of the studied corridors—San Pablo Avenue (North), Broadway Avenue, and El Portal Drive—are within the Project Study Area. Study recommendations included:

- San Pablo Avenue (North): Buffered Class II bike lane to close the gap in bicycle connectivity from Road 20 to Rumrill Boulevard.
- El Portal Drive: Two-way Class IV separated bike lane between Broadway Avenue separated bike lane and Church Lane
- Broadway Avenue: Class IV separated bike lane between 11th Street and El Portal Drive separated bike lane



- 3. Rumrill Boulevard Complete Streets Project** will revamp the existing four-lane arterial roadway and convert one lane in each direction into a Class IV separated cycle track. This cycle track will span the entire length of Rumrill Boulevard, connecting from Costa Avenue to San Pablo Avenue. In addition to the cycle track, pedestrian safety improvements are being installed along the corridor. Newly striped pedestrian crosswalks will be receiving RRFBs (Rapid Rectangular Flashing Beacons) to alert drivers to pedestrians traveling across the corridor. Improved lighting, median islands, and ADA compliant curb ramps will enhance pedestrian safety. Wider sidewalks, new trees and landscaping, and benches will increase pedestrian comfort. The project is fully funded and is expected to be fully constructed by the end of 2023.
- 4. Broadway-El Portal Cycle Tracks** is identified in the San Pablo Bicycle and Pedestrian Corridor Study. Along El Portal Drive, the project will convert the westbound travel lane into a two-way cycle track on the north side of the roadway. Along Broadway, parking will be removed to also provide a two-way cycle track on the north side of the roadway. The new two-way cycle track will connect to existing bike lane infrastructure on Church Lane and El Portal Drive, and to other planned bicycle facilities at Rumrill Boulevard and San Pablo Avenue. The two-way cycle track will be at road level, separated from the westbound auto lanes by a raised buffer. Bus boarding islands will be placed at bus stop locations, with the two-way cycle track running between the boarding islands and the sidewalk. The City recently received an Active Transportation Program grant to fund the project.
- 5. San Pablo Avenue Bridge Replacement** focuses on the San Pablo Avenue/Road 20/23rd Street intersection in the City of San Pablo. The bridge that spans over San Pablo Creek, is seismically deficient and in need of replacement. Considering the need for a new bridge structure, the City is using this opportunity to redesign the existing six-legged intersection. The study includes an alternative evaluation assessment of three different roadway configurations to alter the intersection configuration. The project will include new pedestrian and bicycle connections at the intersection.
- 6. I-80 High-Capacity Transit Study (BRT Corridors)** was completed in 2017 by the West Contra Costa Transportation Advisory Committee (WCCTAC) to evaluate public transportation options and identify funding opportunities to expand high-capacity transit service and access for the more than 250,000 residents of West County. This transit study examined how to encourage transit use and improve service in underserved communities. The final proposal identified five projects to improve the quality and effectiveness of high-capacity transit in West County, expand alternatives to driving on congested streets and highways, and improve regional air quality. Projects identified for future consideration included Bus Rapid Transit (BRT) on San Pablo Avenue and on 23rd Street. The San Pablo Avenue BRT configuration proposed by the Study would operate



on San Pablo Avenue between Robert Miller Drive and downtown Oakland, including through the City of San Pablo. The BRT would require converting an existing vehicle lane in each direction to transit-only use. The recommendations of this Study have continued to be analyzed as part of the San Pablo Avenue Multimodal Corridor Project.

Additionally, the study analyzed a BART extension from the Richmond Station north to a new Hercules Station, passing through a proposed stop at Contra Costa College in the proposed alignment. The proposed alignment for this extension would follow existing rail right-of-way along Rumrill Boulevard, before tunneling north towards Hilltop Mall and eventually to the City of Hercules.

3.3. Existing Transportation Conditions

Existing Study transportation conditions were analyzed to identify existing network gaps and safety conditions.

3.3.1. Existing Auto Network

A map of the local street network can be found in **Figure 7**. The map classifies each of the local street networks by roadway classification (private, local, collector, or arterial). Intersections with all-way stop control or signalized intersections are identified on the map. Additionally, speed limits on each of the main roadways surrounding the college campus are depicted.

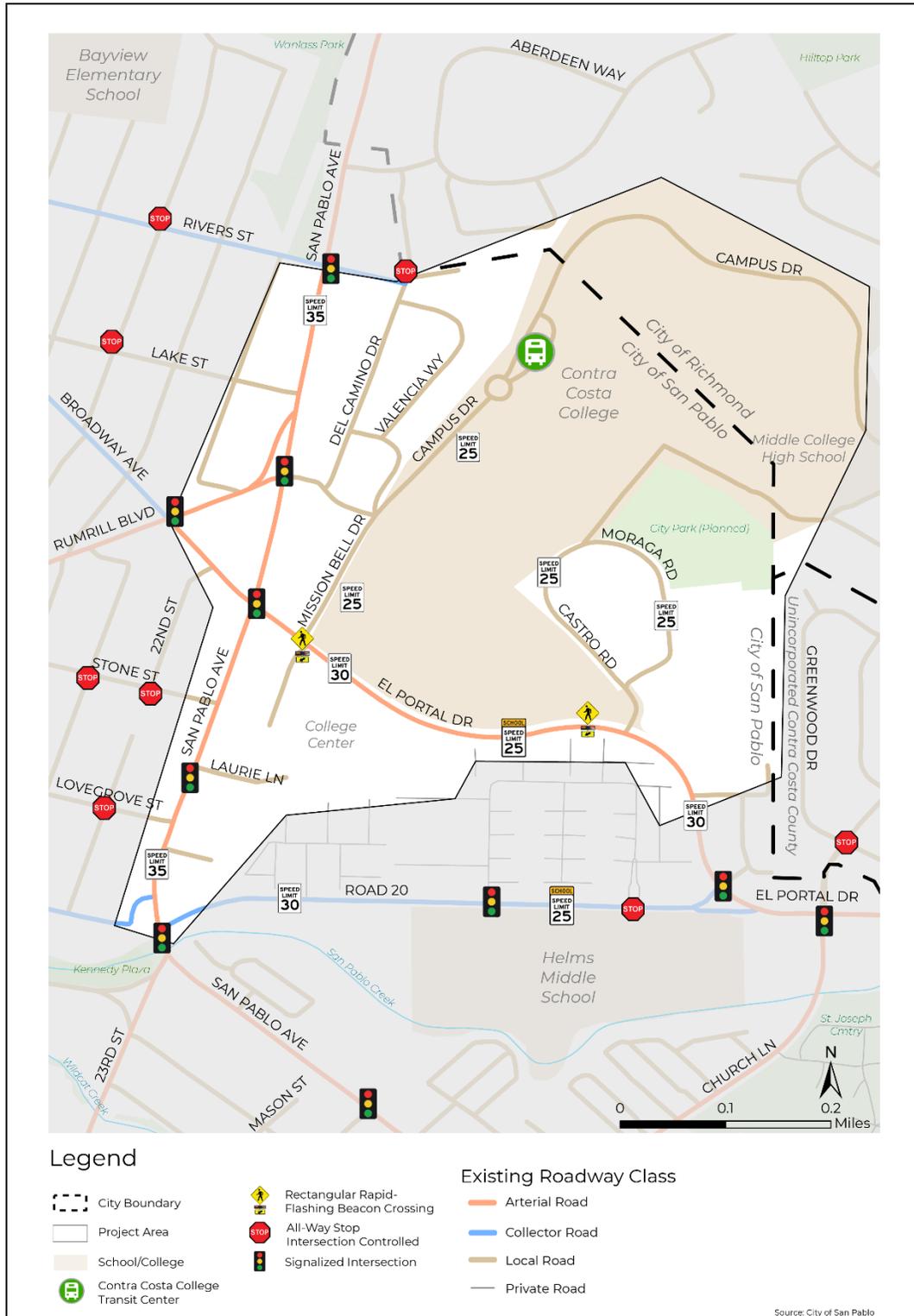


Figure 7. Study Area Roadway Network



The Study area includes a mix of arterials, connectors, and local streets, as described below.

- **San Pablo Avenue** is a north-south four-lane arterial located on the western edge of the Study Area. The portion of San Pablo Avenue within the Study Area has four signalized skewed intersections with channelized right-turn lanes and pork-chop islands. Throughout the corridor, there is a center-dividing median landscape, providing a buffer between the opposing directions of traffic. The speed limit for this corridor is 35 MPH. San Pablo Avenue is planned for transportation improvements, including those identified by the San Pablo Avenue Multimodal Corridor Project and the San Pablo Avenue Bridge Replacement Project.



Image: San Pablo Avenue at Purisima Street, looking north



- **El Portal Drive** is an east-west, median-separated four-lane arterial located on the southern boundary of Contra Costa College. Certain segments along the El Portal Drive corridor have a posted speed limit of 25 MPH. Non-school zone segments have a speed limit of 30 MPH. Additionally, there are two pedestrian crosswalks equipped with Rectangular Rapid Flashing Beacons (RRFBs) at the Mission Bell Drive intersection and just west of the Castro Road intersection. The City received Active Transportation Program grant funds to implement a two-way Class IV cycle track. This will reduce the number of auto travel lanes in the westbound direction from two to one.



Image: El Portal Drive looking west near Castro Road



- **Rumrill Boulevard** is a north-south, median separated four-lane arterial located on the western boundary of the Study Area. The posted speed limit is 35 MPH throughout the corridor. The Rumrill Boulevard Complete Streets Project will construct a Class IV cycle track from Costa Avenue to San Pablo Avenue and improvements at the San Pablo Avenue intersection. The number of auto lanes in each direction is being reduced from two to one.



Image: Rumrill Boulevard at 20th Street looking southwest



- **Castro Road - Moraga Road Loop** is located in the southeast corner of the College. Castro Road is a two-lane collector street that splits into a loop road north of El Portal Drive. The western portion of the loop is known as Castro Road and the eastern portion is known as Moraga Road. Within the loop is a former US Army Reserve Center. Currently, Castro Road has on-street parallel parking availability along the full length of the east and west sides of the corridor, while Moraga Road has angled parking areas on the east side of the street only.



Image: Castro and Moraga Road at Library Drive looking west



- **Mission Bell Drive** is a north-south, two-lane collector street that serves as the main entrance path into the College campus. The street extends between the College Center shopping plaza south of El Portal Drive and terminates at Del Camino Drive. The posted speed limit of the corridor is 25 MPH throughout the length of the corridor. The section of the roadway that runs from El Portal Drive to College Lane includes an 18' foot wide landscaped median divider with planted trees and a wide 8' foot shoulder in both travel directions.



Image: Mission Bell Drive at College Lane Looking South



- **Campus Drive** begins at the intersection of College Lane and Mission Bell Drive and travels along the perimeter of the College campus, before terminating at the intersection of Library Drive and Mills Avenue. The corridor is two lanes wide along its entire length. The north-south running section between Mission Bell Drive and the Transit Center includes a landscaping median, in addition to a shoulder that is available for on-street parallel parking in both directions. At the Transit Center, a roundabout directs general traffic and transit vehicles to the internal campus road, the Transit Center, or to the continuation of Campus Drive. Along the length of the corridor, there are speed bumps placed to calm traffic speeds to the posted speed limit of 15 MPH.



Image: Campus Drive at the Contra Costa College Transit Center Looking South

3.3.2. Existing Bicycle Network

The only existing bicycle facility present within the Study Area is a Class II, partially buffered, bike lane on both sides of San Pablo Avenue, starting at Rumrill Boulevard and continuing north. There is a network gap between Rumrill Boulevard to Road 20 along San Pablo Avenue, where there is currently no bike infrastructure present. The Class II bike lane continues to the south at Road 20. In addition to the existing bicycle facility, there is a Class IV cycle track under construction on Rumrill Boulevard as a part of the Rumrill Boulevard Complete Streets Project.

The City of San Pablo's Bicycle and Pedestrian Plan was adopted in 2017 and identified locations for future bicycle facilities within the Study Area. Proposed improvements include a bike facility gap closure along San Pablo Avenue and a Class IV cycle track along El Portal



Drive. This two-way cycle track is planned for the north side of El Portal Drive and will extend the existing cycle track from Church Lane west to San Pablo Avenue. See **Figure 8** for a map of existing and planned bicycle facilities.

Key gaps in the existing bicycle network identified by the community and the project team are summarized below:

- Gaps in bicycle network on San Pablo Avenue, El Portal Drive, Castro Road, Moraga Road, and College Lane
- Lack of bicycle crossings at intersections
- Lack of bicycle turn boxes along San Pablo Avenue

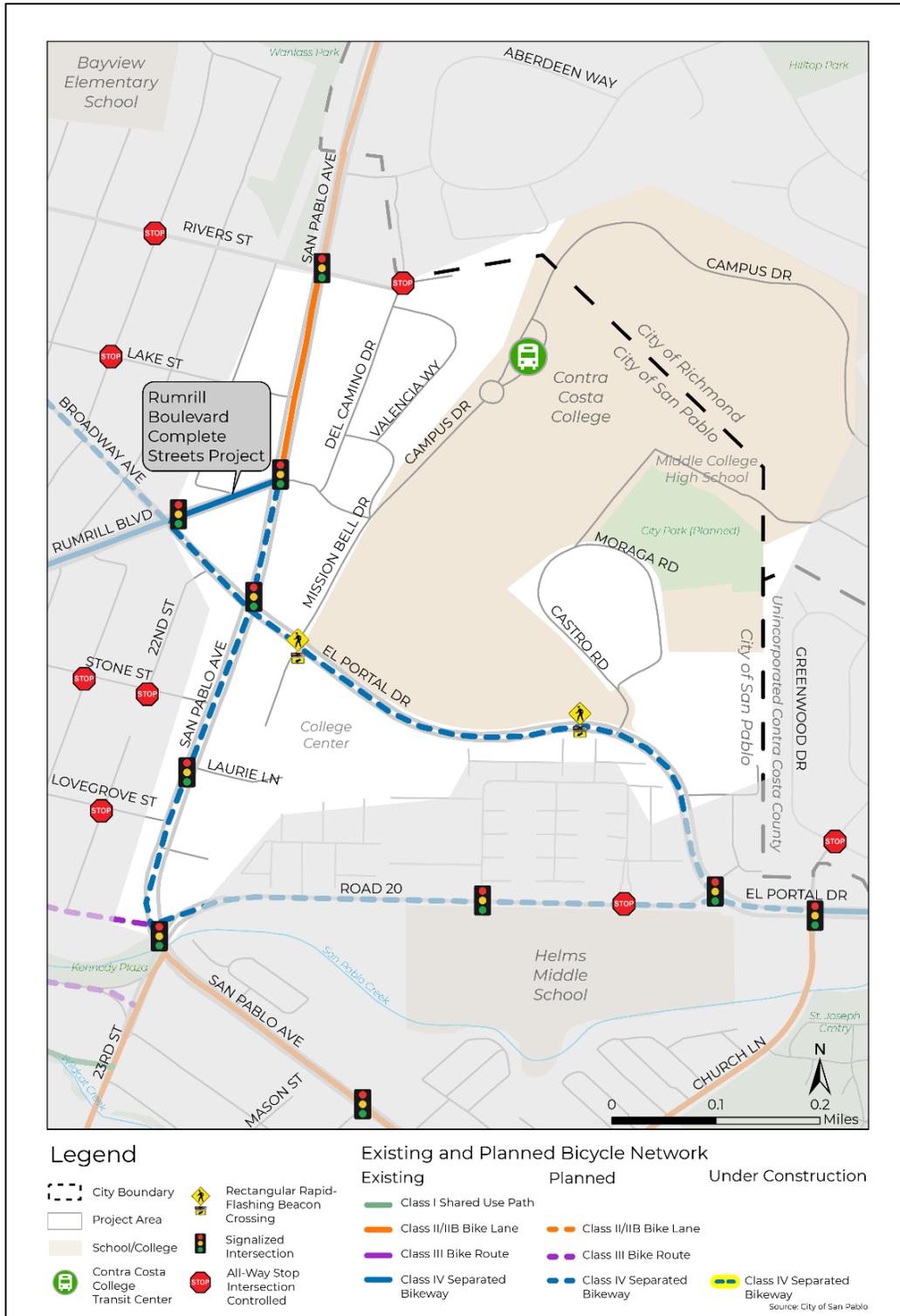


Figure 8. Existing and Planned Bicycle Network



3.3.3. Existing Pedestrian Network

Pedestrian facilities within the Study Area consist of sidewalks, crosswalks, and RRFBs. RRFBs currently are located on El Portal Drive west of Castro Road and east of Mission Bell Drive. The Study Area mostly contains standard visibility crosswalks but has recently received upgraded high-visibility crosswalks at the intersection of Mission Bell Drive and El Portal Drive. Existing sidewalks are shown in **Figure 9**.

Along San Pablo Avenue, the average sidewalk width is eight feet and features street trees. El Portal Drive has narrow five-foot sidewalks but in certain locations in the eastbound direction they widen out to accommodate street trees. Mission Bell Drive and Campus Drive have five-foot sidewalks, with street trees on the east side of both streets. There is no sidewalk on the west side of Campus Drive.

Key challenges for the existing pedestrian network, as identified by the community and project team, are summarized below:

- Low pedestrian visibility at intersections
- Lack of pedestrian wayfinding
- Some crosswalks have minimal safety features
- Lack of street trees and streetscape treatments
- Non-ADA compliant curb ramps and crossings



Image: Missing & Deteriorate Crosswalk on College Ln at the Transit Center



Image: View of the Landscape Median along the Center of Campus Drive, Looking South

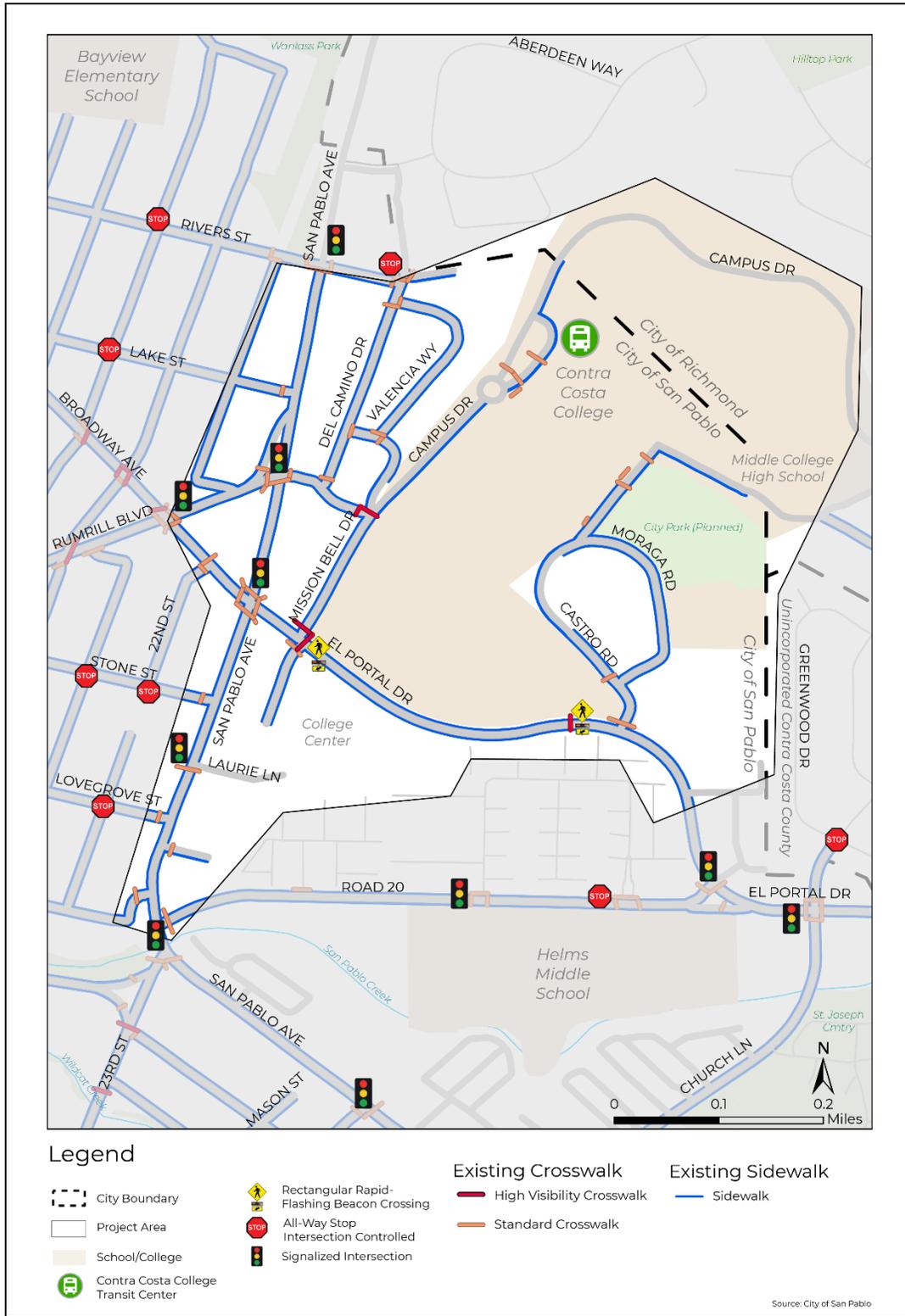


Figure 9. Existing Pedestrian Network



3.3.4. Existing Transit Network

There are eight AC Transit bus stops within the Study Area, excluding the College Transit Center. These bus stops generally lack enhanced amenities, such as bus shelters, benches, or trash cans.

A transit analysis identified the travel patterns of riders within the Study Area. The analysis focused on ridership, usage by time of day, origin and destination patterns, and characteristics of College Transit Center users. The analysis utilizes automatic passenger counter (APC) data and onboard passenger survey results provided by AC Transit from February 3, 2020 to February 23, 2020.

Figure 10 identifies ridership activity at the College Transit Center, the Mission Bell Dr & College Lane stop, and other nearby bus stops within the Study Area . Data was provided by AC Transit and was collected in February of 2020.

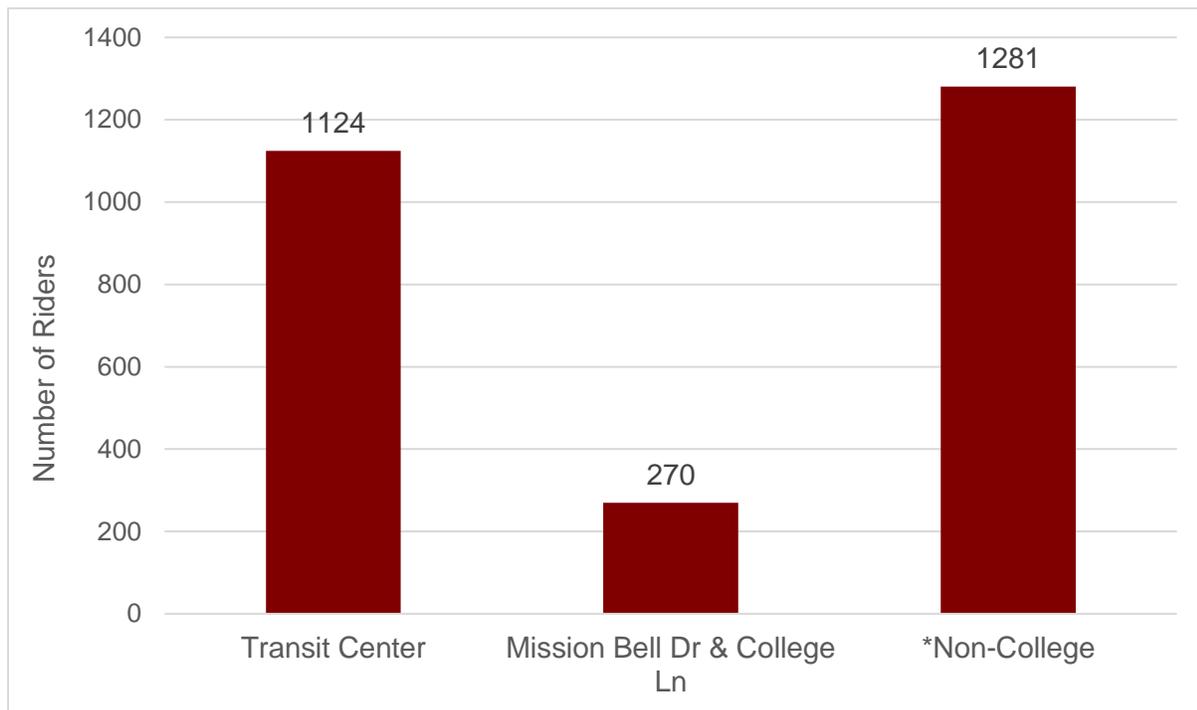


Figure 10. Average Daily Ridership for Bus Stops within the Study Area

* Non-College Stops include:

- El Portal Dr & Mission Bell Dr
- El Portal Dr & Castro Rd
- San Pablo Av & El Portal Dr
- San Pablo Av & Purisima St
- San Pablo Av & Rivers St
- San Pablo Av & Rumrill Blvd
- San Pablo Av & Stone St
- San Pablo Av & Castro St



Ridership at each bus stop within the Study Area is shown in **Figure 11**. Excluding the Transit Center, the top three stops with the highest weekday average daily ridership are:

1. San Pablo Avenue & Stone Street – 213 Passengers
2. San Pablo Avenue & El Portal Drive – 197 Passengers
3. Mission Bell Drive & College Lane – 74 Passengers

The first two stops are adjacent to the College Center shopping plaza. The stop at Mission Bell Drive & College Lane is adjacent to the College campus, south of the College Transit Center.

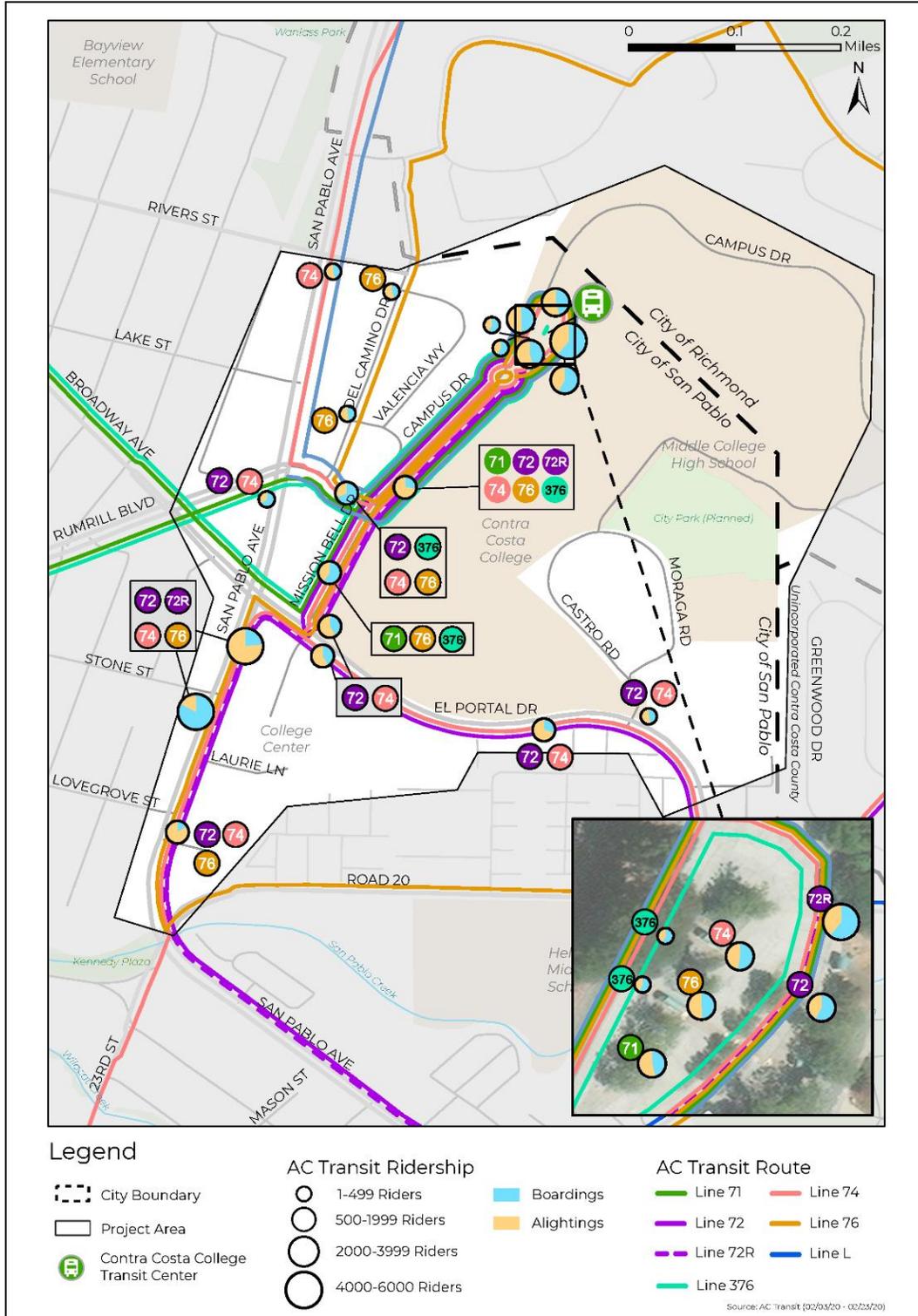


Figure 11: Existing Transit Service and Ridership by Stop



College Transit Center Utilization

The College Transit Center is located at the northwestern corner of the campus, on Campus Drive. The Transit Center has a total of 10 bus bays in a sawtooth configuration. A transit information panel is located at the entry point of the College Transit Center with route details and other service information. Bus stop signage and a shelter and bench are located at each bus stop location. Real-time transit is displayed at one of the bus shelters, with limited visibility due to shelter configuration. Other amenities present at the transit center include sidewalk lighting, a driver relief area, and mounted CCTV near the entrance.



Image: Contra Costa College Transit Center

The College Transit Center is served by 10 AC Transit lines and one WestCAT bus route. Of those 10 AC Transit bus routes, four routes are “Service to Schools Lines,” which only operate when school is in session and are scheduled around school bell times. The hours of operation and bus frequencies during non-holiday weekdays for the remaining six AC Transit routes and the one WestCAT route can be found in **Table 4**. Excluding the school routes, there are a total of 234 bus trips daily at the Transit Center. The most frequent bus route is AC Transit Line 72R (Rapid), with a headway of 12 minutes. The College Transit Center serves as the terminus point of Line 72R.



Table 4: Transit Service Characteristics at College Transit Center

AC Transit			
Route	Frequency (min)	Service Hours	Bus Trips/Day
71	30	6:20 AM - 8:20 PM	29
72	30	4:50 AM - 11:50 PM	39
72R	12	6:12 AM - 7:14 PM	66
74	30	4:24 AM - 8:55 PM	34
76	30	5:15 AM - 8:15 PM	31
376	30	9:23 PM - 2:24 AM	11
WestCAT			
Route	Frequency (min)	Service Hours	Trips/Day
C3	30	7:30 AM - 8:05 PM	24

AC Transit is currently undertaking the *AC Transit Realign* effort, which is a full system-wide reassessment of bus service. The outcome of that process may result in changes in bus service through the transit center. A final service plan is anticipated to be adopted in the first half of 2024.

Table 5 summarizes data showing the average daily ridership per AC Transit line for the College Transit Center. February 2020 was chosen for the data analysis period because it contains the most recent data prior to the COVID-19 pandemic. At the time the analysis was performed, more recent post-pandemic data was not available reflecting normal school operations. Line 72R is the most popular line for both boardings and alightings, with an average of 261 riders per day, representing approximately 25 percent of total College Transit Center ridership.

Table 5: Average Daily Weekday Ridership by Line at College Transit Center (February 2020)

AC Transit Line	Average Daily Boarding	Average Daily Alighting
71	92	96
72	116	78
72R	158	103
74	118	97
76	74	65
376	14	8
Grand Total	572	447

Figure 12 and **Figure 13** display the average daily boardings and alightings, respectively, by hour for the month of February 2020 at the Transit Center. AM ridership peaks at 9 AM with over 50 alightings. After the morning peak, the number of alightings per hour remains steady at around 30 alightings before decreasing after 3 PM. The peak boarding hour occurs at 3 PM, with an average of 60 boardings.

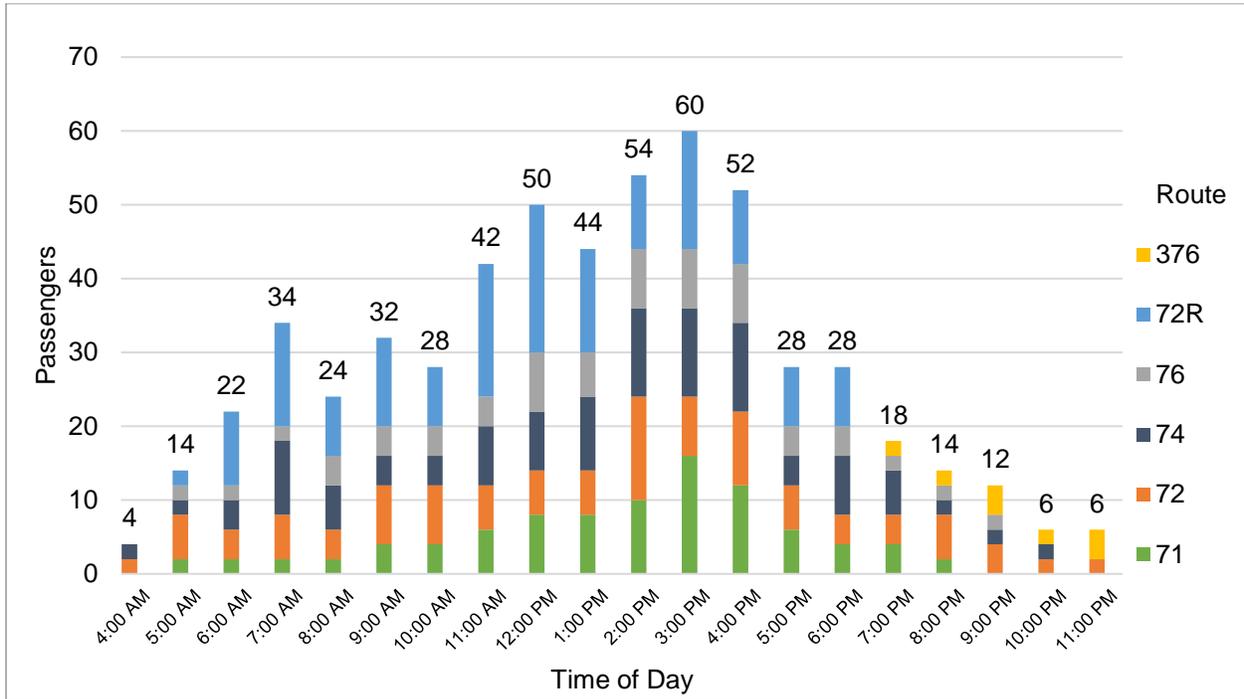


Figure 12. Average Weekday Boardings at College Transit Center, by AC Transit Line (February 2020)

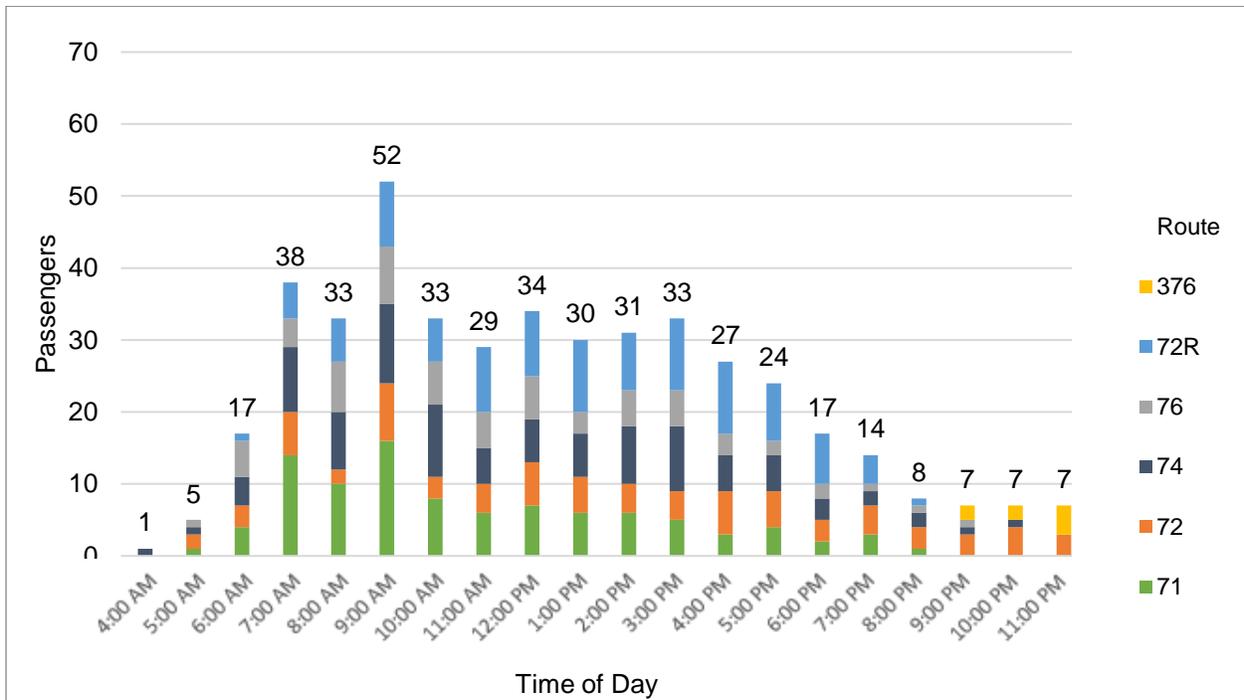


Figure 13. Average Weekday Alightings at College Transit Center, by AC Transit Line (February 2020)



Based on on-board surveys provided by AC Transit, of the 1,124 daily trips at the College Transit Center, 74 trips (7%) involve one transfer and 9 trips (<1%) involve two transfers (**Figure 14**). Thus it can be surmised that most trips through the College Transit Center have an origin or destination nearby.

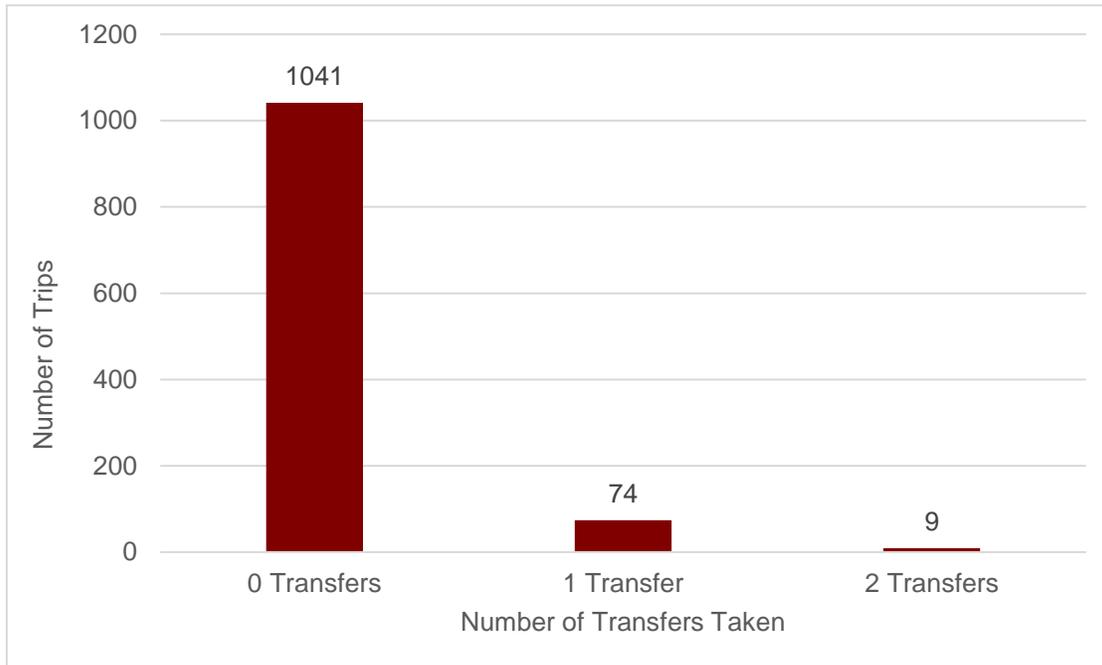


Figure 14. Estimated Trips with a Transfer at CCC Transit Center (February 2020)

Table 6 depicts the number of average daily trips, sorted by trip purpose at the College Transit Center.



Table 6. Trip Purpose for Trips Through College Transit Center

	Home	College/ University	School (K-12)	Workplace	Personal Business	Shopping	Airport
College/ University	48%						
Workplace	16%	3%					
Dining	1%			< 1%			
Escorting Others	1%						
Medical	2%						
Personal Business	1%	1%					
School (K-12)	4%	1%					
Shopping	1%	6%	4%				
Social/ Recreational	5%	2%		< 1%	1%	1%	
Work Related	1%						
Hotel Residence			0%				1%

As shown in the table, of the 1,124 daily trips through the College Transit Center, almost two thirds (62%) referenced “College/University” as either an origin or destination of the trip. Thus, it can be surmised that approximately one-third of the trips through the transit center do not relate to the adjacent College use.

Of the trips that involve a transfer at some point during the trip and originate or terminate at Contra Costa College, the top three transfer routing pairs are all at Del Norte BART Station. The survey results indicate that 79 percent of the trips that originate or terminate in the Study area Area do not involve any transfers. The top city pair of trips that originate or terminate in the Study area Area are between San Pablo and Richmond, with 1,078 trips daily, roughly 40 percent of the total daily transit trips (Error! Not a valid bookmark self-reference. and **Table 8**).



Table 7: Top 3 Transfer Route Pairs of Trips that Originate or Terminate at College

Top 3 Transfer Route Pairs	
Routing Pair	Number of Average Daily Trips
Line 72R and BART	161
Line 72 and BART	41
Line 76 and BART	40

Table 8: Top 3 City Pairs of Trips that Originate or Terminate at Contra Costa College

Top 3 City Pairs	
City Pair	Number of Average Daily Trips
San Pablo and Richmond	1,078
San Pablo and El Cerrito	383
San Pablo and San Pablo	198

3.3.5 Overall Network Issues

In reviewing the current transportation network, the Study identified the following bicycle and pedestrian gaps, safety issues, and accessibility issues for all modes.

Pedestrian Issues

- Low pedestrian visibility at intersections
- Lack of pedestrian wayfinding
- Missing crosswalk facilities
- Deficient or dated streetscape, including lack of pedestrian lighting
- Several curb ramps and crossings are not accessible

Bicycle Issues

- Missing bicycle lanes on San Pablo Avenue, El Portal Drive, Castro Road, Moraga Road, and College Lane
- Missing bicycle crossings at intersections
- Challenges turning to/from major streets

Roadway Issues

- Unsafe or illegal U-turns at mid-block locations along El Portal Drive
- Narrow parking shoulder along Campus Drive
- Vehicles making right turns at high speeds along San Pablo Avenue
- Vehicles traveling at high speeds along certain corridors (Mission Bell Dr, Castro Rd, and El Portal Dr)
- Some streets are too wide



4. Outreach Round 1 Summary

4.1. Stakeholder Meeting #1

Stakeholder meeting #1 took place in Wednesday - August 31, 2022, from 2:00 P.M. – 3:00 P.M. via Zoom. The meeting was to solicit input on potential opportunities and improvement focus areas that would be of interest and provide the most benefits to the Study Area.

4.2. Round 1 Online Survey

An online survey was conducted to collect information about travel behaviors, preferences, and needs for users who travel to, from, or through the Study Area . The survey was hosted on the Alchemer platform, available in English and Spanish, and active between October 17, 2022, and November 28, 2022. The survey (**Figure 15** and **Figure 16**) was advertised via a variety of channels, including:

- Social media: Facebook, Twitter, Nextdoor, and Instagram
- Postcards mailed to 3,977 residents within a 1-mile walkshed from the Transit Center
- An email blast from the City of San Pablo
- Project Webpage, hosted on the City of San Pablo website
- City Manager’s e-newsletter
- Presentations to local community groups, including San Pablo Youth Commission and the Richmond Bicycle-Pedestrian Advisory Committee

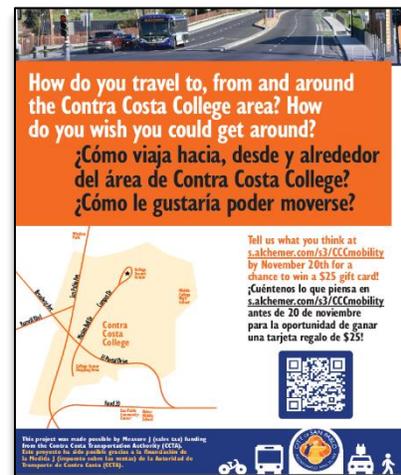


Figure 15. Promotional Flyer



Figure 16. Promotional Postcard

Using parcel information from the Contra Costa County Assessor’s Office, parcels within a 1-mile buffer of the Study Area were selected to receive the promotional postcard at their mailing address.

A \$25 gift card drawing was offered as an incentive to complete the survey. While the survey received 4,985 responses, most were identified as spam. A detailed spam removal process yielded 61 responses.

The results of the survey informed the overall vision and needs for improving multimodal access in the Study Area.

Of respondents, 69 percent reported that they live near the Study Area, and 44 percent reported that they drive through the area. Nearly 20 percent of respondents regularly use buses at the Transit Center, while nearly 10 percent bike through the Study Area.

Respondents were asked to select up to three factors that would encourage them to use transit more often. A full breakdown of the responses can be found in **Figure 17**. The top three responses were as follows:

- More destinations accessible by Bus (46%)
- Shorter wait times between buses (36%)
- Faster bus service (33%)

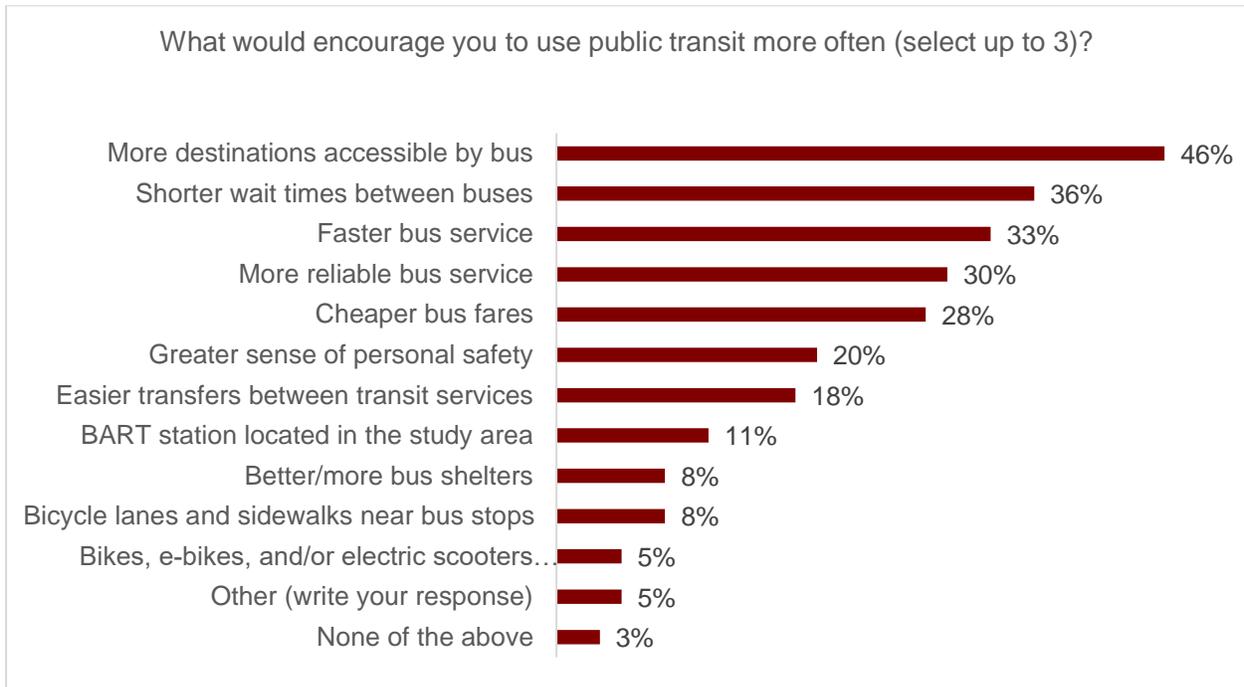


Figure 17. Round 1 Survey: Preferences for Increasing Transit Use

Respondents were asked to identify their top three concerns about traveling through the Study Area. **(Figure 18)**. The latter concern may also reflect a personal safety concern, which was noted in open-ended responses throughout the survey. The top three concerns all centered around traffic safety:

- Intersections feel dangerous (38%)
- Cars drive too fast (33%)
- Not enough lighting (31%)

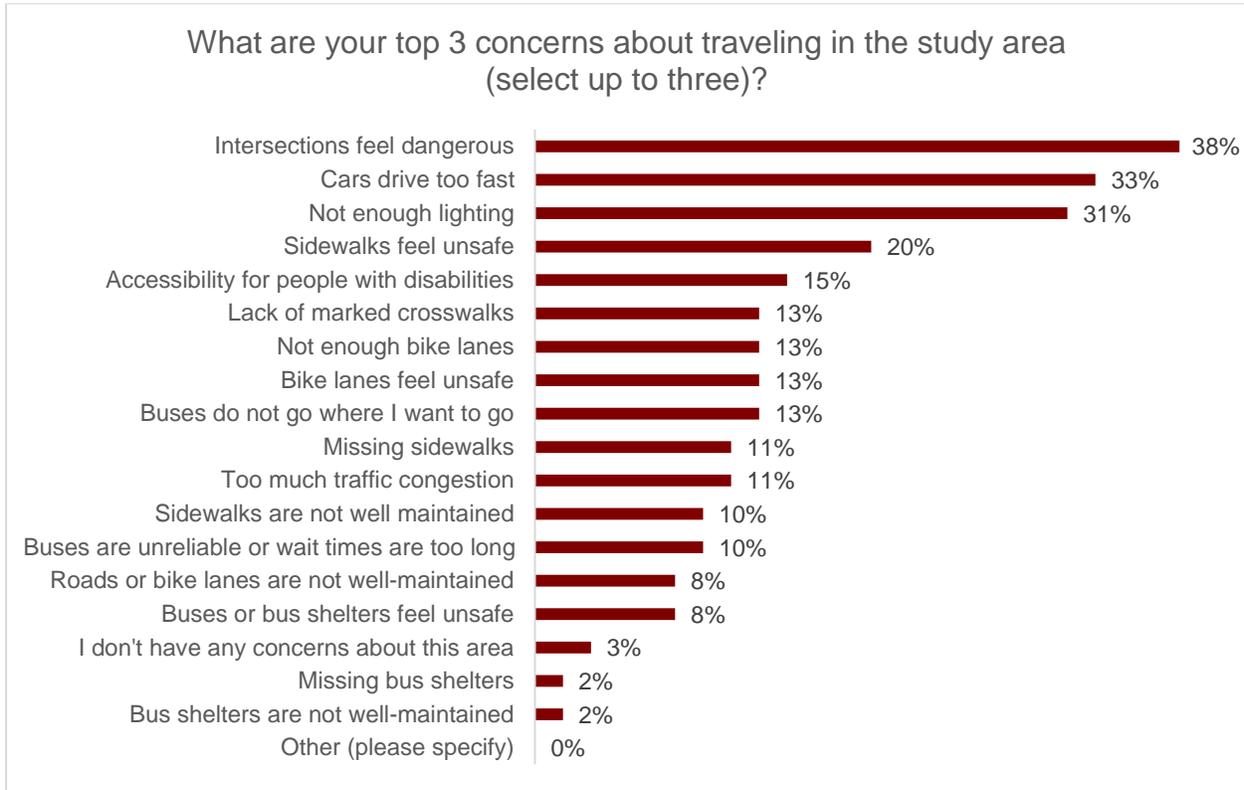


Figure 18. Round 1 Survey: Concerns for Travel in Study Area

The last part of the survey focused on how to encourage walking, biking, and wheelchair use in the Study Area. **Figure 19** demonstrates the top three factors that would encourage people to use active transportation more often in the Study Area. The top responses are as follows:

- Safer crosswalks (39%)
- New or improved sidewalks (23%)
- Slower cars (20%)



Figure 19. Round 1 Survey: Preferences for Increasing Walking, Biking, and Wheelchair Use

Common concerns throughout the survey responses centered around personal safety and traffic safety. Key takeaways from open response feedback included:

- Transit Center location feels secluded and could benefit from being in a more central, visible area
- Intersections feel unsafe
- Cars travel too fast
- Not enough lighting
- Build more bike lanes (especially protected)
- Make existing shopping centers pedestrian friendly
- Sidewalks feel unsafe

Summary of Outreach Round 1 activities and results can be found in **Appendix A**.

4.3. Stakeholder Meeting #2

Stakeholder Meeting #2 took place Wednesday - February 1, 2023, from 2:00 P.M. – 3:00 P.M. via Zoom. The meeting was conducted after Round 1 of Public Outreach with the objective of reviewing public input, the initial network, and mobility concept alternatives.



5. Proposed Network Improvements

5.1. Proposed Access and Safety Improvements

Based on the findings of the network circulation assessment, desired connectivity improvements fall into three categories: bicycle improvements, pedestrian improvements, and traffic calming. The assessment accounted for existing roadway network constraints and planned projects when developing proposed enhancements. The initial list of proposed improvements was reviewed and commented on by stakeholders and the community through project engagement activities. **Table 9** shows the final improvement categories that were established as a framework for the improvement identification process.

Table 9. Bike/Ped/Traffic Calming Improvement Categories

Proposed Improvement Categories	Example Photos	Study Objectives
<p><u>Bicycle Improvements</u></p> <ul style="list-style-type: none"> • Bike Box • Bike Crossing • Bike Lane with/without Buffer • Cycle Track • Multi-use Path • Bike Parking 	 <p>Shared-use Path</p>  <p>Raised Bikeway</p>	<p>Create a connected and comfortable bicycle network</p>



Proposed Improvement Categories	Example Photos	Study Objectives
<p><u>Pedestrian Improvements</u></p> <ul style="list-style-type: none"> • Advanced Limit Lines¹ • Curb Ramp • Construct New Sidewalk • Existing Sidewalk Upgrade • Leading Pedestrian Interval • New or Improved Pedestrian Crosswalk • Pedestrian Signal 	 <p data-bbox="716 617 980 663">Advanced Limit Lines</p>  <p data-bbox="711 1058 956 1094">Curb Ramp Upgrade</p>	<p>Close sidewalk gaps and improve pedestrian connections</p>
<p><u>Traffic Calming</u></p> <ul style="list-style-type: none"> • Median Modification • Raised Intersection • Side-street Bulbout² • Traffic Circle • Signal Improvement 	 <p data-bbox="737 1430 987 1472">Raised Intersection</p>  <p data-bbox="737 1759 976 1793">Side-street bulbout</p>	<p>Improve safety for vulnerable roadway users, including bicyclists and pedestrians</p>

¹ Photo Source: Minneapolis Street Design Guide, 2021

² Photo Source: San Francisco Municipal Transportation Agency



An initial list of proposed improvements was developed based on the existing conditions assessment and community input. It was then commented on and reviewed by agency stakeholders and the community through public engagement activities. After receiving input, a total of 57 spot improvements (see **Appendix B**) are recommended to create a well-connected and comfortable circulation network within the mobility hub area.

The improvements focus on three major areas:

- Improving east-west bicycle and pedestrian connections across San Pablo Avenue into the College and the College Transit Center. This includes new bicycle facilities in the east-west direction along College Lane, upgrades to the existing pedestrian path along Mission Bell Drive and Campus Drive, and pedestrian crossing upgrades at important intersections.
- Improving intersection safety at high activity areas. Intersection improvements such as advance limit lines, side-street bulbouts, and ADA-compliant crossing ramps would improve safety and access through this area.
- Improving access improvements for facilities along the Castro Road-Moraga Road loop. This includes sidewalk improvements, a Class IV cycle track on El Portal Drive, a Class II bike lane along Castro Road, a Class I shared-used path along Moraga Road, and other intersection crossing upgrades. A particular focus is on access to the new City Park.

Figure 20 and **Figure 21** map the locations of the proposed pedestrian and bicycle improvements within the Study Area, respectively.

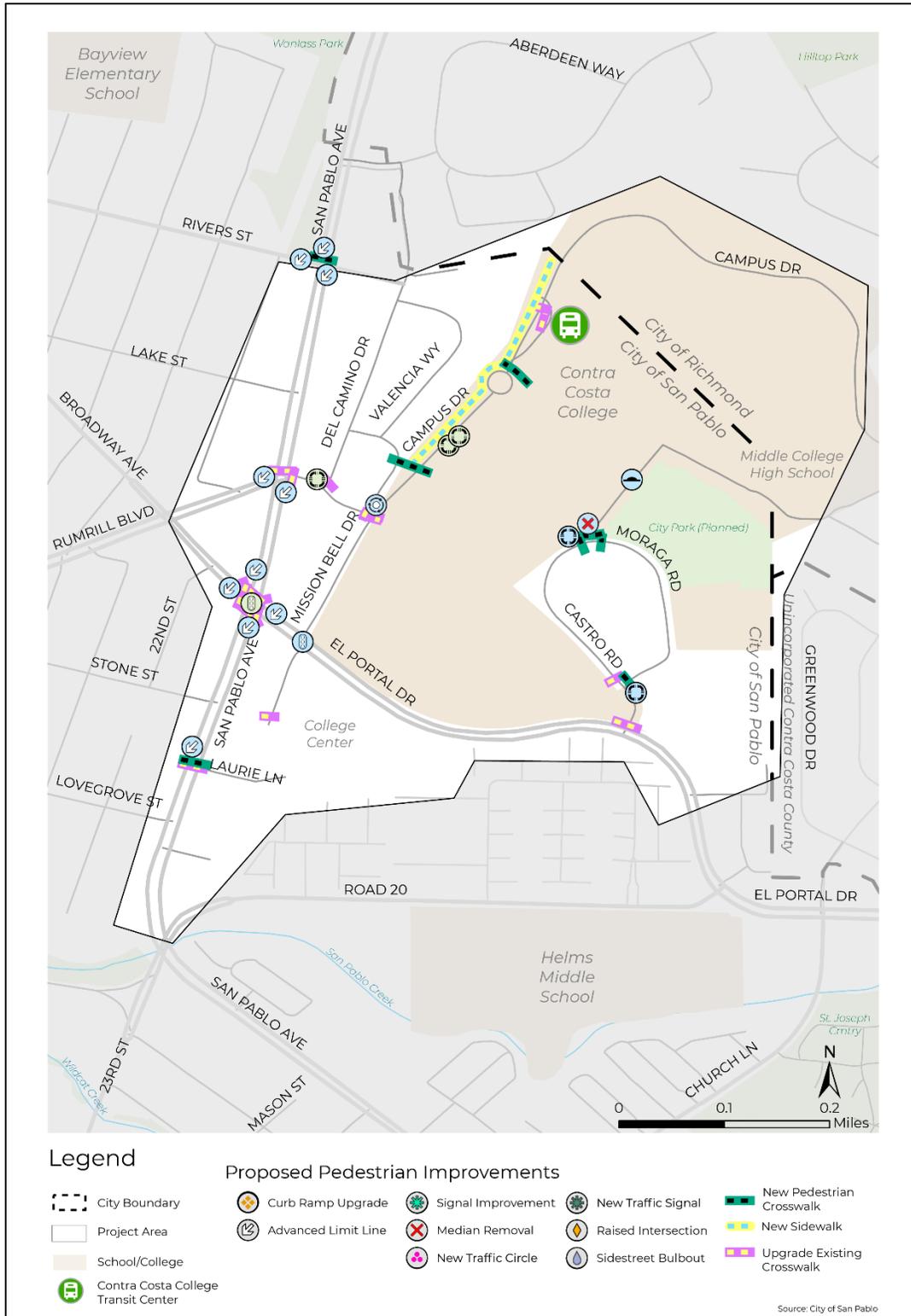


Figure 20. Proposed Pedestrian Network Improvements

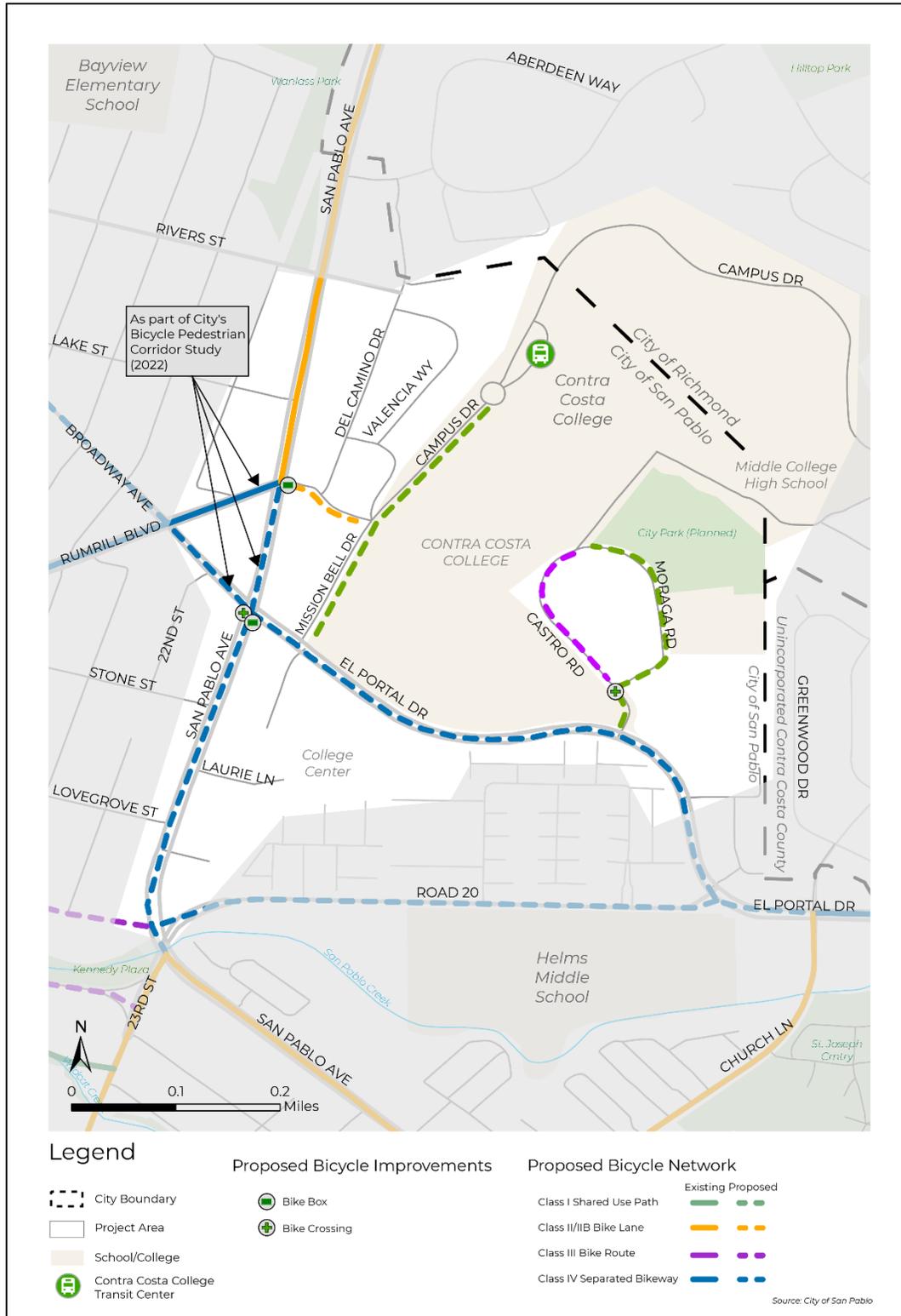


Figure 21. Proposed Bicycle Network Improvements



5.2. Streetscape Concepts

One of the community's stated priorities for improvement in the mobility hub area is to improve lighting and pedestrian comfort. This can be achieved through upgrading the streetscape to include pedestrian-focused amenities such as lighting and wayfinding signage and improving corridor aesthetics through street trees and monumentation. See **Table 10** for a list of proposed streetscape elements.

Table 10. Streetscape Improvement Categories

Proposed Improvement Categories	Example Photos	Study Objectives
<p>Streetscape Improvements</p> <ul style="list-style-type: none"> • Placemaking • Gateway monument • Wayfinding sign • Pedestrian street lighting • Landscape and vegetation (tree, flower, biofiltration tree) • Barrier (fencing) 	 <p>Placemaking</p>  <p>Tube Steel Fence</p>	<p>Create a sense of place and improve community open space</p>

The project team identified opportunity areas for placemaking elements at intersection corners and College entry roadways. For example, the plaza at the corner of El Portal Drive and Castro Road can be enhanced with wayfinding signage, monumentation, bench seating, specialty paving, and public art. Placemaking areas throughout the Study Area should complement each other with unifying site furnishings and features.

Three key corridors around the campus perimeter were identified as candidates for streetscape improvements as part of this planning effort. These corridors serve as the main ingress and egress roadways into the campus.



- **Castro Road-Moraga Road Loop** – At the southeastern entrance to the College off of El Portal Drive, there is an opportunity for gateway features, wayfinding signage, and placemaking elements to enhance the entrance and make it more welcoming. The northwest corner of the intersection is in close proximity of a bus stop and the Performing Arts Center. As Castro Road leads into the campus, the addition of street trees and lighting will make a more comfortable corridor for pedestrians. The front of the future City Park site provides an opportunity for signage and site furnishings that blend into the future park space.
- **Mission Bell Drive** - Within the existing median along Mission Bell Drive, there is a row of healthy coniferous trees. The intent of the streetscape design is to retain those trees but reduce their lower canopy to improve visibility through the corridor. Removal of the existing paving in the median will provide room for the addition of ground plane planting. The existing sycamore trees on the eastern side of Mission Bell Drive will also be protected in place. The sycamores will be adjacent to a new widened walkway and landscape area. On the west side of the street, by narrowing the travel and parking lanes, there is an opportunity for bio-filtration planters with trees and a widened sidewalk. The vision for the northeast corner of Mission Bell Drive and El Portal Drive includes reimagining the paved area as a plaza space and reinvigorating the planting with a swath of flowering trees.
- **El Portal Drive** - The San Pablo Bicycle and Pedestrian Corridor Study, completed in 2022, includes drawings for roadway improvements throughout El Portal Drive. There are opportunities to enhance the previously developed concepts for an improved streetscape. Median and street trees can remain, but the planter areas can be enhanced with new shrub and ground cover planting. New pedestrian-scale lighting will help illuminate the sidewalks and provide a night-friendly corridor.



5.3. Corridor Improvement Concepts

Corridor concepts were developed for the following three corridors, as shown in **Figure 22**:

- Mission Bell Drive
- El Portal Drive
- Castro Road-Moraga Road loop

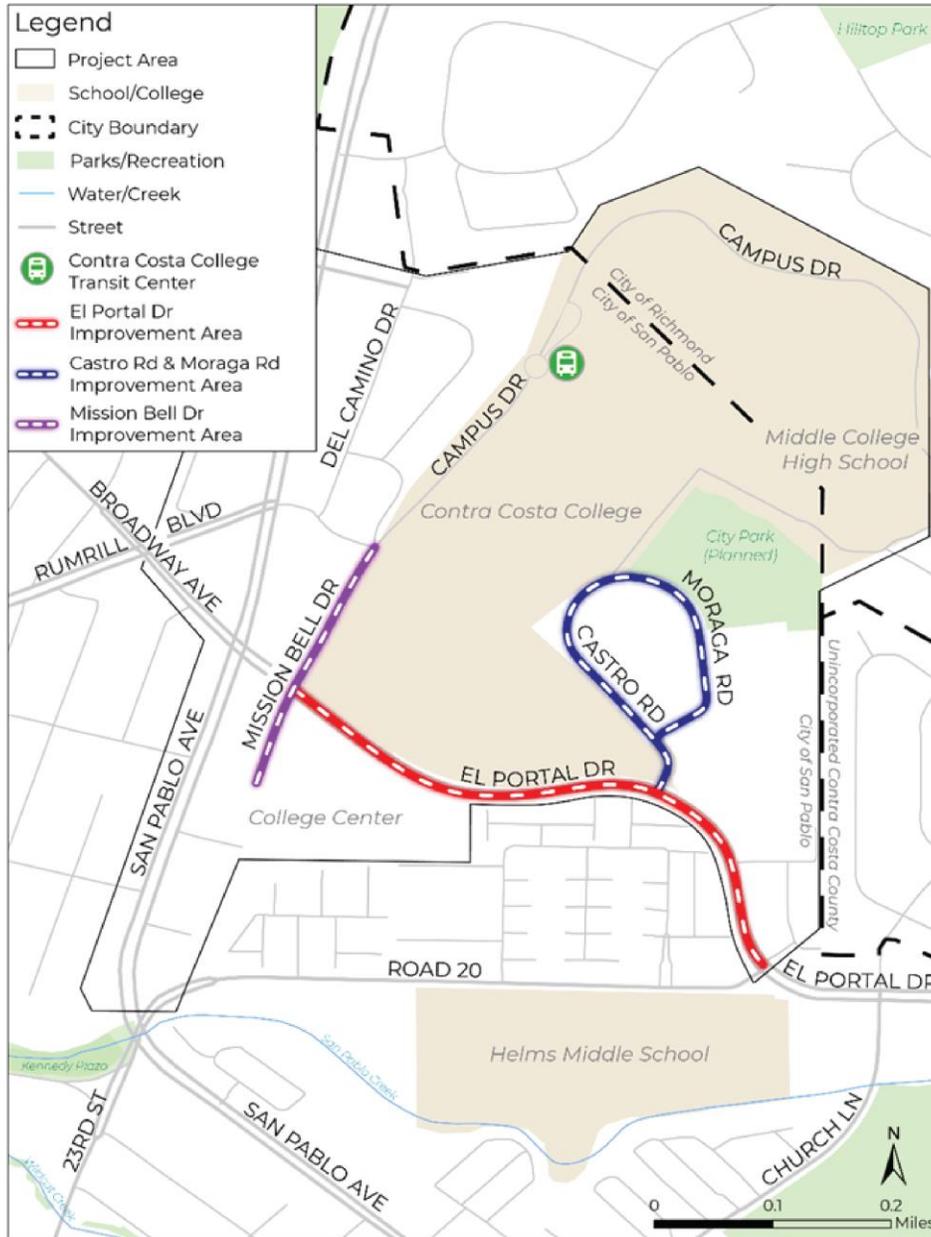


Figure 22. Location of the Corridor Concept Areas



Mission Bell Drive

Existing wide travel lanes contribute to observed instances of vehicle speeds exceeding the posted speed limit of 25 MPH. By narrowing the lane width, studies have shown that vehicles will typically travel at lower speeds. The narrower lane width allows for new elements such as a raised bikeway and biofiltration planters, while still preserving existing amenities such as parallel street parking. These elements achieve the goal of enhancing pedestrian and bicycle infrastructure along the corridor. See **Figure 23** for the existing and proposed cross-section views of Mission Bell Drive.

The proposed enhancements are as follows:

- Narrow the travel and parking lanes
- Widen sidewalk and install biofiltration planters as landscape strip to buffer pedestrians from autos
- Add pedestrian-scale lighting
- Install raised two-way bikeway on the east side
- Replaced paved median with landscaping

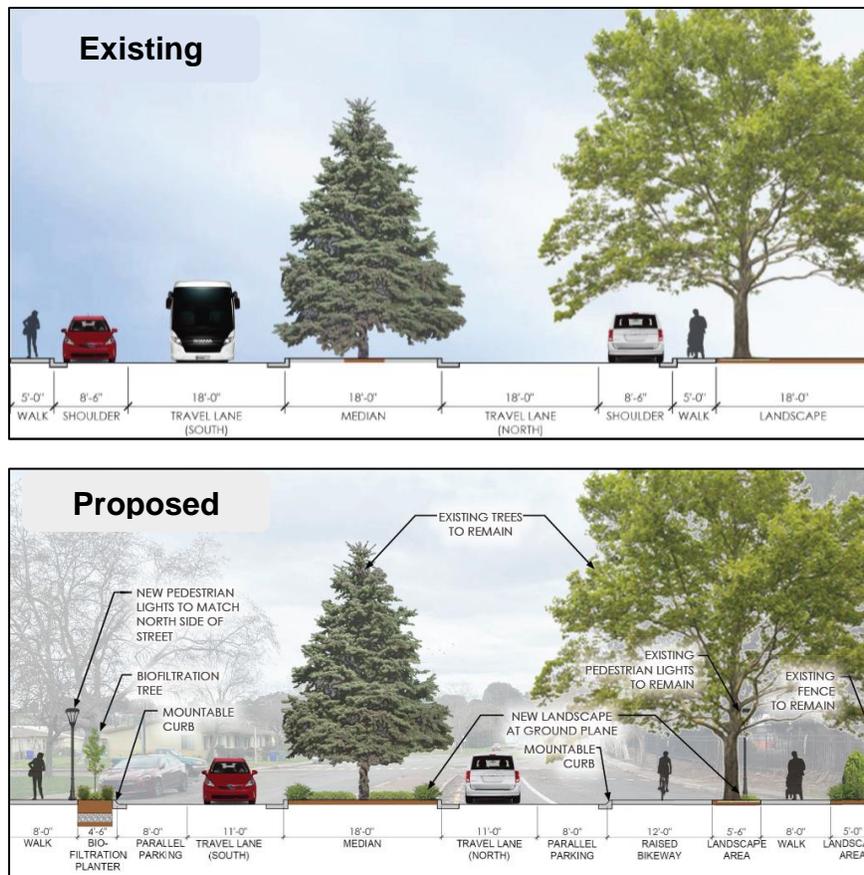


Figure 23. Cross Section View of Existing (Top) and Proposed (Bottom) Mission Bell Drive Improvements



El Portal Drive

El Portal Drive borders the southern edge of the campus and is used by several bus routes and is one of the few east-west corridors in the city. The goal of the improvements is to create a connected bicycle network, provide for improved access to transit, and enhance bicycle and pedestrian comfort. Bikeway improvements were identified as part of the Bicycle and Pedestrian Corridors Project. See **Figure 24** for the existing and proposed cross-section views of Mission Bell Drive.

Proposed enhancements:

- Narrow the travel lanes and median
- Widen sidewalk, add pedestrian-scale lighting, improve landscape on both sides
- Improve transit stop area
- Install two-way cycle track on north side of street with raised concrete buffer
- Add pedestrian-scale lighting the full length of the corridor

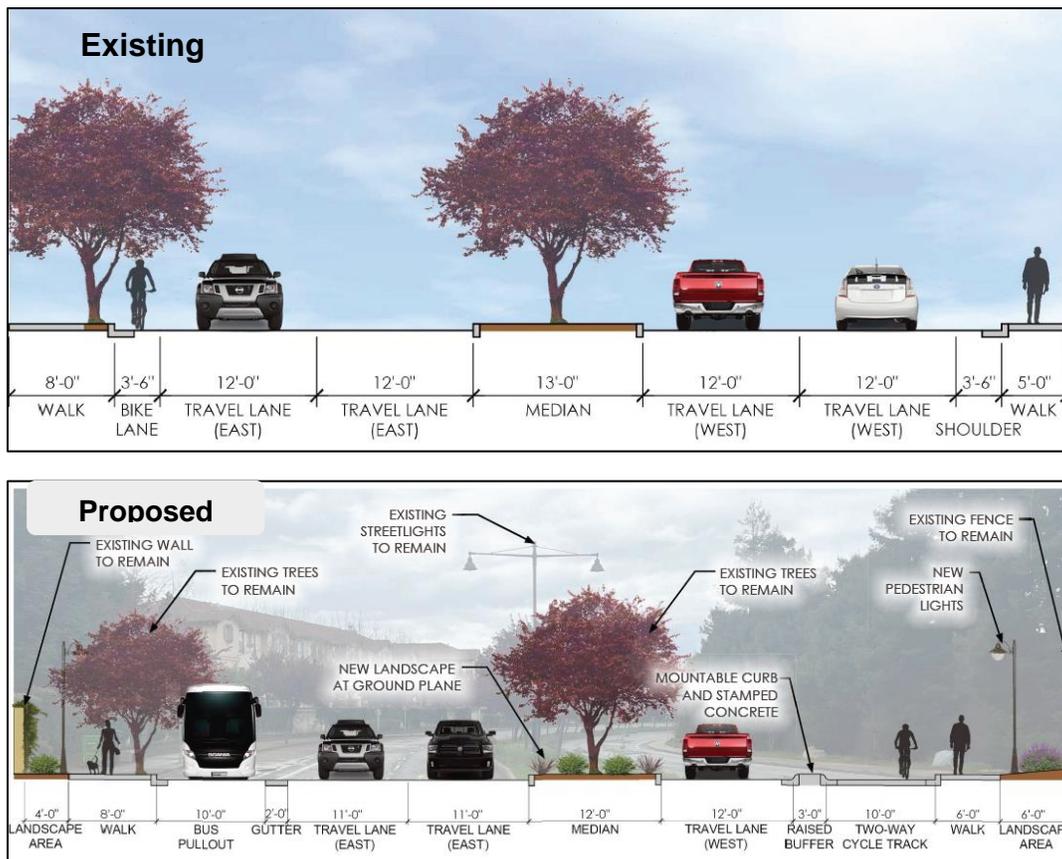


Figure 24. Cross Section View of Existing (Top) and Proposed (Bottom) El Portal Drive Improvements



Castro Road-Moraga Road Loop

Castro Road-Moraga Road loop serve as the access point to the eastern portion of campus, including points of interest such as the Performing Arts Center, the College library, and Middle College High School. With the addition of a new City Park, as well as permanent supportive housing, new bicycle and pedestrian infrastructure will benefit all ages and abilities. See **Figure 25** and **Figure 26** for the proposed cross-section views of Castro Road-Moraga Road loop.

Proposed enhancements:

- Narrow the travel lanes and convert to parallel parking
- Widen landscape area and add fencing
- Install shared-use path along northbound Castro-Moraga Road
- Add pedestrian-scale lighting for the full length of the corridor

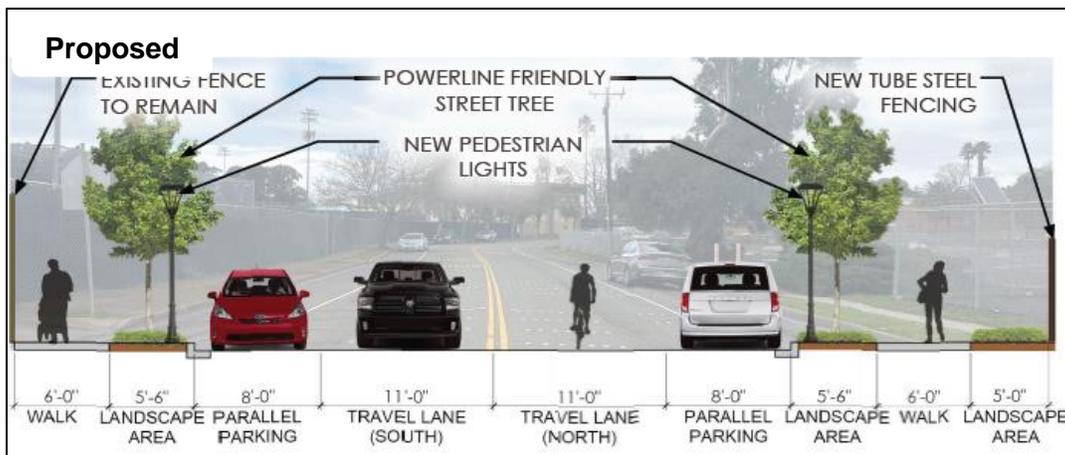


Figure 25. Proposed Cross-section for Castro Road

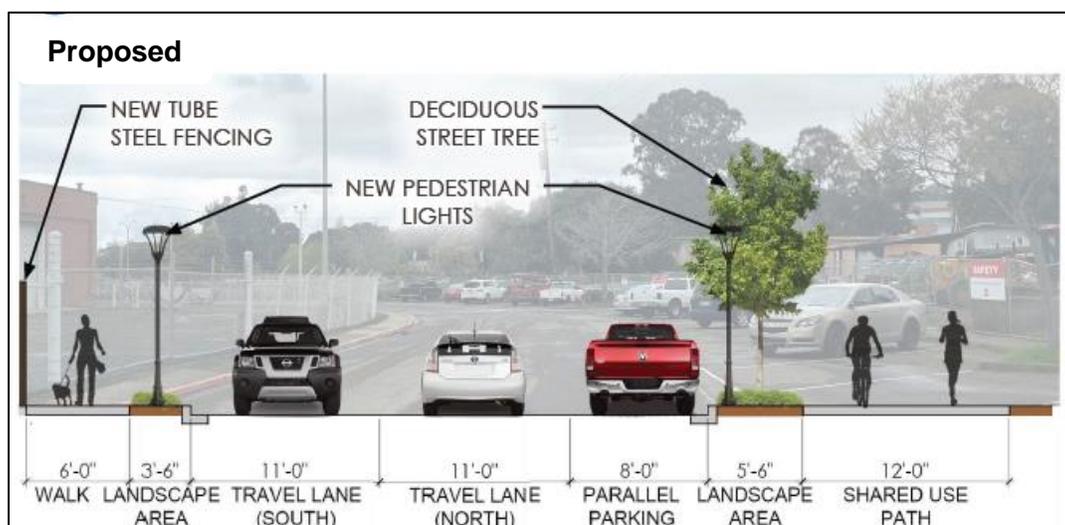


Figure 26. Proposed Cross-section for Moraga Road



5.4. Transit Improvements

Transit improvements are desired within the Study Area to make transit more reliable, safer to access, and a more comfortable experience for riders. Improvements are recommended at the College Transit Center, at bus stops within the Study Area, and in limited locations along transit routes.

The existing College Transit Center is functional but is lacking many of the modern amenities and features typical of other high quality transit hubs in the Bay Area. Improvements to amenities such as upgraded pedestrian-scale lighting, secure bike parking, a cohesive wayfinding system, electronic real-time information signs, modernized shelters and benches, and trash bins would create a more comfortable environment for passengers who are waiting at the College Transit Center. The College Transit Center would also benefit from improved accessible circulation and wider pedestrian paths to connect it with both the College and the surrounding community. Improvements to the College Transit Center should be coordinated with AC Transit as the primary operator and the College as the landowner.

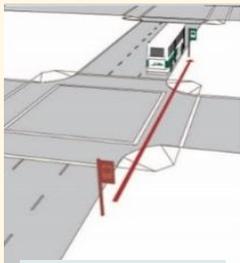
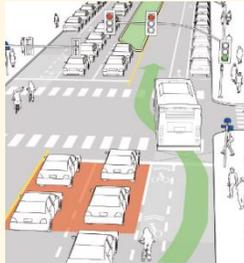
To assess the need for bus stop amenity improvements outside of the College Transit Center, existing stops were inventoried, and existing ridership was analyzed. Higher-ridership stops are recommended for enhanced amenities, such as shelters, benches, trash cans, and wayfinding. Bus stop improvements should be coordinated with AC Transit and may require an agreement between the City and AC Transit for maintenance of the additional amenities.

In a few locations, operational improvements provide an opportunity to make the bus more reliable and shorten travel times. The improvements may include transit signal priority (TSP) to reduce the delay for buses at right lights and intersection improvements such as a new traffic signal at the Mission Bell Drive and El Portal Drive intersection to allow for improved bus turning movements and reduced delay. Additional improvements on San Pablo Avenue were recommended by the San Pablo Avenue Multimodal Corridor Project Phase 2, and are incorporated into this Study, including bus stop consolidation and relocation and transit priority treatments, such as dedicated bus lanes and queue jumps.

See **Table 11** for improvement categories and examples and how those are aligned with the Study objectives.



Table 11. Proposed Transit Improvements

Proposed Improvement Categories	Example Photos	Study Objectives
<p><u>Transit Center Improvements</u></p> <ul style="list-style-type: none"> • Shelter Upgrades • Bike Parking • Real Time Information • Lighting • Accessibility • Wayfinding • Clipper Vending Machines 	 <p>Shelter Upgrade</p>  <p>Real Time Info</p>	<p>Create a comfortable and accessible Transit Center for passengers</p>
<p><u>Operational Improvements</u></p> <ul style="list-style-type: none"> • Transit Signal Priority (TSP)¹ • Bus Stop Relocation • Dedicated Bus Lanes² • Queue Jumps 	 <p>TSP</p>  <p>Bus Lane</p>  <p>Stop Relocation</p>  <p>Bus Queue Jump</p>	<p>Improve bus operation performance, decreasing travel times and increasing bus reliability</p>

¹ Photo Source: British Columbia Ministry of Transportation and Infrastructure

² Photo Source: San Francisco Municipal Transportation Agency



Proposed Improvement Categories	Example Photos	Study Objectives
<p><u>Bus Stop Improvements</u></p> <ul style="list-style-type: none"> • Bus Bulbs¹ • ADA Accessibility Upgrades • Amenities Upgrades (Bench, Shelter) 	<div data-bbox="696 367 1161 674"> <p>Amenities Upgrades</p> </div> <div data-bbox="685 743 1167 1045"> <p>Bus Bulb</p> </div>	<p>Improve bus stop locations with additional amenities</p>

¹ Photo Source: Google



6. Outreach Round 2 Summary

The preliminary recommendations and streetscape designs described in Chapter 5 were presented to the community in the Round 2 outreach period. Feedback was requested from the community on their support for the improvements and whether other improvements not identified are needed to sufficiently address the needs of the Study Area.

Round 2 community engagement included:

- Two in-person, pop-up events:
 - Contra Costa College Earth Day on April 21, 2023 from 10 a.m. to 1 p.m.
 - San Pablo Supermarket at the College Shopping Center on April 28, 2023 from 10 a.m. to 1 p.m.
- Virtual public info session:
 - May 2, 2023 on Zoom from 6-7:30 p.m. (recorded and posted online, linked to the project webpage)
- Supplemental online survey:
 - Survey was open April 21, 2023 through May 31, 2023.

All events were advertised via the project webpage and through the City’s various social media channels and email lists. All materials were provided in English and Spanish. Spanish-speaking City staff were present at the pop-ups and info session for interpretation. **Figure 27** shows the website banner created to advertise the events and survey, and the social media graphics were designed in a similar theme.

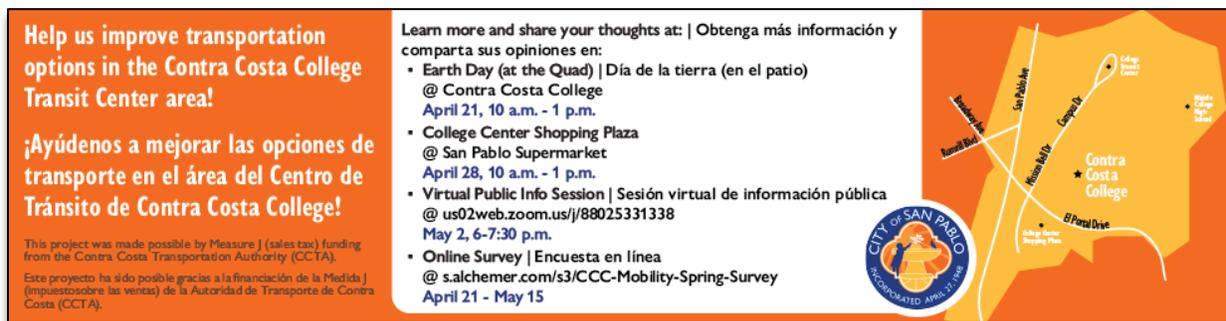


Figure 27. Project Website Promotional Banner

6.1. In-person Pop-up Events

The Project set up a table during the Earth Day event at the College. Two 24x36” boards were developed for the pop-up events, see **Figure 28**. One board was map-based and focused on proposed bicycle, pedestrian, transit, and wayfinding/placemaking improvements and where these improvements would be located. The other board shared preliminary streetscape designs, highlighting key changes, for the three project streetscape corridors: El Portal Drive, Mission Bell Drive, and the Castro-Moraga Road loop.



Contra Costa College (CCC) Mobility Hub Plan | El Plan del Centro de Movilidad

Proposed bicycle, pedestrian, and transit* improvements
*Mejoras propuestas para ciclistas, peatones y tránsito**

* Additional bus stop improvements, including benches, shelters, and lighting, to be developed in coordination with AC Transit | Mejoras adicionales en las paradas de autobús, incluidos bancos, refugios e iluminación, que se desarrollarán en coordinación con AC Transit

AREA-WIDE IMPROVEMENTS
MEJORAS EN TODA EL AREA

- High-visibility crosswalks | Cruce peatonal de alta visibilidad
- Pedestrian lighting | Alumbrado peatonal
- Public art and gateway monuments | Arte publico y monumentos de entrada
- Directional signs | Señales direccionales

BICYCLE SAFETY IMPROVEMENTS | MEJORAS EN LA SEGURIDAD DE LAS BICICLETAS

- Bike crossings | Cruces de bicicletas
- Bike boxes | Cajas de bicicletas

Bicycle Network | Red de bicicletas

- Shared use path | Sendero compartido
- Bike lane | Carril de bicicletas
- Bike route | Ruta de bicicletas
- Separated bikeway | Ciclovía separada

Legend:

- City boundary | Límite de la ciudad
- Project area | Área del proyecto
- CCC Transit Center | Centro de tránsito CCC
- New crosswalk | Nuevo cruce peatonal
- Upgraded crosswalk | Cruce peatonal mejorado
- Bicycle safety improvements | Mejoras en la seguridad de las bicicletas
- Traffic circle | Rotonda
- Other intersection safety improvements | Otras mejoras de seguridad en las intersecciones

TRANSIT CENTER | CENTRO DE TRANSITO

- Benches | Bancos
- Bus shelters | Paradas de autobuses
- Real-time bus arrival info | Información de llegada del autobús en tiempo real
- Bike parking | Estacionamiento de bicicletas
- Accessibility Improvements | Mejoras de accesibilidad

OTHER INTERSECTION SAFETY IMPROVEMENTS | OTRAS MEJORAS DE SEGURIDAD EN LAS INTERSECCIONES

Leading pedestrian interval
Intervalo de tiempo peatonal adelantado

Allows pedestrians to cross 3-7 seconds before motor vehicles are given the green light, which increases visibility and reduces conflicts.
Permite que los peatones crucen de 3-7 segundos antes de que los vehículos motorizados reciban luz verde, lo que aumenta la visibilidad y reduce los conflictos.

Curb extensions | Amortiguador del árbol de la calle
Reduce pedestrian crossing distances at intersections or midblock crossings. Reducir las distancias de cruces peatonales en intersecciones o a mitad de la cuadra.

This project was made possible by Measure J (sales tax) funding from the Contra Costa Transportation Authority (CCTA) | Este proyecto ha sido posible gracias a la financiación de la Medida J (Impuesto sobre las ventas) de la Autoridad de Transporte de Contra Costa (CCTA).

Contra Costa College (CCC) Mobility Hub Plan | El Plan del Centro de Movilidad

Proposed streetscape improvements | Propuestas de mejora del paisaje urbano

EXISTING | EXISTENTE

STREET	EXISTING EXISTENTE	PROPOSED PROPUESTA	CHANGES CAMBIOS
CASTRO RD			<ul style="list-style-type: none"> Bike route added (Castro) Ruta en bicicleta agregada (Castro) Shared use path added (Moraga) Sendero compartido agregado (Moraga) Roadway narrowed Calzada más estrecha Angled parking converted to parallel (Moraga) Estacionamiento en ángulo convertido a paralelo (Moraga) Lighting and trees added Iluminación y árboles añadidos
MISSION BELL DR			<ul style="list-style-type: none"> Raised bikeway added Ciclovía elevada agregada Wider sidewalks Aceras más anchas Landscaped buffer and lighting added Búfer ajardinado e iluminación añadidos
EL PORTAL DR			<ul style="list-style-type: none"> Two-way separated bikeway added Ciclovía separada de dos sentidos agregada Wider sidewalks Aceras más anchas One westbound travel lane removed Un carril en dirección oeste eliminado Bus loading zone added Zona de carga de autobuses añadida

This project was made possible by Measure J (sales tax) funding from the Contra Costa Transportation Authority (CCTA) | Este proyecto ha sido posible gracias a la financiación de la Medida J (Impuesto sobre las ventas) de la Autoridad de Transporte de Contra Costa (CCTA).

Figure 28. Pop-up Boards



The project pop-up table was well attended, and over 30 people engaged with information board and our sticker-voting exercise board. The preliminary recommendations for the Mobility Hub were well received. Public participation at both events was captured in photos shown below.



Image: College Pop-up



Image: San Pablo Supermarket Pop-up

At both events, participants were asked to use stickers to respond to the questions on the board. Additional comments or concerns not captured by the questions and multiple-choice answers were asked to be written down on sticker note sheets. Visual representations of feedback received from each event are shown in **Figure 29** and **Figure 30**.

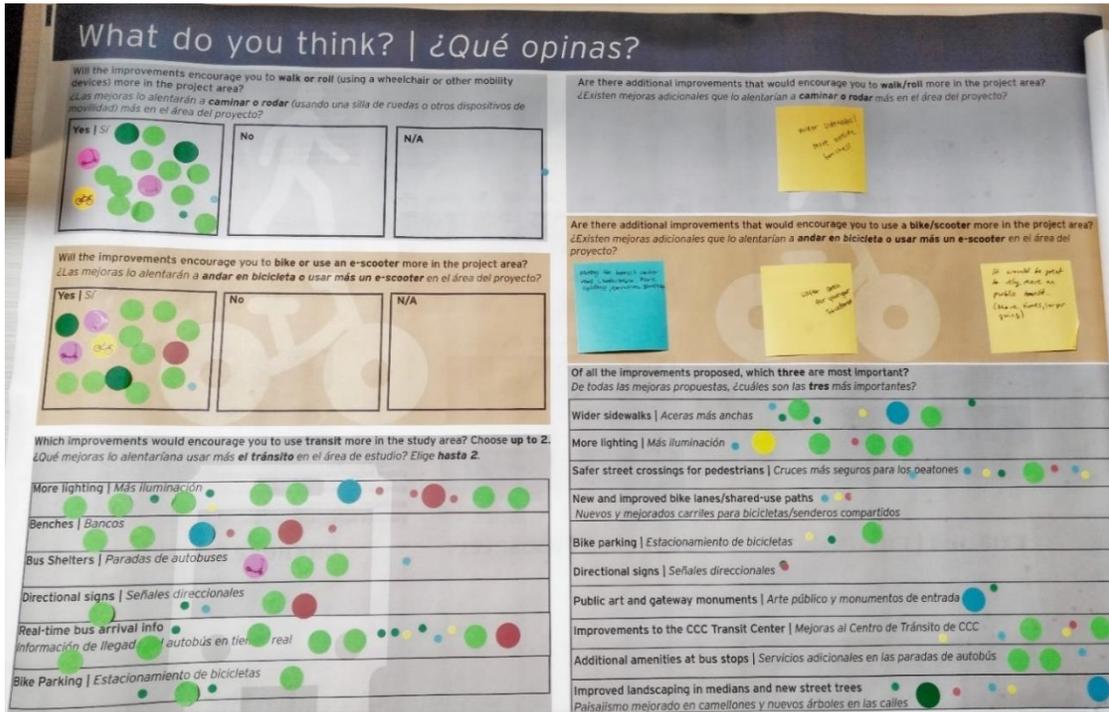


Figure 29. College Pop-Up Feedback Board

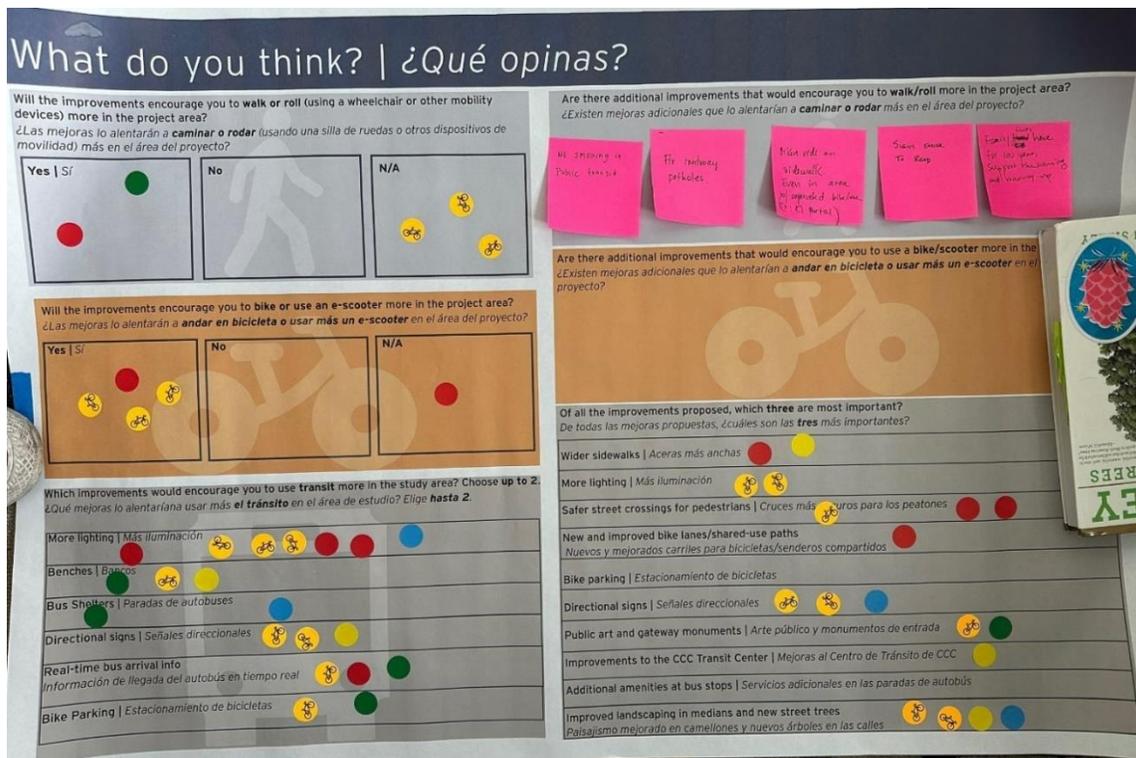


Figure 30. Supermarket Pop-Up Feedback Board



6.2. *Virtual Public Info Session*

The virtual information session was a recorded presentation featuring similar information as the pop-ups. The recording of the session and bilingual slide decks were posted on the project website (<https://www.sanpabloca.gov/2809/CCC-Mobility-Hub-Plan>). The public was alerted to the availability of this media through the City mailing list and social media channels and was also encouraged to take the online survey.

6.3. *Online Survey*

The online survey was intended to provide an opportunity for input from the broader public who did not attend the in-person pop-up events. The online survey included the same information and questions as the pop-ups and info session and was advertised along with the other events. As noted in the introduction of this summary, the survey was advertised through the same channels as the pop-ups and info session. Nine total responses (one of which was in Spanish) were received.

6.4. *Results*

Survey responses from all three outreach methods were compiled and summarized to reflect public perspective on the proposed pedestrian, bicycle improvements, and overall transit recommendations.

Most respondents (approximately 83%) felt the proposed sidewalk, crossing, and bikeway improvements would encourage them to walk, bike, or roll more in the Project area. Additional free-response feedback emphasized the need for improvements already identified in the preliminary recommendations, such as:

- Expanding transit service and making the College Transit Center safer and more comfortable.
- More benches at the Transit Center and throughout the Project area would be useful.
- Supported safer, well-maintained, and expanded bicycle infrastructure.
- Wanted to see bikes in the road and not on the sidewalk.

Summary of Round 2 Outreach activities including a list of open-ended responses can be found in **Appendix C**.

Participants were presented with a list of the preliminary transit improvement recommendations and asked “Which of the proposed transit improvements would encourage you to use transit more in the project area?” Lighting and real-time bus arrival information were the top two choices across all participants (**Figure 31**).

6.5. *Stakeholder Meeting #3*

Followed Round 2 Public Outreach activities, findings and resulted gathered from both in-person events and the online survey. Wednesday – July 26, 2023, from 10:30 A.M. – 12:00 P.M.

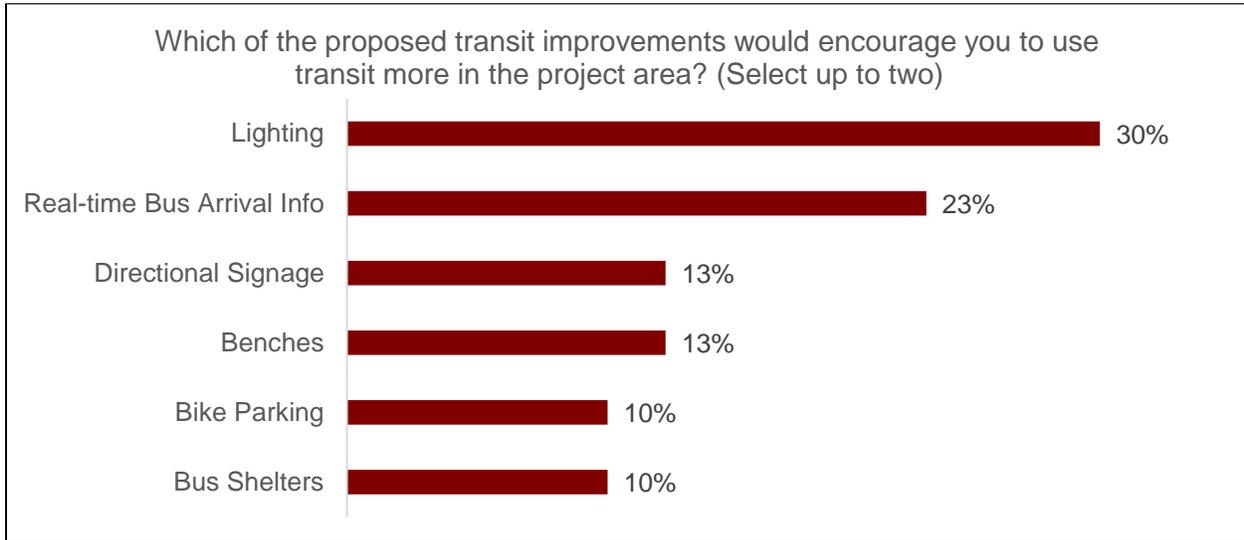


Figure 31. Round 2 Survey: Most Desired Transit Improvements

The three higher priorities for improvements identified by respondents were: “safer street crossings,” “more lighting,” and “improved landscaping/new street trees”, as shown in **Figure 32**. This input will be utilized by the City in determining which improvements to prioritize for near-term implementation based on available funding.

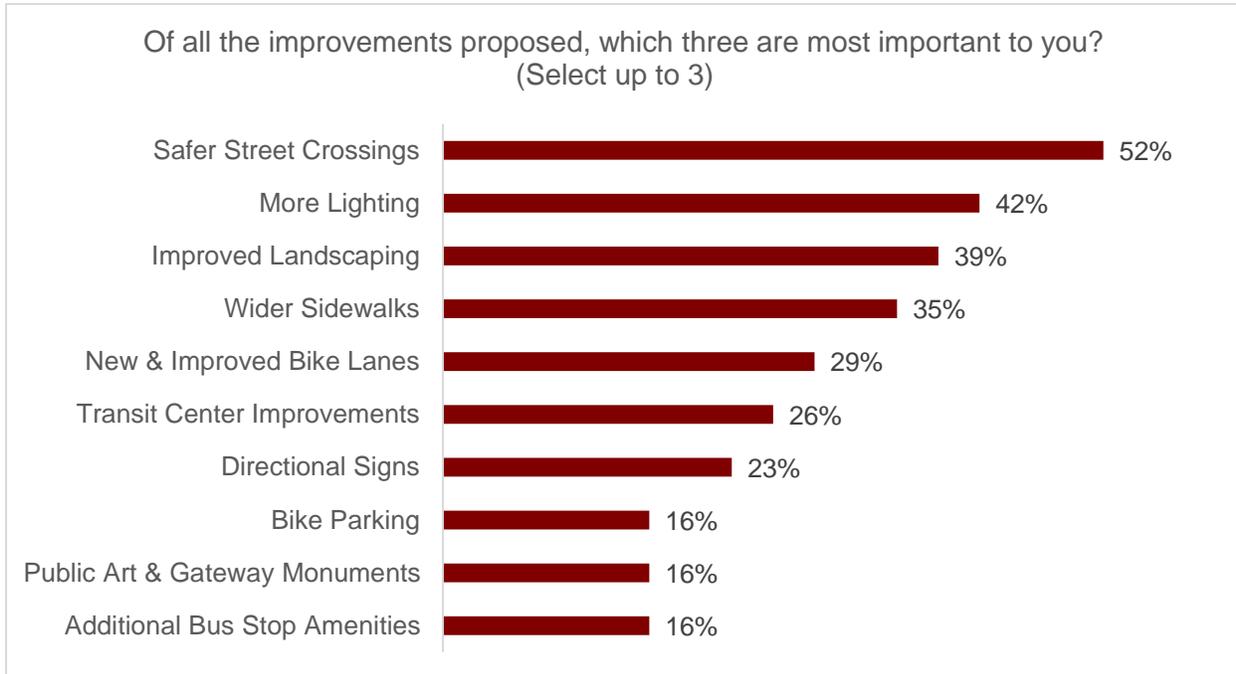


Figure 32. Round 2 Survey: Most Desired Improvements



7. Policy Recommendations

7.1. Curb Management Policy Recommendations

Demands on street curb space have continued to grow, placing pressure on cities to prioritize curb use to effectively meet resident and business needs. New services such as app-based Transportation Network Companies (i.e., Uber or Lyft), and on-demand public transit services such as micro-transit are becoming more popular and require curb space for pick-up and drop-off. Increased online purchasing and on-demand delivery due to the global pandemic is causing more delivery trucks to use loading zones or double parking on streets. However, the growth of micro-mobility options such as scooters, electric bikes, or mopeds often are also competing for the same space as passenger and delivery vehicles. This increasingly diverse mobility landscape raises concerns about conflicts between different modes and equity issues with space allocation. A well-rounded multimodal area requires a dynamic curb assignment with more than just space for private car parking.

With the proposed street improvements and an evolving urban landscape in the City, competition for curb space is increasing. This section provides strategies and a priority framework for the management of valuable curb space. These recommendations take on a flexible, dynamic, and responsive approach as an attempt to meet the City's growing mobility needs.

The City and Planning Division can leverage these policy recommendations to help navigate the curb assignment process either as a standalone process or as part of fronting development project reviews. The strategy is developed through the review of key regulations and management documents from Contra Costa County and the City of San Pablo in the context of the mobility hub area.

Curb space is defined as the border between roadway and sidewalk which separates moving traffic and arrival activities. Effective curb assignment allows travelers to make that transition seamlessly and meet the trip purpose in the most convenient way.

Curb assignments should reflect the surrounding land use context, neighborhood history, and cultural preference. A corridor within an area with high concentration of shops and restaurants will have different needs and users than a residential neighborhood with single family homes.



There are five main curb functions for this urban area context:

	<i>Access for people:</i> pick-up/drop-offs, transit boarding zones, shared mobility services
	<i>Access for goods:</i> dedicated space for delivery trucks, short term loading zones
	<i>Storage for vehicles:</i> on-street parking spaces for vehicles for extended periods
	<i>Protected curb space:</i> curb lane for through movement of motorized or non-motorized usage (transit-only lane and bike lane), visibility zone (daylighting, sight-distance for turning movements and pedestrian safety)
	<i>Public space and services:</i> parklets, bike parking, community services

To achieve a balanced and equitable curb space assignment, shared curb space should be managed thoughtfully and efficiently by following the policy of prioritizing sustainable transportation, aligning with the Vision Zero goal of eliminating traffic deaths and serious injuries, and complying with the Climate Action Strategy goal of promoting trips made by sustainable modes. These supporting policies help to prioritize the curb space allocation process. Below are five principles taken from the City’s supporting policies:

1. Improve traffic safety and support Vision Zero
2. Enhance and support transit operations (Transit First Policy)
3. Increase equity and access for all modes
4. Integrate land use and transportation
5. Reduce greenhouse gas emissions

With these five principles at the forefront, the recommended curb function priorities are set for the four general land-use types, as shown in **Table 12**.



Table 12. Recommended curb function priorities

	Low Density Residential	Medium-High Density Residential	Mixed-use Neighborhood Commercial	Major Attraction (Public/Institutional)
Description	Predominately single-family homes or single-family homes split into several units. There may be a small number of businesses serving nearby residents such as corner stores, dry cleaners, and coffee shops.	Predominately mid-to high-rise apartments with businesses nearby serving residents such as corner stores, dry cleaners, and coffee shops.	A mix of residential and commercial services such as restaurants, coffee shops, corner stores, laundry services, and small-scale retail.	High density and intensity area. Areas with institutions, or buildings that attract a unique set of users. Needs may be specific to time of day and season.
Example of areas within the City	<ul style="list-style-type: none"> West of San Pablo Ave 	<ul style="list-style-type: none"> Willow Rd Neighborhood 	<ul style="list-style-type: none"> Along San Pablo Ave Near City Hall 	<ul style="list-style-type: none"> Contra Costa College Elementary and HS campuses Shopping centers
Priority High ↑ ↓ Low				

The above priorities set the foundation for the curb space assignment process that is in line with regional land-use policy. When curb zones are being used for other non-motorized through movement, such as dedicated transit or bike lanes, those uses take priority over other curb functions. After first allocating curb space based on the highest priority functions, remaining curb areas will be allocated to the lower priority functions. Lowest priority functions do not mean that no space is being allocated for those functions.



Other opportunities for advanced planning of curb space allocation include:

- Prioritize accessibility in curb management
- Right-size loading zones according to latest land-use context
- Consider pricing short-term parking for street-front business corridor
- Proactively plan for City service vehicles
- Develop guidelines for motorcycle parking
- Develop guidelines for EV parking and charging facilities
- Increase evening and weekend parking and loading regulations
- Increase and prioritize enforcement, proactively citing misuse of loading zones
- Develop a parking signage system and deploy signs proficiently with other transportation programs



7.2. Bike Parking Policy Recommendations

The City has plans to enhance the existing bicycle network and provide a reliable alternate transportation option to support regional and local active transportation policies. However, with additional bikes traveling through the area to visit commercial and residential destinations, the need for publicly-available bike parking will increase. The 2017 Bicycle and Pedestrian Master Plan details how to develop and maintain a walkable and bikeable network but provides little guidance on implementation of bicycle parking.

This section explores additional strategies to establish a formulated process in determining appropriate bicycle parking types, quantity, and placements for the City of San Pablo. This section also describes bike parking options, their benefits, and implementation considerations.

There are two main types of bicycle parking that are commonly found at transit centers, community centers, and other mobility hubs: short-term and longer-term storage. Each type of parking serves a unique need for patrons who are accessing the mobility hub.

7.2.1. Short-term Bike Parking

Short-term bike parking serves people leaving bicycles for two hours or less. Short-term bike racks are designed to keep bikes vertical and prevent them from falling against each other. These bike racks are typically installed on the sidewalk or placed in the parking lane on the roadway. Short-term parking should be designed, built, and installed with security in mind, and an overall emphasis on convenience and accessibility. Examples of various types of bike racks commonly used are shown below in **Figure 33**.



Figure 33. Short-term bike parking examples

7.2.2. Long-term Bike Parking

Long-term parking is for bicycle parking needs of longer than two hours and for people who bike that may be willing to travel further to access it in exchange for greater security and protection from the elements. Long-term bicycle parking should be free or low cost to users, easy to use, and readily available at major local destinations with demand for secure facilities. Long-term bicycle parking options are found primarily at city-owned garages in and around downtown, at regional transit hubs, and at train stations. Typically, long-term bicycle parking reservations are available on websites or through online apps for advance trip planning. Examples of various types of long-term bike parking solutions commonly used are shown below in **Figure 34**.



<p style="text-align: center;">Bike Cage/Room</p>  <p>Store multiple bicycles, flexible for bikes in different shapes or sizes. Self-serve: key, keypad or cardkey access control locked with one point of entry.¹</p>	<p style="text-align: center;">Locked Storage Box</p>  <p>Each box fits one bicycle, traditionally access by on-demand electronic cardkey.²</p>
<p style="text-align: center;">Bike Shelter</p>  <p>Providing covered parking for outdoor bike racks.³</p>	<p style="text-align: center;">Bike Stations</p>  <p>A designated in-door space that provides vertical storage.⁴</p>

Figure 34. Examples of long-term bike parking solutions

7.2.3. Implementation Considerations

The quantity of bicycle storage is determined by the anticipated demand and site conditions, in collaboration with local jurisdictions and other stakeholders. New modes of access such as bike and scooter shares must be accounted for and may impact the amount of storage space provided for privately owned bicycles.

Placement should follow the following principles to maintain accessibility and safety:

¹ Photo Source: Duo-Gard

² Photo Source: BART

³ Photo Source: Ground Control Systems

⁴ Photo Source: Saris



- Widely available and decentralized – an abundant supply of bicycle parking near destinations complements the inherent flexibility of bicycles as a mode of travel.
- Intuitive – bicycle parking should be easy to understand and use for all types of people, including youth, seniors, and those on the neurodivergent spectrum.
- Low maintenance – bicycle parking should be sturdy and require little or no work to maintain.
- Economical – to provide bicycle parking in sufficient quantity and begin to meet citywide demand, the racks themselves need to be reasonably affordable.
- Well-connected with other modes – parking should be located at entrances of transit centers or other hubs with clear connections to path of travel for pedestrians and bicyclists.
- Safe – placement should be in a well-lit area, not hidden behind walls or tall features, and must not impede pedestrian traffic flow in the open space environment.

7.2.4. Land-use and Housing Policy

The City established several land-use policies that promote a bicycle friendly community by enticing local land development projects to trade parking spaces for bicycle facilities and amenities.

Namely, Section 17.54.050 of the San Pablo Zoning Ordinance provides waivers or reductions up to 10% in parking standards for mixed-use buildings located within a quarter mile of transit with addition of bike parking. The Housing Elements amended the Zoning Code to allow reduced parking requirements for all new residential projects located on San Pablo Avenue close to transit service and increased credits for bicycle use, up to one space upon provision of a bike rack. The San Pablo Municipal Code imposed bicycle facilities as part of on- and off-site required improvements for the residential subdivision process. In addition, the San Pablo Bicycle and Pedestrian Master Plan indicates that long-term parking is recommended at the College Transit Center and future TOD sites. Bicycle cages or rooms are required in the Planning Code for buildings of certain sizes within specific land use zones. The San Pablo General Plan 2030, which guides long-range physical development in the City, is centered around economic development, creating a pedestrian and bicycle-friendly community, and promoting residential development.

7.3. Streetscape Policy Recommendations

The streetscape of a project area is the holistic view of the purposes of a roadway corridor. These purposes are split into two main categories: the functional requirements of a street, and the visual aesthetic of the overall corridor. Each element within a streetscape concept is carefully planned to be both visually pleasing as well as provide a functional need for its users. These elements, in turn, create public spaces that utilize a local community's assets, ideas, and potential with the intention of improving urban vibrancy. The overall project objective for the streetscape concept is to create a sense of place and arrival.



Landscaping

Landscaping elements along the corridor factor heavily into the overall visual appeal of the public environment. However, it is important to note the plethora of functional benefits a well-planned landscape plan can produce for a roadway corridor. Sustainable and habitat-friendly landscaping elements should account for local biodiversity, water, and energy conservation, while simultaneously providing a natural experience for the general public. Landscape elements along sidewalks provide shade for pedestrians and additionally act as a soft buffer against traffic.

It is a best practice to include materials that promote wildlife habitat and preserve local biodiversity. Tree species that are familiarized with the local microclimate, including native species and drought resistant plantings should be selected. If possible, existing trees and plants should be preserved as it is best to minimally disturb the habitat. However, in many cases, it is best to upgrade existing landscaping, especially if the existing landscaping is not being actively maintained by the City.

Biofiltration

Biofiltration planters provide water quality treatment in areas where right-of-way restrictions are limited. Planters provide water quality treatment and reduce water runoff volumes. Such right-of-way restrictions are present in building areas with constrained setback limitations. Additional limitations are present when existing soil conditions limit the amount of runoff capacity or are contaminated with other pollutants.

It is recommended to design planters to fully drain runoff within 24 to 72 hours. The surface footprint of the planter should be maximized to support the most optimal runoff amounts. However, pedestrian access should be accounted for while maximizing planter size. It is best to provide a pedestrian cut-through every 20 to 40 feet to retain pedestrian access from the sidewalk to the curb. This will minimize pedestrian trampling of the planter and subsequent damage. Native plants should be prioritized, as they cause the least disturbance to the surrounding habitat.

ADA Compatibility

Sidewalks should be widened to 8 to 12 feet at transit stops, as narrow sidewalks create uncomfortable pinch points that can make it difficult or even impossible for those who use mobility devices or strollers to maneuver. Curb ramps should follow ADA guidelines on width and slope to allow greater public access to shared spaces.



7.4. TOD Integration and Planning Policy

TOD involves the synthesis of transportation and land use planning to promote lively communities that are concentrated to a geographic core, contain a mixture of land uses, and are walkable and engaging. In the context of this project, the frequent transit service at the College Transit Center and throughout the Mobility Hub will serve as the nexus for future transit-oriented development.

TOD can be applied to the Mobility Hub through the unification of land use planning and community development policies, which will then maximize transit as the primary guiding principle for improvement of the Project area. Taking inspiration from complete street principles, the Study recommendations will foster a dynamic public realm with the interface of transit, bike, and pedestrian users. By growing and investing in community development, especially in housing and climate impacted areas, the Study Area has the opportunity to develop into an attractive public district.

7.4.1. Implementation Feasibility and Challenges

TOD best practices consist of any new development that is designed to embrace transit facilities and integrate the pedestrian environment. It is important to utilize infill parcels for the revitalization of older urban communities and neighborhoods. The implementation of affordable housing within walkable proximity to transit contributes to a reduction in vehicle needs and cost. Another good practice of TOD is to eliminate security fences, gates, and barriers between uses to avoid segmentation and provide physical and visual connections. An additional positive approach is expanding a city's retail customer base by placing small retail spaces along streets instead of at single, isolated nodes. Reducing the number of parking stalls when they are located within walking and/or biking proximity to transit stations is also highly desired. Another best practice of TOD is utilizing trees, bollards, and other street furniture to protect pedestrians from the roadway and provide a more comfortable pedestrian friendly environment.

The following sites within the Study Area are viable for TOD, as outlined in the Housing Element Update:

- Parcel 416-120-012 at 14260 San Pablo Avenue currently serves as a general commercial use, but is zoned for residential mixed use and could accommodate up to 14 housing units on the 0.44 acres. This parcel is located on the San Pablo Avenue North Corridor near a corner that is adjacent to the Central District and Contra Costa College District, providing an opportunity for transit, bike, and pedestrian connectivity.
- Parcel 416-140-047 at 2555 El Portal Drive is zoned neighborhood commercial and features a vacant office building that is currently undergoing renovations to convert it into a permanent supportive housing project with 54 units. The project will house people who are disabled and homeless, who will pay 30% of their income in rent. This project site is located near the edge of the project area, to the southeast of the Castro-Moraga Road loop. This location will allow these new residents pedestrian access to both the college and local retailers. Other resident amenities will include recreation areas, EV parking, a dog park, and arrangements for a future residents' garden and rooftop solar.



- Parcel 416-170-005 at 14650 San Pablo Avenue is currently used as a church but is designated as high density residential under the general plan. The 1.29-acre site has the opportunity for all of its 78 possible units to be lower income capable. It is across the street from Mission Bell Drive and a bus stop location. The Transit Center is also within bicycle and walking distance to this site.

To achieve successful implementation of TOD principles, a development project must overcome several challenges. These include:

- **Funding:** A project relies on funding to successfully be thought out, developed, and implemented. There are several funding sources and programs available. However, these opportunities are highly competitive. A tactic to present a more competitive candidate project is to demonstrate project readiness by means of planning and documentation (like this project) and public need within a disadvantaged community.
- **Constrained Right of Way:** Right of way constraints can put additional pressure and restrictions on proper TOD design and implementation. Lack of physical space to adequately provide the public with the necessary improvements can, if not addressed, lead to negative impacts on the neighborhood and the users.
- **Use Demand Exceeding Supply:** An unexpected increase in the number of transit riders on an unprepared or inadequately facilitated system may result in backed up or delayed service, which may discourage continued long-term use. By identifying and defining the needs in the TOD planning effort, potential use can be estimated and improvements designed to allow transit providers the flexibility to expand and adjust as necessary.
- **Phasing the Improvements:** Issues typically arise at the edges. The TOD improvements in the various project areas throughout the City of San Pablo will likely be implemented over time with varied stakeholders and project teams leading the efforts. Careful consideration of how these staggered phases interface will be critical to develop and maintain proper transitions of improvements and avoid unintended obstructions or omissions. Also, any planning of TOD improvements must be flexible in nature to successfully integrate new technologies and solutions as they become available. The ultimate goal is a community that is functionally and aesthetically cohesive.
- **Maintenance:** The last major obstacle of implementing TOD is related to maintenance issues and responsibilities. Some ways to overcome these issues are through designing projects that have low maintenance, water wise planting and irrigation, graffiti resistant coatings and materials, skateboarder abatement, and easily cleaned and durable site furnishings. The TOD solutions and materials must be sustainable from a maintenance standpoint by meeting the need of extending maintenance dollars and resources. Overall, it is important to consider whether transit routes, public gathering areas, and open spaces will be maintained frequently enough and to a high standard that the community continues to utilize all of the TOD elements.



7.5. Shared Mobility Feasibility

Shared mobility refers to transportation services where a vehicle is shared among multiple users, either at the same time or consecutively, and includes shared micromobility (bikeshare and scootershare), carshare, microtransit, and the more traditional shared modes of carpooling and vanpooling. Over the last decade, shared mobility has become integral to how people move in urbanized areas. Shared mobility can fill an important role in helping communities mitigate their transportation-related carbon emissions by making it easier for people to shift to more sustainable modes of transportation, such as bikeshare (which includes pedal-powered bikes as well as electric, or e-bikes). In 2022, 51% of all trips made in Contra Costa County were less than 3 miles — a relatively quick trip on a bike or scooter.¹ Shared mobility can also improve transportation equity and accessibility for residents without access to a private vehicle by offering alternatives to driving, providing better first and last mile connections to public transit, and making motor vehicles more accessible through ride-hailing or carsharing.

This section focuses on two forms of shared mobility: shared micromobility (bikes and e-scooters) and shared vehicles. Initial recommendations on how to integrate each service into the Mobility Hub project are also provided.

7.5.1. Bikeshare or Scootershare Program

The most common type of these share programs includes docked bikeshare, dockless bikeshare, and dockless e-scooter. Bikeshare is usually available as pedal-powered or electric pedal assist (e-bikes); however, e-bikes are becoming increasingly popular, especially in dockless systems.

Docked Bikeshare

Docked bikeshare systems include a kiosk at each station where transactions and information are processed to release and lock the bikes at a series of inter-connected docks. In these systems, the locking mechanism and technology is provided at the dock. Although some systems offer independent locks for mid-trip stops, to complete a trip the user generally must return the bike to a designated station. This helps to significantly minimize sidewalk or public-right-of-way obstructions, but limits users' travel behavior and is considered less convenient than systems with free-floating/dockless parking.

Docked bikeshare system assets (bikes, docking stations, etc.) are often owned by public agencies, with day-to-day operations contracted out to a non-profit or private company. The need for docking stations and kiosks in addition to bicycles significantly raises costs and can deter private investment. Capital costs are often covered by a mix of federal grants and local sources of funding, and operational costs are covered by a mix of user revenues, sponsorships and advertising, and/or grants or subsidies. This is the model used by LA Metro Bike Share in Los Angeles; MTC is looking to transition Bay Wheels to this model as well. In 2015, MTC and partner municipalities signed a zero-cost contract with Lyft (then Motivate) to own and operate a

¹ Bureau of Transportation Statistics, 2023.



regional docked bikeshare system, now known as Bay Wheels.¹ However, in February 2023, MTC approved \$16 million to pay for an expansion of Bay Wheels e-bikes and stations – particularly in East Bay communities – as well as to lower fares and membership costs.²



Image: Bay Wheels E-bikes at a Docking Station. (Photo credit: Bay Wheels)

Dockless or Free-Floating Bikeshare

Dockless bikes do not need a dock to park because they have a wheel lock that immobilizes the bicycle when the bicycle is not checked out to a user. Bicycles can be parked anywhere within the system’s service area, with regulations specifying general parking rules (bikes must be parked upright, bikes cannot obstruct pedestrian or driver paths of travel, etc). Users sign up and locate bicycles using the operator’s smartphone application.

Dockless systems may be set up with stations (often called “hubs”) to make them look and function like docked systems, but these stations can be as simple as standard bicycle racks with signage because a transaction kiosk and docks are not needed. In contrast to docked bikeshare, dockless pedal bikeshare systems are now relatively uncommon and most systems are electric.

While dockless bikeshare systems were widely deployed by private companies in the late 2010s due to their lower cost compared to docked bikeshares, these companies have since shifted to deploying even cheaper dockless scooters. Some operators, however, continue to operate dockless bikes, either on their own or in combination with electric scooters. Operators of dockless bikeshare systems often favor opportunities where municipalities share the cost of the

¹ MTC, 2015. <https://mtc.legistar.com/View.ashx?M=F&ID=11371492&GUID=09E91047-7D71-421B-BD01-8043846C9426>

² MTC, 2023. <https://mtc.legistar.com/View.ashx?M=F&ID=11625493&GUID=0C7F3CF7-8DEE-45E6-94EB-D067161C9AFD>



system, such as buying the equipment or providing a subsidy, which makes the business model more like that used for docked bikeshare.

Case Study: LEAP E-Bikeshare (Richmond, CA)

Launched	2022
Partners & Roles	City of Richmond: equipment owner Element LEV: equipment provider LEAP Mobility: operator
Fleet	Dockless e-bikeshare Phase 1: 100 bikes; Phase 2 (planned): 300 bikes at 25 stations
Service Area	City of Richmond (population: 115,639)

In June 2021, the City of Richmond launched its e-bikeshare program with Bolt Mobility using MTC Bike Share Capital Program grant funds. The system was planned to comprise 250 pedal-assist electric bikes and 25 docking stations when fully deployed. After Bolt Mobility filed for bankruptcy and unexpectedly ceased operations in August 2022, the city partnered with LEAP Mobility to restart its bikeshare program, repurposing the bikes left behind. Phase 1 of the new program saw the return of 100 e-bikes, with the fleet expanding to 300 by the completion of an expected Phase 2.



Image: LEAP Bikeshare Station (Photo credit: Richmond Mayor Tom Butt's Office)

LEAP Mobility was chosen as the operator because of its association with the manufacturer of the proprietary bikes that Richmond had bought, which are not compatible with other operators' systems. Based on the information available, it is unclear whether the system remains in



operation, what the results were from the pilot phase, and whether a Phase 2 expansion is being actively considered by the City of Richmond.

Dockless E-Scooters

Dockless e-scooters require no pedaling or knowledge of how to ride a bike, making them more accessible and popular with more users. Because the user mostly relies on the electric motor for propulsion, which is controlled by the electronic components onboard, operators and public agencies have the greatest control over the speed and where people can travel using a dockless scooter. Apart from these differences, dockless scooters are similar in operation to dockless bikes: they are checked out and returned using a smartphone app, they can be parked wherever they are allowed, and parking can be further limited with hubs and optional cable locks.

Dockless scooter operations are typically privately owned and operated with the municipality bearing none of the cost. The lower price per unit compared to bikeshare systems draws private investment to e-scooters. Host municipalities can exert control and oversight over the system by aligning permits with their mobility goals, creating spaces for orderly parking of scooters, and ensuring that the availability of scooters is equitable throughout their jurisdiction.

In Contra Costa County, the communities of Pleasant Hill and San Ramon piloted the deployment of e-scooters by Bird last year.



Image: Bird Dockless E-scooter



7.5.2. Carshare and Vanpool Program

Shared mobility services involving motor vehicles provide the benefits of driving without the full cost of car ownership by either sharing the vehicle or sharing a ride. Private and non-profit operators often operate these services, with some receiving direct governmental support. Carshare and vanpool are two popular concepts being used across the country.

Carshare Program

There are two types of carsharing programs: two-way and one-way carsharing.

Two-way Carsharing:

Cars are borrowed by-the-hour and picked up and returned at designated parking spots, often located at a transit station or public facility. Rentals are conducted through an app, and fuel and insurance are included. Two-way carsharing is best suited for roundtrips of short-to-medium duration (e.g., grocery runs, medical appointments).

In Richmond, CCTA, via the California Energy Commission grant, funded an EV carsharing program with Míocar. Renting a vehicle costs \$4/hour or \$35/day. About 40-45 drivers use the cars each month.



Image: Míocar in Richmond (Photo credit: 511 Contra Costa)

One-way Carsharing:

This system follows the same principles as two-way carsharing, but users can leave vehicles anywhere in a designated service area after they are done. While more flexible than two-way systems, one-way carsharing needs higher density land uses to ensure cars remain within walking distance for the next user.



GIG Car Share is a one-way carsharing program by AAA operating a fleet of hybrid vehicles in the Bay Area, including El Cerrito. Renting a vehicle costs \$19.37/hour or \$112.99/day.



Image: GIG Car Share in El Cerrito. (Photo credit: City of El Cerrito)

Other carshare programs such as rideshare/Transportation Network Companies and microtransit cater more toward on-demand, transit supplemental mobility options. Ridesharing systems, also known as TNC via Uber and Lyft, use apps to reserve a ride with an independent driver working on behalf of a transportation network company (TNC) such as Uber or Lyft. Rides can be private or shared/pooled with other customers. Microtransit utilizes vans or small buses operated by professional drivers to provide transit service in communities where it is needed, but where fixed route transit is not productive. Microtransit is best suited for suburban areas that lack alternative connections.

Vanpool and Carpool Program

Carpooling and vanpooling involve sharing a personal vehicle with passengers heading to the same destination. Public agencies and workplaces often help coordinate the formation of vanpool groups, albeit most carpooling is often informal.

Typically organized by public agencies or workplaces, vanpools offer prearranged trips through a monthly subscription. Participants share costs like gas and insurance, making vanpooling significantly cheaper than driving alone. This service is well suited for frequent medium to long range trips, especially commutes where transit services are unavailable.

This type of program requires a dedicated pick-up/drop-off (PU/DO) zone that is visible from multimodal access paths and transit transfer zones and has sufficient wayfinding, as well as lighting to create a comfortable atmosphere for riders.



7.5.3. Funding Shared Mobility

Starting and sustaining new shared mobility services often requires a mix of funding sources, especially if the service is initiated by a public or non-profit agency. Potential funding sources identified for shared mobility program in the region can be found in **Table 13**.

Federal funds are generally only available for capital expenses, such as the purchase of bikeshare bikes or docks. Federal funds are usually distributed to Metropolitan Planning Organizations (MPOs) that can determine further project selection requirements. Funding for operations is often disallowed or is non-competitive in federal grants. The table below lists out appropriate federal funding mechanisms and what they can support.

Table 13. Shared Mobility Funding Sources

Funding Source	Description
Transportation Alternatives (TA or TAP)	Set-asides for bikeshare projects
Congestion Mitigation and Air Quality (CMAQ)	Has been used in the Bay Area to fund carshare and bikeshare
Federal Transit Administration (FTA) 5307 Urban Area Formula funding	Can fund bikeshare docks and transit-related enhancements
USDOT (RAISE) and FTA (Accelerating Innovative Mobility, or AIM)	Competitive discretionary grants



7.6. Feasibility of BART Extension

With the San Francisco Bay Area Rapid Transit District (BART) system expanding to reach new destination cities in recent years and the Orange and Red lines terminating in adjacent Richmond, the City of San Pablo is a potential candidate for a BART service extension.

7.6.1. Results of Previous Study

In May of 2017, the Western Contra Costa Transportation Advisory Committee (WCCTAC) published the West County High-Capacity Transit Study to evaluate multimodal high-capacity transit opportunities for the region. This study considered differing transit options, such as highway express bus service, bus rapid transit, commuter rail, and multiple BART extension alternatives.

The study identified a BART extension from the Richmond Station north to a new Hercules Station as a feasible solution to advance high-capacity transit for the region. The proposed alignment for this extension will follow existing rail right-of-way along Rumrill Boulevard until it reached the first proposed stop at Contra Costa College in the heart of the Study Area. Should the extension continue past the College, the route would tunnel below grade, continuing north towards Hilltop Mall and eventually to the City of Hercules.

The effects of a proposed BART extension would result in a substantial increase in ridership and decrease in travel time for users. The City of San Pablo would also be connected into the BART network, which would increase opportunities for commuters to access major job centers throughout the region. The High-Capacity Transit Study found the extension strongly supported by both the general public as well as established plans and policies set by the City.

However, the capital cost of the extension is very high and resulted in a finding of a relatively poor project cost effectiveness. When comparing the ratio of ridership benefits to the estimated cost of the project, a BART extension ranks lower than bus rapid transit or express bus alternatives. While BART will bring in the highest overall ridership, it is estimated that the proposed extension would cost \$3.5 to \$4.5 billion. Additionally, the time horizon from conception to delivery of the project would exceed twenty years. The High-Capacity Transit Study did not ultimately select a single preferred project to advance towards implementation.

7.6.2. BART Station Objectives and Goals

While no extension to the College is currently being advanced, this Study considers how Mobility Hub improvements, such as those described in this document, could help enhance the feasibility of a BART extension to the College by helping the City meet BART's stated goals and principles when considering potential extensions. BART has recently updated its System Development Policy document, which sets guidelines on how the agency evaluates proposed new line extensions and stations. Any new extensions must provide clear and measurable benefits to the overall system and its riders, in addition to alleviating the growing transit needs of the Bay Area region. The goals and objectives are divided into three categories: Regional Livability, Improving Rider Experience, and Stewardship of the BART District.



Goal: Support Regional Livability and a sustainable, equitable, and prosperous Bay Area.

The policies outlined in this goal focus on the greater Bay Area region. An emphasis is placed on the need for transit-oriented communities to bolster future BART station areas. This is consistent with the TOD policies outlined in the previous section and being advanced by the City, which include planning for denser housing development.

BART TOD policy must remain consistent with other regional policy, such as the Metropolitan Transportation Commission (MTC) Transit-Oriented Communities (TOC) policy. The MTC TOC policy dictates minimum TOD housing density requirements for any future proposed station, based on their planned level of transit service. For the College Transit Center area, the minimum density requirements are set at 50 units per net acre to be considered for any future BART station extension. This density requirement is set at this level because previous planning work has identified that there would be only one proposed BART line of service in the City of San Pablo.

Additional policies outlined in this section consist of advancing environmental climate resiliency and reducing vehicle miles traveled. With the implementation of the proposed bicycle and pedestrian network changes within the Mobility Hub area, future transit riders would have less reliance on vehicle trips and promote climate conscious activities.

Goal: Better serve communities and improve the rider experience.

BART policies in this goal highlight the need to prioritize the needs of transit dependent riders, with a special emphasis placed on low-income communities who have been systemically disenfranchised and underrepresented. The City of San Pablo has historically had a large minority population with a burden of mobility challenges.

Goal: Support stewardship of the BART District & taxpayer investment

The BART District is primarily concerned with long-term financial sustainability, especially given the drop in overall ridership after the COVID-19 pandemic. The main analysis that is undertaken in this step is a comprehensive cost assessment that considers operational and maintenance costs of an additional system, in addition to core system operation cost and capital impacts. The proposed station must deliver cost-effective improvements to meet rider's needs, by leveraging existing transit service at the location. Existing BART service must not be overburdened by cost or performance with the addition of the new station. A potential new station at the College Transit Center would leverage existing transit service provided by AC Transit and WestCAT. However, an extension north of Richmond would incur significant cost to both build and operate, requiring further analysis on cost effectiveness.



8. Project Implementation

8.1. Project Benefits

The recommended improvements address corridor mobility needs and priorities as provided by the community. The improvements reflect current industry best practices for improving safety and promoting mode shift to sustainable modes. Collectively, the improvements will enhance the safety and comfort for all users of the corridor and expand multimodal options for the residents, students, and faculty in the area. Project benefits will:

- Encourage families and students to use pedestrian and bike facilities to commute to the nearby College, middle school, and high school;
- Reduce the risk of pedestrian and vehicle conflicts at high traffic intersections;
- Reduce auto speeds to improve the safety of vulnerable roadway users;
- Provide new and safe connections for bicyclists; and
- Provide accessibility for those using mobility devices or strollers.

8.2. Implementation Strategies

Collectively, the proposed improvements identified in the Study may exceed available funds or the capacity of the City to implement as part of one project. Therefore, they are grouped geographically or by enhancement type to allow for a phased implementation. These groupings are intended as separate construction packages that can be advanced independently. Groupings can be consolidated based on available funds and capacity.

Opinions of probable cost were developed for each of the proposed improvements, consistent with the preliminary and conceptual level of engineering detail developed as part of this Study. **Table 14** aggregates the design and construction cost for each of the six implementation packages using current year 2023 costs. The total estimated cost for all improvements identified in the Study is \$31,635,000. Detailed descriptions of individual proposed improvements and cost breakdowns can be found in **Appendix D**. Estimated costs include planning, design, and construction. Additional unforeseen construction costs, increases in raw materials, and increases in labor costs may cause the true costs of the improvements to be higher when implemented. Cost refinement on the final design will occur in subsequent project phases.

Note that the transit improvement costs are not included in these estimates as they require further coordination with AC Transit to confirm quantities and locations. However, it is noted that transit improvements are an integral component of the Mobility Hub and should be implemented in a similar timeframe as other identified improvements.



Table 14. Implementation Packages with Estimated Costs

Improvement Package	Improvement Description	Estimated Cost*
1. Safety, access, and streetscape improvements on and along Mission Bell Drive/College Lane, between San Pablo Ave and Contra Costa College campus	<ul style="list-style-type: none"> Install new signal and improve intersection geometry at El Portal Dr and Mission Bell Dr Install new traffic circles Construct two-way shared-use path on the east side of Mission Bell Dr connecting El Portal Dr with Transit Center, Class II buffered bike lane on EB College Lane from Mission Bell Drive to San Pablo Ave Install new pedestrian crosswalks, upgrade existing curb ramps, construct new sidewalk Add pedestrian lighting, median landscaping, biofiltration planters, curb extension 	\$8,300,000
2. Pedestrian and bicycle improvements at intersection along San Pablo Avenue between Road 20 to Rivers Street	<ul style="list-style-type: none"> Add new advanced limit lines at intersections along San Pablo Avenue Improve turning signal and turning movement Add new and upgrade existing crosswalks Install two-stage bicycle turn box at NB and SB approach Install Class II bike lane on San Pablo Avenue from Road 20 to Rumrill Blvd 	\$2,982,000
3. Access improvements for facilities along Castro and Moraga loop, including intersection at Library Drive (0.4 mi total corridor length)	<ul style="list-style-type: none"> Add new pedestrian lighting and street landscaping Construct new sidewalk with protected landscape Install bike crossing, new pedestrian crosswalk, upgrade existing curb ramps, construct side-street bulb out, modify existing median Construct a raised intersection at Library Dr and Moraga Rd Install Class II bike lane along Castro Rd Construct shared-use path on Moraga Rd 	\$7,906,000
4. El Portal Drive improvements (0.5 mi total corridor length)	<ul style="list-style-type: none"> Add bike crossing Construct Class IV cycle track on El Portal Dr from San Pablo Ave to Church Ln Add new pedestrian lights, median landscaping, and concrete raised buffer Upgrade existing pedestrian crosswalk with high visibility crosswalk at Broadway and San Pablo Ave 	\$6,880,000
5. Wayfinding, signage	<ul style="list-style-type: none"> Add new wayfinding signs, gateway monuments, and placemaking to various areas within the Project area 	\$323,000
6. Other streetscape improvements	<ul style="list-style-type: none"> Install steel tube fencing along Castro Rd Construct side-street bulb out Install new high visibility and upgrade existing pedestrian crosswalk Construct Class IV cycle track on Broadway from San Pablo Ave to 11th St Add new covered bike parking in selected areas 	\$5,244,000
Total Estimated Cost		\$ 31,635,000

*Estimated costs in 2023 dollars



8.3. Steps to Implementation

This Study analyzed existing network conditions and received input from the community to define mobility needs in the Study Area. It then identified potential improvements and received community input to arrive at a set of community-supported recommendations. This has defined a universe of projects that the City can advance to future project phases.

Figure 35 shows a pathway to implementation for the recommendations contained in this Study.



Figure 35. CCC Mobility Hub Next Steps

Leveraging the findings in this Study, the next phase of the Project is to develop further analyses and advance conceptual design to refine the recommendations and estimated costs. Additional assessments may be needed for specific improvements to assess their impacts on congestion or parking availability in the Study Area. Further coordination is needed with AC Transit, including the outcome of the ongoing AC Transit Realign planning, to confirm a specific set of transit improvements.

Based on these assessments and in an iterative process, initial engineering design concepts will be developed. These will be presented to the public for further input and will be used to update project costs and perform environmental studies. California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) clearance may be needed, depending on funding sources. The projects may qualify for a reduced level of environmental analysis because they support sustainable use of the transportation system.

Once funding is secured, final design can be prepared to determine if any right-of-way acquisitions are necessary and to prepare construction-ready documents. After all of the necessary design documents and studies are complete, construction can proceed to deliver the proposed network elements.

The City has been awarded \$2.95 million by MTC as part of the Regional Mobility Hub Program for project elements that support the Plan Bay Area 2050 Climate Program and are aligned with the regional goals set forth by MTC. The City also received \$7.2 million from the State of California for the implementation of the Broadway and El Portal Drive Safe Routes to School improvements. The delivery of these grant-funded projects is expected to take place in the next few years.

Appendices



Appendix A: Outreach Round 1 Summary



Appendix B: Network Access Improvements



Appendix C: Outreach Round 2 Summary



Appendix D: Improvement Cost Estimates