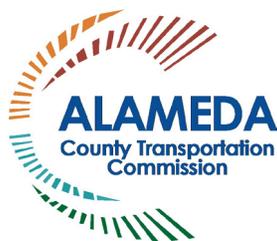


# East 14th St./ Mission Blvd. and Fremont Blvd. Multimodal Corridor Project: **SCOPING PHASE EXECUTIVE SUMMARY**

Fall 2020



# E. 14th St./Mission Blvd. and Fremont Blvd. Multimodal Corridor Project

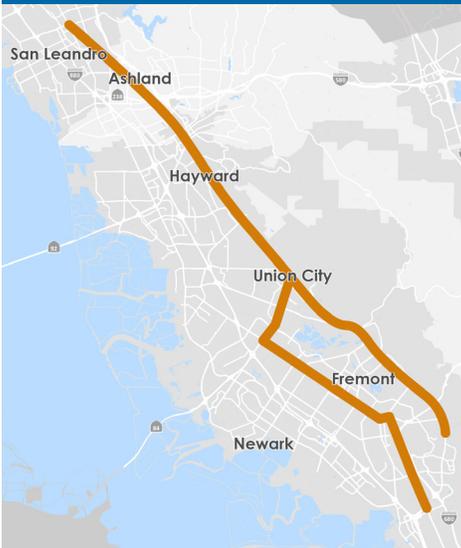
## EXECUTIVE SUMMARY

Fall 2020



## Project Overview

### Project Corridor



East 14th Street, Mission Boulevard, and Fremont Boulevard connect the communities of central and southern Alameda County with regional transportation facilities, employment areas, and activity centers. The corridor extends through five jurisdictions (San Leandro, unincorporated Alameda County, Hayward, Union City, and Fremont) and provides connections throughout the inner East Bay paralleling Interstate 880 and BART.

The E. 14th St./Mission Blvd. and Fremont Blvd. Multimodal Corridor Project (Project) identifies specific near-, mid-, and long-term multimodal mobility improvements for implementation. The Project Corridor extents include the following:

- **E. 14th St. and Mission Blvd.** from Davis St. in San Leandro to Ohlone College (south of I-680) in Fremont
- **Decoto Rd.** from Mission Blvd. in Union City to Fremont Blvd. in Fremont
- **Fremont Blvd.** from Decoto Rd. in Fremont to Washington Blvd. and the planned Irvington BART station
- **Osgood Rd. and Warm Springs Blvd.** in Fremont from the planned Irvington BART station to SR 262 (south of Warm Springs BART)

### Study Area at a Glance

**5 local jurisdictions**

**314,000 residents**

**90,000 employees**

**14 Priority Development Areas**

**120 signalized intersections**

**16,800 to 36,000 vehicles per day**

**2/3 of corridor with bike lanes**

**7 transit providers plus public and private shuttles**

**7 BART stations, 2 Capitol Corridor stations, 1 ACE station (shared with Amtrak)**

### Project Goals

Multimodal improvements for the Study Area have been developed to advance the following goals:

- Support planned long-term growth and economic development
- Address the range of mobility needs for those living and working in the Study Area
- Move people more efficiently within the corridor
- Increase use of alternate travel modes
- Improve connectivity between transportation modes
- Provide a safe and convenient environment for pedestrians, bicyclist, and transit users
- Provide flexibility for future changes in transportation technology

### Project Work to Date

The Project's work completed to date is part of the scoping phase to identify long-term improvements and near- and mid-term projects that achieve the overall Project's multimodal goals, are technically feasible, and are supported by agency and community stakeholders.

### Next Steps

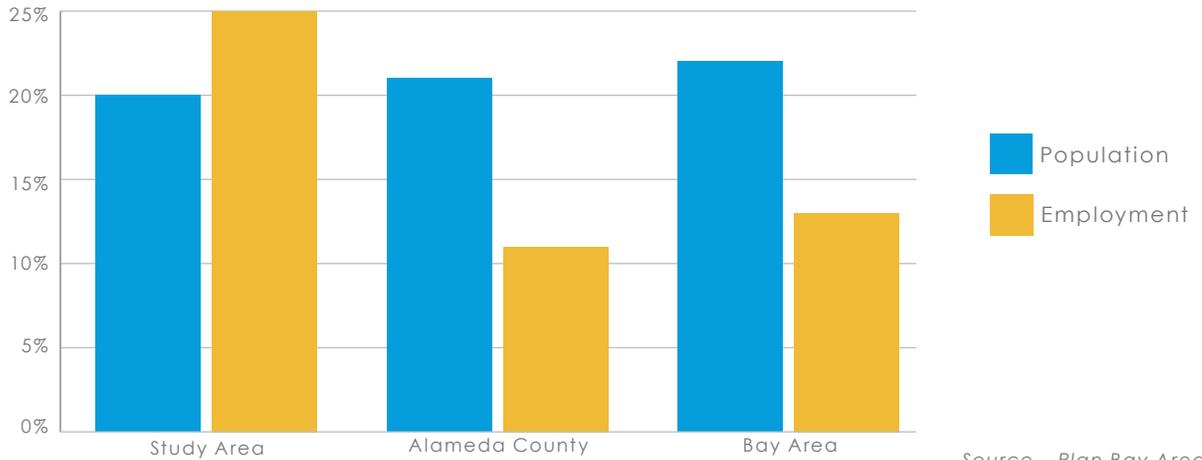
Next steps for the Project focus on advancing the recommended improvements to implementation and construction. These next steps include project development, environmental clearance, final design, and funding.

# Demographics

## Significant Employment Growth Projected

Total employment in the Study Area is projected to grow by 25 percent between 2020 and 2040, double the rate for Alameda County as a whole and for the nine-county Bay Area region. Population in the Study Area is projected to grow at a rate comparable to the rest of the county and region.

STUDY AREA GROWTH 2020 TO 2040

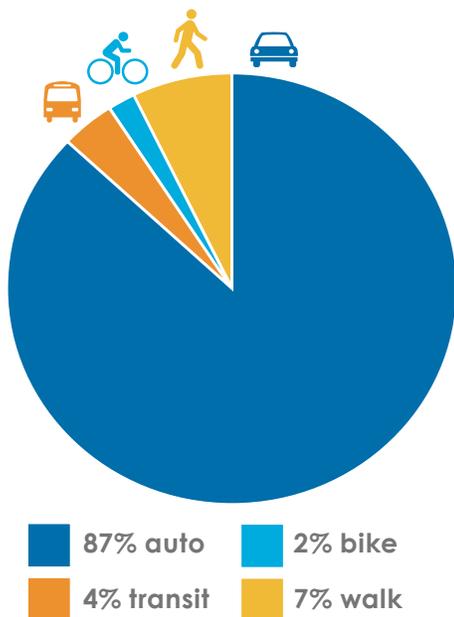


Source – Plan Bay Area 2040

# Travel Markets

## Most trips made by auto

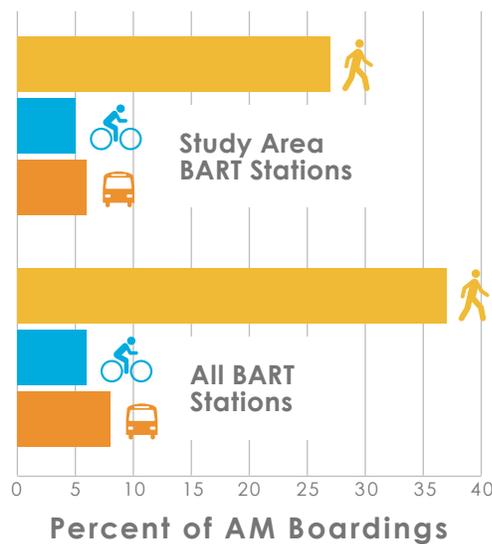
Trips by auto (including drive-alone plus rideshare) make up almost 90 percent of trips for the Study Area.



Source – Alameda Countywide Model, 2018

## BART mode of access

Within the Study Area, a smaller share of BART passengers walk and take the bus to reach the station as compared to the BART system as a whole.



Source – 2015 BART Customer Satisfaction Survey

## Trip Length

**28%** of trips in the Study Area are two miles or less

**55%** of trips are five miles or less

These shorter trips in the Study Area can benefit from pedestrian, bicycle, and transit improvements.

## Safety

### Fatal and Severe Injury Collisions

**84** fatal or severe injury collisions over five years

**32** involving pedestrians

**10** involving bicyclists

Between June 2012 and May 2017, half of fatal and severe collisions involved a pedestrian or bicyclist.

### Countywide High-Injury Network

**40%** of the corridor is part of the high-injury PEDESTRIAN network

**25%** of the corridor is part of the high-injury BICYCLIST network

The 2019 Countywide Active Transportation Plan identifies several portions of the corridor as part of the countywide high-injury network.

## Traffic Operations

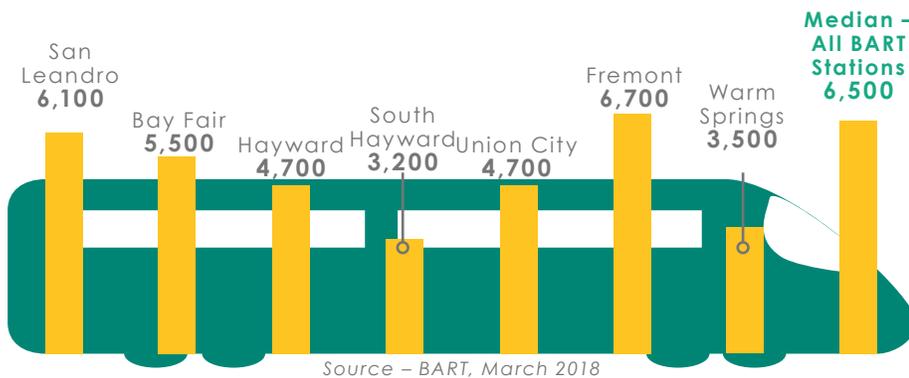
Six intersections currently operate over capacity:

- Foothill Blvd. and A St.
- Mission Blvd. and Niles Canyon Rd./Niles Blvd.
- Mission Blvd. and Mowry Ave.
- Mission Blvd. and I-680 southbound ramps
- Fremont Blvd. and Decoto Rd.
- Fremont Blvd. and Automall Pkwy.

## Transit

### BART ridership

Ridership at BART stations in the Study Area is generally lower than for the BART system as a whole.



### Travel Time Comparison - San Leandro to Fremont

BART is currently twice as fast as driving for end-to-end travel during the PM peak. This highlights the need for strong connections to BART to leverage its travel time advantage.



### Bus Ridership Facts

- Bus service frequencies along the corridor are as high as 13 buses per hour, accounting for multiple transit providers and service types.
- AC Transit Lines 10 and 99 have the highest bus ridership in the Study Area. Each carries more than 3,000 riders per day.
- 40% of bus passengers in the Study Area board at a BART station.



## Agency Outreach and Coordination

### TECHNICAL ADVISORY COMMITTEE (TAC)

The TAC consisted of staff from local jurisdictions and transportation agencies along the Project Corridor. TAC members included agency staff from the City of San Leandro, County of Alameda, City of Hayward, City of Union City, Union City Transit, City of Fremont, Caltrans, AC Transit, and BART.

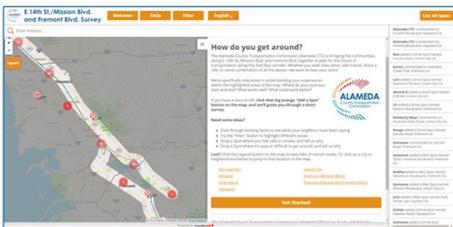
### POLICY ADVISORY COMMITTEE (PAC)

The PAC consisted of elected officials representing the local jurisdictions and transportation agencies along the Project Corridor. PAC members included commissioners from each of the local jurisdictions plus AC Transit.

Throughout the Project period, outreach and engagement activities were held with partner agencies and community stakeholders through a combination of one-on-one, small group, large group, and online formats.

These activities were essential for gathering input and feedback from those who live, work, and travel along the Project Corridor, and for shaping the Project's recommendations.

## Community Outreach



### ONLINE MAP SURVEY

The first phase of stakeholder outreach occurred from May to July 2018 and included an online map-based survey that allowed community members to identify transportation issues and needs along the Project Corridor. The comments provided by community members were used to inform the technical analysis of existing conditions and to identify needed improvements for the Study Area.



### FOCUS GROUP MEETINGS

The second phase of stakeholder outreach occurred from January to March 2019 and included focus group meetings with community stakeholders. The meetings were used to solicit input on the draft improvement concepts and identify additional project improvements to be incorporated. Seven focus group meetings were held, with the meetings representing a combination of geographic focus groups for specific cities plus topic-specific groups for transit riders, bicyclists, and pedestrians.



### OPEN HOUSE WORKSHOPS

The third phase of stakeholder outreach occurred during October and November 2019 and included a series of in-person open house workshops combined with an interactive online workshop. The workshops were used to receive broad feedback on the draft long-range concept and recommended projects and to establish support for future project implementation. Five in-person open house meetings were held.

## Long-Term Concepts

Two long-term improvement concepts were developed and analyzed to understand multimodal benefits and potential tradeoffs. The concepts included combinations of the following improvements:

- Bus-Only Lanes/Bus Rapid Transit
- Rapid Bus
- Microtransit/Flex
- Mobility Hubs
- East Bay Greenway Extension
- On-Street Protected Bike Lanes

Both long-term improvement concepts addressed the transportation goals for the Project Corridor and Study Area, but were developed to reflect a range of infrastructure investment levels and potential benefits. Concept #1 represented a higher level of investment, while Concept #2 represented a lower level of infrastructure investment.

## Evaluation Process

The evaluation of the long-term concepts was completed through three tiers.

**Tier 1 Analysis:** This analysis was a high-level engineering feasibility assessment that focused on existing right of way widths and other physical constraints that could impact project improvement costs and implementation timeframes.

**Tier 2 Analysis:** This analysis quantified demographic and accessibility benefits associated with the long-term concepts, in addition to community priorities and preferences.

**Tier 3 Analysis:** This analysis quantified the long-term (year 2040) multimodal system performance.



## Evaluation Results

### Transit

- Both bus-only lanes/bus rapid transit and Rapid Bus result in increased transit ridership.
- Bus-only lanes result in higher transit ridership than Rapid Bus, particularly in Communities of Concern.
- All mobility hub locations show potential increases in transit ridership due to first- and last-mile improvements, with the highest transit ridership increases are forecast at San Leandro, Fremont, and Warm Springs BART stations.

### Bicycle and Pedestrian

- Bicyclist volumes in the Study Area are projected to more than double by 2040, with the greatest increase in bike volumes forecast in Union City and Fremont.
- Community focus groups stated a preference for both the East Bay Greenway Extension and on-street protected bike lanes

### Demographics

- For Year 2040 conditions, the highest population totals are projected around the Bay Fair BART and Fremont Capitol Corridor/ACE stations.
- The highest employment totals for Year 2040 conditions are projected around the Warm Springs and San Leandro BART stations.

### Sustainability

- Given that the proposed improvements focus on facilitating non-auto travel options, both concepts are projected to reduce vehicle miles traveled (VMT), which will in turn result in reduced greenhouse gas emissions.
- For long-term conditions, Bus-Only Lanes result in a greater VMT reduction than Rapid Bus.



## Bus-Only Lanes and Rapid Bus

### FEATURES OF BUS-ONLY LANES

Bus-only lanes are a long-term recommendation the Project Corridor between San Leandro BART and South Hayward BART, extending through San Leandro, Ashland, Cherryland, and Hayward.

- Part of BRT (bus rapid transit) system
- Buses have a speed advantage compared to automobiles
- Raised bus stop platform
- Tickets are purchased on the platform, not on the bus
- Traffic signal technology reduces traffic delays
- Bus stops have real time arrival data for the next bus
- Separate stops for BRT and local bus service
- Amenities like wifi, cushioned seats, and space for luggage

Bus-only lanes may be in the center of the street or along the outside curb.



Source – Kittelson & Associates



Source – Kittelson & Associates

### FEATURES OF RAPID BUS

Rapid Bus is recommended along the Project Corridor between South Hayward BART and Warm Springs BART, extending through the communities of Hayward, Union City, and Fremont. Rapid Bus improvements are also a potential first step in implementing bus-only lanes from San Leandro BART to South Hayward BART.

- Express bus service with fewer stops to speed up buses
- Local routes continue to operate at all stops to maintain coverage
- Low-floor buses to help riders get on and off faster
- Traffic signal technology reduces traffic delays
- Boarding islands so that buses do not block bike lanes
- Bus stops have real time arrival data for the next bus
- Rapid bus stops can be shared with local routes



Source – AC Transit



Source – AC Transit

## Microtransit

Microtransit is recommended as long-term improvement in Fremont to support shorter trips in the area. Microtransit is also recommended as part of the mobility hub improvements described later.

### FEATURES OF MICROTRANSIT

- On-demand service
- Flexible route and schedule
- Uses small shuttles or vans
- Examples include AC Transit Flex

## Protected Bike Lanes

Protected bike lanes provide a physical separation between bicyclists and moving traffic using one or more of the following:

- landscaping
- concrete separators
- on-street parking
- flex posts



Source – Kittelson & Associates

### LONG-TERM VISION - 2040

On-street protected bike lanes are recommended throughout the Project Corridor from San Leandro to Fremont to improve connectivity and encourage shorter-distance bike trips.



Source – Kittelson & Associates

### PROJECTS UNDERWAY AND PROPOSED

- Alameda County, Hayward, and Fremont have projects underway that will add protected bike lanes to the corridor.
- Additional near-term improvements provide new or improved bike lanes in areas that are part of the County-wide High Injury Network.



Source – Alameda County Public Works Agency

## Pedestrian and Bicyclist Safety

Pedestrian safety treatments throughout the corridor will provide safer, higher-quality travel for pedestrians. Bike safety treatments along the corridor and at intersections will make it more comfortable for people to bike.

### Projects Underway and Proposed

#### Pedestrian projects:

- Sidewalk gap closures
- ADA pedestrian improvements
- Pedestrian signal phasing
- Crosswalk improvements
- Streetscape improvements

#### Bicycle projects:

- Signalized intersection improvements
- Bike lane restriping
- Facilities on parallel and connecting streets
- Driveway consolidation
- Streetscape improvements
- Wayfinding

### ADA Ramp Improvement



Source – Kittelson & Associates

### Pavement Resurfacing



Source – Kittelson & Associates

### Mid-block Pedestrian Refuge



Source – Alameda CTC

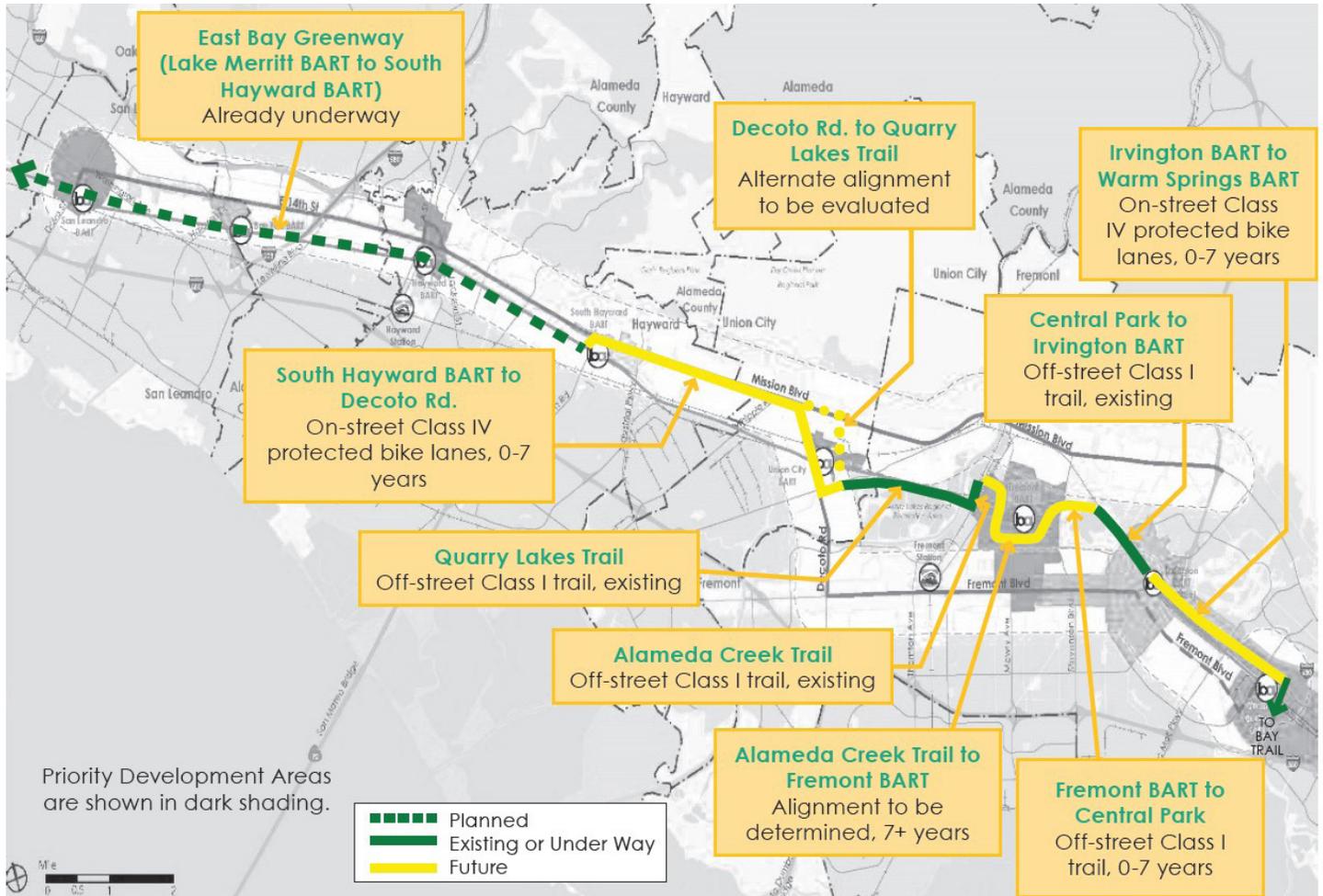
### Leading Pedestrian Phase



Source – Kittelson & Associates

## East Bay Greenway Extension

An extension of the East Bay Greenway bicycle and pedestrian trail is recommended from South Hayward BART to Warm Springs BART. The extension will use existing trails and planned bikeways, and provide safer, more comfortable travel for people walking and biking.



### ALREADY UNDERWAY: EAST BAY GREENWAY FROM LAKE MERRITT BART TO SOUTH HAYWARD BART

The East Bay Greenway Project proposes to construct a bicycle and pedestrian facility that will generally follow the BART alignment for 16 miles through the cities of Oakland, San Leandro, and Hayward as well as the unincorporated communities of Ashland and Cherryland.

#### East Bay Greenway Extension

##### Existing Trails

- Quarry Lakes Trail – Alvarado Niles Rd. to Alameda Creek Trail
- Alameda Creek Trail – Decoto Rd. to Mission Blvd.
- East Bay Greenway – Central Park to Irvington BART

##### New Trails and Trail Connections

- South Hayward BART to Quarry Lakes Trail
- Alameda Creek Crossing: New bike/ped bridge
- East Bay Greenway, Alameda Creek Bridge to Fremont BART: Class I trail (further feasibility assessment is required).
- East Bay Greenway, Fremont BART to Central Park: Class I trail



Source – Alameda CTC



Source – Alameda Magazine

## Mobility Hubs

Mobility Hubs will be developed around major transportation hubs and may include:

- Bike station/bike lockers
- Real-time transit information
- Informational signage
- On-demand rideshare/carpooling
- Microtransit services

- Shared vehicle options (carshare, bikeshare, scooters)
- Electric vehicle charging stations
- Real-time parking information
- Pedestrian and bike access infrastructure
- Supporting land uses (package delivery, convenience retail, etc.)

### POTENTIAL MOBILITY HUB IMPROVEMENTS



#### LEGEND

- 1 Elevated Rail Transit Station
- 2 Bus Transfer Facility
- 3 Wayfinding Signage
- 4 Bike Station / Bike Lockers
- 5 Real-time Transit Information
- 6 Bikeshare
- 7 Scooter share
- 8 Shared Electric Moped Parking
- 9 Real-time Parking Information\*
- 10 Rapid Bus Station
- 11 Transit Signal Priority/ Bus-Only lanes
- 12 Class IV Bikeway

\*Real-time parking information also available through an app

## Advanced Multimodal Signal Technology

### VISION FOR THE FUTURE - 2040

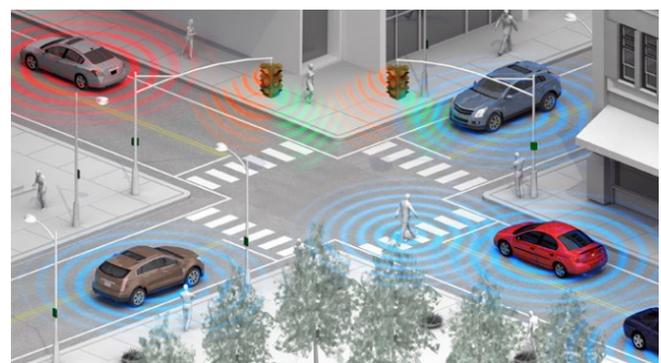
The long-term vision for the corridor accommodates technology related to connected vehicles. Connected vehicles are able to “talk” to roadway infrastructure and/or other vehicles.

**Vehicle to infrastructure communication** – Information shared between vehicles and roadway infrastructure (cameras, traffic lights, lane markers, and signage).

**Vehicle to vehicle communication** enables vehicles to exchange information about their speed and location to help avoid collisions.

### WHAT'S HAPPENING SOON?

**Fremont Blvd. Safe and Smart Corridor** – This project uses technology to move traffic efficiently and improve safety and circulation for pedestrians, bicyclists, and transit users.



Improved Safety and Collision Avoidance

**Adaptive Signal Control (Hayward and Alameda County)** – Adaptive signal systems use real-time traffic information from video cameras or road sensors to determine when a traffic light should be red or green.

**Pedestrian Detection (San Leandro and Fremont)** – Caltrans is in the process of completing pedestrian signal improvements along E. 14th St. in San Leandro and Mission Blvd. in Fremont.

## Areas for Further Refinement

This phase of the Project has identified what recommended long-term, near-term, and mid-term improvements that can be implemented along the Project Corridor to improve multimodal travel and support anticipated growth and economic development.

Specific details regarding how and when to implement the recommended improvements will be analyzed further and defined during subsequent project development and stakeholder engagement activities.

### **BUS-ONLY LANES/BUS RAPID TRANSIT**

Both median-running and side-running bus-only lanes were evaluated for feasibility within the existing right of way conditions. Additional traffic operations and bus operations analyses and stakeholder outreach are required to identify the appropriate configuration(s) for the Project Corridor. Additionally, the alignment for bus-only lanes through North Hayward (either Mission Blvd. or Mattox Rd. and Foothill Blvd.) requires further evaluation.

### **RAPID BUS**

Locations for transit priority treatments such as intersection queue jumps will be defined during subsequent project development activities. Additionally, Rapid Bus may be implemented in San Leandro, Ashland, Cherryland, and Hayward as a first step toward bus-only lanes. This phased implementation approach requires further evaluation.

### **MOBILITY HUBS**

While a suite of improvement types has been identified for mobility hubs, specific improvement projects for each hub will require additional coordination with partner agencies and community hubs, in particular for shared mobility services (e.g., bikeshare and carshare) and traveler information and data (e.g., real-time apps). Further agency and stakeholder coordination is also required to identify the location for a mobility hub pilot project that will serve as a model for implementation at other locations in the Study Area.

### **MICROTRANSIT/FLEX**

Additional analyses and stakeholder coordination are required to identify program elements including the service structure, responsible parties, and infrastructure components.

### **EAST BAY GREENWAY EXTENSION**

Additional analysis is required to define portions of the alignment in Union City and Fremont. In Union City, alignment options along the planned Quarry Lakes Parkway and Decoto Rd. will be evaluated during subsequent environmental phases. In Fremont, engineering and environmental analyses are required to define the location of the planned Alameda Creek bridge crossing and the alignment for the connection to Fremont BART.

### **ON-STREET PROTECTED BIKE LANES**

The physical separation between bicycle lanes and moving traffic may be implemented using raised landscape strips, flex posts, or on-street parking. The type of physical separation may vary based on the corridor context and requires further analysis during subsequent phases. Location-specific intersection treatments to address bicycle/vehicle conflict points also require further analysis.

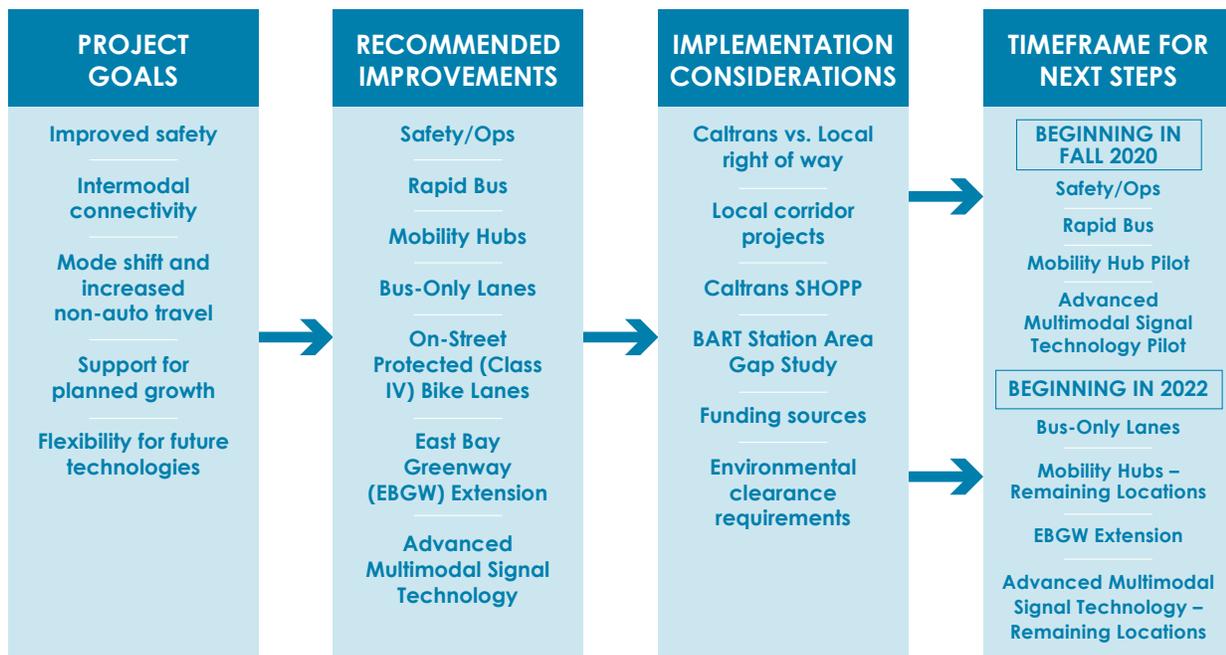
### **NEAR-TERM SAFETY AND OPERATIONAL IMPROVEMENTS**

A draft list of recommended improvement projects has been developed as part of this project phase. While conceptual design plans have been completed for some projects, other projects require additional engineering analysis for concept development.

## Next Steps

For each improvement category, project development and delivery activities are required to obtain environmental clearance, complete design, and ultimately construct the improvements. Next steps for project delivery will be in coordination with Caltrans District 4 in accordance with their prescribed processes. However, the required process depends on several factors, including the construction cost, funding source, and roadway jurisdiction.

Based on these considerations and the number of projects, a phased project delivery approach is proposed as shown in the figure below. This allows for simpler, lower-cost near-term projects to be advanced and constructed sooner. These near-term projects will serve as building blocks for more complex long-term project recommendations that require a longer timeframe for project delivery.



\*No separate project development next steps are recommended for on-street protected bike lanes, as they are being implemented through local agency projects.

### PROJECT DEVELOPMENT OVER TWO YEARS (FALL 2020 – FALL 2022)

- Safety and operational improvements
- Rapid Bus infrastructure
- Mobility hub pilot
- Advanced multimodal signal technology pilot

### PROJECT DEVELOPMENT BEGINNING AFTER TWO YEARS (FALL 2022 – FALL 2029)

- Bus-only lanes
- Mobility hubs (remaining locations)
- East Bay Greenway Extension
- Advanced multimodal signal technology (remaining locations)



1111 Broadway  
Suite 800  
Oakland, CA 94607  
(510) 208-7400  
AlamedaCTC.org