



# TRANSPORTATION and INFRASTRUCTURE COMMISSION REGULAR MEETING AGENDA

Thursday, November 17<sup>th</sup>, 2022, 7:00 pm

*Mission: Advises Council on transportation and public works infrastructure policies, facilities, and services*

PUBLIC ADVISORY: THIS MEETING WILL BE CONDUCTED EXCLUSIVELY THROUGH ZOOM VIDEOCONFERENCE AND TELECONFERENCE.

*Pursuant to Government Code Section 54953(e) and the state declared emergency, this meeting of the City of Berkeley Transportation and Infrastructure Commission will be conducted exclusively through teleconference and Zoom videoconference. The COVID-19 state of emergency continues to directly impact the ability of the members to meet safely in person and presents imminent risks to the health of attendees. Therefore, no physical meeting location will be available.*

**To access the meeting remotely from a PC, Mac, iPad, iPhone, or Android device, please use this URL to join: <https://us02web.zoom.us/j/83037557423>**

Webinar ID: **830 3755 7423**

If you do not wish for your name to appear on the screen, then use the drop-down menu and click on "rename" to rename yourself to be anonymous. To request to speak, use the "raise hand" icon by rolling over the bottom of the screen. To join by phone: *Dial 1-669-900-9128 and enter Meeting ID: 830 3755 7423.* If you wish to comment during the public comment portion of the agenda, Press \*9 and wait to be recognized by the Chair. Note: Your phone number will appear on the videoconference screen.

## **A. PRELIMINARY BUSINESS**

1. Call to order
2. Roll call
3. Public comment on items not on the agenda
4. Approval of minutes from [October 20<sup>th</sup>, 2022](#)
5. Update on administration and staff

## **B. DISCUSSION/ACTION ITEMS**

\* Written material included in packet

\*\* Written material to be delivered at meeting

The public may speak at the beginning of any item.

### **1. Vision Zero Update**

Eric Anderson, Senior Planner

Informational presentation and discussion only.

**2. Transit-First Policy Implementation Plan\***

Beth Thomas, Principal Planner

Presentation and possible action: make recommendation to City Council.

**3. Work Plan Preliminary Discussion**

Commissioners

Review City Council referrals; review previous Public Works Commission and Transportation Commission work plans. Information and discussion item only.

**C. INFORMATION ITEMS AND SUBCOMMITTEE REPORTS**

*Information items can be moved to Discussion or Action by majority vote of the TIC*

1. Subcommittee Reports and Assignments

Actions required: Appoint subcommittee to work with staff on the bike plan update; appoint subcommittee to review the 5-year paving plan

2. Council Summary Actions 2022\*

3. [Link to Council and Committee Agendas and Minutes](#)

4. Transportation and Infrastructure Commission Mission Statement – TBD

5. Work Plans

a. [Transportation Commission](#)

b. [Public Works Commission\\*](#)

6. Subcommittees and Liaisons

**D. COMMUNICATIONS**


**E. ADJOURNMENT 9:30 pm**

Agenda Posted: November 10<sup>th</sup>, 2022

*The next virtual meeting of the Transportation and Infrastructure Commission is scheduled for Thursday, December 15<sup>th</sup>, 2022 at 7:00 pm.*

**A complete agenda packet is available for public review at the Main Branch Library and at the Transportation Division and Engineering Division front desks.**

**ADA Disclaimer**

 *This meeting is being held in a wheelchair accessible location. To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at 981-6418 (V) or 981-6347 (TDD) at least three business days before the meeting date. Please refrain from wearing scented products to this meeting.*

Transportation and Infrastructure Commission  
Thursday, November 17<sup>th</sup>, 2022

**SB 343 Disclaimer**

Any writings or documents provided to a majority of the commission regarding any item on this agenda will be made available for public inspection at the Public Works Transportation Division offices located at 1947 Center Street, 4<sup>th</sup> Floor.

**Communications Disclaimer**

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**TRANSPORTATION and INFRASTRUCTURE COMMISSION  
REGULAR MEETING  
DRAFT MINUTES**

Thursday, October 20<sup>th</sup>, 2022, 7:00 pm

**A. PRELIMINARY BUSINESS**

**1. Call to order**

The meeting was called to order by Secretary Farid Javandel at 7:00 pm.

**2. Roll call**

Commissioners Present: Noelani Fixler, Sam Greenberg, Liza Lutzker,  
Karen Parolek, Kim Walton, Ray Yep

Commissioners Absent: Barnali Ghosh (excused), Adrian Leung (excused)

Staff Present: Farid Javandel, Beth Thomas, Alisa Shen,  
Alisha Gard

**3. Public comment on items not on the agenda**

No speakers.

**4. Approval of [minutes](#) from regular meeting on September 15<sup>th</sup>, 2022**

**Action:** It was Moved / Seconded (Parolek / Walton) to approve the minutes.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton, Yep

Noes: None

Abstain: None

Absent: Ghosh, Leung

**Motion passed 6-0-0-2**

**5. Update on administration and staff**

Secretary Javandel provided updates on the following: staff vacancies and their impact on applications for and delivery of grant projects; per City Council, the Hopkins plans will proceed; I-80 Gilman improvements continue, and the bike and pedestrian bridge is nearing completion; and, the Southside Complete Streets project is on track. No action.

**6. Commission member introductions**

No action.

**B. DISCUSSION / ACTION ITEMS**

**1. Chair and Vice Chair Elections**

**Action:** The present members of the Transportation and Infrastructure Commission moved to elect Karen Parolek as Chair.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton, Yep

Noes: None

Abstain: None

Absent: Ghosh, Leung

**Motion passed 6-0-0-2**

Transportation and Infrastructure Commission  
Thursday, October 20<sup>th</sup>, 2022

**Action:** It was Moved / Seconded (Yep, Lutzker) to nominate Sam Greenberg as Vice Chair.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton, Yep

Noes: None

Abstain: None

Absent: Ghosh, Leung

**Motion passed 6-0-0-2**

## 2. Adeline at Ashby BART Project

Beth Thomas, City of Berkeley Principal Planner, and Phil Erickson of Community Design + Architecture, provided a presentation to the Commission.

Public Comment: 6 speakers

**9:25 pm – Action:** It was Moved / Seconded (Parolek / Walton) to extend the meeting until 10:00 pm.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton, Yep

Noes: None

Abstain: None

Absent: Ghosh, Leung

**Motion carried 6-0-0-2**

**10:00 pm – Action:** It was Moved / Seconded (Parolek / Walton) to extend the meeting until 10:20 pm.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton

Noes: Yep

Abstain: None

Absent: Ghosh, Leung

**Motion carried 5-1-0-2**

**Action:** It was Moved/Seconded (Walton / Greenberg) that the Transportation and Infrastructure Commission recommends to Council moving forward with option 2, and would like the following four items to also be considered:

1. Creating accessible pedestrian and wheelchair access from the plaza to the BART station entrance on the western edge of the Adeline plaza with 24/7 access and that does not solely rely on functional elevators;
2. Continuing efforts to realize the vision in the Adeline corridor plan for shopfronts in the new development to meet the western edge of the Adeline plaza to ensure activation of the plaza through business and community activity;
3. Continuing to investigate all possible solutions to increase safety, possibly by reducing crossing distances and eliminating slip turn lanes, at the Adeline / Ashby intersection as it will potentially be considered with Reconnecting Communities grant along Ashby; and
4. Looking for additional grant opportunities, such as Safe Routes to Transit, to improve pedestrian access to the station from the surrounding areas.

Transportation and Infrastructure Commission  
Thursday, October 20<sup>th</sup>, 2022

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton, Yep

Noes: None

Abstain: None

Absent: Ghosh, Leung

**Motion carried 6-0-0-2**

**10:17 pm – Action:** It was Moved / Seconded (Parolek / Lutzker) to extend the meeting until 10:40 pm.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton

Noes: Yep

Abstain: None

Absent: Ghosh, Leung

**Motion carried 5-1-0-2**

### **3. Berkeley Strategic Transportation (BeST) Plan Update and Transit-First Policy Implementation Plan**

Beth Thomas, Principal Planner, provided a presentation and received comments from Commissioners.

Public Comment: 2 speakers

No action.

## **C. INFORMATION ITEMS AND SUBCOMMITTEE REPORTS**

### 1. Subcommittee Reports and Assignments

Actions required: Appoint subcommittee to work with staff on the bike plan update; appoint subcommittee to review the 5-year paving plan

### 2. Council Summary Actions 2022

### 3. [Link to Council and Committee Agendas and Minutes](#)

### 4. Transportation and Infrastructure Commission Mission Statement – TBD

### 5. Work Plans

#### a. [Transportation Commission](#)

#### b. [Public Works Commission](#)

### 6. Subcommittees and Liaisons

## **D. COMMUNICATIONS**

1. John Givens. Email to the TIC with the subject “Oct 20 Meeting: Adeline Street Redesign: 2 lanes and NO GAP!” Received via email by Public Works Deputy Director Farid Javandel on 10/18/2022.
2. Abbie Turiansky. Email to the TIC with the subject “Oct 20 Meeting: Adeline Street Redesign: 2 lanes and NO GAP!” Received via email by Public Works Deputy Director Farid Javandel on 10/18/2022.
3. Teresa Clarke. Email to the TIC with the subject “Oct 20 Meeting: Adeline Street Redesign: 2 lanes and NO GAP!” Received via email by Public Works Deputy Director Farid Javandel on 10/18/2022.

Transportation and Infrastructure Commission  
Thursday, October 20<sup>th</sup>, 2022

## E. FUTURE AGENDA ITEMS

Create and assign subcommittees; appoint members  
Review City Council referrals  
Vision Zero update  
5-year paving plan update

## F. ADJOURNMENT

**Action:** It was Moved / Seconded (Walton / Fixler) to adjourn the meeting at 10:40 pm.

Ayes: Fixler, Greenberg, Lutzker, Parolek, Walton, Yep

Noes: None

Abstain: None

Absent: Ghosh, Leung

**Motion carried 6-0-0-2**

Public Present: 30

Speakers: 8

*The next virtual meeting of the Transportation and Infrastructure Commission is scheduled for Thursday, November 17<sup>th</sup>, 2022 at 7:00 pm.*

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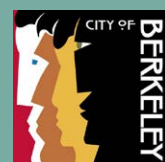
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# BERKELEY TRANSIT-FIRST POLICY IMPLEMENTATION PLAN

NOV 9TH, 2022 - PUBLIC REVIEW DRAFT





# CONTENTS

<b>01</b>	<b>Existing Policies and Best Practices</b>	<b>5</b>
	Plan Purpose	6
	Plan Background	6
<b>02</b>	<b>Existing Conditions</b>	<b>15</b>
	Ridership and Reliability	16
<b>03</b>	<b>Design Guidelines and Policies</b>	<b>25</b>
	Design Guidelines	26
	Policies	32
<b>04</b>	<b>Transit Corridor Study Prioritization</b>	<b>39</b>
	San Pablo Avenue	40
	Telegraph Avenue	43
	Adeline Street	46
	Shattuck Avenue	49
	University Avenue	51
<b>05</b>	<b>Appendix</b>	<b>55</b>



# 01

## EXISTING POLICIES AND BEST PRACTICES

# EXISTING POLICIES AND BEST PRACTICES

## Plan Purpose

**Create a set of policies and design guidelines that provide procedures for implementation of the City's Transit-First Policy and development of the City's existing transit priority corridors.**

To work toward the City's goals related to transit and to achieve the City's Transit-First Policy of prioritizing transit over single-occupant vehicles, the objectives of this Plan are to:

- Improve transit efficiency, reliability, and accessibility,
- Increase transit ridership, and
- Prioritize transit corridors for implementation.

## Plan Background

The City of Berkeley Transit-First Policy dates back to 1996 with a resolution to improve public transit and encourage greater use of transit. The General Plan states goals to reduce traffic and also encourage transit, as well as goals of sustainability and maintenance of infrastructure. The Transportation Element further details policies and actions to improve transportation and infrastructure. Most important is Policy T-4, the Transit-First Policy, which prioritizes transit and alternative transportation over single-occupant vehicles. All of these policies are compiled below.



**Figure 1.1. AC Transit Bus on Shattuck Ave.**  
(Source: Paul Sullivan)

## Resolution No. 58,731-N S. Declaring that the Use of Public Transit Be Encouraged (1996)

The City Council directs the Public Works Department and the Transportation Commission to consider and incorporate in the Plan, as appropriate, various methods of expediting transit services and encouraging greater transit use, including but not limited to the following:

1. Creation of exclusive bus lanes
2. Restriction of automobile turning movements that conflict with transit vehicles
3. Synchronization of traffic signals to the speed of transit vehicles rather than automobiles
4. Use of signal preemption devices for transit vehicles
5. Extension of bus stop curbs out to the traveled transit lane
6. Enforcement of regulations against double parking and parking in bus stops
7. Optimization of bus stop locations, considering factors such as bus operations and passenger safety
8. Posting and maintenance of transit schedule information at bus stops
9. Bus stop improvements such as benches and shelters

## City of Berkeley General Plan: A Guide for Public Decision-Making (2003)

The following are the goals from the General Plan that are applicable to the Transit-First Policy Implementation Plan.

### Goal #1: Preserve Berkeley's unique character and quality of life

**Reduce Traffic and Encourage Transit:** The increase in automobile traffic volume on city streets, its spillover onto local residential streets, and the increased congestion on a number of major streets have eroded the livability of some parts of the city and pose a continuing threat to Berkeley's quality of life. Berkeley has too many accidents involving pedestrians and

bicyclists. There are major gaps in and problems with the transit service available to Berkeley residents. The General Plan contains policies to improve and to encourage use of alternative modes of transportation, including working with transit agencies to establish a citywide or regional “Eco-Pass” program that would provide free transit passes. There are also policies to calm traffic and improve pedestrian and bicycle safety.

### **Goal #3: Protect local and regional environmental quality**

**Improve Air Quality and Conserve Resources:** Air quality in the Bay Area is threatened by increased emissions from motor vehicle use and other sources. The City Council recently approved the Resource Conservation and Global Warming Abatement Plan (1998). Many policies from that plan are incorporated into the General Plan. The Plan’s Transportation Element contains policies to reduce automobile use and the Land Use Element encourages housing development along transit corridors to reduce the need for automobiles.

### **Goal #5: Create a Sustainable Berkeley**

**Protect the Environment:** The Plan is committed to protecting the environment through appropriate environmental management actions and programs as described above in Goal #3, but also through actions and programs such as improvement of the regional and local public transportation system and development of multi-family, affordable housing on transit corridors and near job centers such as the Downtown and the University of California.

**Promote Social Equity:** The Plan is committed to ensuring that all members of the community benefit from Berkeley’s natural setting, high quality of life, economic opportunities, and unique neighborhoods. The Plan’s housing, transportation, economic development, and citizen participation objectives and policies are designed to ensure that all economic groups benefit from equal opportunities, services, and participation in government.

**Goal #7: Maintain Berkeley’s infrastructure, including streets, sidewalks, buildings, and facilities; storm drains and sanitary sewers; and open space, parks, pathways, and recreation facilities.**

## **City of Berkeley General Plan – Transportation Element (2001)**

The following are policies and actions from the Transportation Element of the General Plan that are applicable to the Transit-First Implementation Plan.

### **Policy T-1 Regional Transit Policy**

Advocate for regional coordinated transit services and regional transportation policy to reduce automobile use and increased funding for public and alternative transportation improvements.

#### **Actions:**

- A. Vigorously pursue regional, statewide, and national policies that encourage greater transit use by providing funding to improve transit services, to subsidize lower fares and free (or nominal-cost), seamless transfers among transit systems, and to provide AC Transit with an increased, more stable operating budget.

### **Policy T-2 Public Transportation Improvements**

Encourage regional and local efforts to maintain and enhance public transportation services and seek additional regional funding for public and alternative transportation improvements. (Also see Economic Development and Employment Policy ED-6.)

#### **Actions:**

- A. Work with AC Transit to:
  1. Expand service and reduce waiting time and transfer times for people who have to use more than one bus to get to their destination.
  2. Increase east-west cross-town service.
  3. Add transit-only or transit/HOV-only lanes where appropriate on any streets or portions of streets that are part of the city’s transit network.
  4. Implement improvements to make transit more convenient, dependable, and attractive, such as benches at bus stops, transit shelters, transit centers, information kiosks, and signs.
  5. Upgrade the City’s traffic signal system to provide transit-priority operation.
  6. Continue to replace older diesel buses with quieter, less polluting vehicles.
  7. Establish an AC Transit/BART/UC/LBNL/City/BUSD transit coordinating council to improve transit service in the Southside and Downtown areas.
  8. Promote and market public transportation by:



- Improving access to information about public transportation alternatives and schedules.
- Pursuing joint marketing campaigns with transit agencies and event sponsors promoting alternative ways to get to city districts and events.

D. Improve shuttle and transit services by:

1. Increasing shuttle and transit services from Rockridge and the Rockridge BART station to Downtown BART and the campus.
2. Increasing shuttle services between neighborhood commercial areas and between BART stations and employment centers, such as West Berkeley.
3. Promoting express shuttle services to complement local transit service and ensure that Berkeley residents and commuters have information about shuttle services readily available.
4. Testing the feasibility of a low-cost shuttle or "jitney" service for Berkeley residents.
5. Encouraging transportation providers to coordinate and consolidate the installation of new jointly used shelters.
6. Encouraging expansion of transit, rail service, and inter-modal connections in West Berkeley.
7. Developing a mass transit validation program in Berkeley commercial districts similar to a parking validation program.

### Policy T-3 Eco-Pass City Program

Increase transit use and reduce automobile traffic and congestion in Berkeley by creating an Eco-Pass program.

**Actions:**

- A. Work with AC Transit, BART, neighboring jurisdictions, major employers, and neighboring transit districts to establish an "Eco-Pass" program for Berkeley employers that would allow pass holders free unlimited rides on AC Transit and/or BART. Once the program is established:
  1. Provide Eco-Passes for all City employees.
  2. Establish participation in the Eco-Pass program as a condition of approval for all new businesses with over 50 employees.
  3. Encourage existing area employers, particularly major employers such as UC Berkeley, Berkeley Unified School District, Lawrence Berkeley National Laboratory, and Alta Bates Medical Center, to join the program.

4. Contact all employers with 50 or more employees to encourage their participation in Eco-Pass.
5. Work with the participating transit agencies to offer a neighborhood Eco-Pass, which would allow neighborhoods to participate in the program, similar to the Boulder, Colorado, Neighborhood Pass.
6. Consider creation of a Citywide Transit Pass for Berkeley residents financed by a tax that would allow pass holders free unlimited rides on AC Transit and/or BART.
7. As an interim measure, contact and encourage area employers to participate in the existing Commuter Check program. Maintain or increase existing transit subsidies for City employees and encourage other employers to maintain and increase existing transit subsidies.

### Policy T-4 Transit-First Policy

Give priority to alternative transportation and transit over single-occupant vehicles on Transit Routes identified on the Transit Network map.

**Actions:**

- A. In residential areas, restrict fixed-route transit services to Primary and Secondary Transit Routes shown on the Transit Network map.

### Policy T-5 Light Rail/Bus Rapid Transit

Support regional efforts to develop light rail or bus rapid transit service connecting East Bay cities.

**Actions:**

- A. Locate light rail or bus rapid transit systems on the primary transit corridors identified on the Transit Network map.
- B. Consider bus rapid transit, with bus priority signals and bus priority lanes on transit corridors, as an interim and low-cost alternative to a new light rail system.
- C. Aggressively pursue regional funding sources with AC Transit and neighboring cities for a light rail or bus rapid transit system.
- D. Continue to work with AC Transit and regional transportation agencies to evaluate potential major public investment strategies and alternatives to improve transit services for Berkeley citizens, including light rail and bus rapid transit.
- E. Work with local merchants to build support for a light rail system and bus rapid transit and minimize potential impacts to businesses from construction

and loss of parking.

- F. Investigate a low-cost open trolley service along major pedestrian and shopping corridors such as University, Shattuck, and Telegraph as an interim or permanent solution similar to the Santa Barbara waterfront trolley system.
- G. Support AC Transit's Major Investment Study with its recommendations to achieve long-term rail on Telegraph Avenue. Advocate for extension of the recommendations to the foot of University Avenue and connection with service enhancements on San Pablo Avenue.

### **Policy T-6 Transportation Services Fee**

Ensure that new development does not impact existing transportation services and facilities. (Also see Land Use Policy LU-28.)

#### **Actions:**

- A. Prepare a nexus study (pursuant to Government Code Section 66000 et seq.) to enable imposition and collection of a Transportation Impact Fee for new development projects.

### **Policy T-7 Special Transit Programs**

Continue to maintain and improve access and mobility for the disabled, seniors, and youth with programs such as paratransit, the taxi voucher program, and senior vans.

#### **Actions:**

- A. Work with paratransit service providers to better meet the needs of the disabled community, including: accommodating scooters and all types of wheelchairs, improving response time, expanding hours of service, and requiring drivers to take sensitivity training to better assist disabled riders.
- B. Work cooperatively in the development of a comprehensive County program.

### **Policy T-25 Street Maintenance**

Maintain streets, sidewalks, and other public infrastructure to reduce the long-term replacement costs.

#### **Actions:**

- B. Coordinate pedestrian and transit public improvements with street repairs and repaving.

### **Policy T-29 Infrastructure Improvements**

Facilitate mobility and the flow of traffic on major and

collector streets (shown on the Vehicular Circulation Network map at the end of the Element), reduce the air quality impacts of congestion, improve pedestrian and bicycle access, and speed public transportation throughout the city by making improvements to the existing physical infrastructure.

#### **Actions:**

- B. Designate or add transit-priority lanes or transit-only lanes.
- G. Complete the San Pablo Avenue Corridor Plan improvements designed in cooperation with the surrounding cities.
- H. Time traffic signals on major transit corridors to give priority to and speed movement of transit vehicles.

### **Policy T-30 Traffic Signals**

Continue to pursue better signal devices and systems to facilitate movement on Berkeley's limited road network. Consider:

- 2. Bus-activated signals.
- 5. Timed traffic signals to give priority to and speed movement of transit and emergency vehicles.

### **Policy T-53 Intersections with Severe or High Collision Rates**

Reduce pedestrian and bicycle collisions, injuries, and fatalities.

#### **Actions:**

- A. Undertake a review of intersections or street locations with a high number of collisions and/or a high percentage of fatal or permanently disabling collisions and develop programs with appropriate mix of education, enforcement, and engineering changes to improve the safety of these intersections and locations. Consider:
  - 2. Moving bus stops to the far side of the intersection so that buses do not block visibility at the intersection when stopping to pick up passengers.

### **Policy T-55 Street Networks: Increasing Access and Mobility**

To ensure the effective and convenient movement of people and goods, ensure a successful integration of land use patterns and transportation systems, and encourage transitions to more environmentally sensitive modes of transportation, the Berkeley

General Plan includes four network maps: the Vehicular Circulation Network map, the Transit Network map, the Bicycle Circulation Network map, and the Emergency Access and Evacuation Network map. The network maps identify the city's transportation infrastructure and establish priorities and standards for its use and improvement. These priorities and standards shall be used in conjunction with General Plan policies to determine priorities for use and determine network modifications to facilitate certain modes of travel. In all cases, the City shall recognize that the transportation network is a shared network that requires shared use and that to effectively achieve the transportation, land use, community safety, and economic development objectives of the General Plan will require careful consideration and balancing of competing objectives and needs. The network maps are intended to facilitate these future decisions.

The Transit Network map shown below identifies the network of streets that are necessary for efficient and effective transit services throughout the city. These streets are the highest priority for transit improvements, such as bus shelters and planned improvements that may serve light rail or ferry services. The network map does not depict every street that may be used by transit services and it is not meant to limit transit and shuttle services from streets not shown on the map.

**Primary Routes** shown on the map are the highest priority routes necessary to serve existing needs and inter-city connections.

**Secondary Routes** are routes that are necessary to provide convenient access to other areas of the city and supplement the Primary Routes.

**Planned Routes** identify the highest priority additions to the transit circulation network.

Variations to the network may occur during final planning, design, funding, and implementation of the specific transit improvements without a General Plan amendment. The Transit Map is also reflected in the Berkeley Bicycle Plan, see Figure 1.3, in identifying the streets that are both recommended for complete streets studies for low stress bikeway and those that are also Primary Transit Routes.

## Metropolitan Transportation Commission & Association of Bay Area Governments Plan Bay Area 2050 (2021)

### Maintain and Optimize the Existing System

- T6. **Restore, operate and maintain the existing system:** Commit to operate and maintain the Bay Area's roads and transit infrastructure while reversing pandemic related cuts to total transit service hours.
- T7. **Support community-led transportation enhancements in Equity Priority Communities:** Provide direct funding to historically marginalized communities for locally identified transportation needs.

### Build a Next-Generation Transit Network

- T8. **Enhance local transit frequency, capacity and reliability:** Improve the quality and availability of local bus and light rail service, with new bus rapid transit lines, South Bay light rail extensions, and frequency increases focused in lower-income communities.
- T9. **Expand and modernize the regional rail network:** Better connect communities while increasing frequencies by advancing the Link21 new transbay rail crossing, BART to Silicon Valley Phase 2, Valley Link, Caltrain Downtown Rail Extension and Caltrain/High-Speed Rail grade separations, among other projects.
- T10. **Build an integrated regional express lanes and express bus network:** Complete the buildout of the regional express lanes network to provide uncongested freeway lanes for new and improved express bus services, carpools and toll-paying solo drivers.



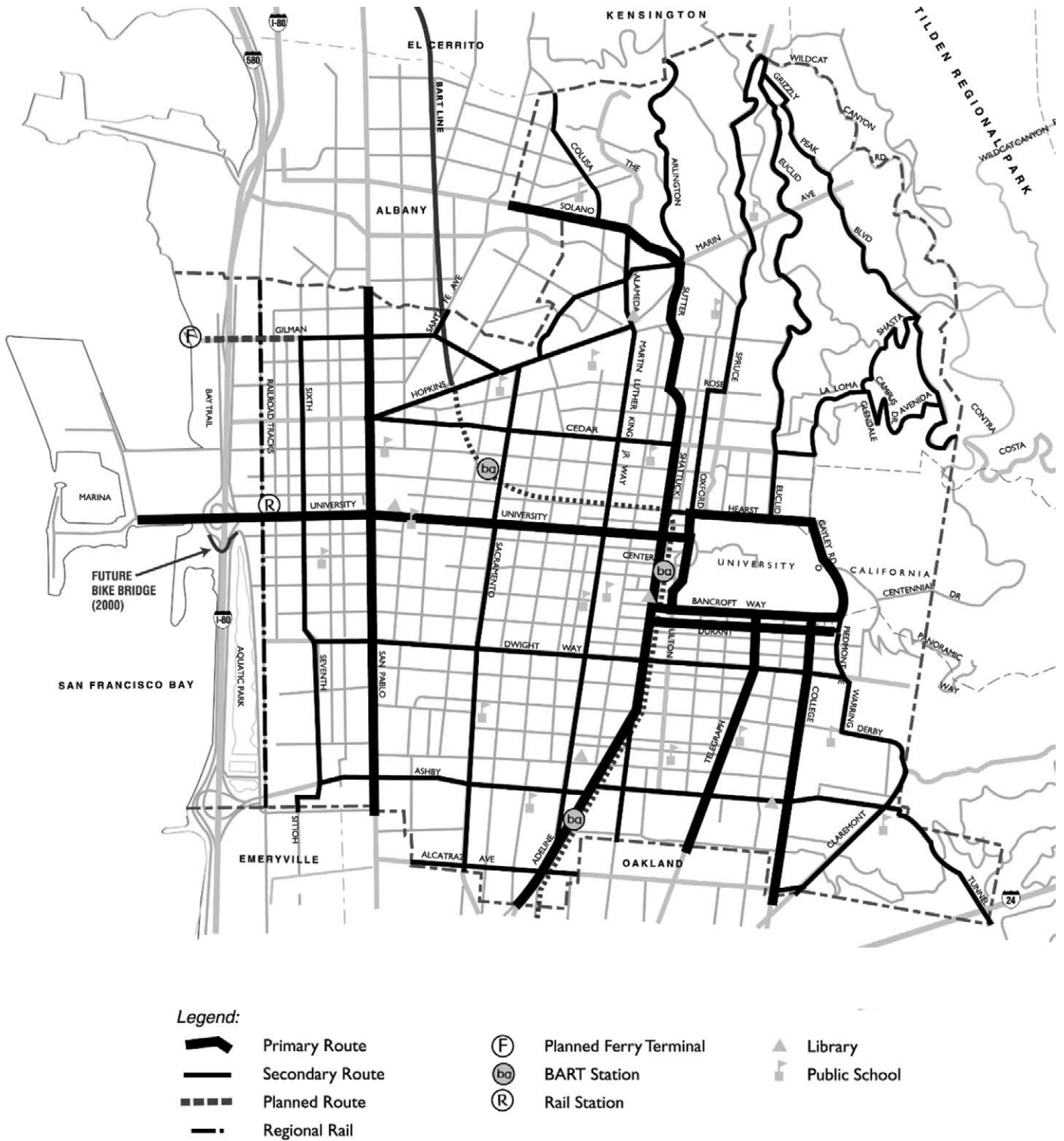


Figure 1.2. General Plan Transit Map. (Source: Berkeley General Plan, 2003)

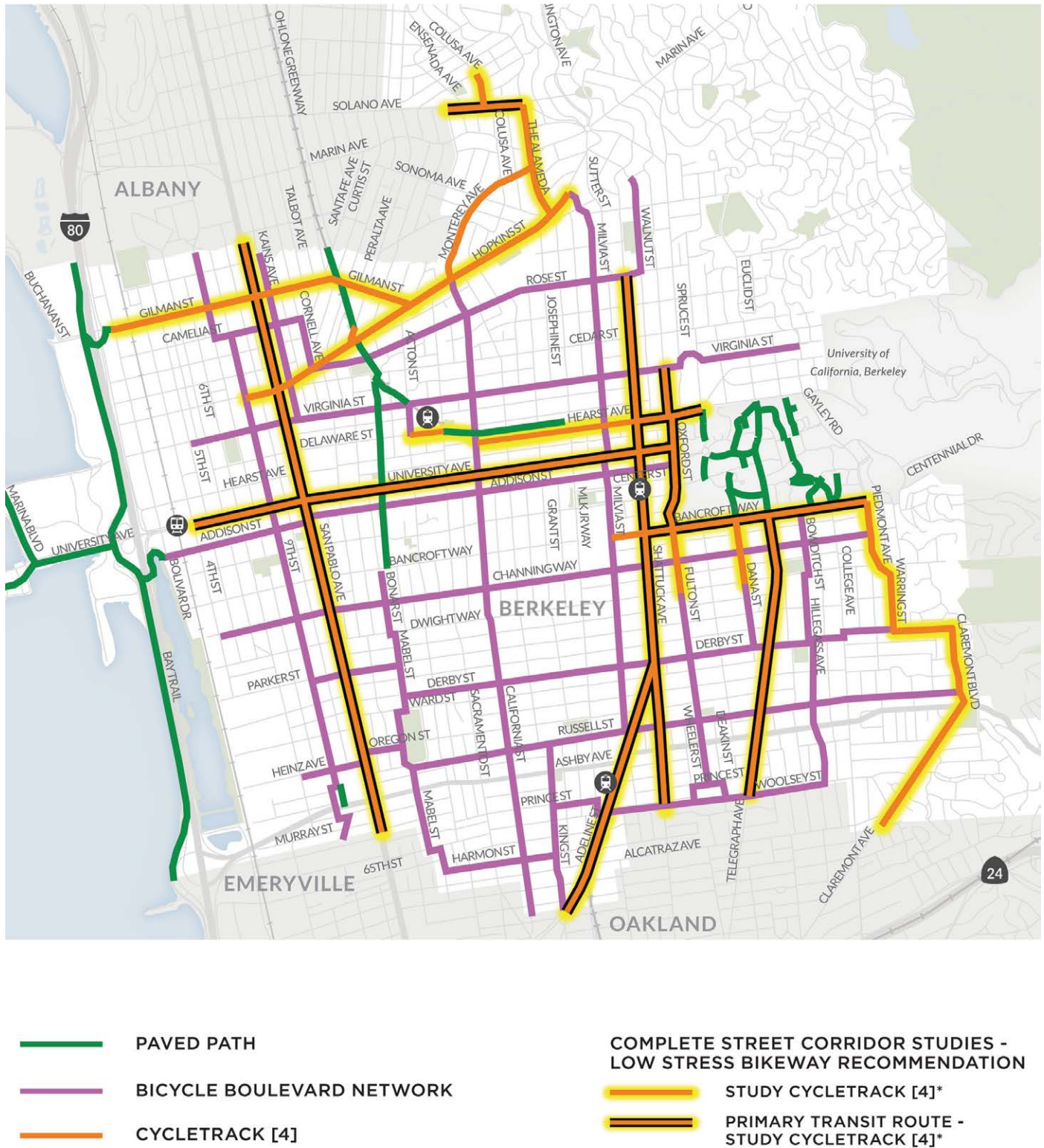


Figure 1.3. Low-Stress Bikeway Network Vision. (Source: Berkeley Bicycle Plan, 2007)





# 02

## EXISTING CONDITIONS

# EXISTING CONDITIONS

## Ridership and Reliability

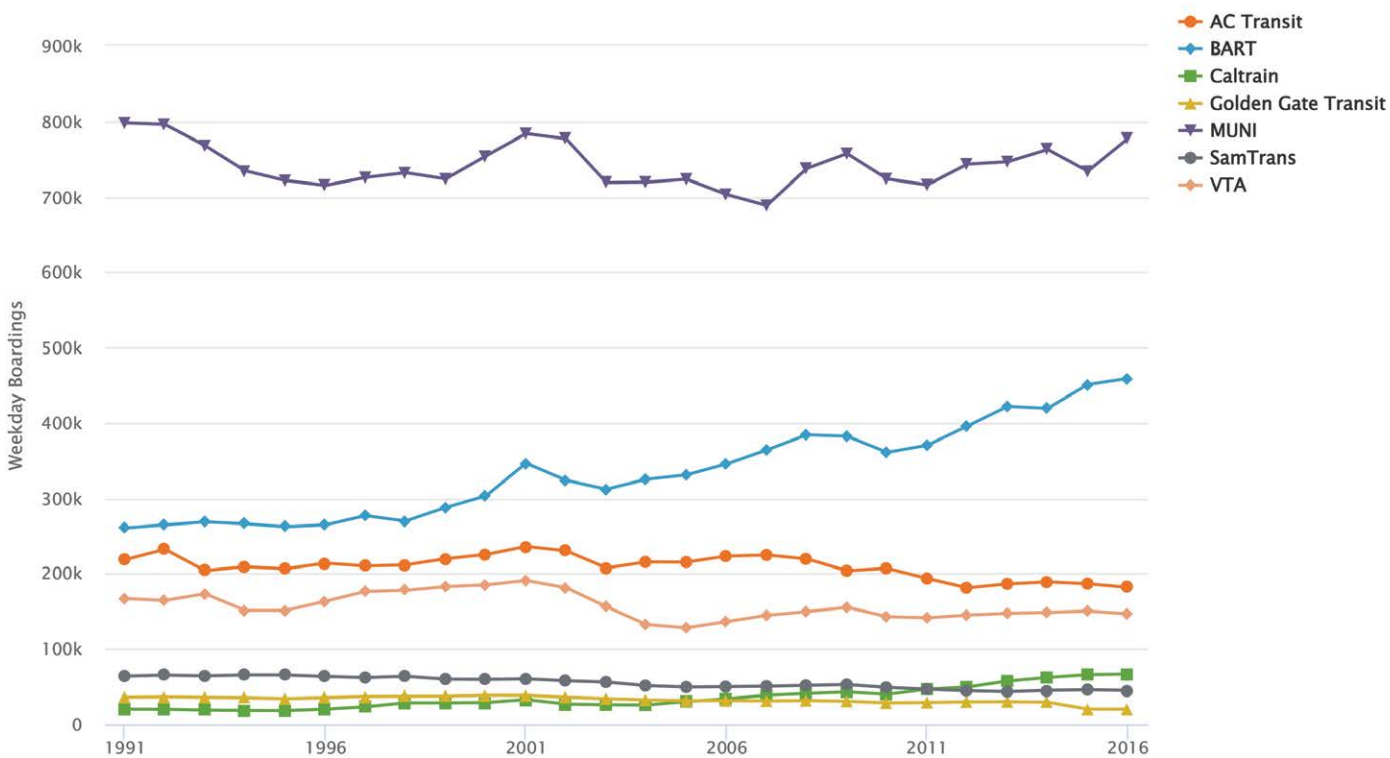
This section focuses on ridership and on-time performance (OTP, also called reliability). The City of Berkeley encourages greater use of transit, and thus would like to see increasing levels of transit ridership. Service availability and quality are factors that affect ridership, and the City is in support of transit improvements to increase this availability and quality, as highlighted in the Plan Background section.

Reliability is especially important because it has a direct effect on whether people use a service. If a bus cannot be counted on to be on-time, it can cause inconveniences and potentially more serious consequences such as missing medical appointments

or being late to work. A lack of reliability can lead to people deciding to take other forms of transportation.

AC Transit's [Short-Range Transit Plan \(Fiscal Years 2014/5-2023/24\)](#) describes the three performance measures whereby the agency evaluates its service:

1. Effectiveness
  - Ridership (passengers per revenue hour)
2. Service availability and quality
  - Distance to bus stops
  - Span of service
  - Frequency
  - On-time performance (reliability)
  - Percentage of revenue service operated
3. Efficiency
  - Cost per revenue hour
  - Cost per passenger mile



**Figure 2.1. AC Transit - Historic Trend for Transit Ridership by Operator.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))

## Ridership

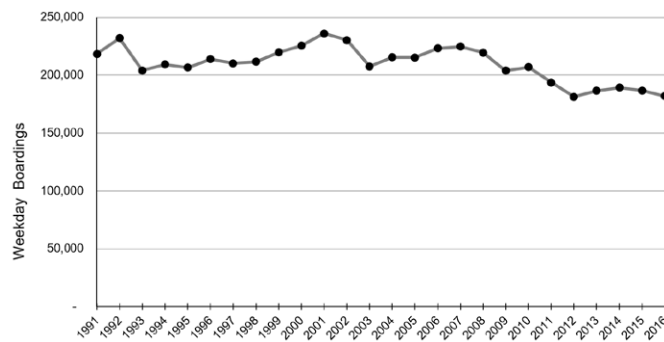
### AC Transit

Regionally, transit ridership was declining even before the COVID-19 pandemic, as part of a national trend. Looking closer at the AC Transit historic trends, AC Transit ridership has trended downward over the last few decades. Moreover, AC Transit’s share of trips (mode share) has been significantly decreasing relative to population growth.

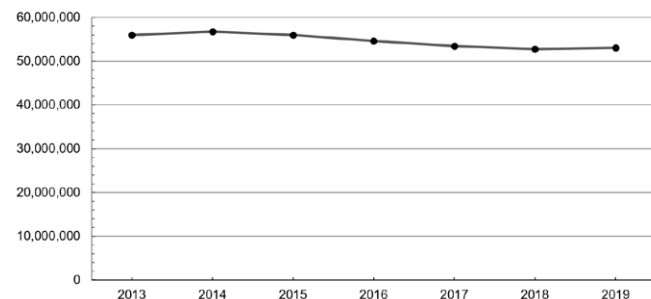
Before the COVID-19 pandemic, AC Transit had a daily weekday ridership of 175,000 riders, including approximately 14,500 Transbay commuters, and an annual ridership of 53,041,000 for fiscal year 2018-2019. During this time, AC Transit ran 158 bus lines across its 364-square-mile service area in Alameda and Contra Costa counties and unincorporated areas. In the years leading up to the COVID-19 pandemic, AC Transit systemwide ridership was fairly flat. Ridership on AC Transit routes running through Berkeley was generally flat pre-COVID. Of the last four years with available data by calendar year quarter, ridership was at its highest in the third quarter of 2016 with 315,809. This can be attributed to AC Transit’s implementation of their Service Expansion Plan in 2016. Since then, the lowest that ridership has dipped was in the fourth quarter of 2017 with 284,256. Ridership was steadily increasing for a time, with a peak in the third quarter of 2018 with 300,685, then dropped again before rebounding to 296,703 in the second quarter of 2019.



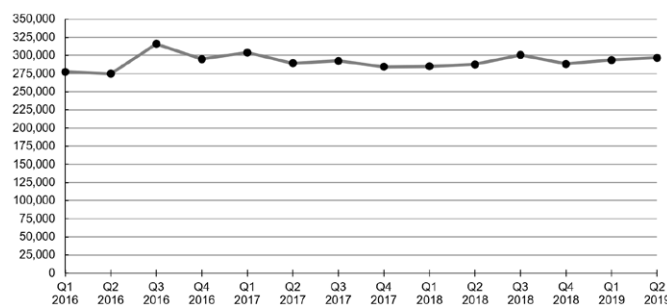
**Figure 2.2. AC Transit Hydrogen Fuel Cell Bus, Shattuck Ave at Center Street.** (Source: SoCal Metro)



**Figure 2.3. AC Transit - Historic Trend for Daily Ridership.** Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016)

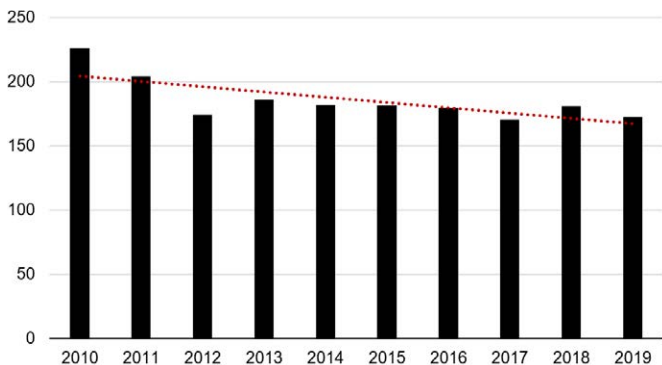


**Figure 2.4. AC Transit - Systemwide Annual Ridership (2013-2019).** Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016)

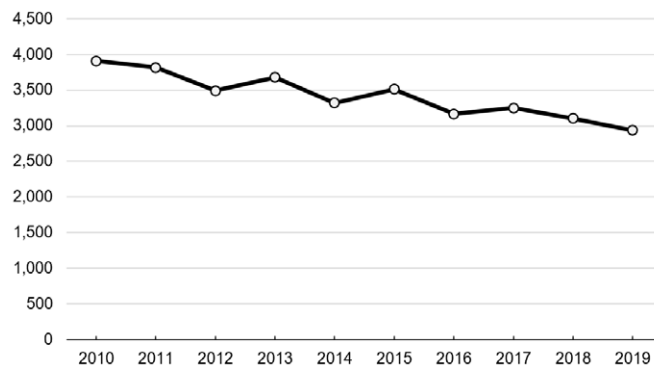


**Figure 2.5. AC Transit of Routes through Berkeley by CY Quarter through Fiscal Years 2016-2019.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))





**Figure 2.6. Berkeley EasyPass - Monthly Average Unique Users.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))



**Figure 2.7. Berkeley EasyPass - Monthly Average Boardings.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))

**EasyPass**

EasyPass is a program offered by AC Transit for employers, residential developments, and colleges to buy AC Transit passes in bulk. This translates into low per-participant costs and provides unlimited rides on AC Transit. EasyPass, as a transportation demand management tool, is an incentive for users to take public transit by providing simple access.

The City of Berkeley is an EasyPass participant and offers employees the option of signing up for an EasyPass. From 2010 to 2019, the average monthly total number of unique EasyPass users was 186, with a general downward trend. Correspondingly, the number of monthly average boardings by EasyPass users has been decreasing. In 2010, the monthly average boardings was 3,908, and in 2019 it was 2,937.

**Bear Transit**

[Bear Transit](#) is part of the UC Berkeley Parking and Transportation Department and provides shuttles on four daytime routes (six daytime routes pre-COVID) to connect people to and around the UC Berkeley campus. Bear Transit also provides two Night Safety routes running from 7:30pm to as late as 3am on weekdays and 3:45am on weekends. The Perimeter Line is the most popular route, with an average quarterly ridership pre-COVID of 34,734 in fiscal year 2018-19. Ridership on most lines generally drops during the second (October-December) and fourth (March-June) quarters, coinciding with winter and summer break. Ridership on the Night Safety North and South lines saw an increase from first quarter

to the second quarter, with the likely reason being decreasing daylight hours from daylight savings time and the season change.

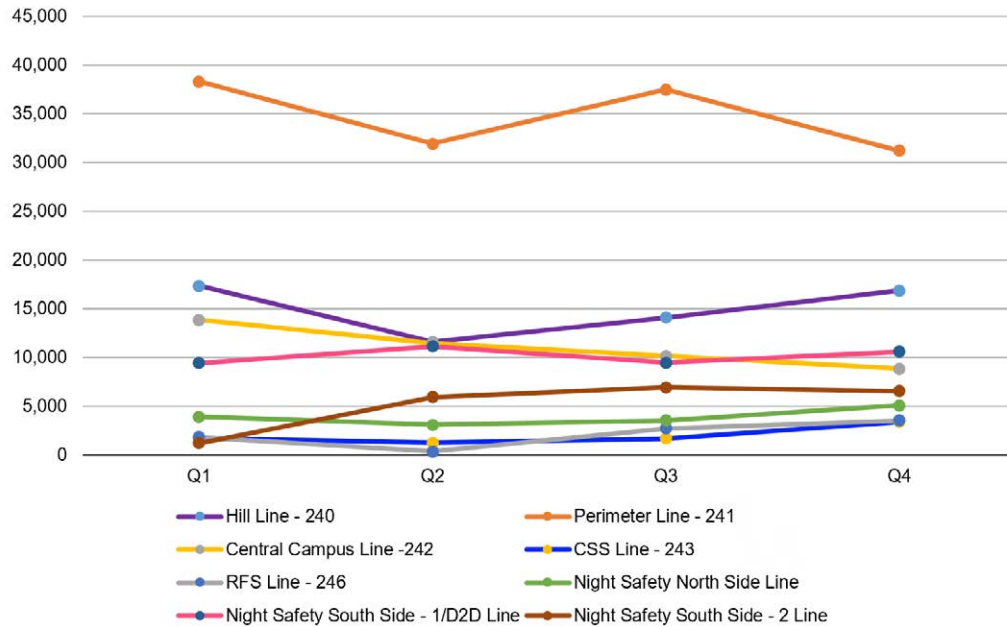
**Lawrence Berkeley National Laboratory**

[Lawrence Berkeley National Laboratory](#) (LBNL) runs six shuttle routes to provide their employees with easy commutes to the Lab from Downtown Berkeley, West Berkeley, Albany, Emeryville, and the North Berkeley, Rockridge, and MacArthur BART stations.

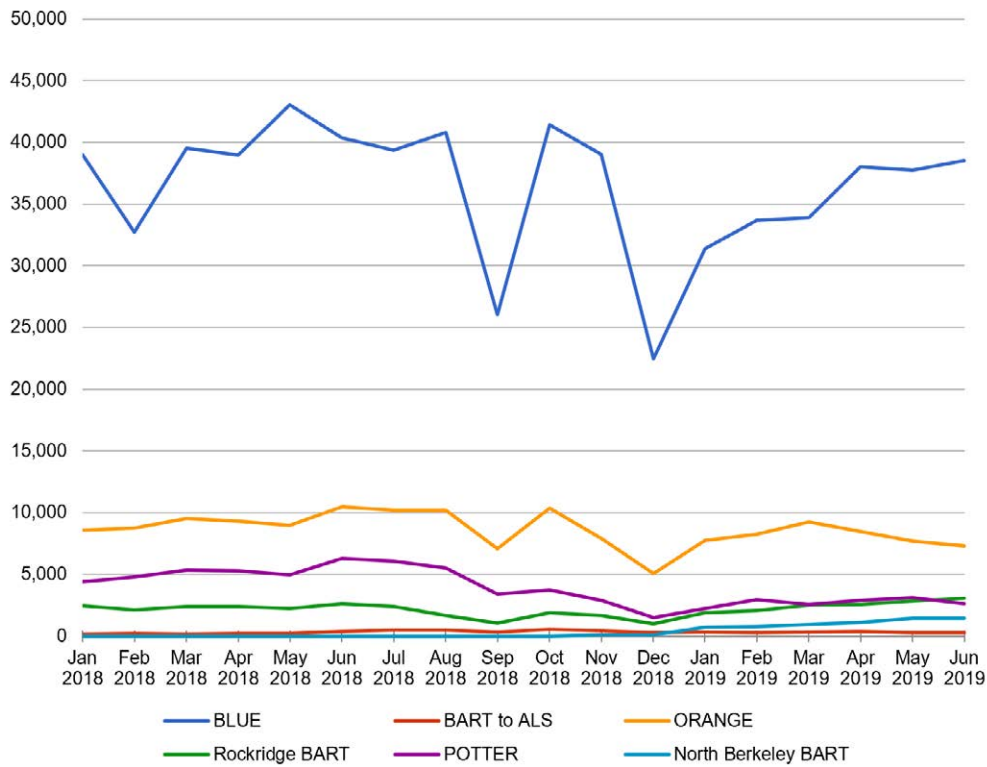
The Blue Route is by far the most used route, with an average monthly ridership pre-COVID of 36,446 passengers from January 2018 to June 2019. It runs from Downtown Berkeley to the Lab via Hearst Avenue. Ridership for all routes dips in September and December, which likely are times when employees take summer and winter vacations, respectively.



**Figure 2.8. Lawrence Berkeley National Laboratory Shuttle.** (Source: Julie Chao/Berkeley Lab Public Affairs)



**Figure 2.9. Bear Transit Ridership by Route Fiscal Year 2019.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))



**Figure 2.10. Lawrence Berkeley National Laboratory Shuttle Ridership by Route From Fiscal Year 2018 to 2019.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))



## Reliability

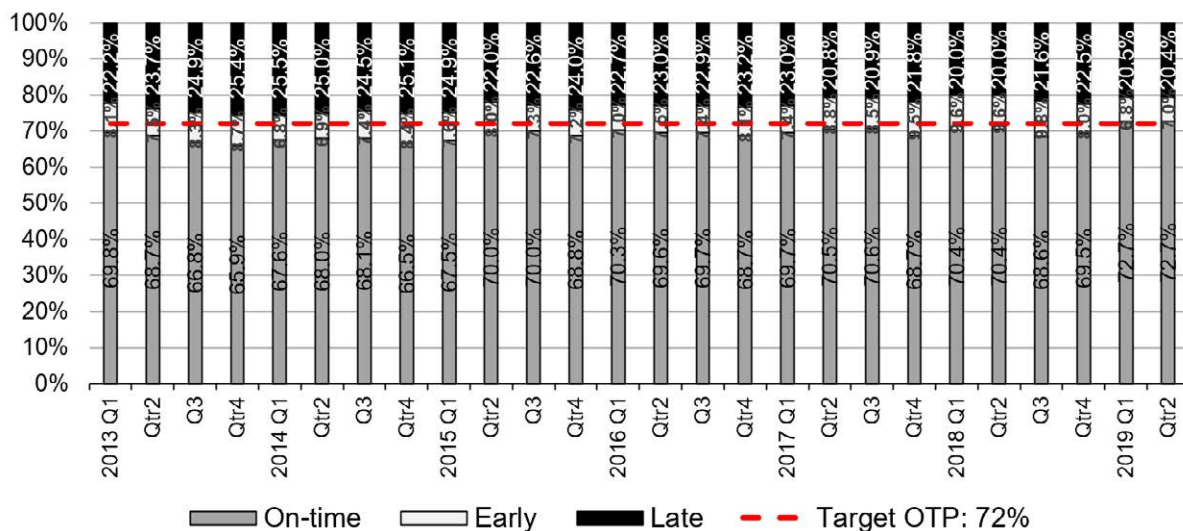
Reliability, or on-time-performance (OTP), is a measure of how many trips are completed on time. AC Transit’s target OTP is 72 percent, meaning that at least 72 percent of the trips on a line should arrive on time. “On-time” is defined by AC Transit as between one minute early and five minutes late. Compared to many other transit agencies, even with slightly different definitions of “on-time”, this is a low target. The industry standard target OTP goal is 75 to 85 percent.

AC Transit’s average OTP from 2013 through Fiscal Year 2019 (through the second quarter of calendar year 2019) was 69.3 percent. Starting from the first quarter of 2019, OTP met the 72 percent goal. However, AC Transit’s on-time performance goal is set low compared to other Alameda County bus transit agencies. For example, Livermore Amador Valley Transit Authority (LAVTA) has an on-time performance goal of 85% and Union City Transit has an on-time performance goal of 90%. These agencies achieved 84% and 91% on-time performance, respectively, in Fiscal Year 2019 (pre-COVID). That said, LAVTA and Union City Transit carried fewer than 1.7 million and 265,000 passenger trips, respectively, compared with AC Transit handling nearly 47 million passenger trips the same year.<sup>i</sup>

AC Transit’s OTP goal is lower than that of some other Bay Area transit agencies, but the gap between the goal and actual performance is small. By comparison, the gap between the San Francisco Municipal Transportation Agency (Muni) OTP goal of 85% and actual bus performance, at 56% for Fiscal Year 2019, is much larger. Meanwhile Muni buses carried more than 560,000 passenger trips just on an average weekday in Fiscal Year 2019, for a weekday total for the year of 146 million rides.<sup>i</sup>

These results suggest that agencies operating in more suburban, less congested conditions, and carrying relatively few passengers, such as LAVTA and Union City Transit, can more easily achieve high rates of on-time performance than agencies operating bus service in more urban, congested environments with high passenger loads. However, these results also suggest the potential for AC Transit to significantly improve on-time performance with greater street capacity through dedicated transit lanes and with measures to increase boarding efficiency.

<sup>i</sup> Connecting Communities: 2018-19 Annual Report, San Francisco Municipal Transportation Agency



**Figure 2.11. AC Transit - On-Time Performance of Routes through Berkeley by Quarter from Fiscal Year 2013 to 2019.** (Source: Vital Signs by Metropolitan Transportation Commission using Federal Transit Administration: National Transit Database information (2016))

**Policy**

AC Transit Policy 471: Cancellation of Scheduled Service Policy was adopted in 1990 and last amended in 2017. It states:

“In the event of unavoidable cancellations, AC Transit will take priority actions to serve the public with the least impact/inconvenience.”

The order of service coverage is:

1. Supplemental (School) Service
2. Transbay Service
3. Local Service

Policy 471 prioritizes maintaining school service and Transbay service over local service, in the event of unavoidable cancellations. This means that Local service is the first to receive cancellations under the policy, which was a factor in frequent, high-ridership lines experiencing a higher percentage of missed trips pre-COVID-19.

However, in March 2020 in light of the COVID-19 pandemic, AC Transit suspended Policy 471. The order of service prioritization has been reversed:

- Local Service: High-ridership lines are prioritized, as an essential service and to

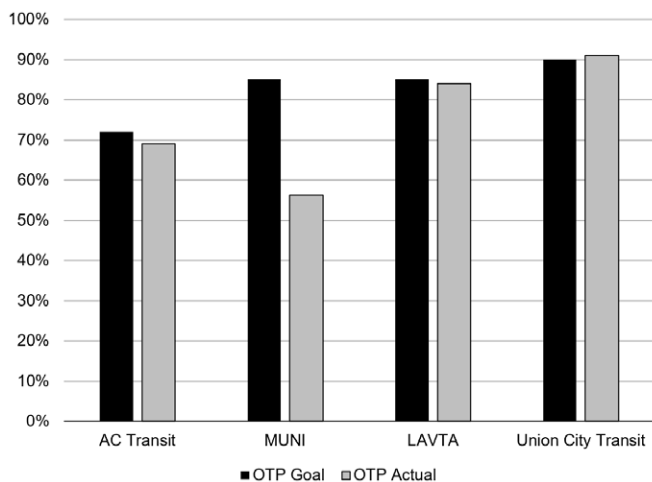
- provide room for physical distancing
- Transbay Service: Low operation, due to the shift to work-from-home
- Supplemental (School) Service: Not in operation, due to school closures

Post-COVID, Policy 471 should be revisited by AC Transit in order to undo its bias toward Transbay riders, who are more affluent on average than local riders<sup>ii</sup> and therefore tend to have more choices available to them for alternative forms of transportation to use. Another consideration is that Transbay customers comprise a much smaller number of riders than those who make up the local ridership. Policy 471, in its currently written form, therefore would cause the impact of missed trips to continue not only to be felt by more people, but by those who are more vulnerable.

**Missed Trips**

“Missed trips” is a measure of one important factor affecting reliability. It is the portion of scheduled runs

ii AC Transit 2017-18 On Board Passenger Survey, <http://www.actransit.org/wp-content/uploads/2017-18-On-Board-Passenger-Survey.pdf>



**Figure 2.12. Comparison of Transit Agencies' On-time Performance Fiscal Year 2019.** (Source: Alameda County Transportation Commission FY 2019 Measure B, Measure BB, and Vehicle Registration Fee Program Compliance Summary Reports; SFMTA Muni On-Time Performance)

	Completed Trips	Missed Trips	Percentage Completed	Percentage Missed
Local Routes through Berkeley	488,374	40,867	91.73%	7.68%
Transbay Routes through Berkeley	38,957	1,564	95.91%	3.85%

**Figure 2.13. Analysis of Missed Trips across all lines on Local and Transbay Routes through Berkeley.** (Source: AC Transit, March 2019 – February 2020)

that are not completed. For example, in the 12-month period from March 2019 to February 2020, AC Transit's Line 51B had a total number of 69,295 planned trips. Of those, 62,593 trips were completed and 6,446 trips were not completed or missed, equivalent to 9.3 percent of trips missed. The month with the most missed trips for Line 51B was March 2019, with 1,015 missed trips, equivalent to 17.6 percent of trips missed, while Line 51B's average monthly missed trips is 537.

There are fourteen AC Transit Local routes that run through Berkeley: Lines 6, 12, 18, 36, 51B, 52, 65, 67, 72, 72M, 72R, 29, 80, and 88. Additionally, four Transbay routes run through Berkeley: Lines F, FS, G, and J. From March 2019 to February 2020, the total number of Local route trips planned to run through

Berkeley was 512,284. Of those, almost 8 percent were missed trips. At the same time, the total number of Transbay route trips planned to run through Berkeley was 40,617, and nearly 4 percent of those were missed trips. The discrepancy of Local routes having double the proportion of missed trips of Transbay routes leads to the question of whether AC Transit prioritizes Transbay routes over Local routes, which is discussed in the next section.

More generally, looking at each route, the percentage of missed trips tends to be higher on more frequent, high ridership routes. There are many possible reasons for missed trips, such as a transit operator shortage, delay, collision, or mechanical issues. Addressing these issues is needed in to increase reliability.

Line	Completed Trips	Missed Trips	Percentage Completed	Percentage Missed
52 - UC Village - Cedar - UC Campus	34,676	3,979	89.52%	10.27%
51B - University - College - Rockridge	62,593	6,446	90.33%	9.30%
6 - Berkeley - Telegraph - Oakland	56,998	5,690	89.99%	8.98%
79 - Colusa - The Alameda - Claremont	22,615	1,981	91.81%	8.04%
72R - San Pablo Rapid	39,367	3,485	90.74%	8.03%
18 - Solano - Shattuck - MLK Jr.	41,763	3,657	91.08%	7.98%
72 - Hilltop - CCC - San Pablo	25,305	2,100	91.34%	7.58%
80 - Pierce - 6th St. - Ashby	33,176	2,636	92.59%	7.36%
72M - Macdonald - San Pablo	24,756	1,987	91.62%	7.35%
88 - Sacramento - Market	36,871	2,675	92.83%	6.74%
12 - MLK Jr. - Temescal - Grand	29,403	1,919	92.91%	6.06%
7 - Arlington - 1000 Oaks - Shattuck	19,044	1,073	94.61%	5.33%
36 - Dwight - Shellmound - Adeline	25,803	1,407	94.70%	5.16%
67 - Tilden Park - Spruce - Oxford	18,484	967	94.97%	4.97%
65 - Grizzly Peak - Euclid	17,520	865	95.13%	4.70%
G - Colusa - Solano Transbay	3,130	155	95.11%	4.71%
F - Adeline - Market Transbay	27,385	1,136	95.81%	3.97%
J - Sacramento - Christie Transbay	5,122	181	96.35%	3.40%
FS - Shattuck - University Transbay	3,320	92	96.91%	2.69%

**Figure 2.14. Analysis of Missed Trips across Individual Local and Transbay routes through Berkeley.** (Source: AC Transit, March 2019 – February 2020)

However, the majority of missed trips occurred pre-COVID because of “no workforce”. There was a bus driver shortage region-wide, affecting other Bay Area transit agencies as well. It is difficult to recruit and retain drivers due to the high cost of living in the Bay Area, perceived working conditions, and competition with private shuttle companies.

Outside of the region-wide bus driver shortage, a cause of missed trips that cities can help prevent is “delay”. Strategies to improve traffic flow for buses through congested areas can minimize delay. These will be discussed in the following chapter on best practices and recommendations for Transit Policies and Design Guidelines.





# 03

## DESIGN GUIDELINES AND POLICIES

# DESIGN GUIDELINES AND POLICIES

The policies and design guidelines in this chapter were developed based on the findings from Chapter 1: Existing Policies and Best Practices, Chapter 2: Existing Conditions, and input from the Technical Advisory Committee (TAC) and the Transportation and Infrastructure Commission. Topics have been identified, and policies and standard design guidance are provided to address these topics and support the use of transit in Berkeley. As appropriate, each topic includes examples, conceptual plans or diagrams, and matrices of recommended elements based on criteria, as applicable.

## Design Guidelines

### 1. Stops and Stations

#### Bus Bulbs

Bus bulbs are desirable because they create more space to allow for sidewalk activity and bus stop amenities to not conflict with one another. Also, when a bus stops at a bus bulb, it stops in the traffic lane. This reduces the amount of time that the bus is at the stop because the bus does not need to turn into the

stop or wait for a gap in traffic to reenter traffic, as it would at a bus stop with a pull-out.

A bus bulb should be used when a street does not have a bicycle facility and it is feasible for a bus to be in the traffic lane at a bus stop. Generally, the street should have multiple lanes so that drivers can pass around a stopped bus. The average travel speed should be less than 35 mph.

The distance a bus bulb can extend from the existing curb depends upon the existing cross section of the street. Generally, a bus bulb can be as wide as the existing parking lane on the street. If travel lanes can be narrowed, the additional space can be added into the width of the bus bulb.

#### Boarding Islands

A bus boarding island should be used when a street has a bicycle facility and where it is feasible for a bus to be in the traffic lane at a bus stop. This separates people cycling from stopped buses which is safer than having a cyclist pass around a stopped bus.



**Figure 3.1.** Bus Bulb at University Ave and Grant Street. (Source: Google)



**Figure 3.2.** Bus Boarding Island on Dexter Ave, Seattle, Washington. (Source: NACTO)



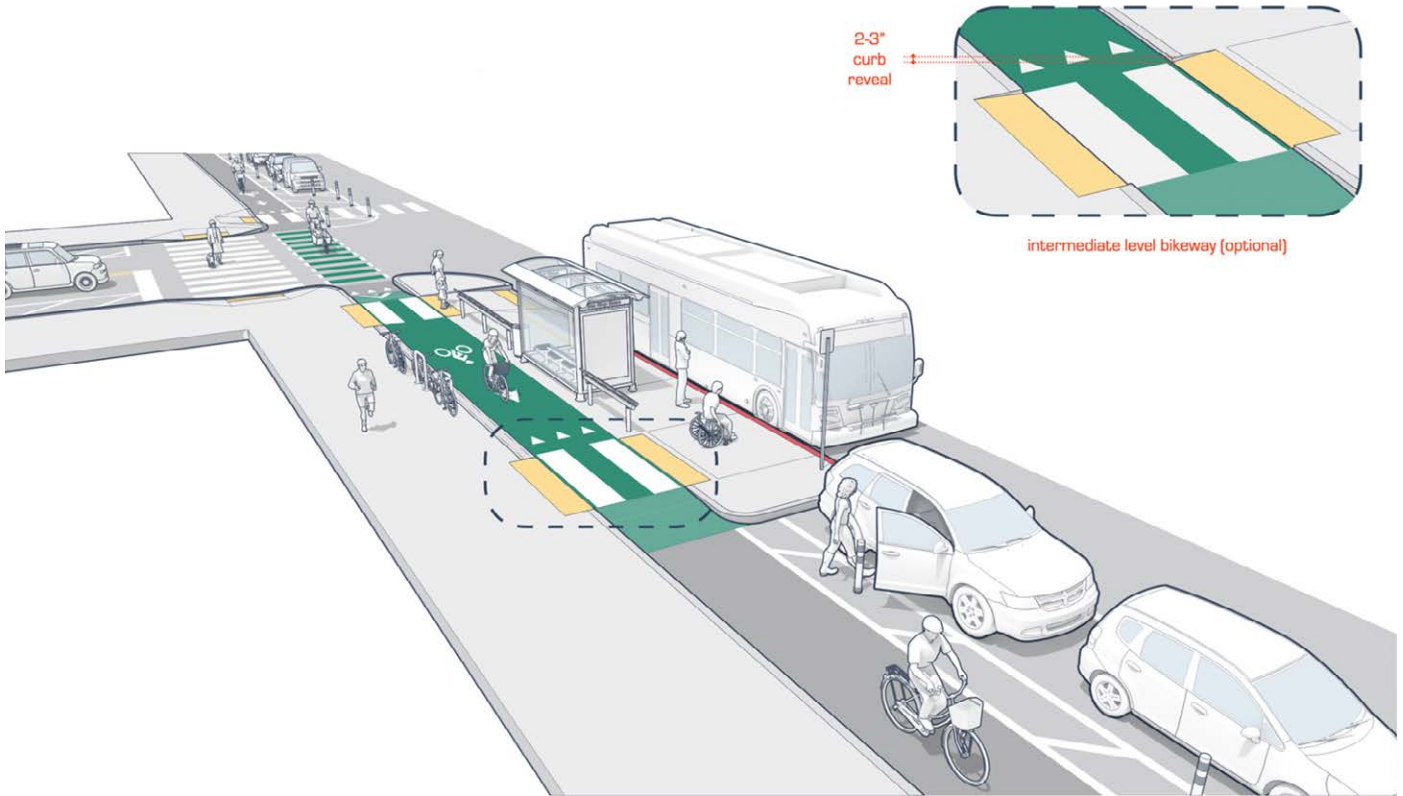


Figure 3.3. Boarding Island with Protected Bikeway Perspective. (Source: AC Transit Multimodal Corridor Guidelines (2018))

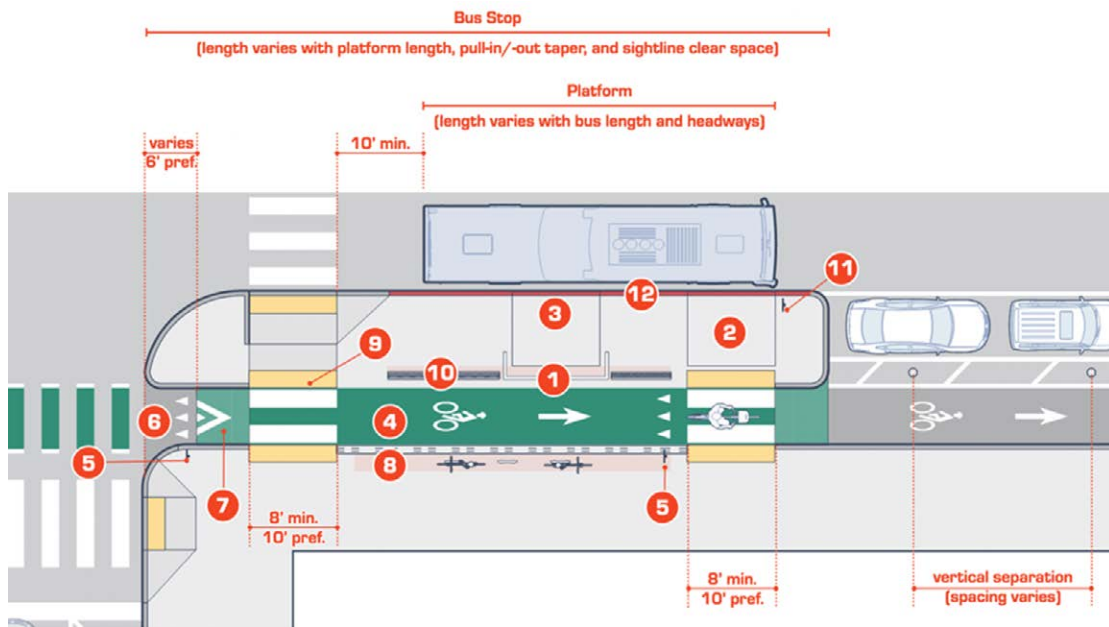
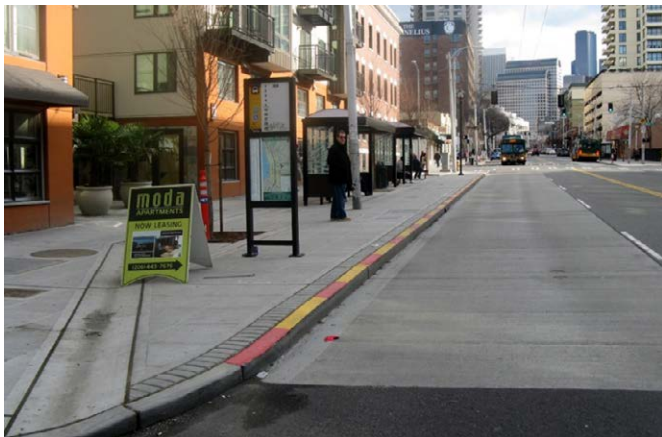


Figure 3.4. Boarding Island with Protected Bikeway Plan. (Source: AC Transit Multimodal Corridor Guidelines (2018))





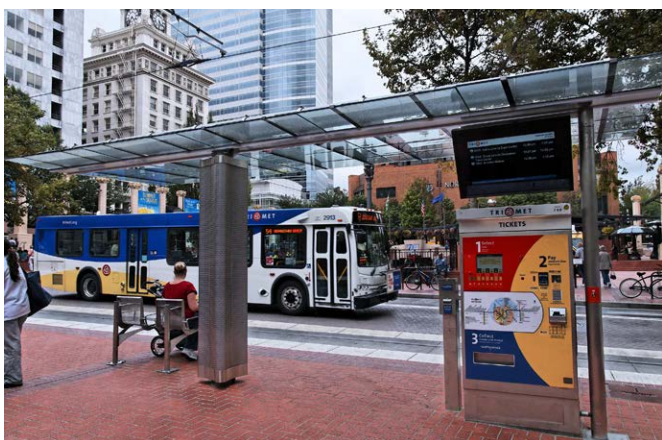
**Figure 3.5. Bus Pad in Seattle, Washington.**  
(Source: NACTO, B. Bryant)

Several transit design guidelines were reviewed in developing the Transit-First Plan, including AC Transit's *Multimodal Corridor Guidelines* document. Given that this document is focused on the issue of designing bus stops on streets with bicycle facilities, is the most recent of the guides reviewed, and was prepared by the local transit agency, the recommendation here is that Berkeley use the *Multimodal Corridor Guidelines* for the design of bus boarding islands in Berkeley.

### Bus Pads

Bus pads are concrete slabs that are installed in the street at bus stops. They prevent roadway damage that would otherwise occur from the the weight of buses and the torque and friction of bus tires on asphalt.

Typically, a bus pad includes a minimum 10-inch thick concrete slab with rebar over a minimum 12 inch deep aggregate base. The design depends on soil and other site specific issues.



**Figure 3.6. Bus Stop Amenities at High frequency Portland, Oregon.** (Source: TriMet)

### Bus Stop Fixtures

Current AC Transit policy (*Board Policy 550*) defines Rapid Service and BRT as the only service types that should have stops with bus stop fixtures. Other levels of service have fixtures when provided by advertising or when provided by the city. Berkeley should provide input as AC Transit develops their *Bus Stop Furniture Guidelines*. These will provide a useful basis for the development of Berkeley's guidelines for bus stop fixtures, including definition of what improvements AC Transit may provide and the role of Berkeley in providing and maintaining bus stop fixtures in the City.



**Figure 3.7. Bus Stop Amenities at University Ave Stop.**  
(Source: Paul Sullivan)

Bicycle parking is an element to include to provide flexible access to transit and provide for cycling as a first-/last-mile connection; see related First-/Last-Mile Shared Mobility section below. Standards should be developed for routes that are likely to have riders who cycle to the bus service, such as routes that are used more heavily by commuters.

Street trees and other landscaping at bus stops improve comfort for riders by providing shade. Green stormwater infrastructure can also enhance the sustainability of bus bulbs and help to address street drainage issues that can occur when curb extensions are constructed, see Figure 3.8.

## 2. Laneways and Intersection Treatments

This section describes several treatments for lanes and intersections that give priority to buses. These improvements are typically made in higher ridership corridors and will include other improvements, such as Transit-Signal Priority (TSP), more fixtures at the stops including off-board fare collection, shelters, and possibly platforms with a height to allow level boarding onto the bus.

### Dedicated Transit Lane

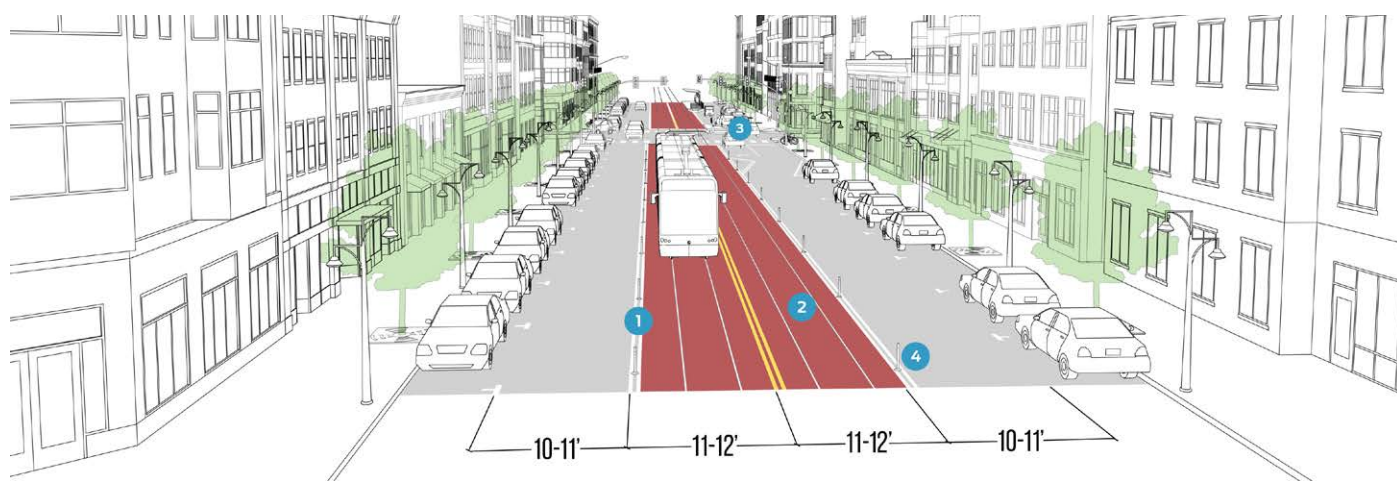
Dedicating a lane for bus transit use can address many sources of delay by removing conflict with other vehicles and separating buses from congestion along a street. The lane can either be in the center, along the curb, or floating between other lanes. Bus Rapid Transit (BRT) typically provides dedicated transit lanes with raised bus stations like AC Transit’s Tempo service. Dedicated transit lanes can also be used in areas with high-frequency and multiple lines of service, like on Bancroft Avenue from Telegraph Avenue to Oxford Street. AC Transit Rapid lines, which have limited stops to reduce travel time but no dedicated lane, are good candidates to consider the implementation of dedicated transit lanes as an interim step towards the higher level of investment needed for full BRT service. Dedicated transit lanes for Rapid service can be next to on-street parking, although this reduces the travel time benefits to some extent.



**Figure 3.8. Green Infrastructure at Bus Bulb in Portland, Oregon.** (Source: Dianne Yee)



**Figure 3.9. Tempo BRT Station on International Blvd. in Oakland.** (Source: CD+A)



**Figure 3.10. Dedicated Transit Lane Diagram.** (Source: NACTO)





Figure 3.11. BAT Lane on Geary Street. (Source: SFMTA)



Figure 3.12. BAT Lane on Geary Street. (Source: SFMTA)

### Business Access & Transit (BAT) Lane

BAT Lanes can be used on high-volume, highly congested corridor segments where there is no room for boarding islands or bulbs and no curbside parking. Right-turning vehicles can use the transit lane to make right turns at intersections and driveways. San Francisco has BAT lanes on Geary St. in downtown, see Figure 3.10. Enforcement is needed to ensure that delivery, rideshare, and private vehicles do not block the lane for loading.

### Peak-time Transit Lane

This lane treatment can be appropriate where either bus and/or traffic have high peak-period volumes and priority is given to transit vehicles. These are dedicated or BAT lanes that operate during the peak-period by dedicating a lane, typically the curb lane, to transit use. Typically, this flexible lane is used for parking and loading off-peak, but in some cases, it may be a vehicle travel lane.

### Shared Bus/ Bike Lane

This type of transit lane should only be used on streets where the width of the street is very constrained, and where no bicycle facilities exist or are planned. Also, bus speeds should be slow and have a moderate frequency. Ideally dedicated and separated bus and bicycle facilities are preferred. The design also needs to consider the potential for buses to safely pass bicycles and for cyclists to safely pass buses when they are stopped.

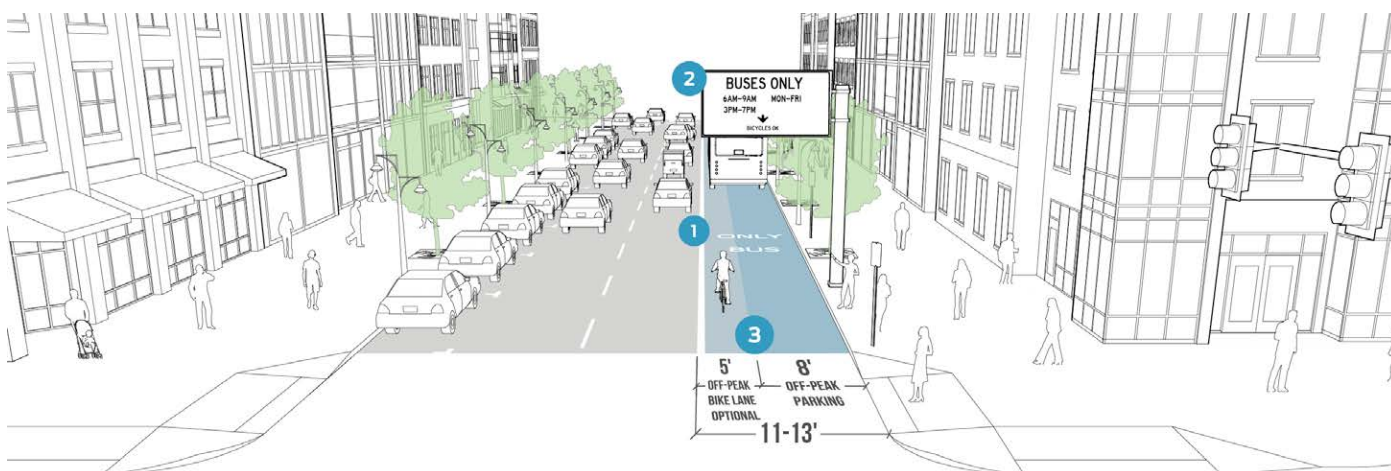


Figure 3.13. Peak-time Transit Lane. (Source: NACTO)

### Intersection Queue Jump Lane

This intersection treatment is appropriate on streets that do not have dedicated transit lanes, at approaches to signalized intersections where buses encounter long delays due to traffic congestion, and there is a relatively low volume of right turns. They can also be used at entry points to street segments with dedicated lanes. A queue jump lane allows buses to bypass queues of general traffic in a separate lane up to the intersection where buses get a green light before other traffic to pass through the intersection. They can be used at intersections without bus stops or with near-side or far-side stops.

### Transit-only Aperture

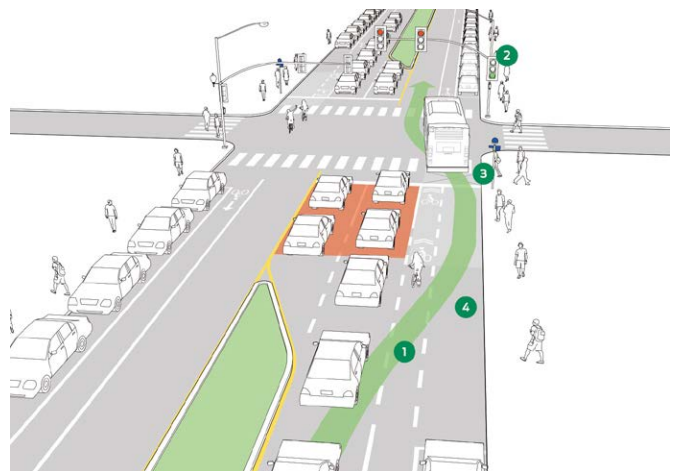
This intersection treatment is designed to allow buses to be the only vehicles allowed to make a turning movement or through movement which diverts general traffic away from the transit route. This prioritizes transit in congested locations. The benefit to buses can be enhanced by giving a green light for buses separate from other traffic movements.

Figure 3.17 summarizes and compares the recommendations from transit design guidelines listed below, in the last column, indicates which ones are recommended as City transit design practices:

- National Association of City Transportation Officials (NACTO) – *Transit Street Design Guide (2016)*
- Transit Research Board (TRB) – Transit Cooperative Research Program (TCRP) *Report 165: Transit Capacity and Quality of Service Manual, Third Edition (2013)*
- Alameda County Transportation Commission (Ala CTC) – *Central County Complete Streets Design Guidelines (2016)*
- AC Transit – *Designing With Transit (2004)* and *Multimodal Corridor Design Guidelines (2018)*
- Portland Bureau of Transportation’s (PBOT) – *Enhanced Transit Corridors Plan: Capital/Operational Toolbox (2017)*



**Figure 3.14. Shared Bus/ Bike Lane, Portland, Oregon.**  
(Source: bikeportland)



**Figure 3.15. Intersection Queue Jump.** (Source: NACTO)



**Figure 3.16. Transit-only Aperture in Portland, Oregon.**  
(Source: PBOT)

Treatment		Agency					
		NACTO	TRB	Alameda CTC	AC Transit	PBOT	City (Proposed)
Stops	Far-side bus stop placement						
	Bus pull-out						
	Bus bulb (curb extension)						
	Bus boarding island with bikeway						
	Shared cycle track bus stop*						
	Bus pad						
	Bus stop fixtures						
	Real-time arrival info						
	Off-board fare payment						
Lanes	Dedicated transit lane						
	Business access & transit lane						
	Peak-time transit lane						
	Shared bus/bike lane						
Intersections	Intersection queue jump						
	Transit-only aperture						
	Transit signal priority & progression						

Recommended TreatmentRecommended in certain ContextsNot Recommended

\* This is not recommended because passengers would disembark from buses and step directly onto the bikeway.

Figure 3.17. Summary of Transit Improvement Recommendations and Proposed Berkeley Recommendations

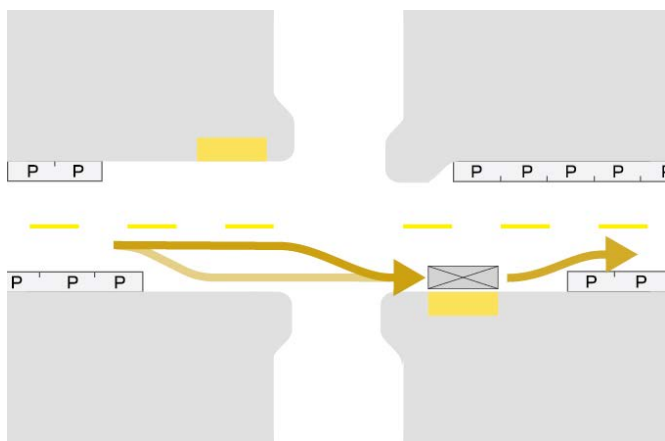


Figure 3.18. Far-side Bus Stop Diagram. (Source: NACTO)

## Policies

### 1. Stops and Stations

#### Policy 1.1 Bus stops on far-side of intersections

It is preferred for all bus-stops to be placed on the far-side of the intersection, when feasible. This is the preferred location for new and relocated stops.

**Purpose:** Far-side bus stops allow a bus to clear the intersection before stopping and this improves bus speed and reliability, particularly when combined with Transit Signal Priority (TSP) technologies and queue-jump lanes.



**Actions:**

1. When implementing street modification projects affecting or adjacent to bus stops, include relocation of near-side stops to far-side locations.
2. Define requirements for developers to implement this policy if their project fronts a potential far-side bus stop location.

**Policy 1.2 Bus bulbs and boarding islands**

It is preferred that bus stops be located on bus bulbs or boarding islands when feasible, including the implementation of multi-use bus bulbs or bus parklets where desired by businesses or other uses adjacent to the bus stop.

**Purpose:** Bus bulbs and boarding islands improve the speed and reliability of bus service because buses do not need to wait to re-enter a traffic lane. Also, bus bulbs provide more space for pedestrians or sidewalk seating on sidewalks.

**Actions:**

1. Replace pullouts at bus stops with bus bulbs on multi-lane streets (with more than one traffic lane each direction) when reconstructing or modifying the street or sidewalk at or adjacent to a bus stop. This would be in the form of a boarding island where protected bicycle lanes are installed.
2. Work to update the existing City parklet program to allow and encourage the provision of bus parklets that follow the guidance in AC Transit’s [Bus Parklet Design Manual \(2018\)](#).
3. Define requirements for developers to implement this policy if their project fronts a potential bus bulb or boarding island location.

**Policy 1.3 Bus pads**

Provide bus pads where frequency of bus service or dwell time of buses can result in deforming and otherwise degrading the roadway pavement.

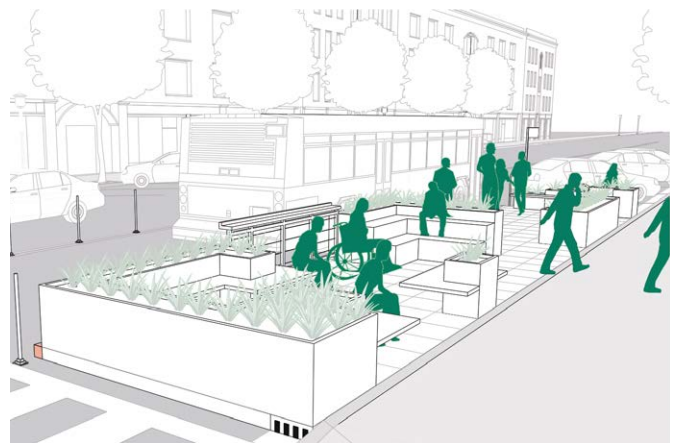
**Purpose:** The combination of the heavy weight of buses, their braking and acceleration as they enter and leave bus stops, as well as the potential heat generated by idling buses at layovers can result in degrading roadway pavement and increase the frequency of needing roadway patching and repaving. Construction of concrete bus pads will mitigate these issues.

**Actions:**

1. Require the construction of bus pads when stops are moved, or new stops are developed.



**Figure 3.19. Bus Boarding Island.** (Source: Green Lane Project)



**Figure 3.20. Bus Parklet Illustration.** (Source: Bus Parklet Design Manual)



**Figure 3.21. Bus Pad on University Ave at Martin Luther King Jr. Way.** (Source: Paul Sullivan)

2. Coordinate with the City pavement program to install bus pads as part of repaving projects.
3. Define requirements for developers to implement this policy if their project fronts a bus stop.

### Policy 1.4 Bus stop fixtures

Implement and maintain a standard for fixtures at bus stops based on ridership, nearby destinations (i.e., services and housing for seniors and people with disabilities), and frequency of service by working with AC Transit and shuttle operators.

**Purpose:** Bus stop fixtures provide riders with comfort, safety, and information that support their use of transit. Fixtures can include shelters, benches, off-board fare payment machines, maps, signage, real-time display, lighting, trash/recycling cans, and emergency call systems. While these fixtures are important, revenue from advertising at bus stop shelters has diminished to the point that it no longer covers the cost of shelter cleaning and maintenance, causing advertising companies to request that public agencies supplement the advertising revenue with payments for shelter cleaning and maintenance.

#### Actions:

1. Develop a standard for providing certain fixtures to be present at certain types of bus stops based on criteria for bus stop usage, frequency of service, and corridor priority.
2. Identify funding to cover the cost of bus shelter maintenance.
3. Define requirements for developers to implement this standard if their project fronts a bus stop that does not meet the fixtures standard.



**Figure 3.22. Transit Signal Priority Diagram.**  
(Source: SamTrans)

## 2. Lane and Intersection Treatments

### Policy 2.1 Signal timing and transit signal priority (TSP)

Implement signal timing improvements and/or transit signal priority for bus stops and corridors based on lane configuration, traffic operations, bus stop locations, service type, and corridor priority.

**Purpose:** Signal timing and TSP can improve the speed and reliability of service along a bus route.

#### Actions:

1. Provide TSP along the corridors and routes identified in the AC Transit Major Corridors Study (2016) and along Major Transit Routes identified in the City's General Plan Transportation Element, if not already implemented. Include TSP in plans for these corridors and in new traffic signals and traffic signal modifications along these routes.
2. Develop a citywide implementation and funding plan for upgrading TSP along corridors, identifying where TSP already exists and any potential limitations to future upgrades.

## 3. Operations and other Policies

### Policy 3.1 Temporary Transit Impact Notification

Give notice to transit riders about temporary relocations or changes in service at transit stops and along transit routes.

**Purpose:** Giving adequate notice of temporary transit service changes to riders which gives them time to adjust when they take trips or find alternative modes for their trips.

#### Actions:

1. When a bus stop is to be temporarily closed due to construction or a special event, identify a new location for the bus stop whenever feasible. The temporary bus stop must be ADA accessible and at curb height and must provide at least 8 feet of level boarding space measured perpendicular to the curb edge.
2. Develop guidance on traffic handling plans and temporary relocation of bus stops due to construction and special events.
3. Provide at least two weeks' notice to affected riders.
4. Provide notice of construction or other impacts



to AC Transit prior to their standard two weeks request for notification so that there is additional time to inform riders.

**Policy 3.2 First-/last-mile shared mobility**

At transit hubs, such as BART stations or major bus line stops, provide parking for micro mobility that is safely out of the way from the transit facilities and active sidewalk space.

**Purpose:** Shared mobility devices are an important way to provide first-/last-mile connections for transit riders to complete their trip. But micro mobility devices are often not parked out of the way of transit stops or pedestrian paths of travel at transit hubs and stops.

**Actions:**

1. Develop guidance for bikeshare and scooter-share parking zones near transit stops.
2. Work with shared mobility providers to implement the guidance.

**Discussion – Shared Micromobility Connections**

Shared micromobility refers to shared-use fleets of small, fully, or partially human-powered vehicles such as bikes, electric bikes (e-bikes), and electric scooters (e-scooters). These devices are generally rented through a mobile app or kiosk, are picked up and dropped off in the public right-of-way and are meant for short point-to-point trips.

**Bikeshare** (shared bicycles and e-bikes)

Bay Area Bike Share launched in 2013 and is now operating as Bay Wheels by Lyft. There are currently over 2,600 bicycles at stations throughout the Bay



**Figure 3.23. Shared Mobility Parking at Bus Hub.**  
(Source: MTC-Nelson\ Nygaard)

Area, including in Berkeley.

Bikeshare users have different reasons for riding than scootershare users. In survey data from several cities, people who use station-based bikeshare are more likely than people using scootershare to report that they ride to get to/from work and to say that they use bikeshare to connect to transit. (1) In 2018, over half of bikeshare users in Oakland linked their transit card to the bikeshare system, making unlocking bikes a quick tap and making payment more seamless across systems.

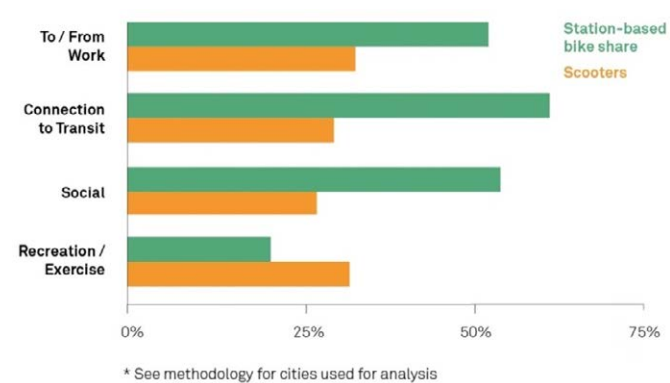
Based on bikeshare serving as a first- and last-mile mobility connector to transit, the following guidelines and policies are recommended to promote this relationship between the modes:

**Work with bikeshare providers to promote bikeshare-transit connections.**

1. Locate bikeshare stations adjacent to transit stops on major corridors.
2. Expand targeted outreach to bikeshare users about transit connections, and targeted outreach to transit users about bikeshare.
3. Increase outreach to low-income communities about transit and bikeshare connections and low-income bikeshare membership.

**Explore feasibility of free transfers between bikeshare and bus.**

1. Work with regional agencies to incorporate bikeshare transfers into Clipper.
  - In Pittsburgh, HealthyRide members receive a free 15-minute transfer between bikeshare and



**Figure 3.24. Why People Ride.** (Source: NACTO)

the bus. This has increased bikeshare ridership even without an expansion of the bikeshare system.

- Bay Wheels can be accessed by Clipper Card. Integrating bikeshare fares and free transfers into the Clipper system can encourage more bikeshare and transit trips, improving mobility and increasing equity.

**Scootershare** (scooters, e-scooters, e-scootershare, powered scooters)

Scooters emerged in 2017 as a new shared mobility service in the United States. Companies began operations in some cities without government permits of consent. Several cities responded with cease-and-desist orders and fines. Some cities developed pilot programs for scootershare to study ridership behavior and capabilities of scootershare companies to help achieve cities' transportation goals.

From evaluations of pilot programs, it was found that the demographics of scootershare users skew young, white, male, and with higher incomes and more education than overall demographics of pilot program areas. (3, 4, 5) In contrast, demographics of transit users are generally more diverse. Scootershare companies would need to conduct more outreach and expand service areas to reach a diverse user base representative of the general population to advance cities' equity goals to provide more transportation options to everyone.

Pilot program evaluations have found multiple effects of scooters, but the net effect on transit is inconclusive. Scootershare users reported using scooters to replace walking trips, as well as personal car trips, ride-hailing trips, and transit trips. They also use scooters to connect to transit.

Locally, SFMTA found in a survey of scootershare users, that 34% of respondents used scootershare services to get to or from public transportation, and nearly 28% of respondents would not have taken transit if a scooter was not available but used the service to connect to transit. This indicates that scooters generally complement transit by serving as a valuable last mile connection. However, "transit" was not distinguished between buses and subway or light-rail.

In September 2021, the City of Berkeley adopted a Shared Electric Micromobility Permit Program that allowed permits to be issued to up to three companies

to provide free-floating shared electric mobility devices to the public. Permits were issued in spring 2022. More than half of the devices provided are ridden by standing on them. Two of the three companies also provide seated electric scooters, while the third company provides mainly standing scooters and some e-bikes.

The following guidelines and policies are recommended for scootershare to better support transit:

1. Scootershare operators should use geofencing to prohibit scooters from being parked in bus stop areas and from being locked to bus stop poles.
  - The requirement of lock-to mechanism on scooters addresses the major issues of sidewalk clearance and pedestrian safety. However, scooters should not be parked within bus stop areas where they may obstruct passengers boarding and alighting.
2. Scootershare program guidelines should include a guiding principle for supporting transit.
  - For example, one of SFMTA's Emerging Mobility Guiding Principles is, "Powered scooter share must support, rather than compete with, public transit services, and must account for the operational needs of public transit and encourage use of high- occupancy modes."
3. Locate scootershare parking in the curbside parking lane or street space such as on bulb-outs.
  - Scootershare parking can be located on a minor street around the corner from a bus stop. This can achieve the safety benefits of daylighting the corner for pedestrians while providing a visible connection from transit and scootershare services.
  - Prioritize scootershare parking areas at major transit corridors.

### **Policy 3.3 Support More Equitable Service Reliability**

Advocate for creation and adoption of a more equitable and transparent AC Transit service cancellation policy.

**Purpose:** Many residents of Berkeley's historically underserved communities are dependent on AC Transit bus service for most of their transportation needs. AC Transit's current policies and data indicate that avoiding service cancellations for routes serving these populations should be a higher priority.

**Actions:**

1. Coordinate with AC Transit staff and the AC Transit Board of Directors to develop and approve a new equity- and ridership- based service cancellation policy.
2. Continue to collect and review data from AC Transit regarding service cancellations in Berkeley.

**Policy 3.4 Support AC Transit in Various Payment Options**

To increase transit efficiency by reducing dwell times at bus stops, support the development of all-door boarding and off-board payment options.

**Purpose:** The amount of time that passengers are loading and alighting the bus has a significant effect on the speed and reliability of service along a route. All-door boarding is one way to reduce this time. Efficiency can be increased further by providing for fare collection at the stop prior to passengers boarding the bus. The Tempo BRT service provides ticket vending machines on the platform; fare inspectors ride on the buses and will ask riders for proof of payment. This type of fare collection could be expanded to other routes that repeatedly experience delays from passenger loading.

**Actions:**

1. Coordinate with AC Transit to monitor conditions on high-ridership routes in the City and explore expansion of all-door boarding and a off-board payment options

**Policy 3.5 Create a City-AC Transit Interagency Liaison Committee (ILC)**

Work with AC Transit and City Council to form and regularly convene a Berkeley-AC Transit ILC to collaborate on joint service planning and transit corridor projects.

**Purpose:** Improving coordination between the City of Berkeley and AC Transit will help achieve desired transit service and infrastructure improvements for people who live and work in Berkeley, and visitors to the City.

**Actions:**

1. Work with City Council and AC Transit to appoint two City Councilmembers and two AC Transit Board Directors to the Berkeley-AC Transit ILC.
2. Coordinate with AC Transit staff to schedule and manage the Berkeley-AC Transit ILC.

**Policy 3.6 Support Attraction and Retention of Bus Drivers**

Recognize that transit agencies are facing driver shortages due to a challenging work environment and a high number of retirement eligible workforce. Advocate for regional operational funding sufficient to attract and retain drivers.

**Purpose:** Transit providers serving Berkeley have been experiencing difficulties attracting and retaining bus drivers.

**Actions:**

1. Coordinate with AC Transit, other service providers, and other local agencies to advocate at the regional level for funding to provide adequate pay, benefits, and a supportive work environment for transit drivers.

**Policy 3.7 Improve Facilities for Bus Layovers**

Evaluate identify, and implement bus driver layover improvements, including bus driver and restroom needs, ADA and universal accessibility improvements, curb lengths, and other right-of-way improvements under City purview.

**Purpose:** Bus service is adversely affected by inadequacies in bus layover facilities which can delay buses. These inadequacies, particularly lack of access to restrooms, negatively affect drivers' work environment.

**Actions:**

1. Coordinate with AC Transit to evaluate bus layover facilities in Berkeley and define a plan for improvements.
2. Coordinate negotiations and agreements between AC Transit and business and building owners regarding access for AC Transit drivers to restroom facilities at layover locations.
3. Make necessary changes to layover locations to provide adequate space and safety for operations.





# 04

## TRANSIT CORRIDOR STUDY PRIORITIZATION



# TRANSIT CORRIDOR STUDY PRIORITIZATION

This chapter identifies and prioritizes corridors for future study of their transit infrastructure needs. The proposed prioritization considers AC Transit plans, funding already acquired by the City for transit corridor studies, and anticipated transit demand or being late to work. A lack of reliability can lead to people deciding to take other forms of transportation.

*AC Transit Major Corridors Study (2016)* identifies the following streets in Berkeley for future significant transit improvements: San Pablo Avenue, Adeline Street, Telegraph Avenue, Shattuck Avenue, University Avenue, and College Avenue. Figure 4.2 below shows the long-term investment strategies recommended by AC Transit for these corridors.

The year by which this plan recommends that transit corridor studies be completed is shown in the last column of the table for comparison. The corridor studies would evaluate a range of transit infrastructure improvements, including transit-only lanes and full Bus Rapid Transit.

## San Pablo Avenue

The San Pablo Avenue within the City of Berkeley extends from Harrison Street in the north to Haskell Street in the south. San Pablo Avenue is under the jurisdiction of the State Department of Transportation (Caltrans) as it is designated as State Route 123.



**Figure 4.1. AC Transit Tempo BRT in Oakland.**  
(Source: CD+A)

Corridor	AC Transit – Long-Term Improvements (by 2040)	City of Berkeley - Transit Corridor Study Completion Date
San Pablo Avenue	Bus Rapid Transit	–**
Telegraph Avenue	Bus Rapid Transit	2024
Adeline Street*	TBD	2025
Shattuck Avenue	Rapid Bus – Overlay Local	2027
University Avenue	Bus Rapid Transit	2029
College Avenue	Rapid Bus – Replace Local	–

\* Adjacent to Ashby BART station: 2023; south of Ashby BART station: 2024; north of Ashby Ave: 2025

\*\* Led by Alameda County Transportation Commission

**Figure 4.2. Major Corridors Long-Term Investment Strategies.** (Sources: AC Transit and City of Berkeley)

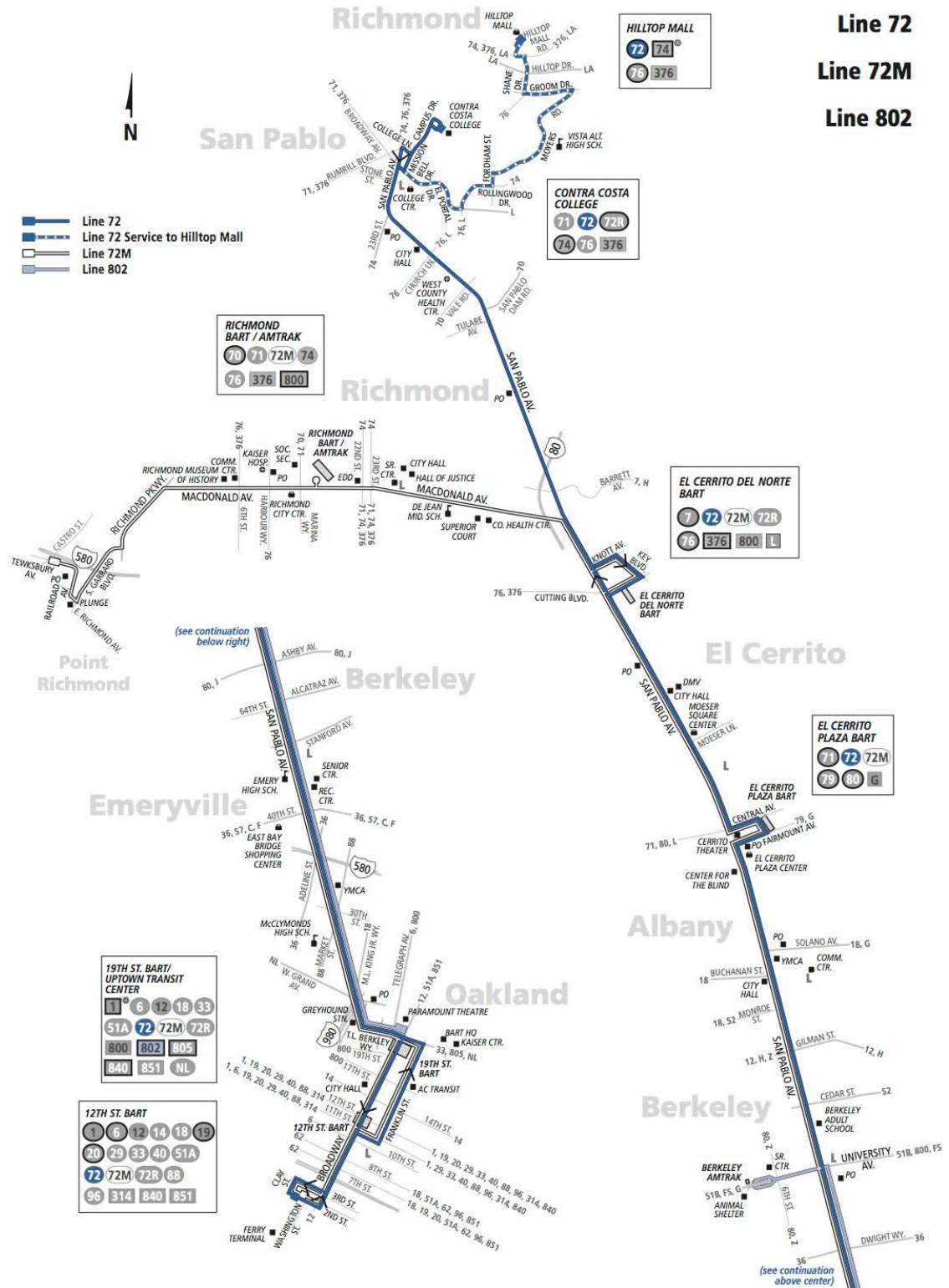
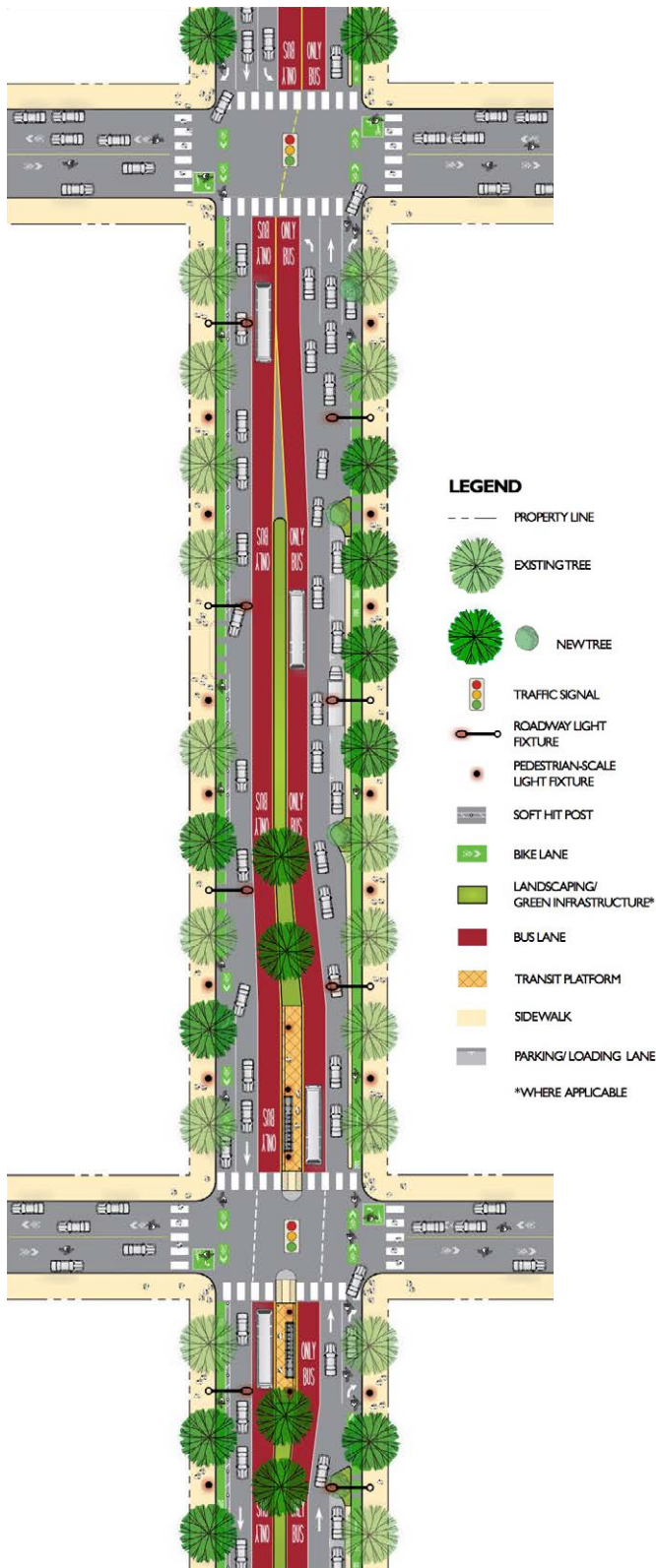


Figure 4.3. AC Transit Lines 72, 72M, and 72R run from Richmond to Oakland via Berkeley on San Pablo Avenue. (Source: AC Transit)



**Figure 4.4.** One of the proposed concepts from the San Pablo Corridor Project. (Source: Alameda CTC)

## Plans and Projects

The Alameda County Transportation Commission (Alameda CTC) is currently working on the [San Pablo Corridor Project](#). The project will develop a long-term vision for the full corridor and identify short-term projects to improve the safety and experience of all users. The corridor is 12 miles long, spanning two counties and seven cities. Alameda CTC is also working with Caltrans and AC Transit.

Alameda CTC has presented three conceptual designs for the corridor:

- Concept A: Median bus lanes and curbside bike lanes with some parking/loading
- Concept B: Median bus lanes and parking/loading with bike lanes on a parallel route
- Concept C: Curbside bike lanes with bus boarding islands and parking/loading

Alameda CTC is moving forward with curbside bus lanes on San Pablo Avenue from Downtown Oakland to South Berkeley at Burnett Street, one block north of Ashby Avenue. Protected bike lanes would continue to Russell Street.

## Support

The City of Berkeley – [2015-2023 Housing Element](#) calculated that San Pablo Avenue could accommodate 1,047 units, or about 20 percent of the citywide total. The Office of Economic Development conducted a study in December 2016 and held a City Council work session to identify existing conditions and consider pursuing grant funding for a comprehensive land use planning effort. Since that time, the City has acquired funding to develop a [San Pablo Avenue Specific Plan](#). This growth in housing along the corridor will generate demand for higher capacity transit services along San Pablo Avenue in an environmentally efficient way.

## Recommended Actions

1. Work with Alameda CTC, Caltrans, and neighboring cities to develop a long-term vision and plan for the corridor in Berkeley that meets the transit needs of planned land uses along San Pablo Avenue.
2. Coordinate with Alameda CTC, Caltrans, and neighboring cities on the design development to implement this vision.

## Telegraph Avenue

The Telegraph Avenue corridor spans from Bancroft Way in the north at the UC Berkeley campus to Woolsey Street in the south at the Oakland border.

### Plans and Projects

The City of Berkeley *Southside Plan (2011)* includes Telegraph Avenue from Parker Street to Bancroft Way in its study area. The goals in the Transportation Element of the Southside Plan are to increase the share of usage of non-automotive modes of transportation and to improve pedestrian and bicycle safety. The *Southside Plan* supports improving transit in the Southside area as a way to work toward those goals. Objective T-A states: "Jointly advocate for improved mass transit and non-auto travel to the Southside."

#### Policy T-A1

The City and University should jointly advocate to AC Transit and BART regarding the need for continued and ongoing improvement of transit service to the Southside.

#### Policy T-A2

Form a collaborative partnership between the City, the University, Oakland and other jurisdictions, and the regional transit agencies to study and improve transit options and simplify transit connections throughout the Bay Area.

#### Policy T-A3

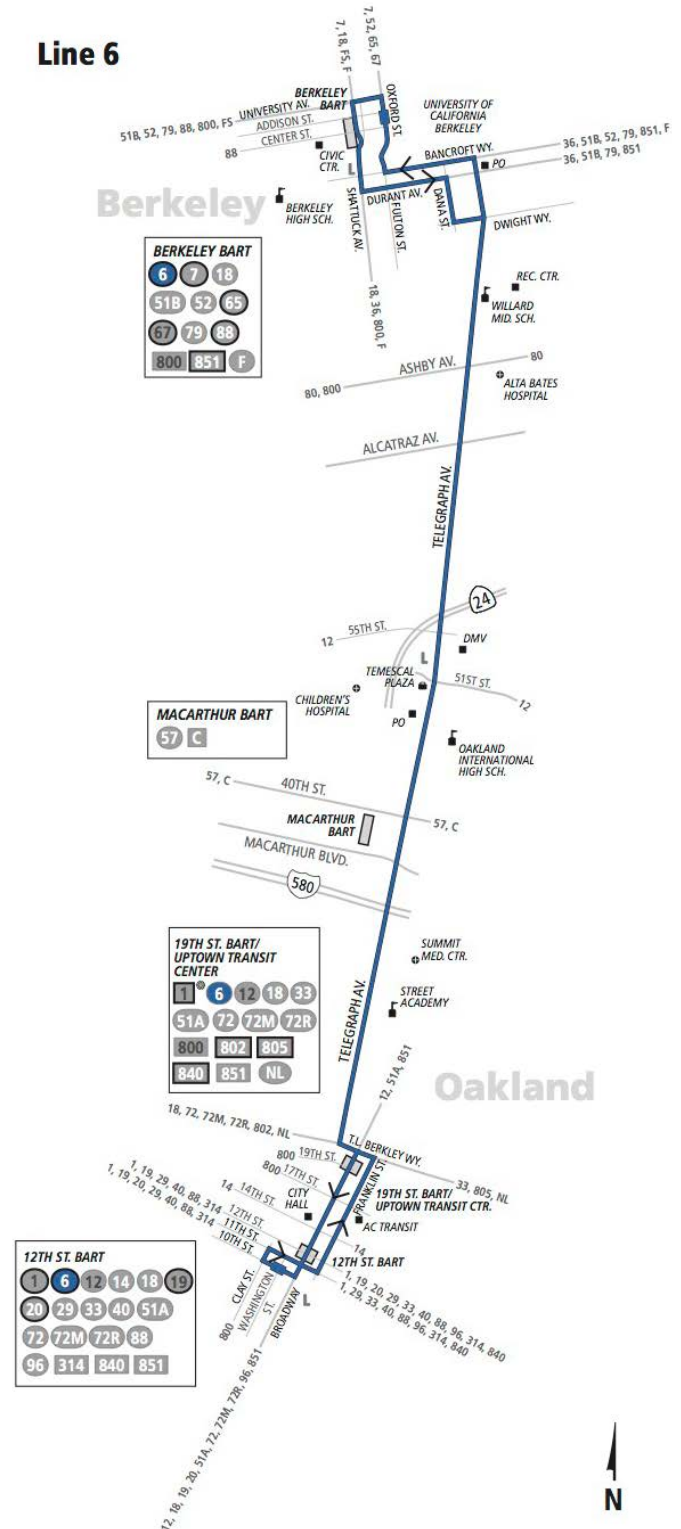
Work with AC Transit to implement the proposed Bus Rapid Transit (BRT) project as embodied in the Locally Preferred Alternative (LPA) measures passed by Council. Advocate to AC Transit and the regional transportation bodies for light rail as a longer-term way to provide cleaner, more efficient transit service for the Southside. Ensure that College Avenue, Telegraph Avenue, Bancroft Way, and Durant Avenue are evaluated as future light rail corridors.

The *Southside Plan* continues with Objective T-B: "Increase the usability and enhance the amenity of public transit to, from, and within the Southside."

#### Policy T-B1

- A. Improve bus stops throughout the area.
- B. When feasible, add covered platforms, shelters,

### Line 6



**Figure 4.5.** AC Transit Line 6 runs from Downtown Berkeley to Downtown Oakland via Telegraph Avenue. (Source: AC Transit)



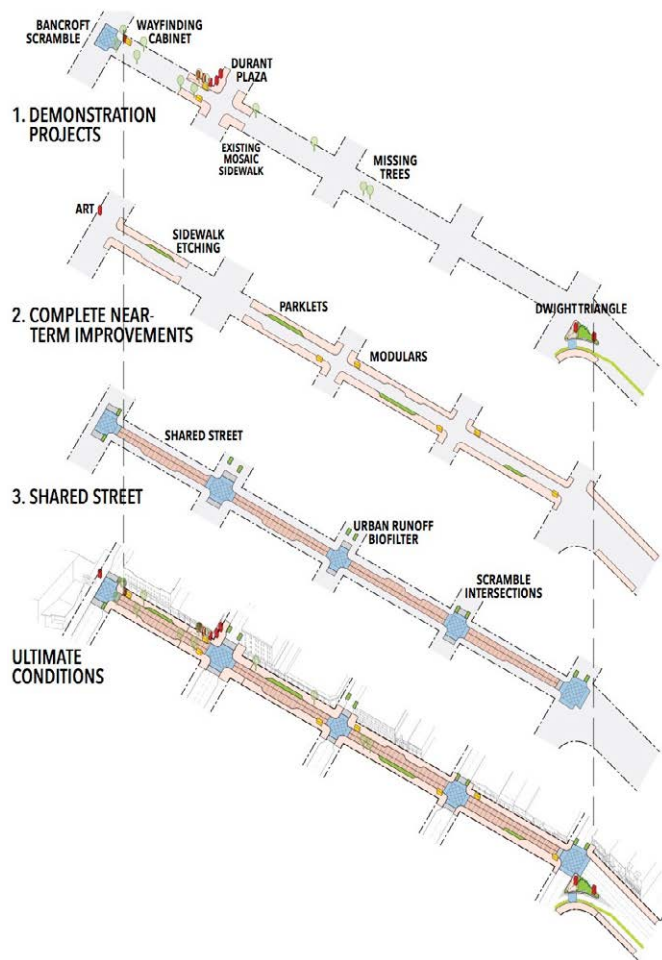
“bulb-outs,” and appropriate street furniture at heavily used bus stops.

- C. Add clear signage, route maps and schedules, and adequate lighting at all Southside bus stops.
- D. Improve the Telegraph/Bancroft area, particularly Bancroft west of Telegraph, as a major “station” and destination point for transit, including appropriate loading, unloading, and waiting facilities for commuters using campus shuttles, conventional buses, and anticipated bus rapid transit or light rail.

**Policy T-B2**

Devise ways to decrease mass transit travel times through the Southside.

- A. Establish a planning criterion that major bus routes and shuttles should run at least every ten minutes



**Figure 4.6. Diagram of proposed phasing strategy for, Telegraph Public Realm Plan.** (Source: Taecker Planning and Design)

from 7 a.m. to 10 p.m.

- B. On Telegraph Avenue, and on other Southside streets with transit service, vigorously enforce traffic laws prohibiting double parking and ensure that trucks and other vehicles making deliveries to local businesses use designated loading zones. Expand loading zones as needed to ensure that deliveries can be made efficiently without double-parking (see Policy T-F5).
- C. Continue to consult with AC Transit about timing and type of traffic signals on transit routes through the Southside. Maintain changes in the timing and type of signals to facilitate movement of buses while also improving safety for pedestrians.

The *Telegraph Public Realm Plan* (TPRP) was approved by the City Council in 2016. The plan established a vision and provides guidance for a shared street on the four northernmost blocks of Telegraph Avenue — from Dwight Way to Bancroft Way. The planning process included extensive input from community members such as vendors, merchants, property owners, and representatives from UC Berkeley and AC Transit. The plan calls for converting Telegraph Avenue north of Dwight into a shared street, which refers to a street that functions as shared public space, with nonmotorized activities as the core element. The plan also notes that it will need to be updated to include the future possibility of dedicated bus lanes.

In 2018, the City of Berkeley implemented a bus-only lane on the north side of Bancroft Way from Telegraph Avenue to Fulton Street, and a 2-way protected bikeway on the south side of Bancroft Way. The bus stop on Bancroft Way west of Telegraph was improved as well, in a partnership with UC Berkeley.

In the same year, the City of Berkeley implemented the Telegraph Avenue Loading Zone and Customer Parking Pilot Project. The pilot project addressed the issues of a perceived lack of visitor parking and the impacts of double parking, such as transit delay. It converted parking spaces that were previously loading zones into metered loading zones in the morning and general parking for the remainder of the day. It also consolidated two closely spaced bus stops on Telegraph Avenue into one stop at Haste Street. The pilot was adopted as a permanent program. This improvement to Telegraph Avenue, together with the Bancroft bus-only lane and two-way bikeway, worked toward implementation of the Southside Plan’s policies and objectives.

AC Transit is currently working on their **Telegraph Rapid Corridor Project** (part of Transit Performance Initiative – Round 3 [TPI3]), which includes the Berkeley portion of Telegraph Avenue as well as the Oakland portion, and Grand and West Grand Avenue in Oakland. The aim of the Rapid Corridor project is to increase the speed and reliability of transit service on this corridor. To achieve this objective, the project proposes to remove or relocate bus stops, install TSP hardware and software at signalized intersections, and implement a bus queue jump in the northbound direction at 52nd St. in Oakland. The Telegraph Rapid Corridor project will be constructed in 2023.

The City of Berkeley is currently working on a project called the **Southside Complete Streets** project. The goals of the project are to ensure safety for all street users, improve transit reliability and travel times, and support the economic and cultural vitality of the Southside neighborhood. The street segments that are the subject of the Southside Complete Streets project are: Bancroft Way from Piedmont Avenue to Milvia Street and Telegraph Avenue, Dana Street, and Fulton Street each from Dwight Way to Bancroft Way. The project evaluated a potential transit-only lane on Telegraph Avenue from Dwight to Bancroft Way, which is a one-way northbound segment of Telegraph. The project design concept was adopted by the Berkeley

City Council in February 2022. It includes widening the existing Bancroft transit lane between Dana Street and Fulton Street, extending the Bancroft transit lane such that it would run continuously on Bancroft from College Avenue to Shattuck Avenue, and adding a bus lane on Telegraph Avenue between Dwight and Bancroft as part of a “shared street” that significantly calm traffic for a plaza-like experience while reserving dedicated space for transit. The detailed design and construction of the Bancroft, Dana, and Fulton components of the project are fully funded. The Telegraph shared street/transit lane concept would require the acquisition of additional funding for detailed design and construction.

It is worth noting that AC Transit has separately acquired funding for a quick-build red transit lane on Durant Avenue between Ellsworth Street and College Avenue, and that the City plans to fund the extension of the red transit lane so that it starts west of Ellsworth at Shattuck, providing the Durant piece in the Bancroft/Durant one-way street couplet used by AC Transit Lines 51B and 6.

In mid 2022, the City of Berkeley started working on the **Telegraph Avenue Multimodal Corridor Project**. The project area spans Telegraph Avenue from Dwight Way to Woolsey Street (Oakland border). The

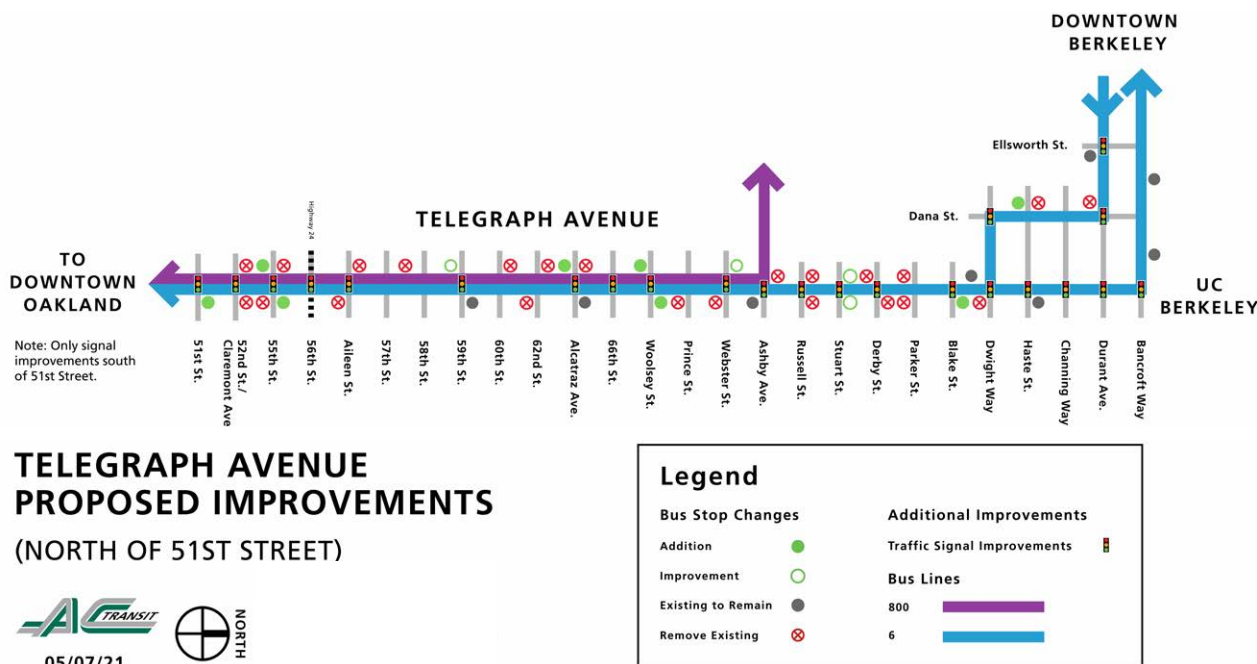


Figure 4.7. Proposed bus stop changes, AC Transit Telegraph Rapid Corridor project. (Source: AC Transit)

project will develop conceptual designs and conduct preliminary engineering for protected bike lanes, transit lanes, and pedestrian safety improvements. The project goals are to improve transit reliability and to improve traffic safety overall.

## Support

City Council has recently expressed support for BRT on Telegraph Avenue, as well as the above-described shared street with transit lane design for the northernmost four blocks of Telegraph Avenue.

This is a significant change from 2010, when City Council rejected implementation of BRT on Telegraph Avenue, citing stakeholder concerns about impacts on traffic, parking and loading. Instead, Council approved a proposal without bus-only lanes, focusing on improvements to bus stops, signage, transit signal priority, and proof-of-payment systems.

A decade after this action, City Council passed a new referral approving a letter drafted in support of reviving BRT on Telegraph Avenue

### Letter in Support of Reviving Berkeley Bus Rapid Transit

Send a letter to AC Transit, the Alameda County Transportation Commission, Assemblymember Buffy Wicks, and State Senator Nancy Skinner in support of expanding Bus Rapid Transit into Berkeley on Telegraph Avenue at the first possible opportunity. (City Council Meeting – March 10, 2020: Item #20, see Appendix A for details).

## Recommended Actions

A corridor plan is needed to analyze the varying conditions along the entire corridor. It will need to integrate a design for a shared transitway from Dwight Way to Bancroft Way.

1. Seek and acquire funding to implement the shared street with transit lane concept approved by City Council for Telegraph between Dwight and Bancroft.
2. Analyze any changes in transit reliability and speeds after implementation of the AC Transit [Telegraph Rapid Corridor](#) project.
3. Complete the [Telegraph Avenue Multimodal Corridor Project](#) by the end of 2024.

## Adeline Street

The Adeline Street corridor begins at its intersection with Shattuck Avenue in the north and extends to the Oakland border in the south, including its intersections with Stanford Avenue and Martin Luther King Jr. Way.

## Plans and Projects

The City of Berkeley [Adeline Corridor Specific Plan](#) was adopted by the Berkeley City Council in December 2020. The planning process included extensive community outreach to develop a long-range plan for the area along south Shattuck Avenue between Dwight Way and Adeline Street, and Adeline Street from Shattuck Avenue to the Oakland border.

The five priorities that were identified for the future of the Adeline Corridor are: land use and community character, housing affordability, economic opportunity, transportation, and public space. Although the [Adeline Corridor Specific Plan](#) does not detail a concept plan for BRT or bus-only lanes, there is strong support among some community groups for reducing vehicle speeds and volumes to improve safety on the corridor.

The City of Berkeley Measure T1 Bond included a pavement rehabilitation project on Adeline Street from Derby Street to Ashby Avenue. The project also included installation of protected bike lanes, bus boarding islands, and high-visibility crosswalks. The project completed construction in 2019.

The City and BART have been coordinating on a study of the feasibility of a lane reduction on Adeline Street between Ashby Avenue and Martin Luther King (MLK) Jr Way as a means of providing room for a public plaza with a protected bikeway adjacent to the Ashby BART station, see [Redesigning Adeline Street at Ashby BART](#). This plaza could provide a future location for the Berkeley Flea Market after the western parking lot at the Ashby BART station is developed into housing. The study responds in part to a Referral adopted by City Council in February 2020 calling for the analysis of a redesign of Adeline Street between Ward Street and MLK to prioritize a two-lane option for Adeline in order to increase safety while meeting the needs of public transit. The potential for converting an existing mixed-traffic lane in each direction of Adeline to a transit-only lane was included in this study. The traffic operations analysis, however, found that additional delay caused by the lane reduction could be significantly reduced

Line F

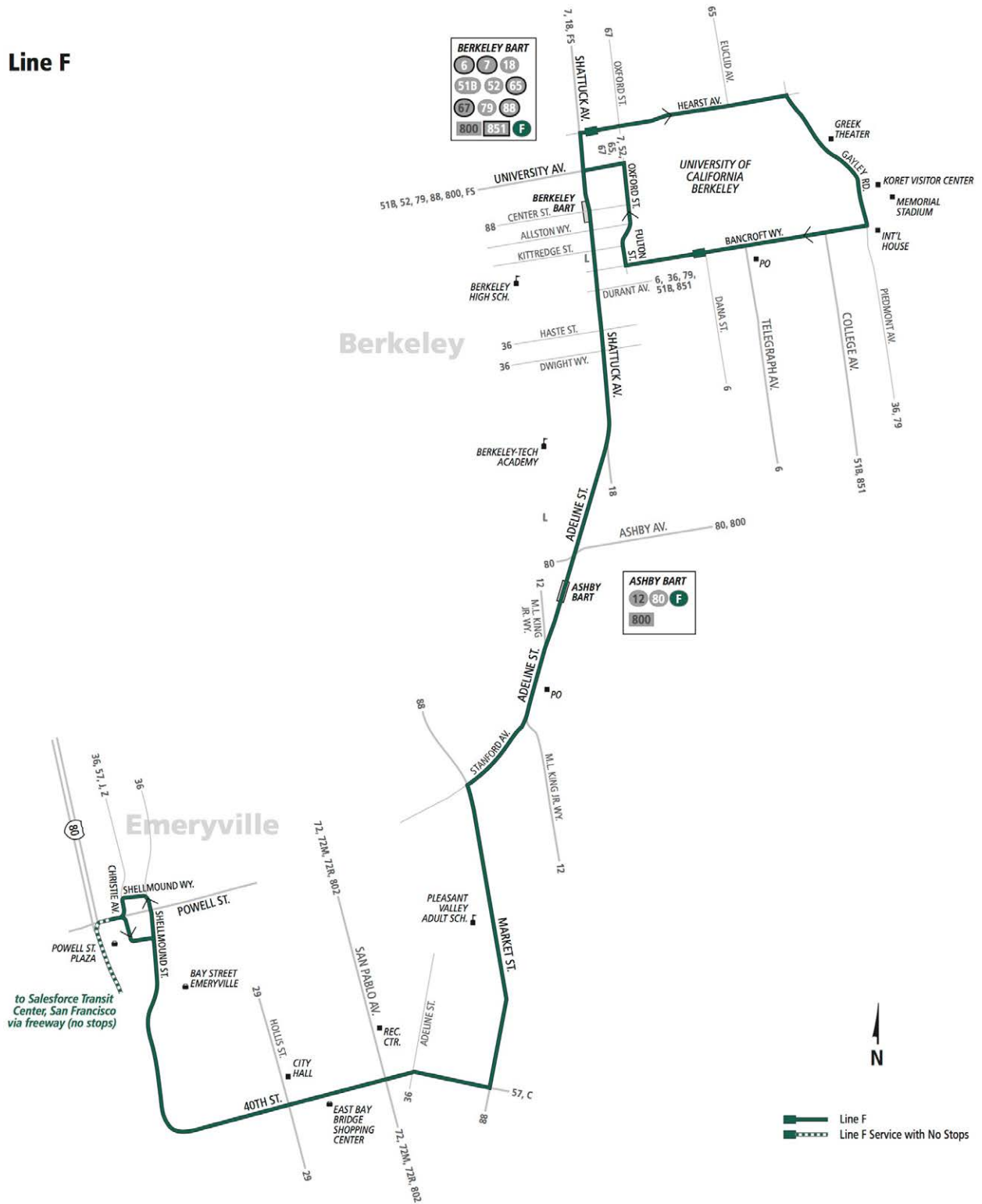
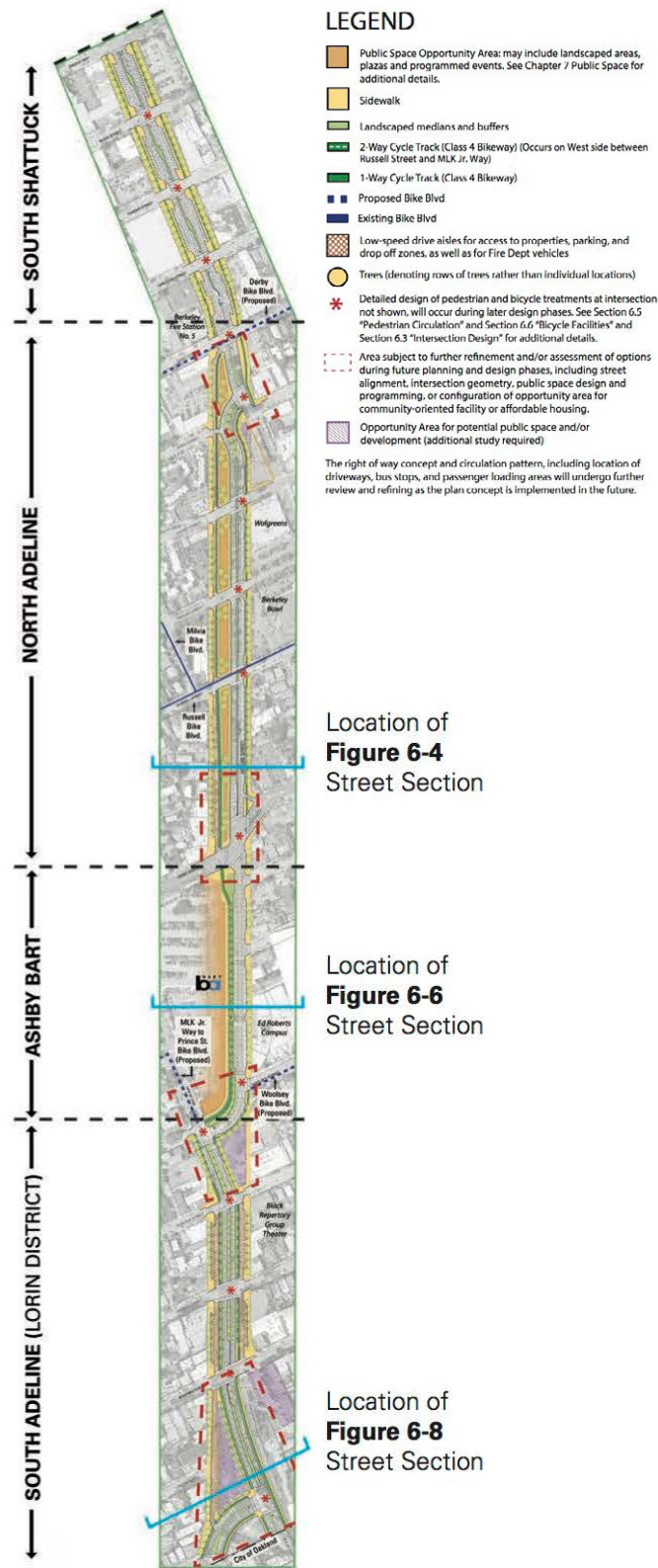


Figure 4.8. AC Transit Transbay Line F runs from Downtown Berkeley to San Francisco via Adeline Street and Emeryville. (Source: AC Transit)





**Figure 4.9. Transportation Concept, Adeline Corridor Specific Plan.**

by optimizing the traffic signal timing at the Adeline/Ashby and Adeline/MLK intersections. The inclusion of a queue jump lane for buses southbound approaching the Adeline/Ashby intersection would further reduce any transit delay. The results of the public engagement were that the option without a transit lane received much greater public support. Staff therefore has recommended that City Council adopt the option without a dedicated transit lane, but with the above described queue jump lane.

In late 2022, the City of Berkeley will start on a new project for "South Adeline" — from MLK Jr Way to the Oakland border. This *Adeline Street Transportation Improvements* project will develop preliminary engineering plans for multimodal improvements, including protected bikeways, potential bus-only lanes and other transit improvements, and pedestrian safety improvements. This project implements the *Adeline Corridor Specific Plan* by moving the plan's design concepts into the preliminary engineering phase.

**Recommended Actions**

The Adeline corridor is a relatively low priority for BRT or transit-only lanes for AC Transit based on ridership levels. However, the Transbay Line F connects Berkeley with Emeryville, which BART does not serve, and San Francisco.

Despite lower ridership in comparison to other major corridors in Berkeley, Adeline Street may be more feasible to implement a transit-only lane sooner than on some other major corridors for a few reasons. Large right-of-way widths allow greater flexibility in reconfiguring lanes. Additionally, Adeline Street is not a State Route and does not require close coordination with or approval from the State Department of Transportation. Feedback gathered during the development of the *Adeline Corridor Specific Plan* shows that area residents are eager for implementation of transportation improvements.

Future changes in ridership may demand a full upgrade to BRT, but current conditions show that implementing transit-only lanes on Adeline Street is feasible and can improve transit operations.

1. Complete Adeline corridor transportation design concept by the end of 2025.  
 Adjacent to Ashby BART station: by 2023  
 South of Ashby BART station: by 2024  
 North of Ashby Avenue: by 2025

# Shattuck Avenue

The Shattuck Avenue corridor spans from Shattuck Place in the north to Adeline Street in the south, encompassing the north Shattuck, Downtown, and south Shattuck areas.

## Plans and Projects

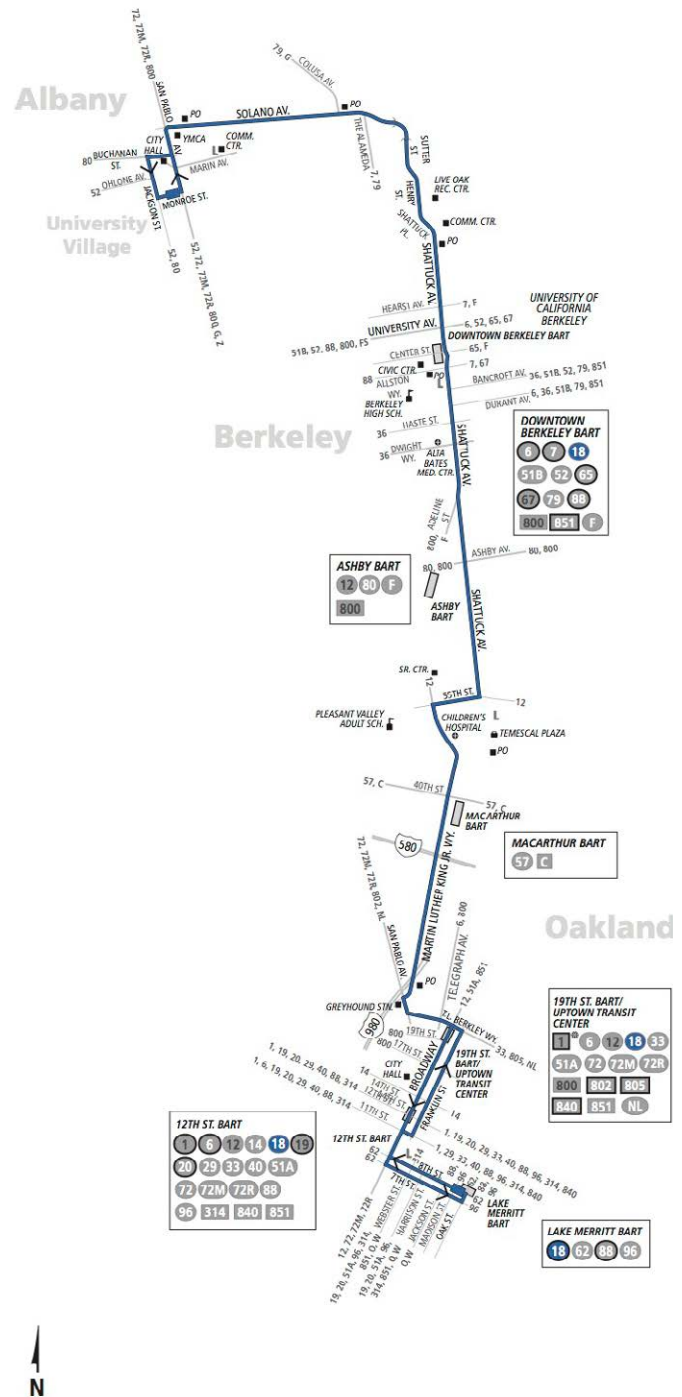
AC Transit’s *Major Corridors Study* recommends Rapid Bus investments to the Shattuck Avenue / Martin Luther King Jr. Way corridor, given the corridor’s physical dimensions and projected ridership. Dedicated transit lanes on certain segments, to be determined, could further increase travel speed and ridership.

AC Transit’s *Service Expansion Plan (SEP) – AC Go* implemented immediate-term improvements to the Shattuck Avenue / Martin Luther King Jr. Way corridor in Spring 2017. Originally a single route, Line 18 was split into three different routes to improve reliability, as it was one of the longest routes in AC Transit’s District. Portions of the route were moved from Shattuck Avenue to Martin Luther King Jr. Way, and segments from Downtown Oakland to Montclair shifted to another route.

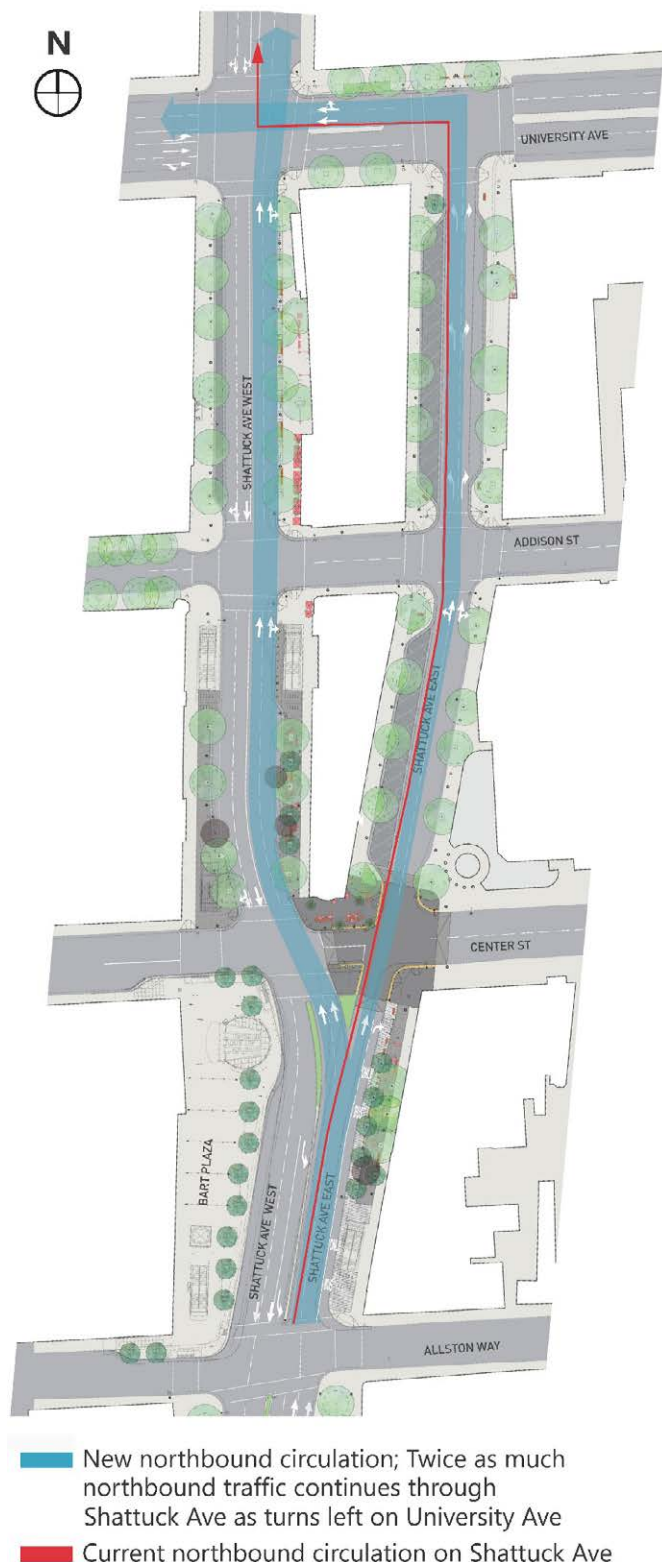
- A Transit Priority Zone is an area concentrated with intensive transit improvements. It includes design elements to minimize delay, such as single or double transit lanes, off-board payment area, boarding islands, parking and turn restrictions, pedestrian enhancements, as well as bus stop optimization, sidewalk extensions, TSP, and other elements.
- The City of Berkeley *Adeline Corridor Specific Plan* includes the southern portion of Shattuck Avenue, between Dwight Way and Adeline Street, in its project area.

The City of Berkeley *Shattuck Reconfiguration and Pedestrian Safety Project* completed construction in 2021. The project reconfigured three blocks of Shattuck Avenue from Allston Way to the University Avenue intersection, see Figure 4.11. It converted the west (southbound) leg of Shattuck Avenue into a four-lane, two-way street, eliminating the current circuitous movement for northbound traffic at the Shattuck/ University intersection. The project included bus stop consolidation on northbound Shattuck Avenue, and other pedestrian safety improvements. The earlier improvements to bus stops on the south side of Shattuck Avenue at the downtown plaza complement

### Line 18



**Figure 4.10. AC Transit Line 18 runs from University Village in Albany to Lake Merritt BART station in Oakland via Berkeley, including on the entire length of Shattuck Avenue within Berkeley.** (Source: AC Transit)



**Figure 4.11. The Shattuck Reconfiguration and Pedestrian Safety Project.**

the *Shattuck Reconfiguration* improvements, see Figure 4.12.

The City of Berkeley *South Shattuck Strategic Plan* (1998) identified its goal in transportation to make improvements “which complement economic development and urban design goals, encourage the use of alternatives to the automobile, and preserve the quality of life in residential neighborhoods.”

### Transportation Policy #4

Support alternatives to the automobile (transit, shuttles, bicycling, and walking) by developing and implementing policies which encourage non-automobile travel, including a plan for targeted street improvements.

### Recommended Actions

AC Transit identified Shattuck Avenue / Martin Luther King Jr. Way as a major corridor, as it was originally a single line. With implementation of short-term improvements through AC Go, Line 18 now runs largely on Shattuck Avenue in Berkeley and largely on Martin Luther King Jr. Way in Oakland. As such, the focus for the City of Berkeley is on Shattuck Avenue.

1. Incorporate Transit Priority Zone elements to the Downtown portion of Shattuck Avenue.
2. Incorporate transportation recommendations for south Shattuck Avenue between Dwight Way and Adeline Street from the *Adeline Corridor Specific Plan*.
3. Complete Shattuck Avenue transit corridor plan by the end of 2027.



**Figure 4.12. Bus stop improvements at downtown plaza.** (Source: AC Transit)



## University Avenue

The University Avenue corridor spans from Oxford Street in the east at the UC Berkeley campus to Marina Boulevard in the west at the Berkeley Marina.

### Plans and Projects

The City of Berkeley *University Avenue Strategic Plan (1996)* identified the opportunity for University Avenue to be a multimodal corridor, see Figure 4.14.

### Policy 18

Improve transit service within the University Avenue study area and tie to existing and future regional transit facilities.

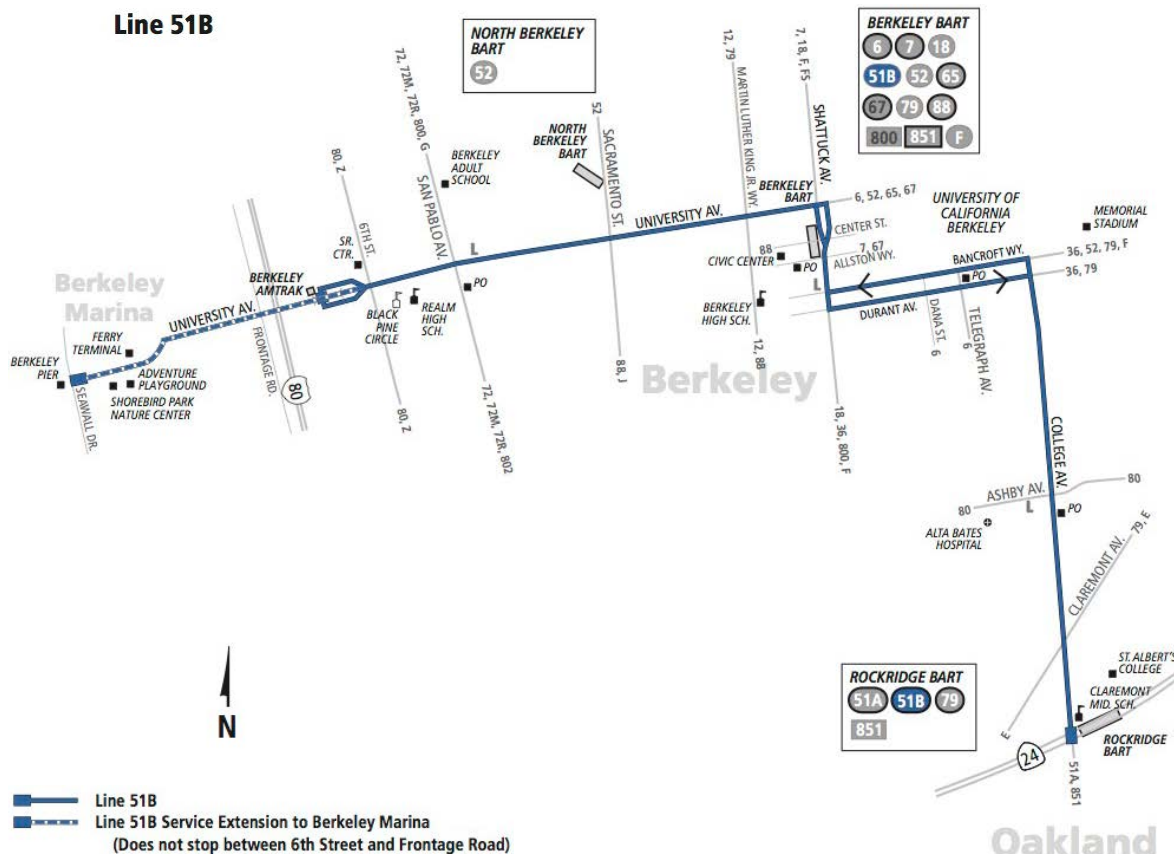
The plan demonstrated community support for frequent transit for the corridor, such as light-rail or a special electric shuttle linking West Berkeley

and Downtown. The plan identified the importance of making regional transit connections. The City's Redevelopment Agency considered creating a multimodal transit hub at the foot of University Avenue (on the site of Spencer's parking lot).

AC Transit's *Major Corridors Study* identified University Avenue as part of the Broadway/College Avenue/University Avenue Corridor. The study recommended implementing Rapid Bus improvements to serve the high ridership on this corridor. It also recommended that the University Avenue segment be linked with the Telegraph Avenue corridor. Linking University Avenue with the Telegraph Avenue corridor by way of Shattuck Avenue would combine the two corridors into a BRT line.

### Recommended Actions

1. Complete University Avenue transit corridor plan by end of 2029.



**Figure 4.13.** AC Transit Line 51B runs on University Avenue, connecting to Rockridge BART via Shattuck Avenue, Durant Avenue and Bancroft Way, and College Avenue. (Source: AC Transit)



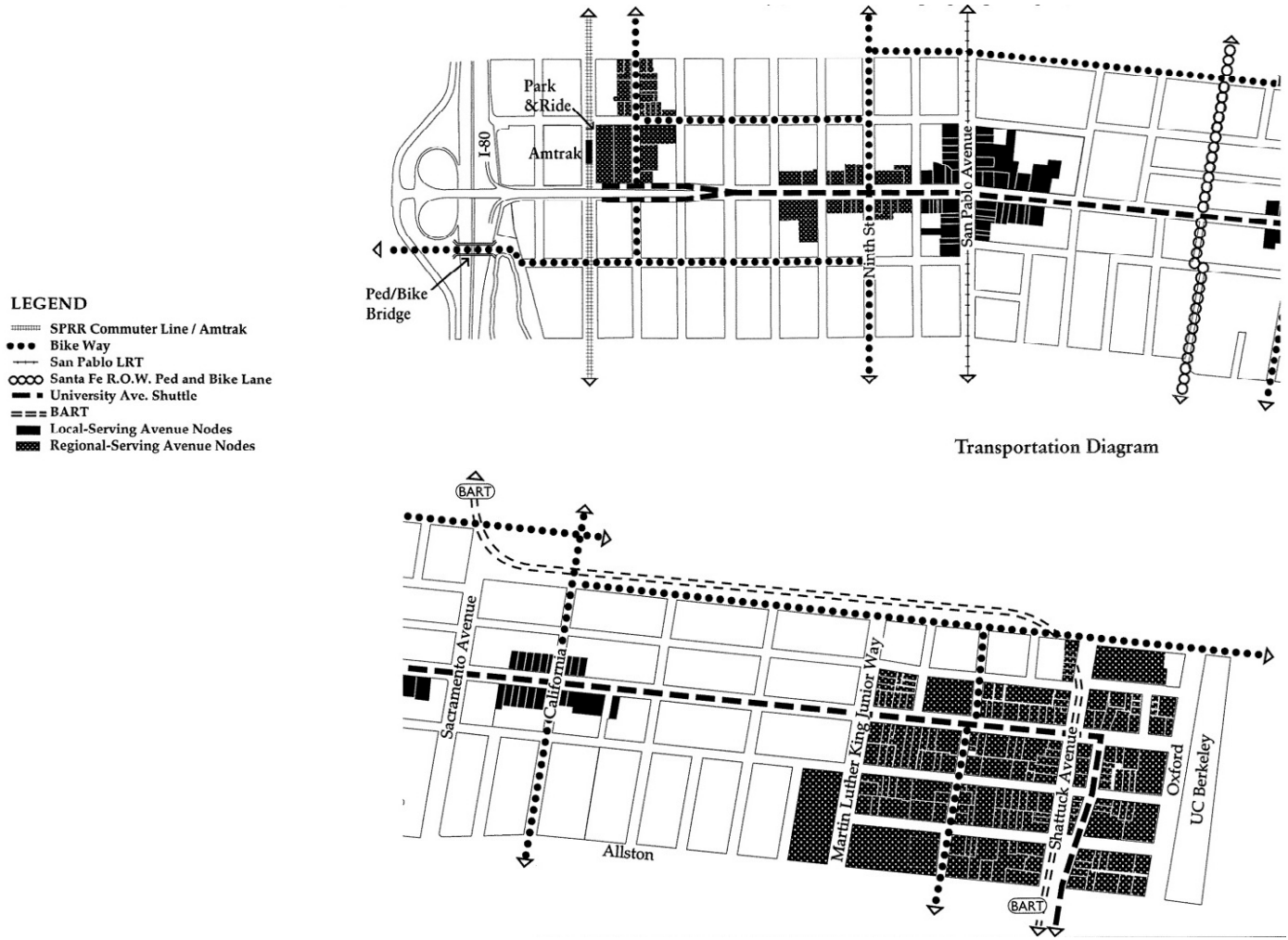


Figure 4.14. Transportation Diagram, University Avenue Strategic Plan (1996).



# 05

## APPENDIX



Rigel Robinson  
Councilmember District 7

## REVISED AGENDA MATERIAL

**Meeting Date:** March 10

**Item Number:** 20

**Item Description:** Letter in Support of Reviving Berkeley Bus Rapid Transit

**Submitted by:** Councilmember Rigel Robinson

Addition of Councilmember Harrison and Mayor Arreguín as co-sponsors. Addition of AC Transit ridership data along the Telegraph corridor.



CONSENT CALENDAR  
March 10, 2020

To: Honorable Mayor and Members of the City Council  
 From: Councilmember [Rigel Robinson](#), [Councilmember Harrison](#), and [Mayor Arreguín](#)  
 Subject: Letter in Support of Reviving Berkeley Bus Rapid Transit

RECOMMENDATION

Send a letter to AC Transit, the Alameda County Transportation Commission, Assemblymember Buffy Wicks, and State Senator Nancy Skinner in support of expanding Bus Rapid Transit into Berkeley on Telegraph Avenue at the first possible opportunity.

POLICY COMMITTEE RECOMMENDATION

On February 18, 2020, the Facilities, Infrastructure, Transportation, Environment, and Sustainability Committee adopted the following action: M/S/C (Harrison/Robinson) to send the item, as revised, to the City Council with a Positive Recommendation.

BACKGROUND

Bus Rapid Transit, or BRT, is a growing tool in urban planning that centers the concept of transit right-of-way. Dedicated bus lanes can increase bus speeds by 6 to 12 percent,<sup>1</sup> reducing delays by ensuring that buses do not have to slow or stop for other vehicles (which accounts for 57 percent of delays), or wait to merge back into traffic after making a stop (24 percent of delays).<sup>2</sup>

Traffic congestion disproportionately affects public transit operations because of the multiplier effect — late buses have to pick up more passengers at every stop, causing them to fall even more behind schedule. This effect also means that more buses need to be deployed to maintain scheduled frequencies, costing taxpayers money.<sup>3</sup>

BRT makes it possible for transit agencies to run reliable bus service independent of how many cars are on the road. However, it is also intended to benefit non-transit users. Buses and cars sharing lanes poses a danger to drivers, who are put at risk by buses that suddenly merge into traffic or slow to make a stop. Once dedicated bus lanes are implemented, emergency vehicles can use them to bypass private automobile traffic, improving response times. Furthermore, the traffic calming, sidewalk widening, and general public realm improvements that are encompassed in a comprehensive BRT

<sup>1</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-2

<sup>2</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-12

<sup>3</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-2



project are community benefits that enhance the streetscape for pedestrians, bicyclists, and local businesses alike.<sup>4</sup>

The AC Transit East Bay Bus Rapid Transit project was originally proposed to be implemented as a three-city project, connecting the Cities of Berkeley, Oakland, and San Leandro. The proposal would have provided bus service connecting the Downtown Berkeley and Bay Fair BART stations that was 18 percent faster, more frequent, and more reliable than current service. By 2015, BRT was expected to attract 6,820 new riders to transit per weekday over the no-build alternative, reducing vehicle miles traveled (VMT) by 6.2 million per year.<sup>5</sup>

As part of an AC Transit Major Investment Study (MIS) process, the Berkeley City Council adopted implementation of BRT as an official City policy in a 2001 unanimous vote. The policy, Resolution 61,170-N.S., states that Berkeley has a “Transit First Policy that supports the creation of exclusive transit lanes,” and specifically calls out supporting “bus rapid transit as the preferred transit mode” on Telegraph Avenue. This aligns with the findings of the MIS, which found BRT to be more cost-effective and beneficial than any less robust improvements. The study also found Telegraph Avenue to be a better route for BRT than College Avenue or Shattuck Avenue.<sup>6</sup>

However, in a 2010 reversal, the Council ~~rejected~~ ~~voted against~~ Telegraph BRT ~~in~~ by a 4-2-2 vote, citing stakeholder concerns about impacts on traffic, parking, and loading.<sup>7</sup> Instead, Council voted 8-0 for a “reduced impact” proposal without bus-only lanes, focusing on improving bus loading areas and signage and implementing priority signalization and a proof-of-payment system.<sup>8</sup> Because this proposal was not studied in AC Transit’s BRT Draft Environmental Impact Report, it could not be legally incorporated into the Bus Rapid Transit plan. As a result, BRT is currently only being implemented in the Cities of Oakland and San Leandro.

Since 2010, Berkeley’s political environment and the needs of its residents have changed. Public transit demand, population, and employment in the East Bay are all growing — by 2040 in AC Transit’s service area, population is projected to grow by 30 percent and employment by 40 percent. By 2025 along the Telegraph corridor, population is expected to grow by 16 percent and employment by 23 percent.<sup>9</sup> In the next three years, UC Berkeley’s student enrollment will reach 44,735, a 33.7 percent increase over original projections.<sup>10</sup>

<sup>4</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-3

<sup>5</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-19

<sup>6</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-13

<sup>7</sup> <https://www.eastbaytimes.com/2010/05/06/berkeley-opposes-bus-only-lanes-for-transit-project/>

<sup>8</sup> [https://www.cityofberkeley.info/uploadedFiles/Clerk/Level\\_3\\_-\\_City\\_Council/2010/05May/2010-05-18\\_Item\\_02\\_Minutes\\_for\\_Approval.pdf](https://www.cityofberkeley.info/uploadedFiles/Clerk/Level_3_-_City_Council/2010/05May/2010-05-18_Item_02_Minutes_for_Approval.pdf)

<sup>9</sup> <http://www.actransit.org/wp-content/uploads/Draft-Final-MCS-Report.pdf>

<sup>10</sup> <https://www.berkeleyside.com/2019/02/21/uc-berkeley-student-enrollment-projected-to-reach-44735-in-next-3-years>

Coupled with a burgeoning housing crisis that is pushing residents to live farther from their jobs, these numbers pose significant traffic and congestion challenges. Berkeley residents are commuting to Oakland and San Leandro, and vice versa. UC Berkeley students are living farther from campus or commuting from home. AC Transit's Draft EIR found that the number of Berkeley intersections that are severely congested during rush hour will increase from one to five by 2025 without BRT.<sup>11</sup>

A dedicated bus lane on Telegraph connecting Berkeley and Oakland would build much-needed public transit infrastructure into a densifying neighborhood that increasingly relies on multimodal transportation. During weekday peak times between the Oxford & Addison and Telegraph & Alcatraz stops, the 6 bus carries approximately 190 riders per hour in each direction, for a total of 380 per hour. The maximum number of riders observed on a bus at any one time was 38 – a typical 40-foot bus has 36 seats, but can accommodate up to 50-60 people. While there is clear demand for public transit in the Telegraph corridor, there is still capacity for improved bus service to attract new riders.

A BRT system would better serve existing riders; increase bus capacity, frequency, and reliability; and bring in new riders with improved service. BRT was projected to attract a total of 39,200 additional riders by 2035.<sup>12</sup> A significant fraction of these riders would be replacing their car trips with efficient, reliable public transit — when San Pablo Avenue adopted rapid bus routes, 19 percent of their riders were former drivers.<sup>13</sup> Providing an attractive public transit alternative to driving is crucial for reducing vehicle miles traveled, encouraging people to get out of their cars, and ensuring that roads are less congested for Berkeley residents who absolutely need to drive.

In October, the City of Berkeley released a draft of the Berkeley Electric Mobility Roadmap.<sup>14</sup> The draft roadmap proposes that “The City will support opportunities to explore and advance bus rapid transit routes, using electric buses, which can provide mobility and health benefits particularly for low-income communities of color.”

In October, the Council unanimously passed a referral to move forward with the Telegraph Public Realm Plan shared streets proposal, which will reconfigure the first four blocks of Telegraph Avenue to prioritize pedestrians, bicyclists, and buses over automobile thru traffic.<sup>15</sup> Over the next few years, the City will be identifying and applying for regional funding sources, going through multiple stages of design and planning, and engaging in community outreach and public input. This presents a unique opportunity for Telegraph Avenue to be reintegrated into the Bus Rapid Transit plan.

<sup>11</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-12

<sup>12</sup> BRT for Berkeley: A Proposal for Consideration, fig. 1-7

<sup>13</sup> BRT for Berkeley: A Proposal for Consideration, pg. 1-20

<sup>14</sup> <https://www.cityofberkeley.info/EVCharging/>

<sup>15</sup> [https://www.cityofberkeley.info/Clerk/City\\_Council/2019/10\\_Oct/Documents/2019-10-29\\_Item\\_30\\_Referral\\_Telegraph\\_Shared\\_Streets\\_-\\_Rev.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2019/10_Oct/Documents/2019-10-29_Item_30_Referral_Telegraph_Shared_Streets_-_Rev.aspx)



Letter in Support of Reviving Berkeley Bus Rapid Transit

CONSENT CALENDAR March 10, 2020

Staff should send the attached letter of support to AC Transit, the Alameda County Transportation Commission, Assemblymember Buffy Wicks, and State Senator Nancy Skinner.

#### FINANCIAL IMPLICATIONS

None.

#### ENVIRONMENTAL SUSTAINABILITY

The City of Berkeley's Climate Action Plan supports BRT as a key strategy to reducing carbon emissions, stating that the City should "continue timely assessment and development of proposed East Bay Bus Rapid Transit (BRT) system." The Plan stresses the importance of BRT "given the expected significant increase in the Bay Area's population (and associated traffic congestion) in that same time period."<sup>16</sup> Implementation of Bus Rapid Transit will reduce vehicle miles traveled (VMT) by 6.2 million per year.

#### CONTACT PERSON

Councilmember Rigel Robinson, (510) 981-7170

Attachments:

1: Letter

2: BRT for Berkeley: A Proposal for Consideration

[https://www.cityofberkeley.info/uploadedFiles/Planning\\_\(new\\_site\\_map\\_walk-through\)/Level 3 - General/LPA REPORT FINAL 090809 FULL REPORT.pdf](https://www.cityofberkeley.info/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/LPA_REPORT_FINAL_090809_FULL_REPORT.pdf)

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<sup>16</sup> [https://www.cityofberkeley.info/uploadedFiles/Planning\\_and\\_Development/Level 3 - Energy and Sustainable Development/Berkeley%20Climate%20Action%20Plan.pdf](https://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Energy_and_Sustainable_Development/Berkeley%20Climate%20Action%20Plan.pdf)

## Council Referrals to Transportation and Infrastructure Commission

City Council's [Regular Meeting on 10/11/2022](#)

**Item #18: Referral to the Transportation and Infrastructure Commission and City Manager to Consider and Make Recommendations Regarding the Policy of Deploying Rectangular Rapid Flashing Beacons and Other Treatments at Dangerous or High-Collision Pedestrian and Bicycle Intersections**

**From: Councilmember Harrison (Author)**

**Recommendation:** Referral to the Transportation and Infrastructure Commission and City Manager to consider and make recommendations regarding the policy of deploying Rectangular Rapid Flashing Beacon (RRFB) and other treatments at dangerous or high-collision pedestrian and bicycle intersections.

**Financial Implications:** See report

Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140

**Action:** Councilmember Taplin added as a co-sponsor. Approved recommendation.



Sub Quorums	Goal
<b>5-Year Paving Plan</b>	-Review proposed 5-year paving plan for conformance with the paving policy if any modifications or revisions are made to the approved plan.
<b>Long Term Road Surfacing Strategic Plan</b>	-Work with staff to develop goals, objectives, and scope for Strategic Plan -Consider function of roadways -Oversee work of consultant developing the Strategic Plan
<b>Public Works Funding Measure</b>	-Coordinate with staff to review the implementation of Measure T-1 Phases 1 and 2. -Review merits of future funding mechanisms (e.g. parcel tax, other taxes, bonds, and/or other mechanisms.)
<b>RV Waste Disposal</b>	-Monitor options for waste disposal - voucher option vs nonprofit option.