AN INTRODUCTION TO TRANSPORTATION TERMS

CITY OF OAKLAND
DEPARTMENT OF TRANSPORTATION

Parts of the Street

Bollard

Sturdy, vertical posts made of hard materials or less-durable plastic dividers used in the roadway.

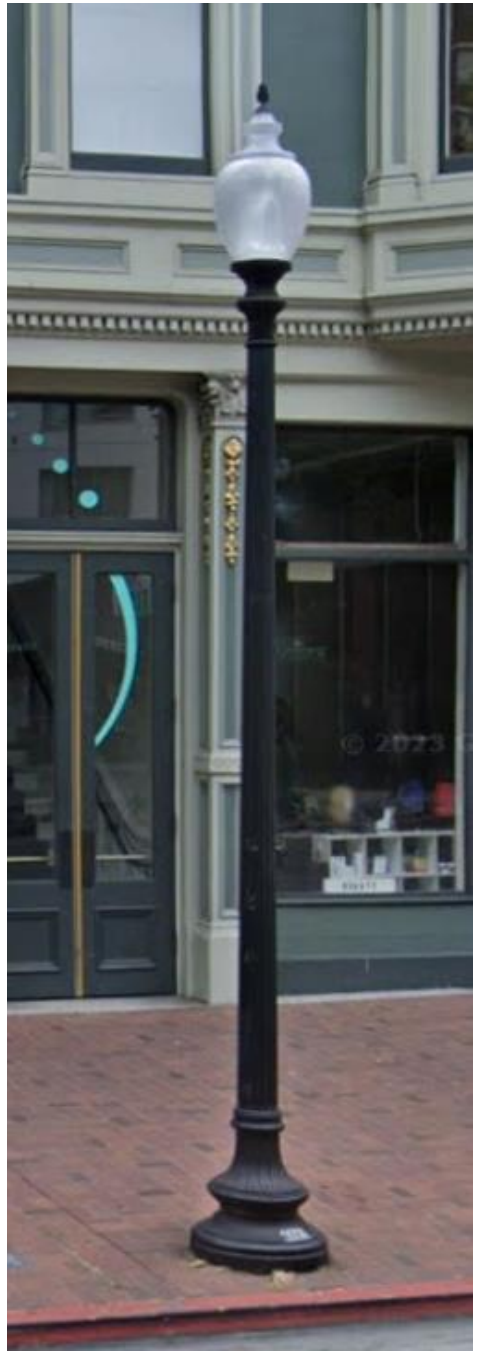
Median

An area in the middle of the street between traffic traveling in different directions; it can be made of paint and bollards, modular plastic, or concrete. Concrete medians may have landscaping.

Safe Streets for People Walking and Biking

Pedestrian Scale Lighting

This type of lighting is directed toward the sidewalk and positioned lower than roadway lighting. Pedestrian scale lighting improves visibility of pedestrians and enhances security.



Two-Way Cycle Track (roadway-level)

Two-way cycle tracks (also known as protected bike lanes, separated bikeways, and on-street bike paths) are physically separated cycle tracks that allow bicycle movement in both directions on one side of the road. The image below is an example of a two-way, roadway-level cycle track.

Multi-Use Paths

Also known as mixed-use paths or Class 1, multi-use paths are completely separated from streets. These paths are typically shared with pedestrians and are often located along waterfronts, creeks, railroad rights-of-way or freeways with a limited number of cross streets and driveways.

Shared Street

Shared streets maintain access for vehicles operating at low speeds and are designed to permit easy loading and unloading for trucks at designated hours. They are designed to implicitly slow traffic speeds using pedestrian volumes, design, and other cues to slow or divert traffic.

Intersection Safety and Accessibility

High Visibility Crosswalks

Brighter crosswalk markings are more visible to vehicles and improves yielding behavior.

Bulb-Outs

The expansion of the sidewalk at intersections to shorten the distance pedestrians have to cross the street, increase visibility to people driving. Bulb-outs are sometimes called curb extensions.

Curb Ramps: The ramp from the sidewalk to the street usually at a crosswalk; It can be made of textured concrete, brick, or textured plastic pads. Curb ramps can be “dual directional” which means there are two curb ramps, each going in a separate direction. The images show dual directional curb ramps.

Pedestrian Refuge Island: Medians designed for a person walking across a street in a crosswalk to pause between directions of traffic with protection from moving vehicles.

Traffic and Pedestrian Signals

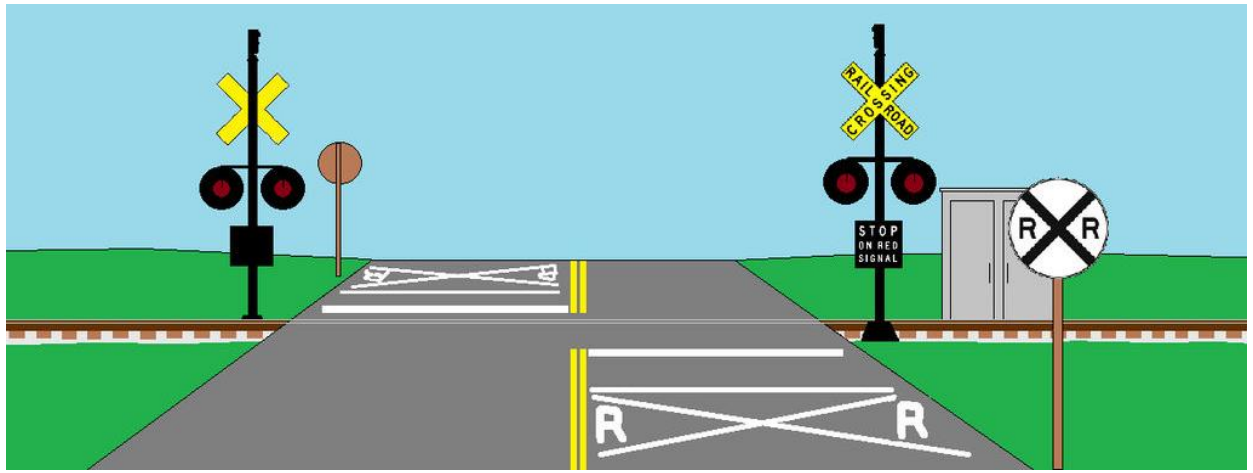
Traffic Signals: A traffic signal is the red yellow-green intersection control device that tells people walking, biking, and driving when to go and when to stop. Often, they are referred to as traffic lights or stop lights. A new traffic signal transforms an existing intersection that is either uncontrolled or controlled by stop signs into a fully signalized intersection.

Mast Arm: The part of the traffic signal pole that hangs over the intersection. Mast arms provide better visibility of intersection signs and signals which aids the drivers' advance perception of the upcoming intersection.

Railroad Safety

At-Grade Crossing

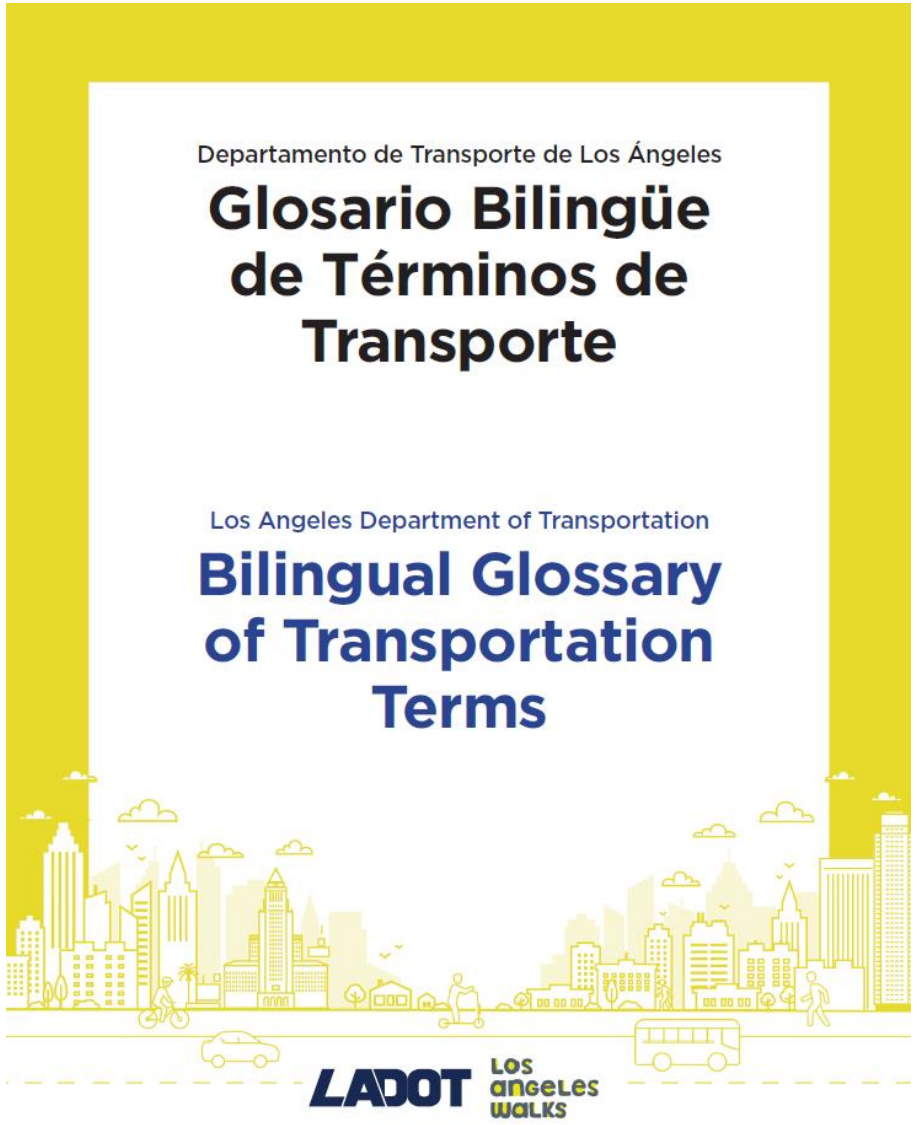
An at-grade crossing is an intersection of roads at the same level. At-grade crossing typically refers to a railroad crossing a road.



Grade Separation: Grade separation involves lowering or raising a road or path, so it is no longer at the same level as the railway. This requires construction an underpass or overpass.

Railroad & Pedestrian Crossing Arms: An arm or gate that automatically closes before a train approaches to keep vehicles from crossing the tracks. Pedestrian crossing arms are installed along pedestrian paths or sidewalk to prevent pedestrians from crossing tracks.

RESOURCE



Los Angeles Department of Transportation

Bilingual Glossary of Transportation terms (English + Spanish)

Major Projects Division

Overview of Current Projects

CAC Meeting
June 13, 2024

CITY OF OAKLAND
DEPARTMENT OF TRANSPORTATION

PRESENTATION OUTLINE

1. Who are we?
2. What projects are we working on?
3. Key Resources

WHO ARE WE? Oakland Dept. of Transportation

- Maintain 800 miles of streets, over 1,000 miles of sidewalks, and other key infrastructure
- Develop and deliver capital improvements to promote and increase roadway safety, sustainability, and more equitable outcomes
- Manage parking and other forms of mobility programs
- Partner with community, City departments and regional agencies such as the Port, Alameda CTC, BART, AC Transit

CITY OF OAKLAND DEPARTMENT OF TRANSPORTATION

WHO ARE WE? Major Projects Division

Division Manager
Nicole Ferrara

Planners

Audrey Harris
Acacia Dupierre
Ruth Meza
Celina Chan

Engineers

Edmond Siu
Beaver Boonsook
Michelle Stevens
Jon Liang
Parson Galicia

CITY OF OAKLAND | DEPARTMENT OF TRANSPORTATION

WHAT PROJECTS IS MPD WORKING ON?

WHY ARE THESE PROJECTS IMPORTANT?

These projects may increase the likelihood of…

- Reducing disparities in safety, access and health outcomes impacting communities of color, seniors, people with disabilities and low-income populations
- Improving goods movement and support for the Port operations and the regional economy

BROADWAY STREETSCAPE IMPROVEMENTS

Project Scope:

- New ADA curb ramps, bulb-outs, and high-visibility crosswalks
- Bus-only lanes and Transit Signal Priority (TSP)
- Upgrade traffic signals
- Eliminate curved right turn at 6th Street
- Wayfinding signage
- Underpass improvements

STATUS UPDATE

Design milestone	Draft 100% designs
Upcoming engagement	Public notification anticipated in June 2024
Anticipated construction start	Fall 2025

MLK JR. WAY STREETSCAPE IMPROVEMENTS

Project Scope:

- Raised cycle track in the NB direction on MLK
- Curb ramps and bulb-outs to improve pedestrian safety
- High-visibility crosswalks
- New street trees and street furniture
- Green Loop

STATUS UPDATE	
Design milestone	Draft 100% designs
Upcoming engagement	Public notification anticipated in June 2024
Anticipated construction start	Fall 2025

7TH STREET CONNECTION

Project Scope:

- Protected bike lane on both sides of 7th Street
- Pedestrian improvements, including crosswalk improvements
- Improved pedestrian lighting
- Street trees and landscaping

STATUS UPDATE	
Design milestone	65% designs anticipated in July 2024
Upcoming engagement	Gathering feedback on greening, art, and historical markers
Anticipated construction start	2027

8th STREET CORRIDOR IMPROVEMENTS

Project Scope:

- Intersection and sidewalk improvements to improve safety and visibility
- Pedestrian-scale lighting
- Wayfinding signage

STATUS UPDATE	
Design milestone	Summer '24: Current draft designs will be updated based on what can be delivered with secured funding
Upcoming engagement	Summer '24: Continue to gather feedback on needs from seniors, families and youth
Anticipated construction start	FY 2028-29

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Project Scope:

- Establishing a transit hub by providing real-time transit information, seating, and shelter
- Improving lighting, sidewalk, pedestrian crossings, and wayfinding
- Relocating a bikeshare station
- Connecting an existing bike lane
- Upgrades to improve bus operations and rerouting Line 12

STATUS UPDATE

Milestone	Received TIRCP funding
Upcoming engagement	Engagement happening now until Fall 2024 for 35% designs
Anticipated construction start	2026

EMBARCADERO WEST RAIL SAFETY & ACCESS

Project Scope:

- Significantly increase railroad crossing safety for all road users
- Improve reliability for freight and passenger rail operations
- Enhance access and connections to the Jack London District and Waterfront
- Build near-term route for overweight trucks, study long term options

STATUS UPDATE	
Design milestone	35% designs anticipated by Fall 2024
Upcoming engagement	Summer 2024 Pop-Ups & Public Workshop
Anticipated construction	2026

KEY RESOURCES

Project Information

https://www.oaklandca.gov/topics/major-projects-division

Division Email Address

mpd@oaklandca.gov

Report a Problem to OAK 311

oaklandca.gov/services/oak311 or call at 510-615-5566

CITY OF OAKLAND DEPARTMENT OF TRANSPORTATION

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

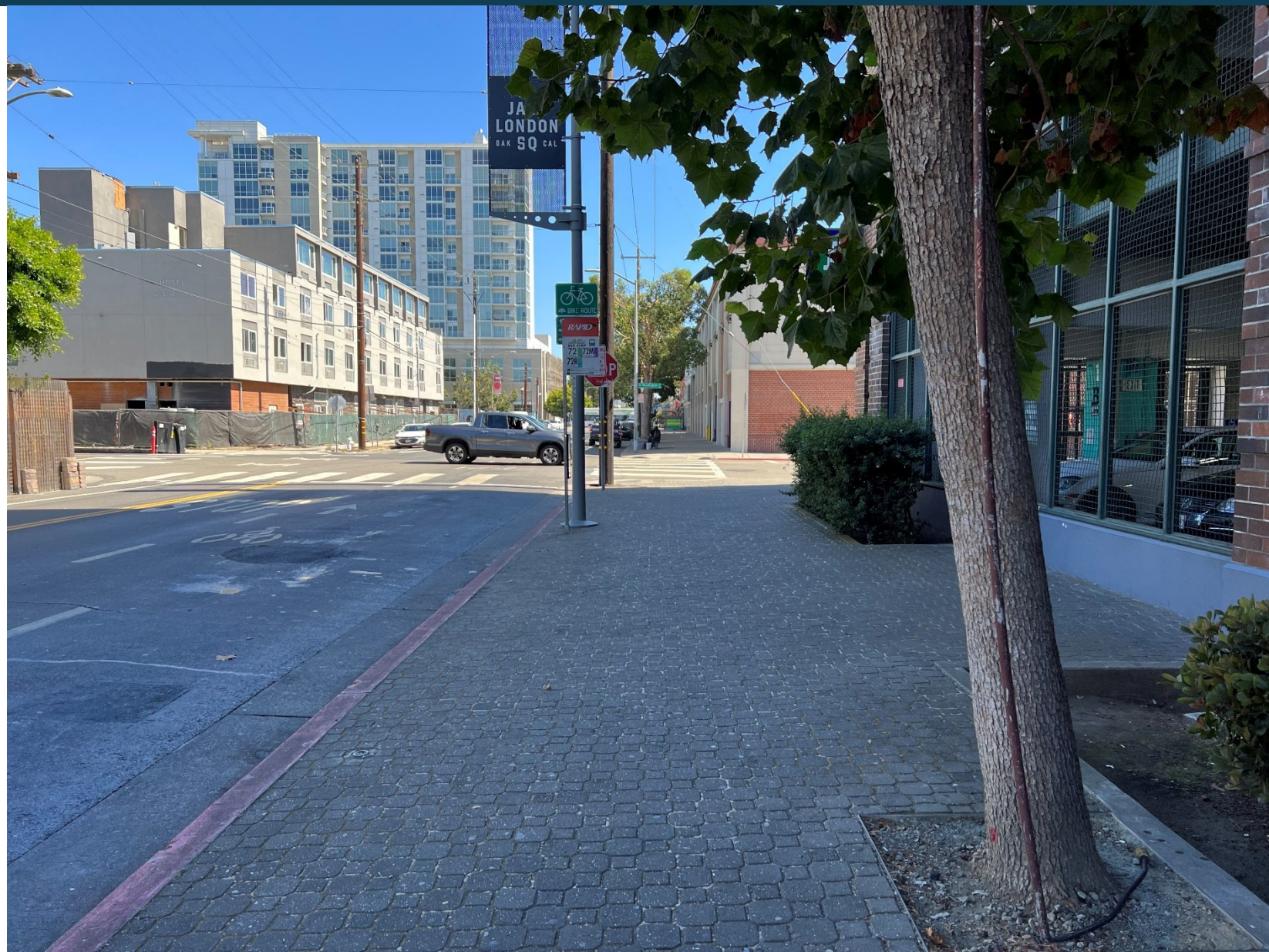
Community Advisory Committee (CAC) - June 13, 2024

Oakland
DEPARTMENT OF TRANSPORTATION

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Outline

1. Project Location
2. Existing Conditions & Context
3. Project Scope
4. Timeline & Conceptual Plans
5. Questions



2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Project is located on 2nd Street between Clay Street and Alice Street

- **Transit hub** (Clay Street to Washington Street)
- **Bike lane connection** (Harrison Street to Alice Street)

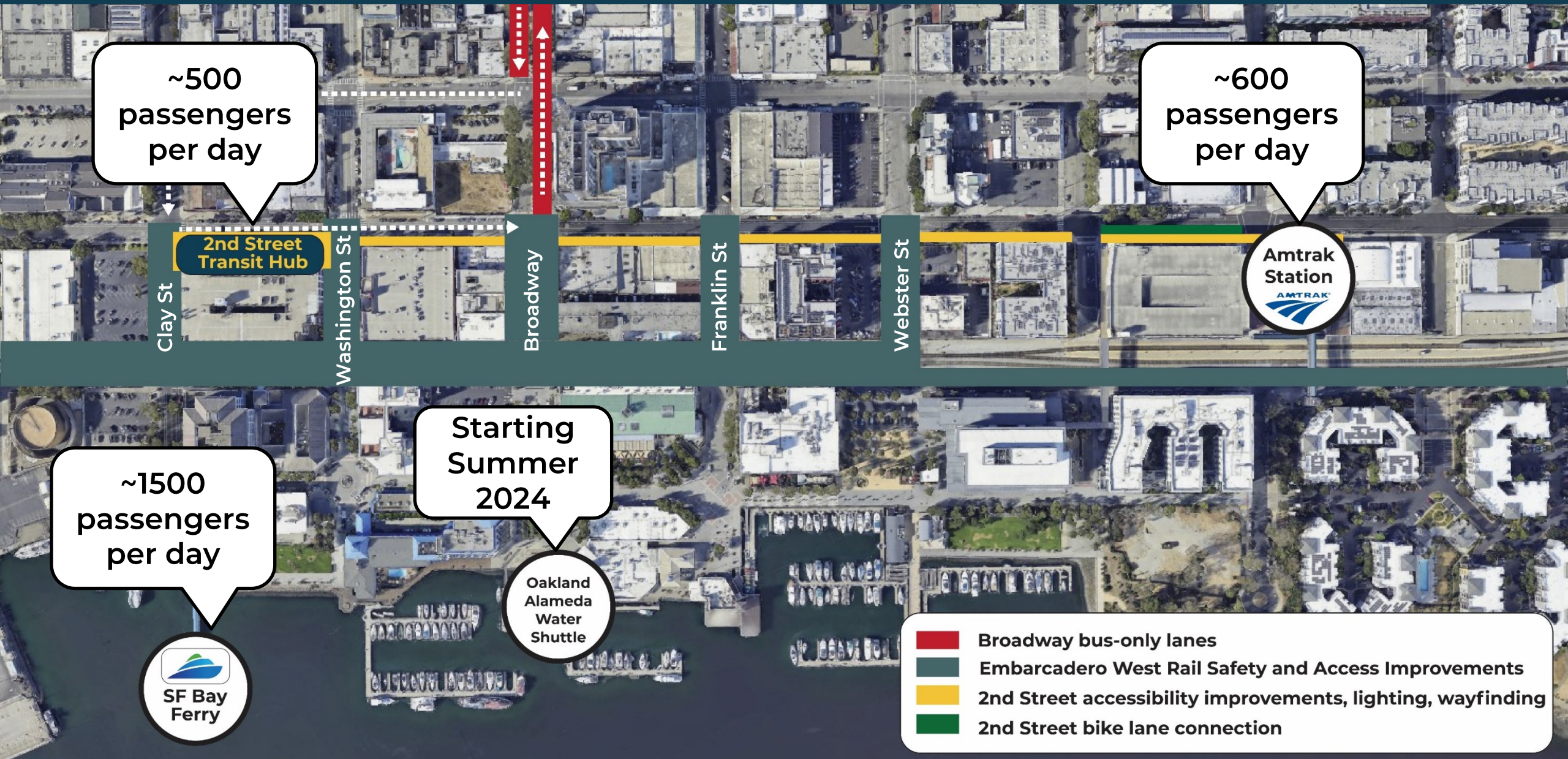
2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Existing Conditions

- Sidewalk is not ADA compliant
- No shelter or seating
- Poor lighting
- Pavement is deforming

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION



2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Project Scope

- Establishing a **transit hub** at an existing bus stop by providing real-time transit information, seating, and shelter
- Improving **lighting, sidewalk, pedestrian crossings**, and **wayfinding** at and between transit stations
- Relocating a **bikeshare station** to be near the transit hub to support convenient transit connections
- Connecting an existing **bike lane** across a one block gap and reconfiguring parking
- Making **upgrades to improve bus operations**, such as concrete bus pads and layover facility improvements for bus drivers
- **Rerouting Line 12** in coordination with the Embarcadero West Rail Safety and Access Improvements

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Rerouting Line 12

Line 12 (Existing and Proposed)

- Existing Line 12 Route
- Proposed Line 12 Route
- Broadway Bus-Only Lanes
- 2nd Street Transit Hub

2nd STREET TRANSIT HUB & BIKE LANE CONNECTION

Timeline

Engagement	Now - 2025
35% Design	Late 2024
100% Design	Late 2025
Construction	2026

Engagement for 35% designs will continue until mid-October!

Now let's look at the **Conceptual Plans**...

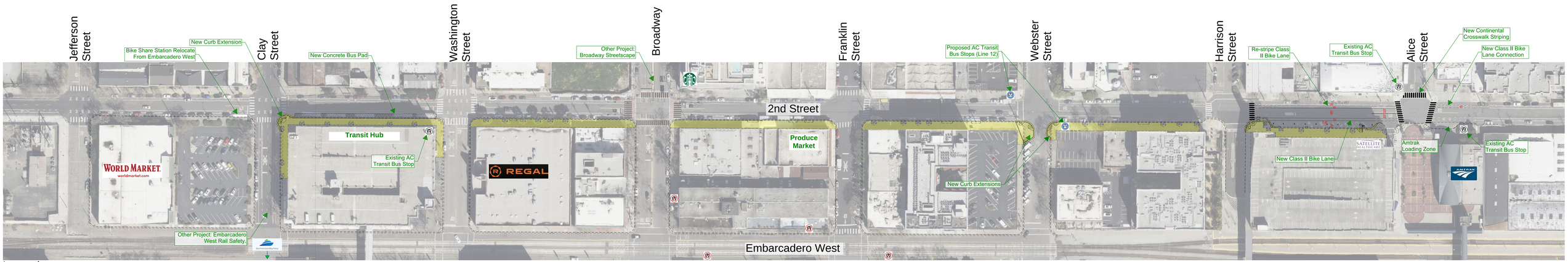
CONTACT US

Oakland
DEPARTMENT OF
TRANSPORTATION

Major Projects Division Webpage
www.oaklandca.gov/MPD

Project Webpage
www.oaklandca.gov/2ndStreetHub

Contact
mpd@oaklandca.gov



Legend:

- Accessibility Improvements (Includes lighting, and wayfinding)
- Bike Share Station Relocate from Embarcadero West
- Concrete Bus Pad
- Existing Trees
- Existing Curb & Gutter
- Proposed Curb & Gutter
- Existing AC Transit Bus Stop
- Proposed AC Transit Bus Stop
- Existing AC Transit Bus Stop to be Removed

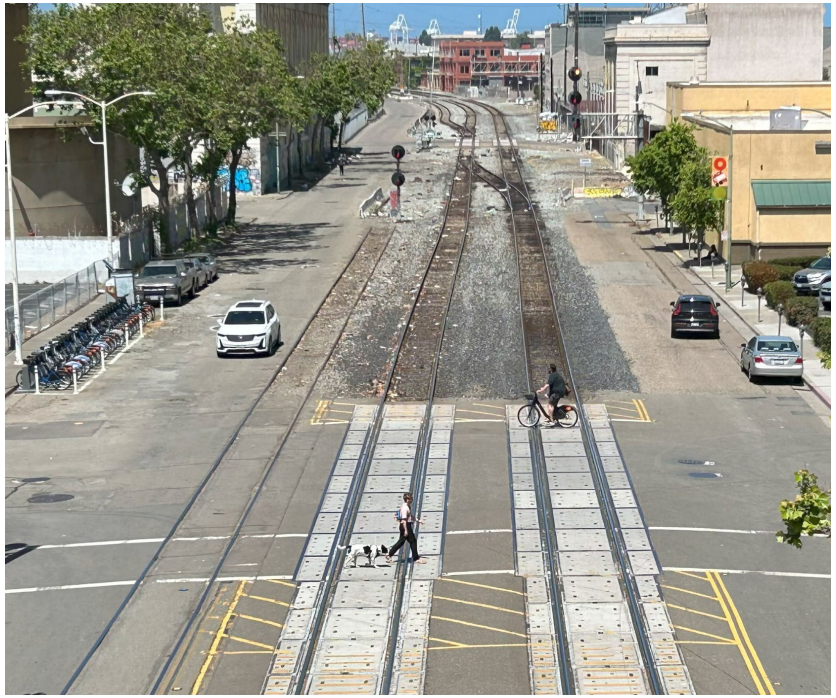
2nd STREET TRANSIT HUB & BIKE LANE CONNECTION PROJECT

PRELIMINARY CONCEPT LAYOUT

CITY OF Oakland

Embarcadero West

Rail Safety and Access



EXISTING *clockwise from top left* Embarcadero West at Washington St, Clay St, and Webster St

Community Advisory Committee June 13, 2024

CITY OF OAKLAND | DEPARTMENT OF TRANSPORTATION | Major Projects Division

Existing Conditions & Need

Regional & National Significance

- **65 trains a day** use this corridor, moving freight and passenger rail throughout the U.S.
- The **one-mile rail and roadway** segment along Embarcadero West accounts for **25% of vehicle incidents** along Amtrak's **160-mile** segment from San Jose to Auburn

Existing Conditions & Need

Local Significance

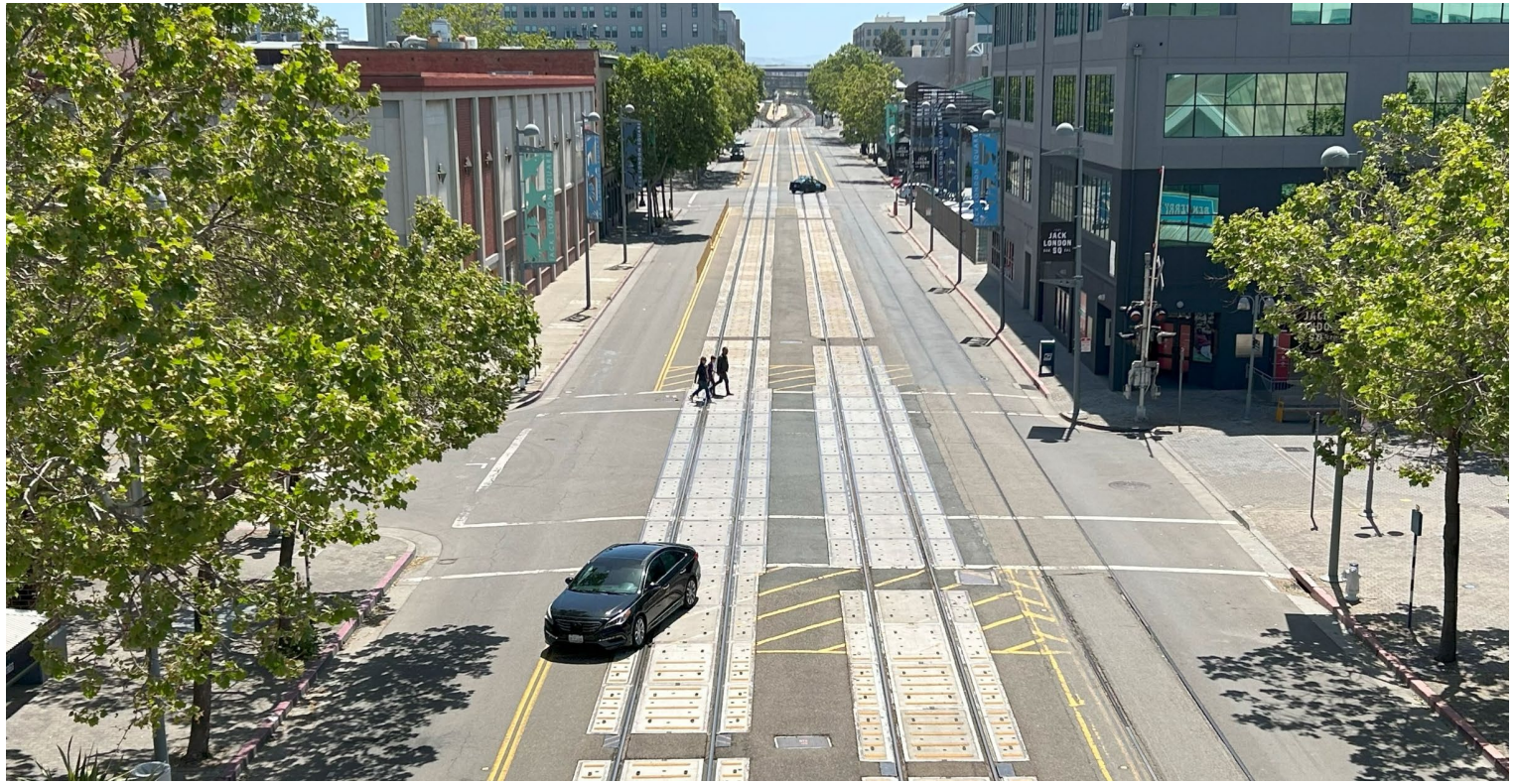
2014 – 2023

- **47** injuries from reported collisions
  - **11** Pedestrian
  - **7** Bicyclist
  - **27** Driver

2017 – 2023

- **390** reported 'vehicle on track' incidents
- **67** in 2023 alone

Embarcadero West: Market St – Oak St



1860s-era shared roadway and rail design is not:

- meeting current rail safety standards
- accessible for people with disabilities
- a welcoming connection to the waterfront

Project Goals & Opportunity

Project Goals

- Significantly **increase railroad crossing safety** for all users on Embarcadero West
- Improve **reliability for freight and passenger rail** operations
- **Enhance access and connections** to the Jack London District and Waterfront

Opportunity

- Leverage available funding to deliver a once-in-a-century project

Project Scope

Overweight Corridor

Existing Conditions

2021 – Present Overweight trucks instructed to bypass Adeline Street overpass (*Adeline Bridge*).

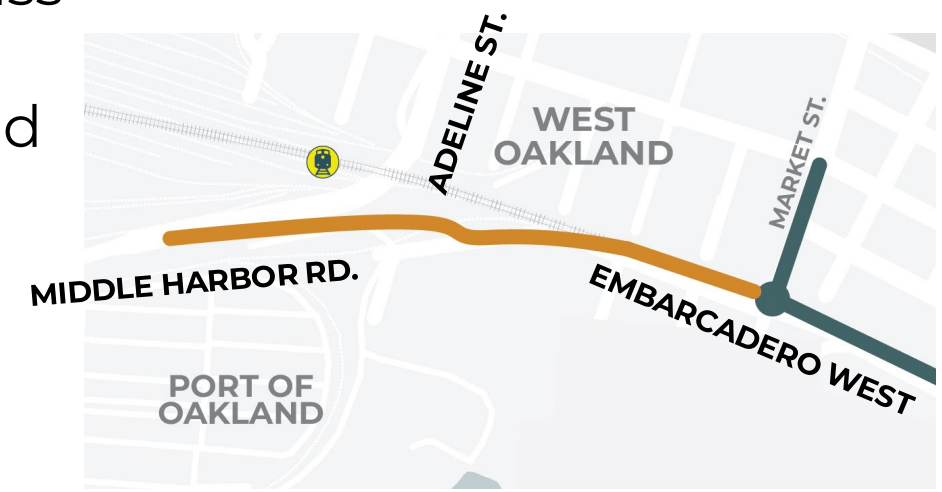
Temporary re-route through residential West Oakland on 7th Street until bridge retrofitted or rebuilt.

Goal

Create near-term route to remove overweight trucks from 7th Street sooner than bridge redevelopment

Proposed

- Rebuild railroad track crossing on Port property to overweight truck standards.
- Establish new temporary overweight route to remain emergency access when bridge is redeveloped. Not intended for public access.



Note

Overweight or Heavyweight trucks:

- 80k – 95k lbs
- Require permits
- Must use designated overweight routes

Rail Safety and Access

Existing Conditions

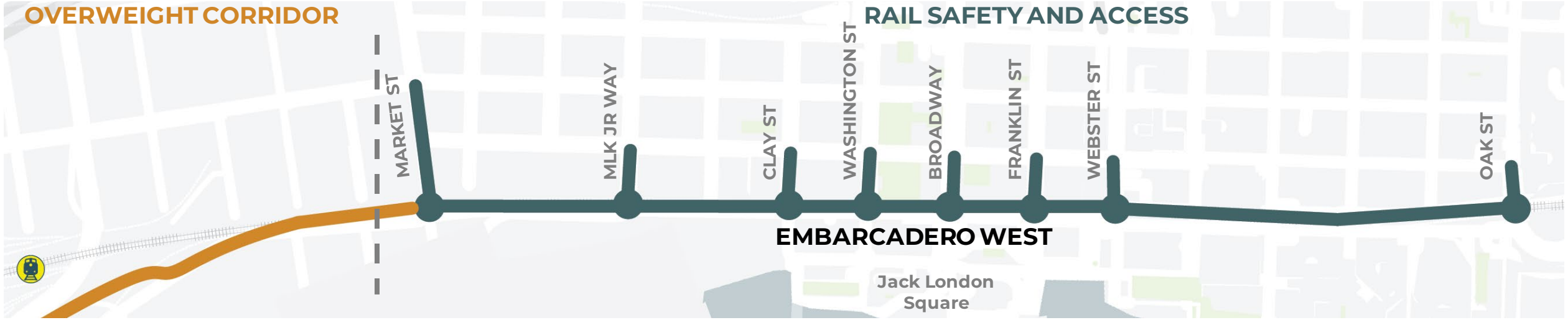
Majority of rail incidents occur when vehicles make left turns over tracks

Goal

Reduce opportunities for incidents while maintaining waterfront and business access

Proposed

- Reduction of vehicle traffic on E.W.
- Restricted vehicle turns
- Conversion of vehicle lanes to pedestrian and bike routes



Rail Safety and Access

PROPOSED Broadway at Embarcadero West *facing south*

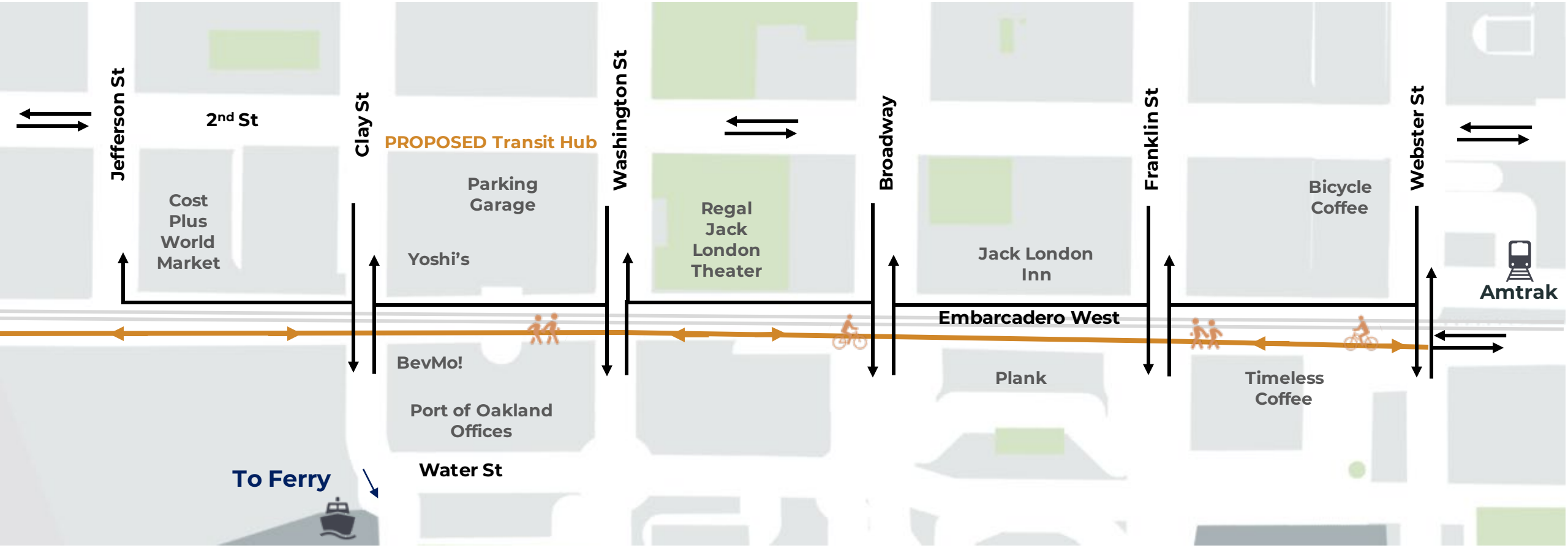
1. Shared street on northside
2. Bollards to slow and direct vehicles
3. Westbound vehicles: right turn only
4. Wider sidewalks
5. Waterfront vehicle access: direct
6. Additional lighting
7. RR gate arms for vehicles and pedestrians
8. Bike lanes and walking path on south side

Rail Safety and Access

PROPOSED Embarcadero West at Franklin St *facing east*

1. Shared Street
2. Fencing between intersections
3. Track asphalt replaced with gravel between intersections
4. Railroad operating width maintained
5. Additional lighting
6. 2-way bike lanes
7. Walking path
8. Landscaping where feasible

Rail Safety and Access Shared Street and Circulation



Proposed

Permitted Vehicle Access

Pedestrian, Bicycle, Emergency Vehicle Access Only

Rail Safety and Access Bike Network Connections

Embarcadero West will provide a protected bike lane segment of the **Green Loop**

Loading and parking needs from **Webster St** to **Oak St** under study for potential protected bike lane connection

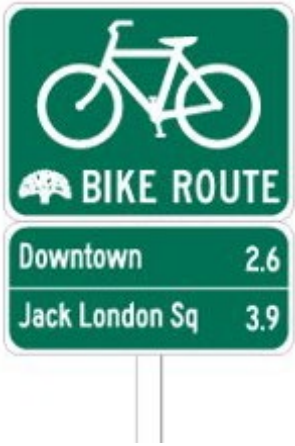
Rail Safety and Access Urban Design

Goal

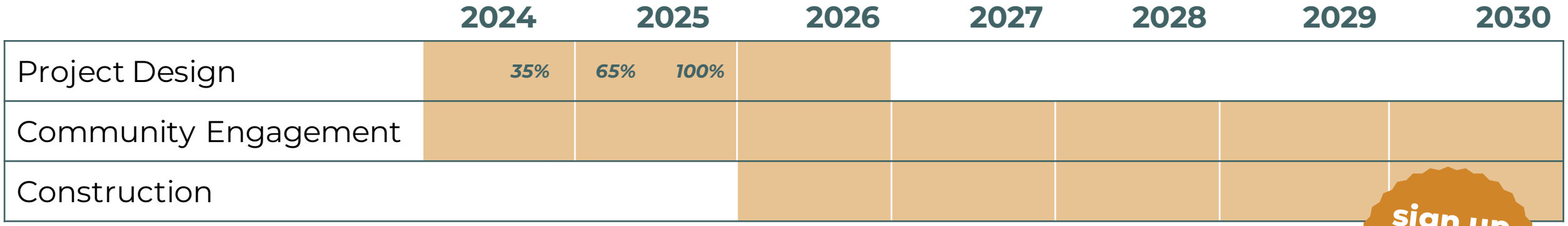
Select design elements and materials that:

- Enhance placemaking - a people-centric specific sense of place in the Jack London District
- Are ADA accessible – usable by wide ranging abilities
- Provide safety and comfort between modes
- Support wayfinding and directions
- Are appropriate for short and long term maintenance

Precedent Designs



Project Timelines



Major Projects Division will be conducting 35% design through Summer 2024

sign up for email updates!

- **Bicycle and Pedestrian Advisory Committee**
  Thursday May 2
- **Jack London Improvement District**
  Tuesday May 7
- **Mayors Commission Persons with Disabilities**
  Monday May 20
- **Ferry Fest**
  Saturday June 1
- **Jack London Square Farmer's Market**
  select Sundays in June – July
- **Jack London Neighborhood Council**
  Tuesday June 25
- **Jack London Brewing District Block Party**
  Saturday August 3
- **National Night Out**
  Tuesday August 6
- **Other Events to be Confirmed**

Community Design Workshop

Join OakDOT Major Projects Division at a public workshop to learn about streetscape and transportation improvements on Embarcadero West in the Jack London District. Light refreshments will be provided.

Community Design Workshop:
Embarcadero West Rail Safety and Access

Wednesday July 17, 2024

5:00pm - 7:30pm

BLOC15

252 2nd Street

Oakland, CA 94607

save the date!

spread the word!

Embarcadero West Rail Safety and Access

www.oaklandca.gov/EmbarcaderoWest

CITY OF OAKLAND

DEPARTMENT OF TRANSPORTATION

Major Projects Division