

December 4, 2023

Exhibit 1



Fernside Boulevard Traffic Calming & Bikeways Project

Existing Conditions & Toolbox

ParametriX

Parisi
TRANSPORTATION CONSULTING

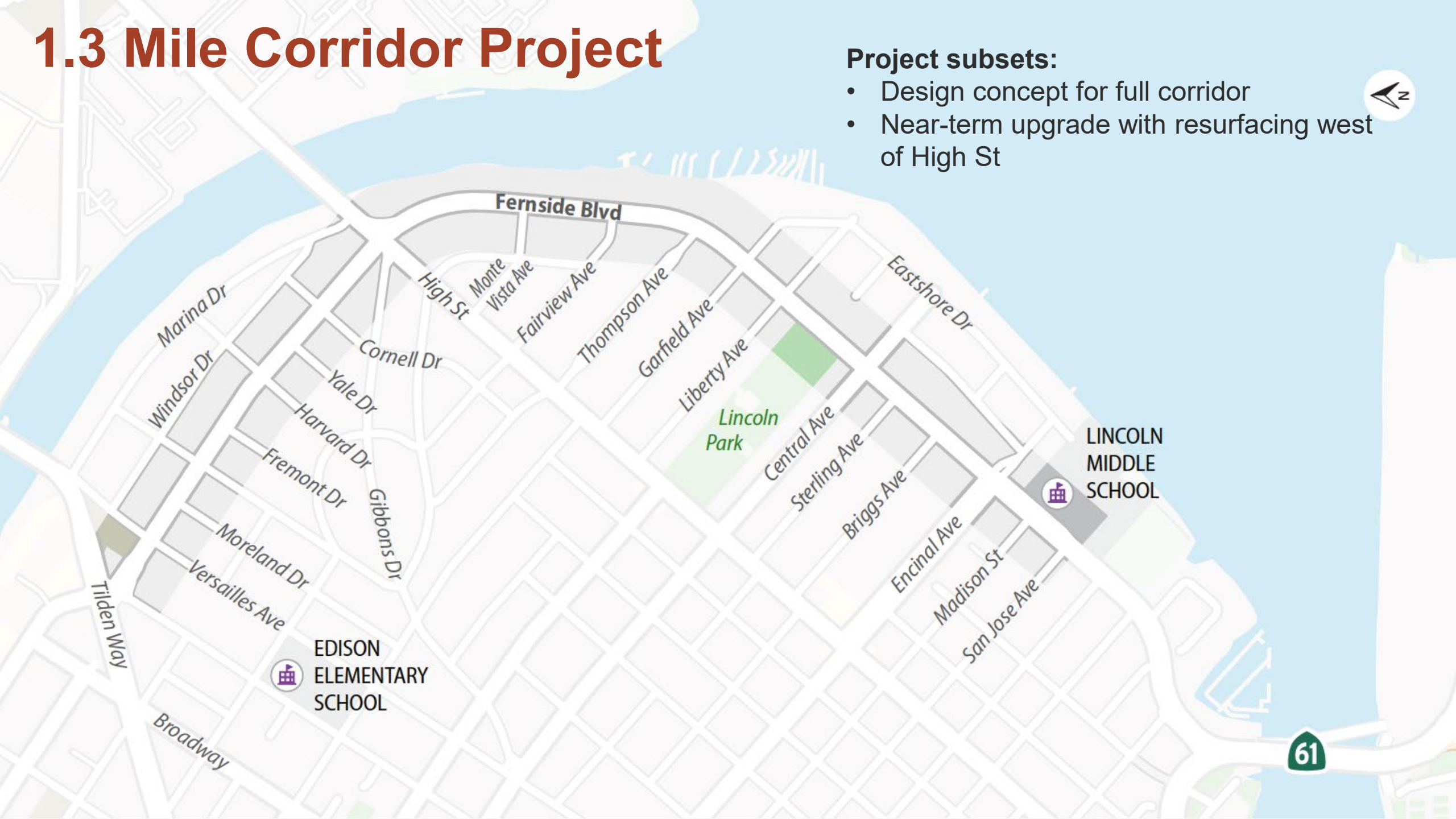


About the project

1.3 Mile Corridor Project

Project subsets:

- Design concept for full corridor
- Near-term upgrade with resurfacing west of High St



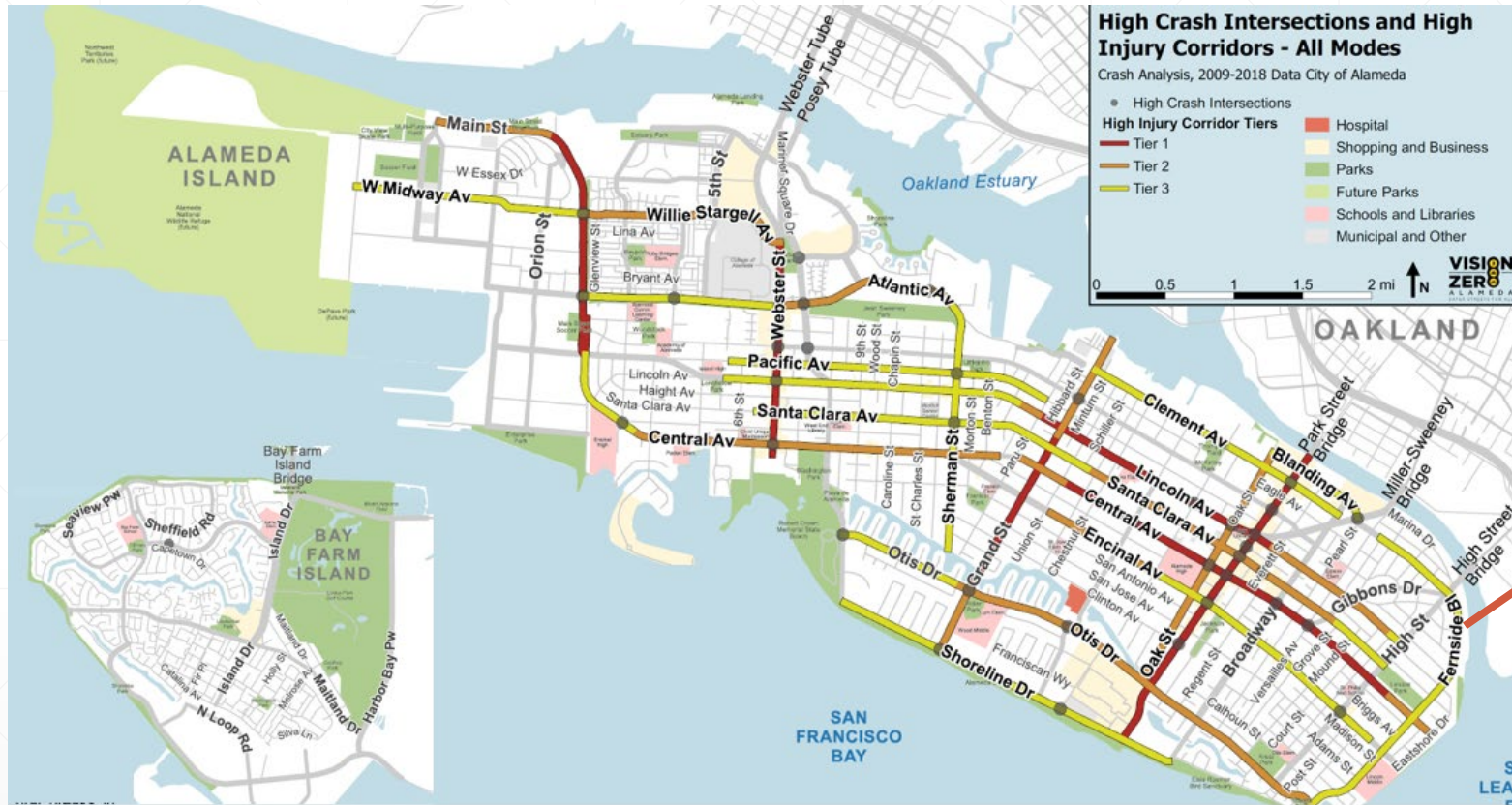
Why are we here?

Project goal: reduce traffic speeds and improve safety and mobility for all

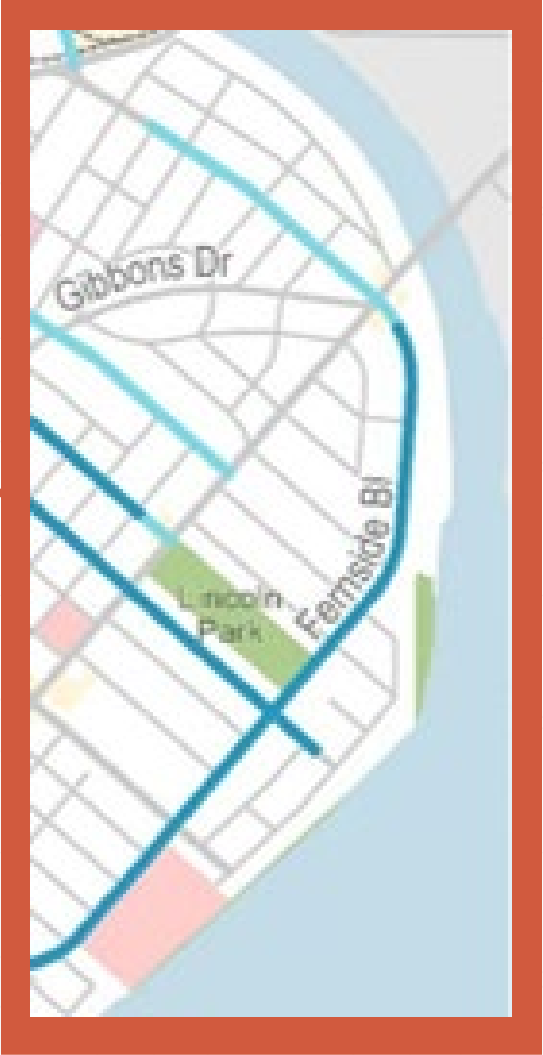
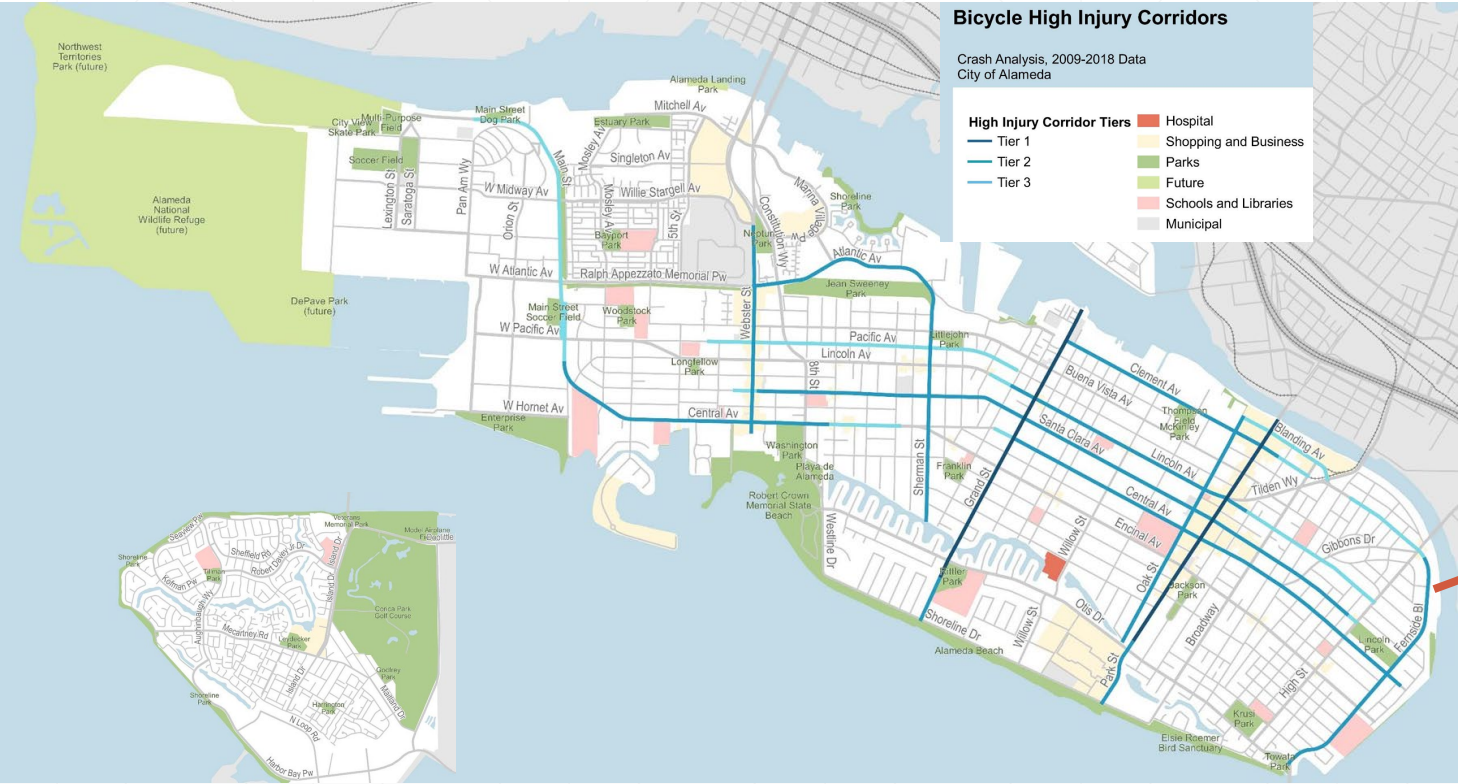
- Coordinate with pavement resurfacing
- Implement plans and policies:
 - Vision Zero Action Plan
 - Active Transportation Plan
 - City Council Strategic Plan
 - San Francisco Bay Trail (*regional*)



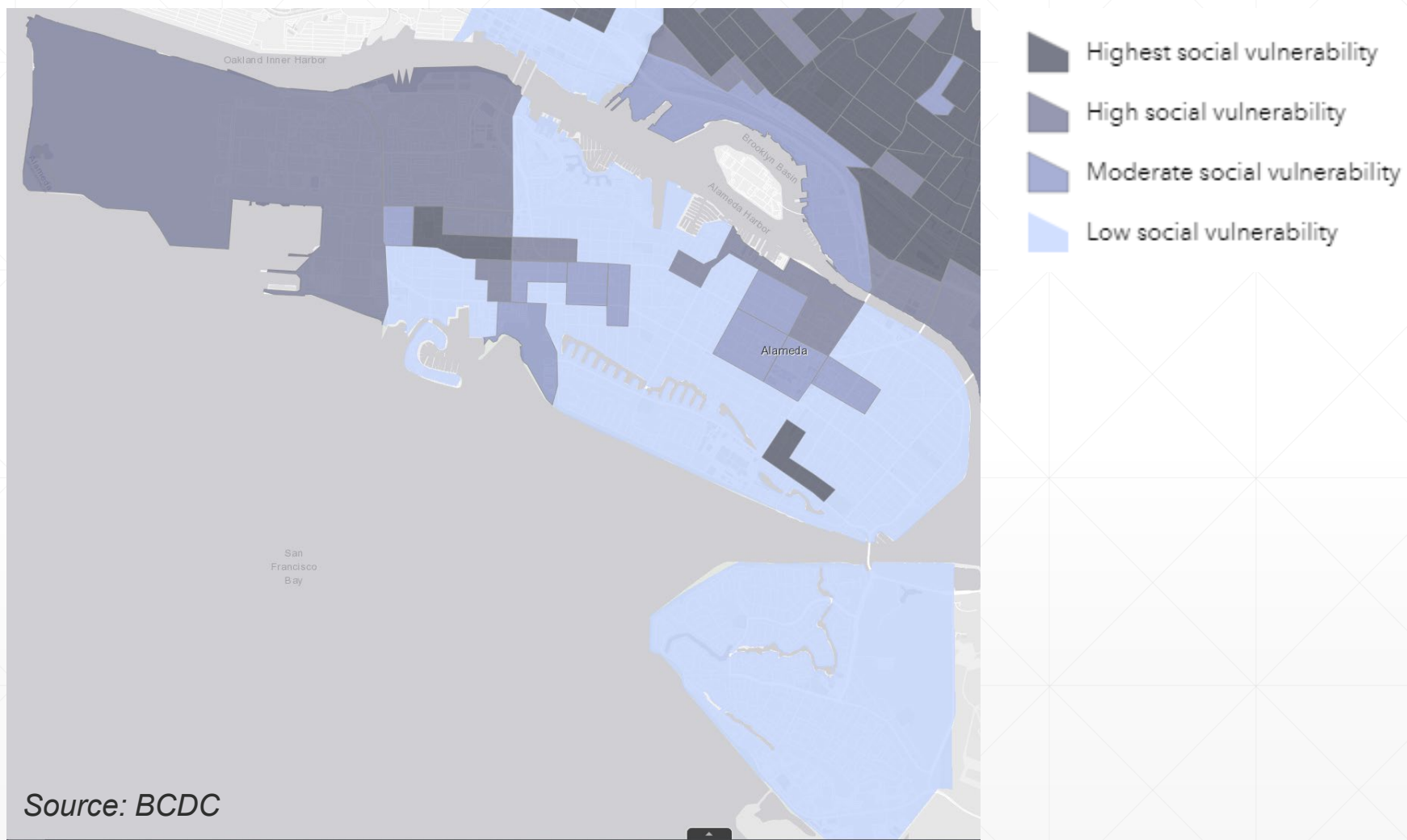
Fernside is a Tier 3 High Injury Corridor, All Modes



Fernside has Tiers 2 & 3 Bicyclist High Injury Corridors



Fernside not in an Equity Priority Area



Fernside in Active Transportation Plan: Low-Stress Bikeway

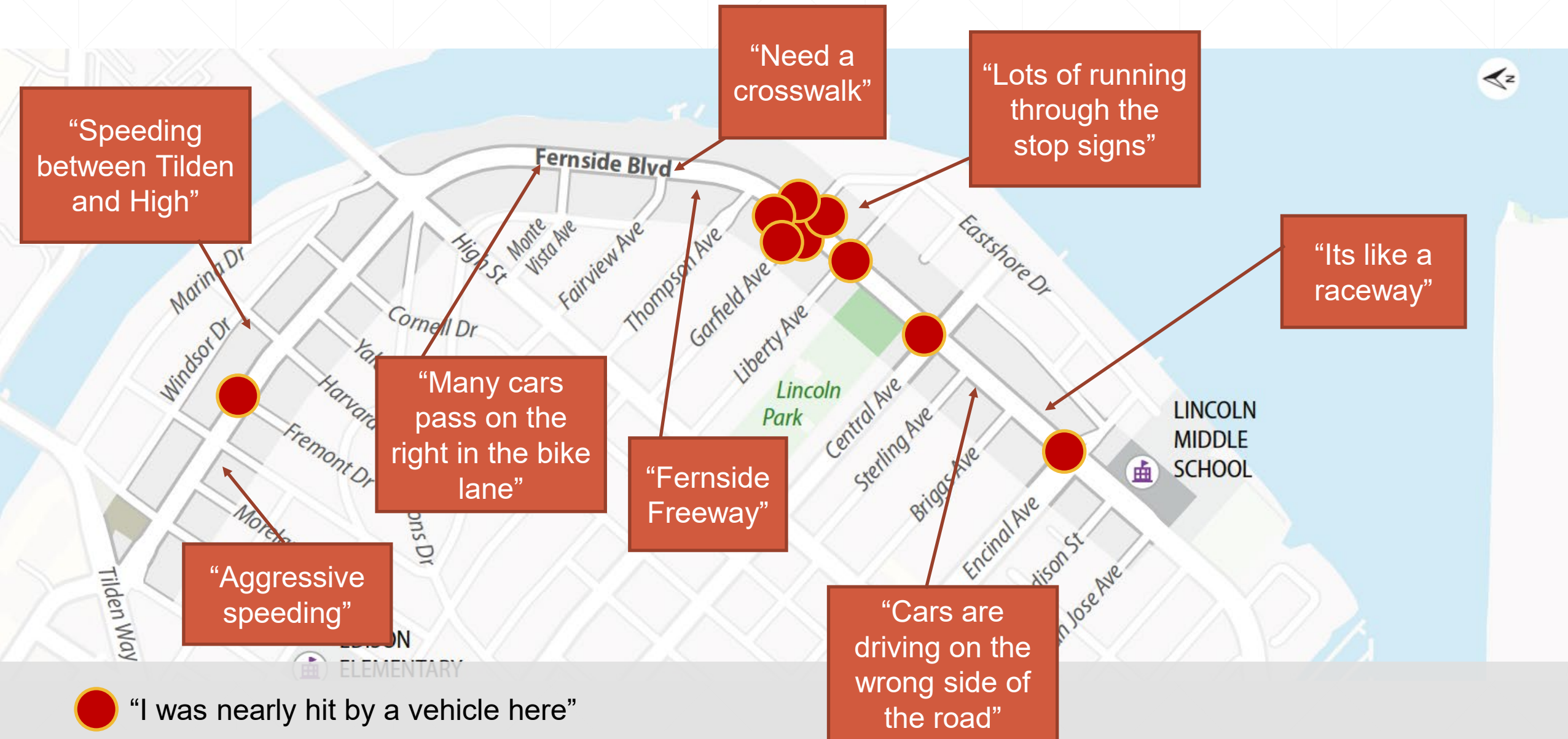
2030 Low-Stress Backbone Bikeway Network



- Adopted plan shows Fernside with a protected bike lane
- Key to the 2030 Low-Stress Backbone Network for all ages and abilities
- Part of regional San Francisco Bay Trail



Community Concerns about Street Safety



History

History

Late 1800s: A.A. Cohen's 106-acre Fernside estate



History



Fernside Estate: ca. 1900



Fernside Loop: 1911



Eastshore Fill: 1950s



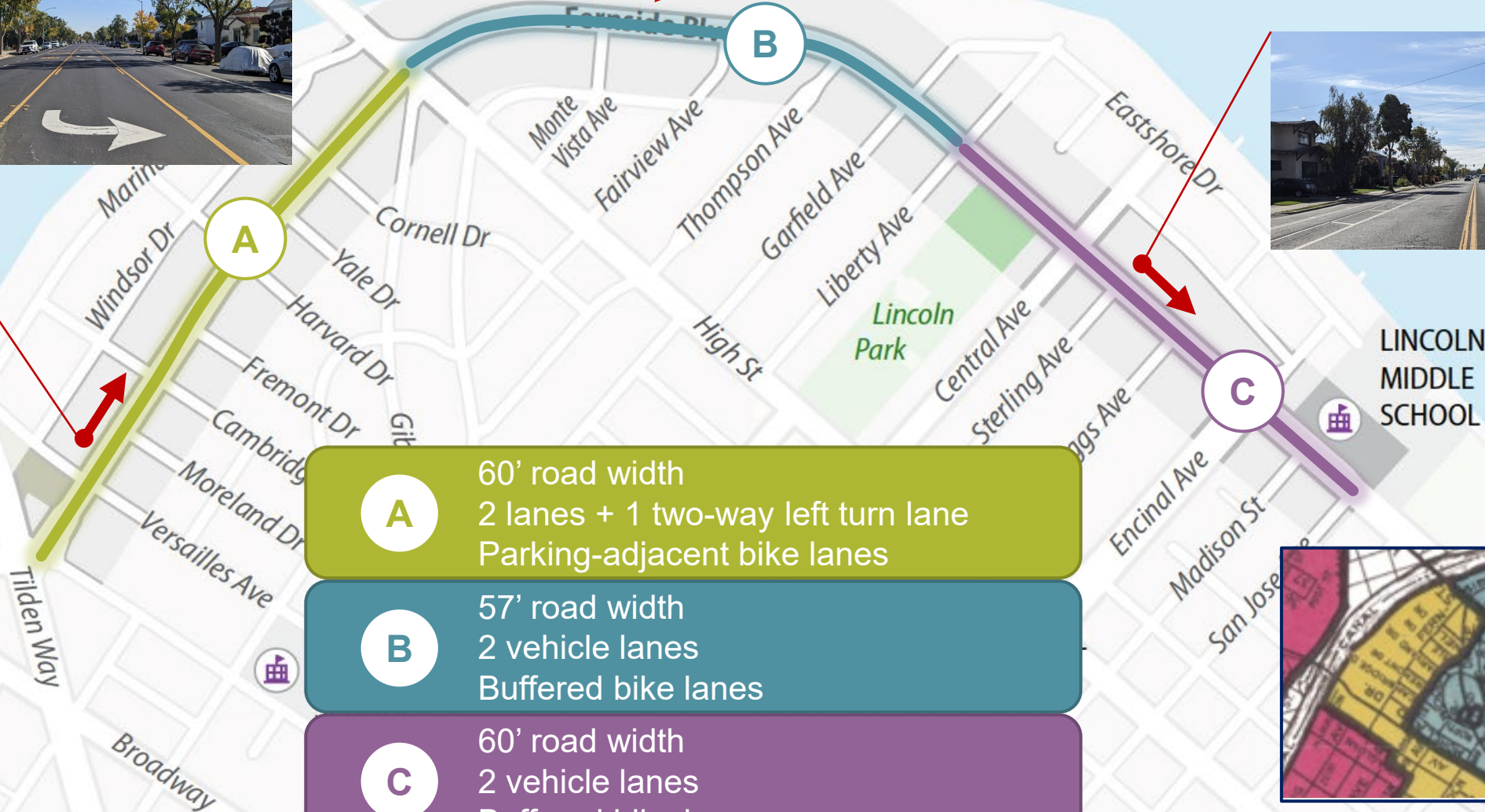
Existing Conditions

Fernside Boulevard Recent Enhancements

- At Versailles Ave:
 - 2010: Uncontrolled crossing upgraded to high-visibility striping
 - 2013: RRFB and concrete crosswalk protection improvements
- At Cambridge Dr.
 - 2014: Speed feedback sign below posted speed limit sign
- At Harvard Ave:
 - 2013: Uncontrolled crosswalk at Harvard Ave installed
 - 2021: RRFB and concrete crosswalk protection improvements
- At High St:
 - 2013: Removed second travel lane merge west of High St.
- East of High St:
 - 2019: Upgrade to buffered bike lanes as part of roadway repaving
- Between Otis and Lincoln Middle School
 - 2009: Two-way bikeway access to school



Varied Segments



A 60' road width
2 lanes + 1 two-way left turn lane
Parking-adjacent bike lanes

B 57' road width
2 vehicle lanes
Buffered bike lanes

C 60' road width
2 vehicle lanes
Buffered bike lanes



Relationship to historic redlining

Fernside from Tilden to High 80' Right-of-Way



6'

4'

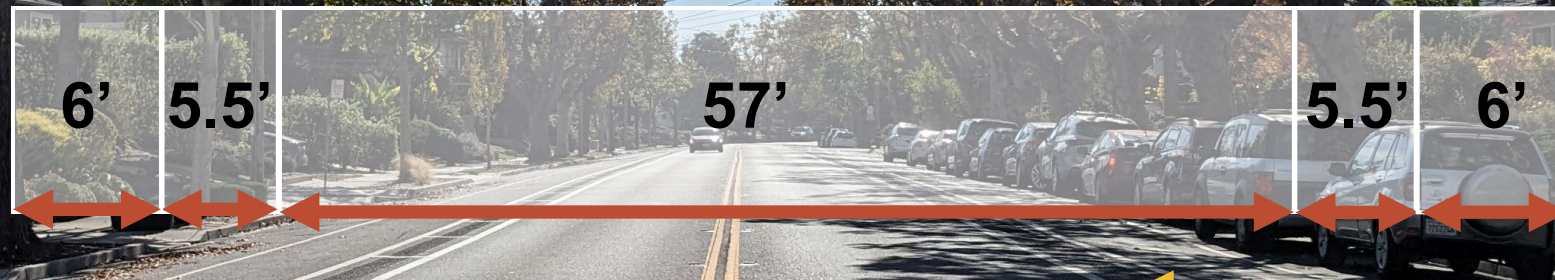
60'

4'

6'

20' center of sidewalk
to edge of travel lane

Fernside from High to Liberty 80' Right-of-Way



26' center of sidewalk to
edge of travel lane

Fernside from Liberty to San Jose

75' Right-of-Way



23' center of sidewalk
to edge of travel lane

1,000 to 2,000 feet between Marked Crosswalks from Versailles Ave to Garfield Ave



AC Transit Bus Routes

LEGEND

LOCAL LINES

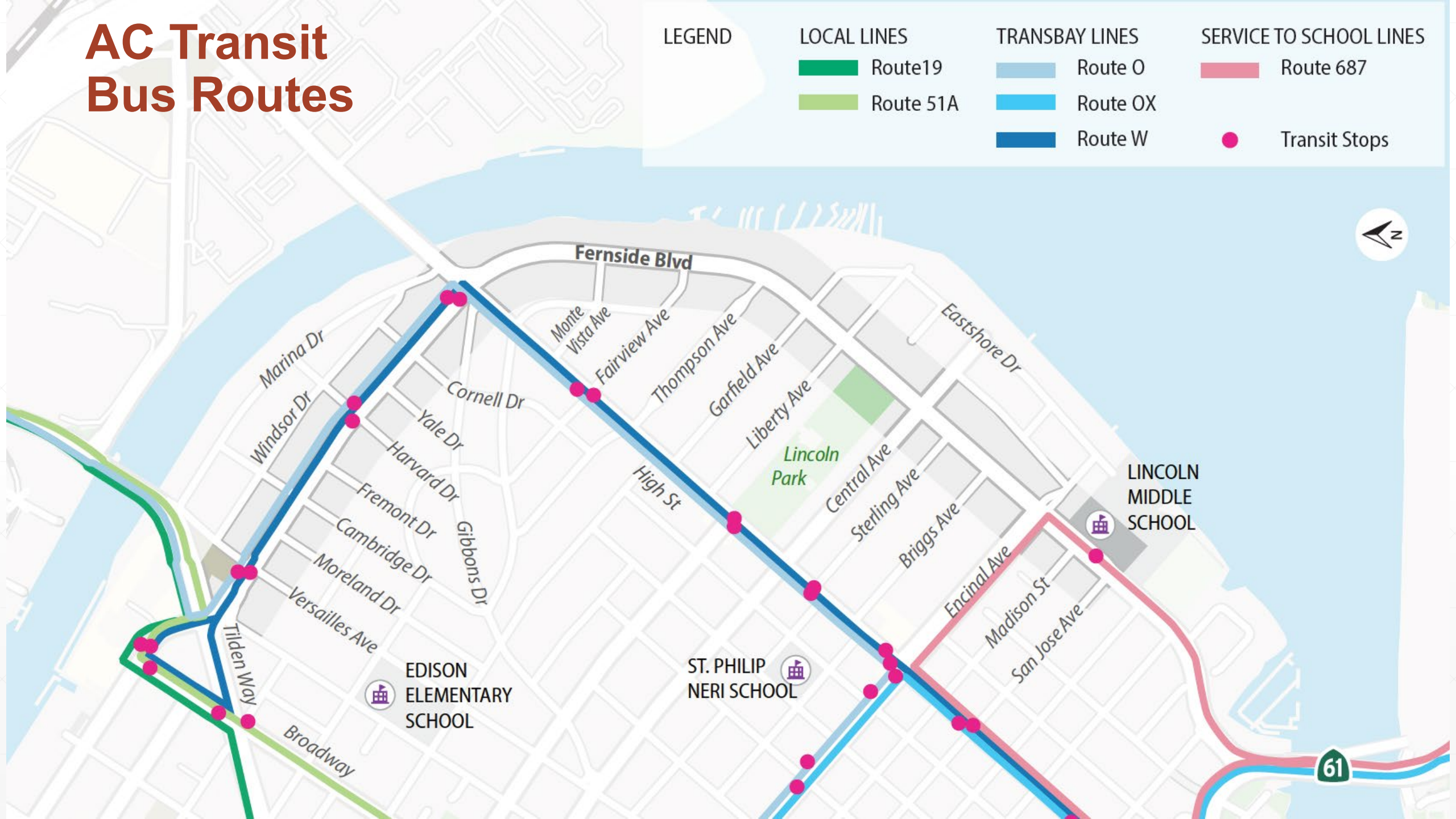
- Route 19
- Route 51A

TRANSBAY LINES

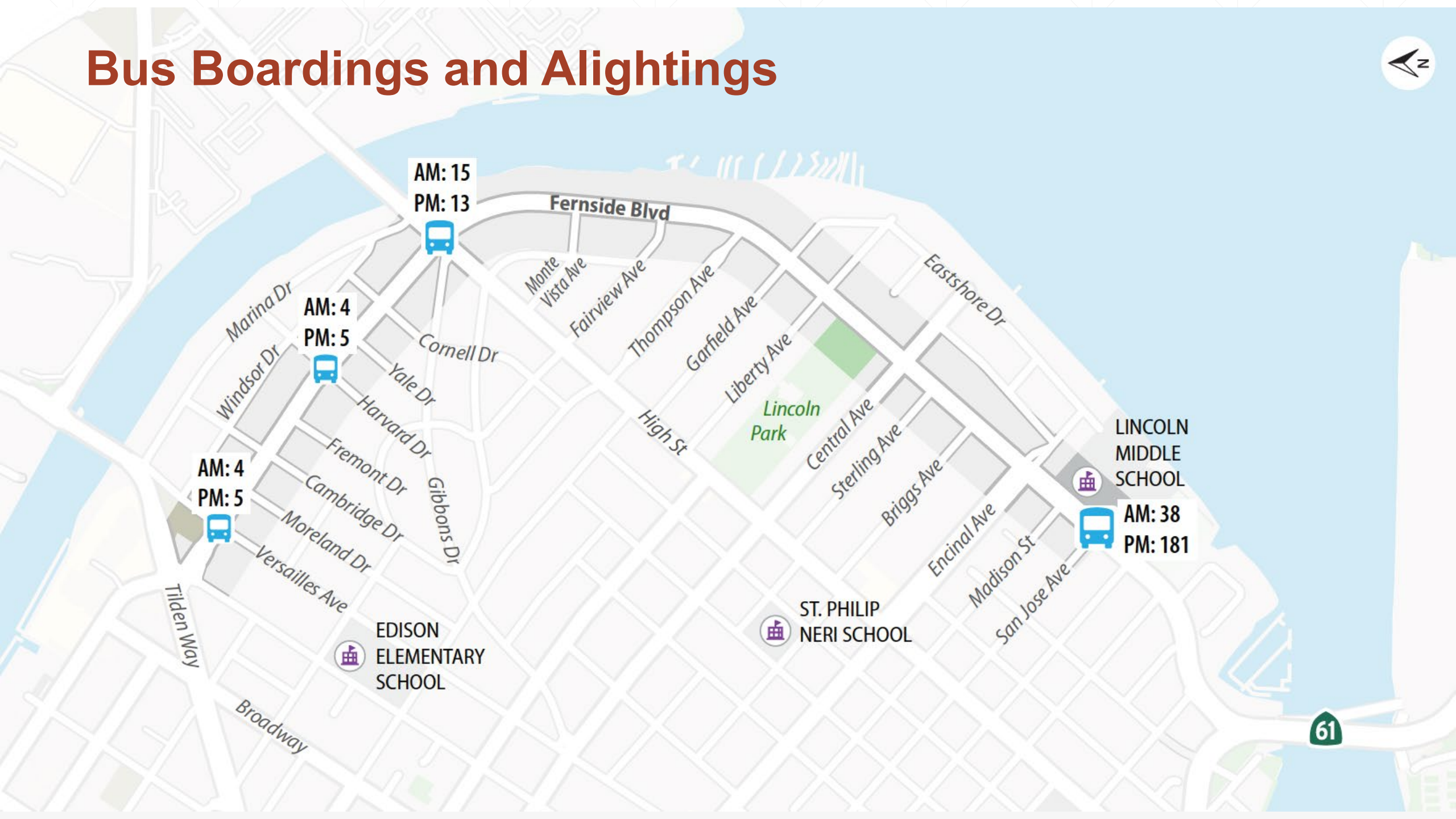
- Route O
- Route OX
- Route W

SERVICE TO SCHOOL LINES

- Route 687
- Transit Stops



Bus Boardings and Alightings





Crash History

Vehicle Speed and Crash Outcomes Involving Pedestrians

● If hit by a person driving at:

● Person Survives the Collision

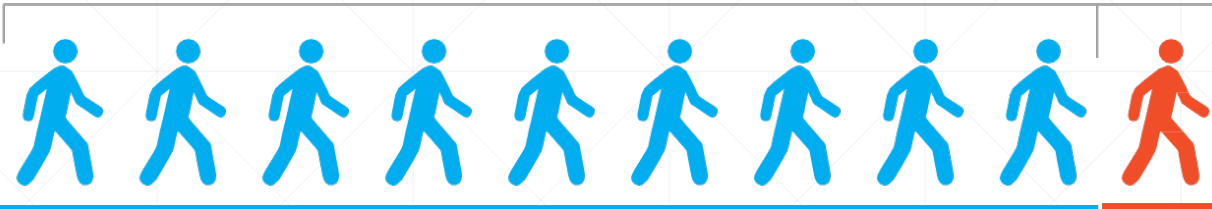
● Results in a Fatality

20 MPH



90%

10%

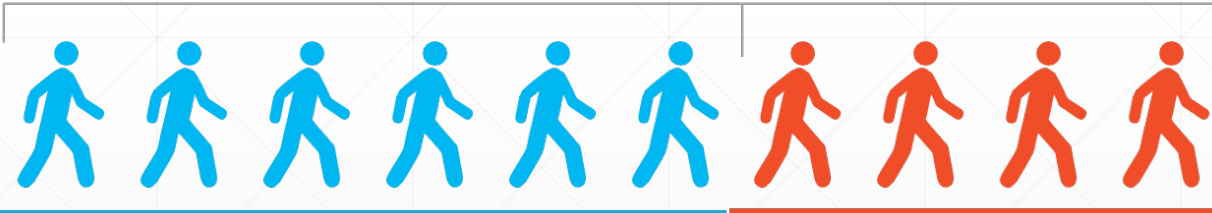


30 MPH



60%

40%



40 MPH



20%

80%

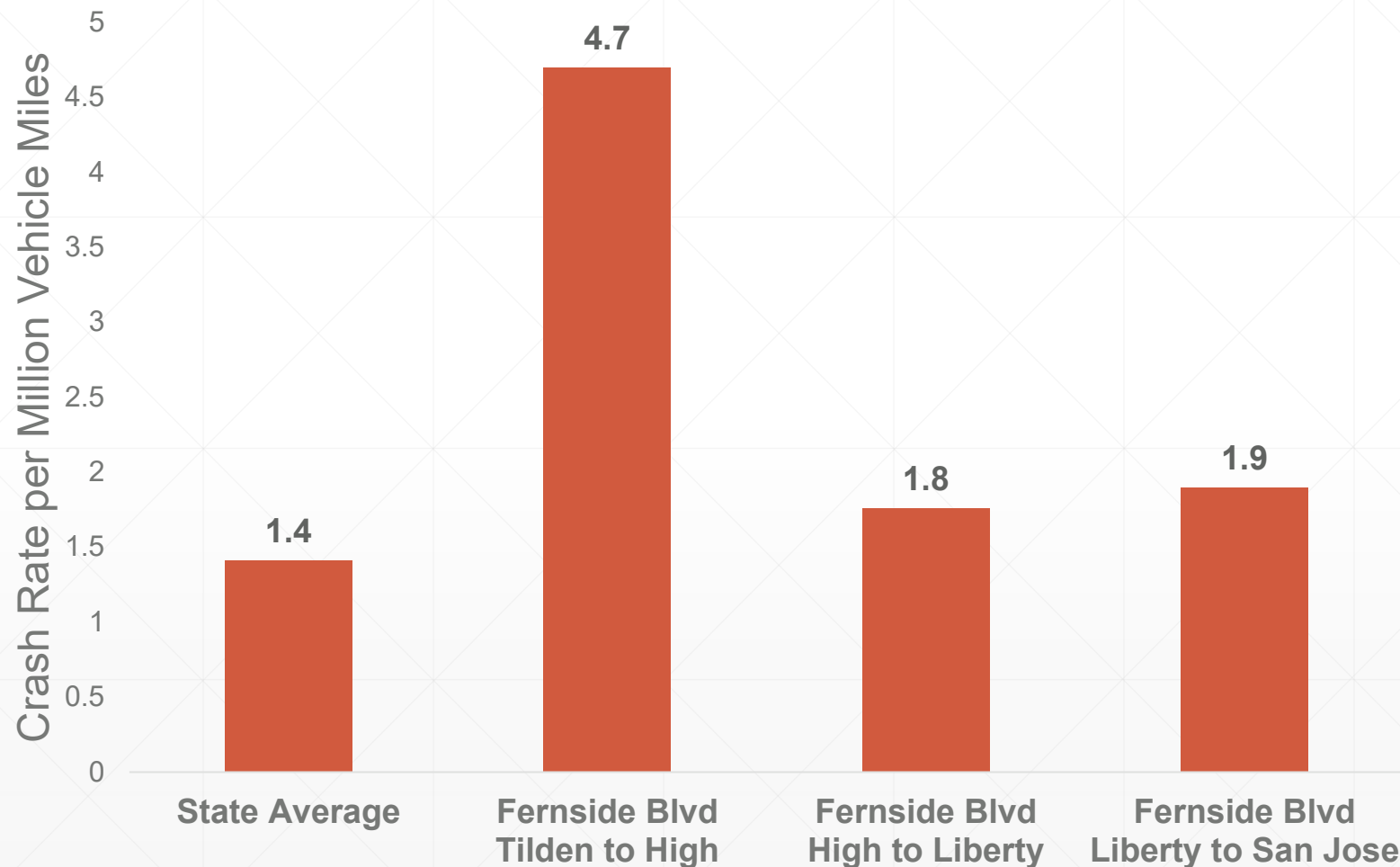


High Crash Rate throughout the Corridor

64

crashes from
2017-2021

(including non-injury crashes)



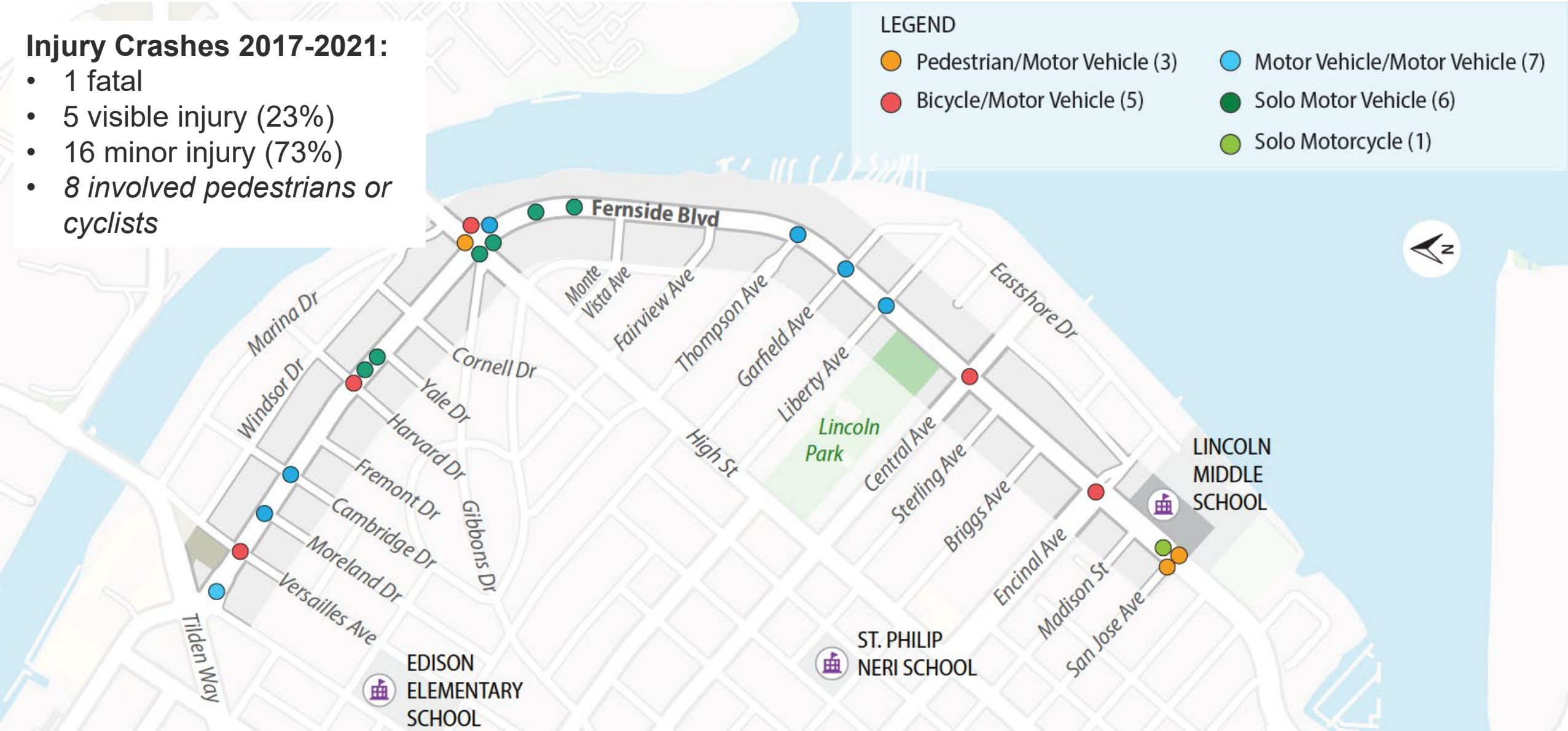
22 Injury Crashes from 2017-2021

Injury Crashes 2017-2021:

- 1 fatal
- 5 visible injury (23%)
- 16 minor injury (73%)
- 8 involved pedestrians or cyclists

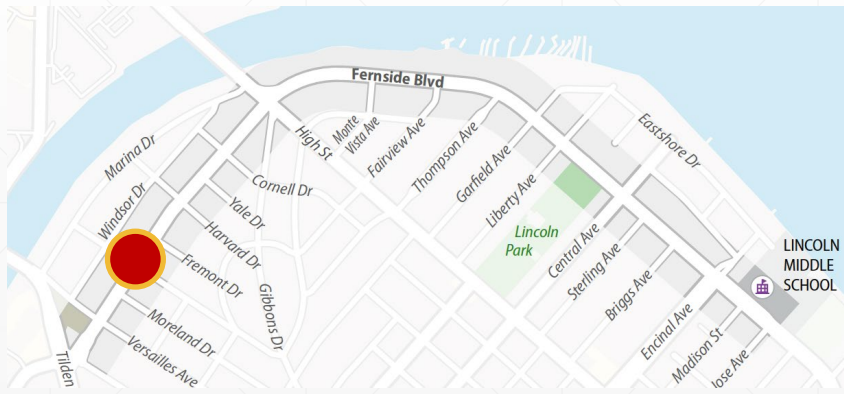
LEGEND

- | | |
|--------------------------------|-----------------------------------|
| ● Pedestrian/Motor Vehicle (3) | ● Motor Vehicle/Motor Vehicle (7) |
| ● Bicycle/Motor Vehicle (5) | ● Solo Motor Vehicle (6) |
| | ● Solo Motorcycle (1) |



Fatal Crash: September 6, 2021

- Fernside & Cambridge intersection
- High-speed driver on Cambridge failed to stop at stop sign, causing broadside collision with another vehicle traveling on Fernside





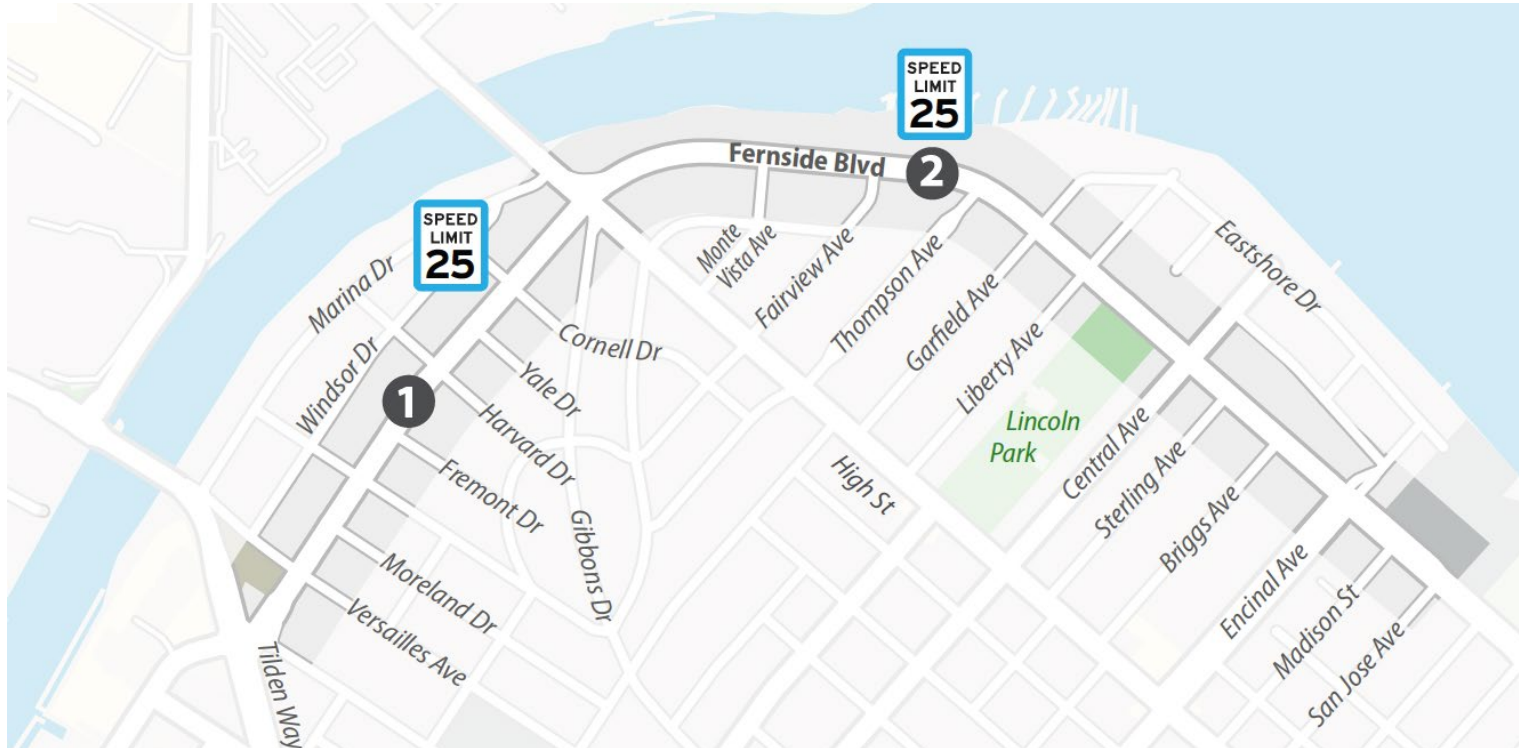
Data Collection

Existing Speed Limit is 25 mph, but Actual Vehicle Speeds are Higher

Average Speed: 30 mph
85th Percentile Speed: 35 mph
Highest speed recorded: 46 mph



1



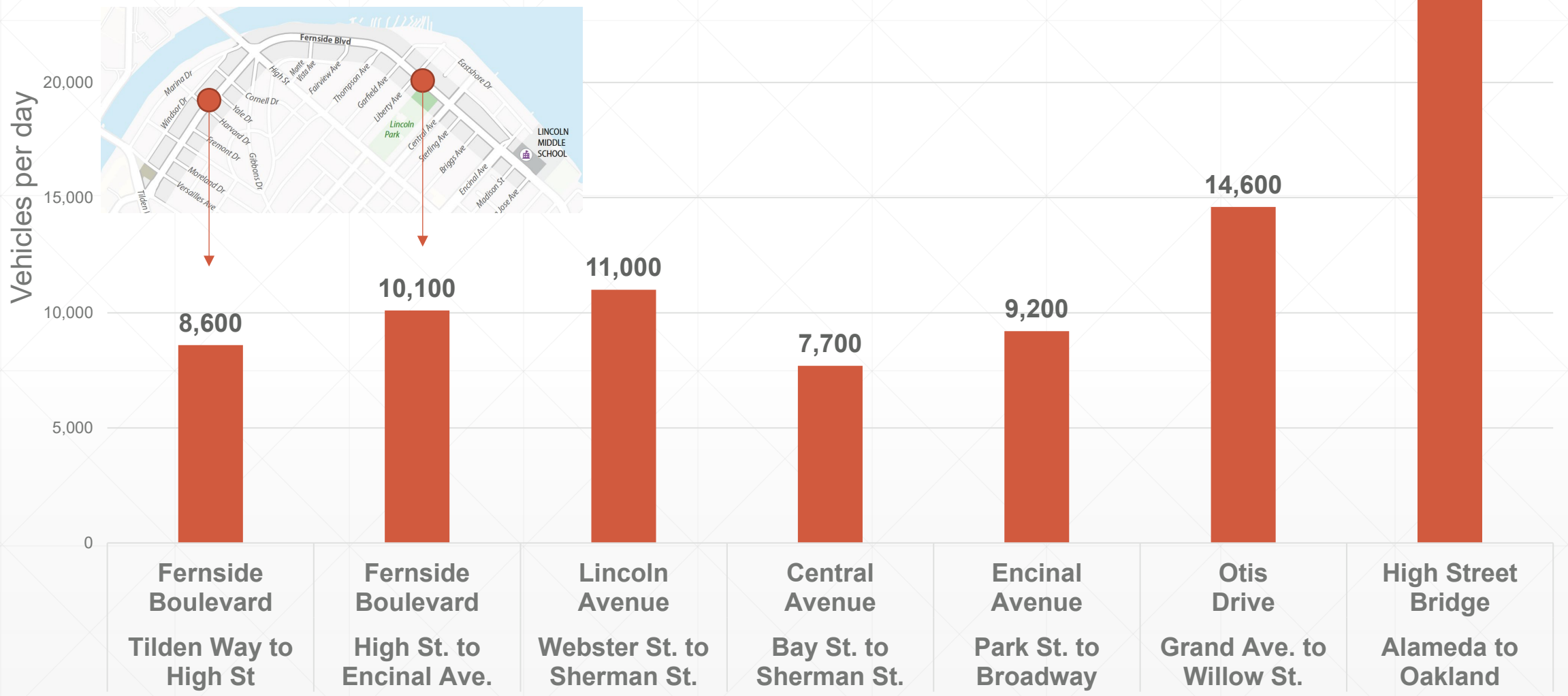
Average Speed: 31 mph
85th Percentile Speed: 35 mph
Highest speed recorded: 44 mph



2

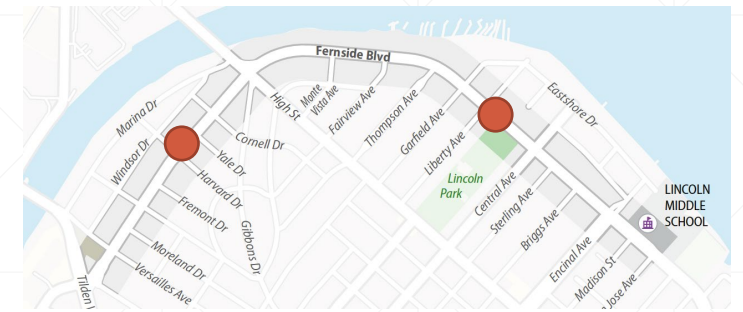
Speed survey conducted on 10/24/2023

Average Daily Traffic Compares to Similar Roadways

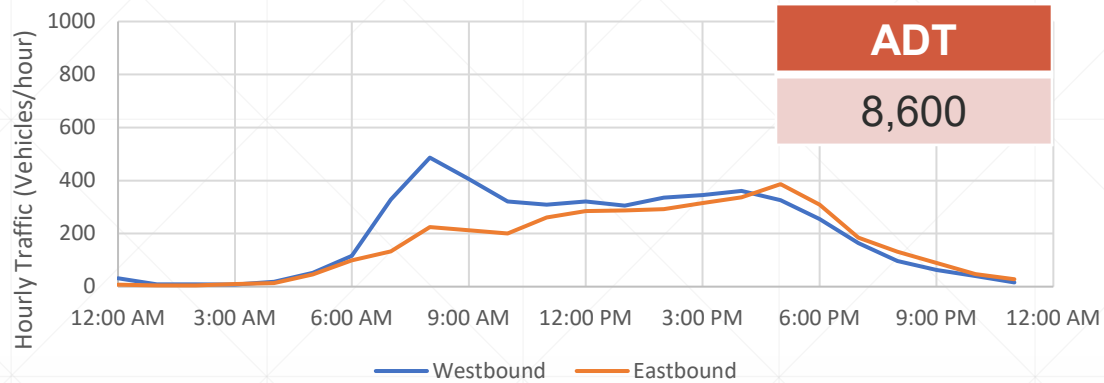


Traffic counts measured between 10/12/2023 and 10/18/2023

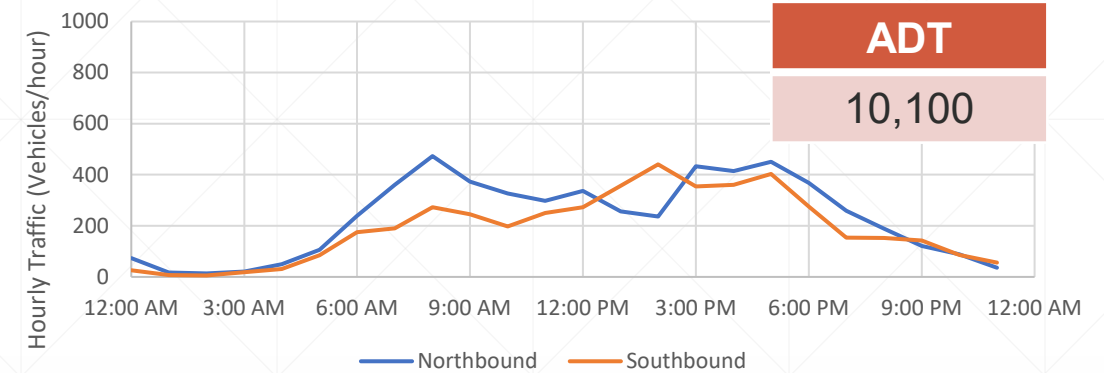
Fernside Carries 200 to 500 Vehicles per Hour in Each Direction



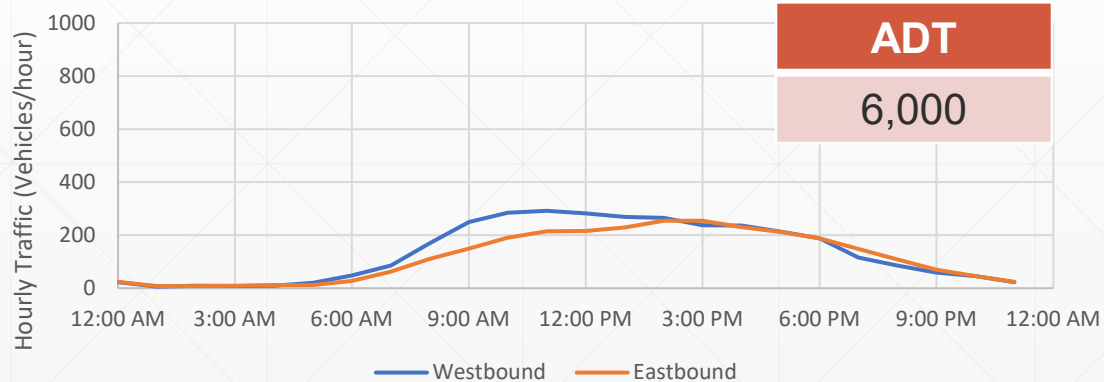
Fernside east of Harvard; Average T-Th



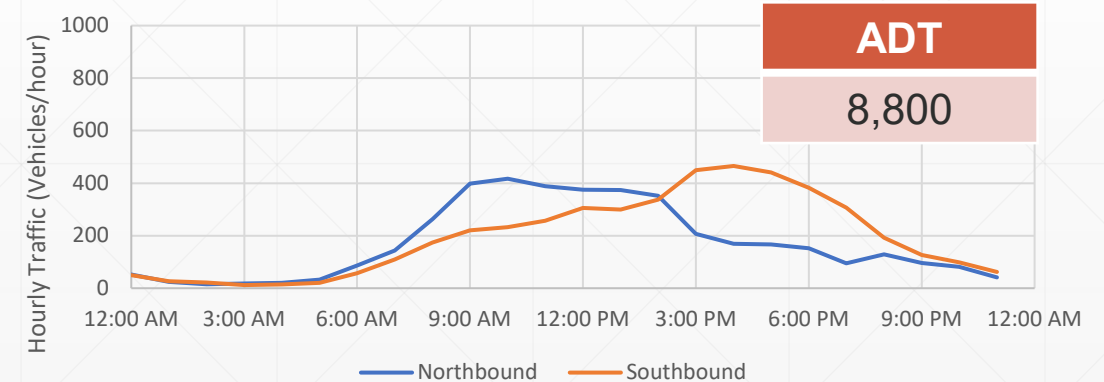
Fernside north of Central; Average T-Th



Fernside east of Harvard; Average Weekend



Fernside north of Central; Average Weekend



Vehicles Flow to and from Bridges



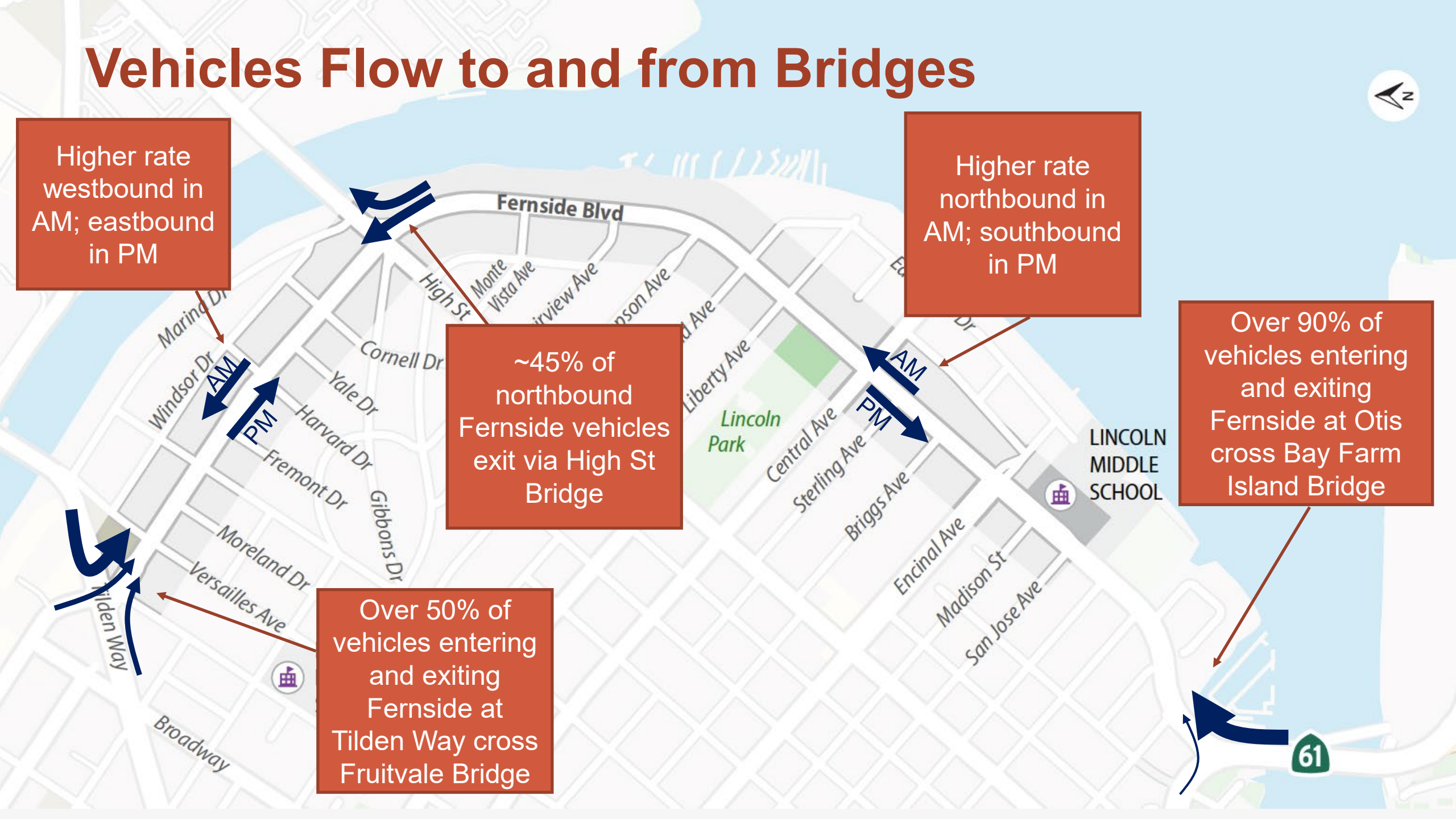
Higher rate
westbound in
AM; eastbound
in PM

Higher rate
northbound in
AM; southbound
in PM

~45% of
northbound
Fernside vehicles
exit via High St
Bridge

Over 90% of
vehicles entering
and exiting
Fernside at Otis
cross Bay Farm
Island Bridge

Over 50% of
vehicles entering
and exiting
Fernside at
Tilden Way cross
Fruitvale Bridge



Pedestrian and Bicyclist Demand



Between 10-20 pedestrians cross Fernside per hour before and after school



Between 20-30 bicycles per hour make left turns traveling to/from school



Between 60-100 pedestrians cross Fernside per hour before and after school



Between 20-35 bicycles per hour travel through intersection during morning commute



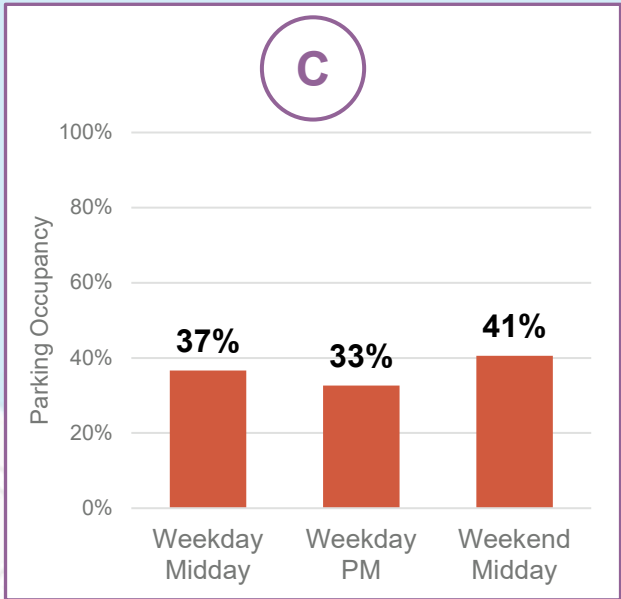
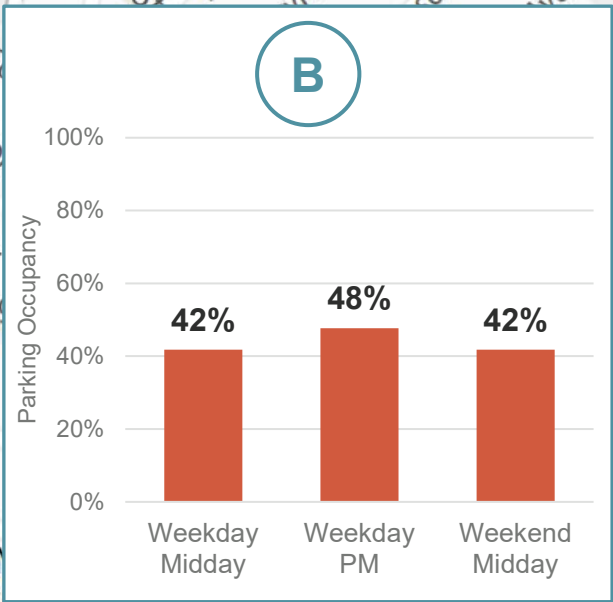
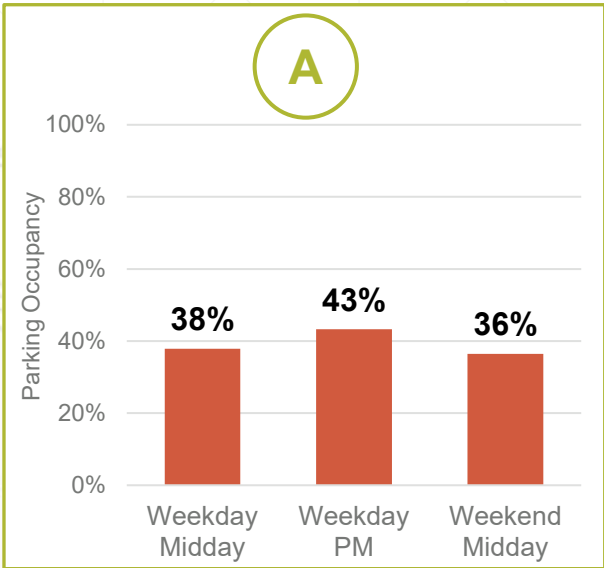
Higher rate westbound in AM; eastbound in PM



Before and after school, bicycles comprise 10-15% of all traffic on Fernside

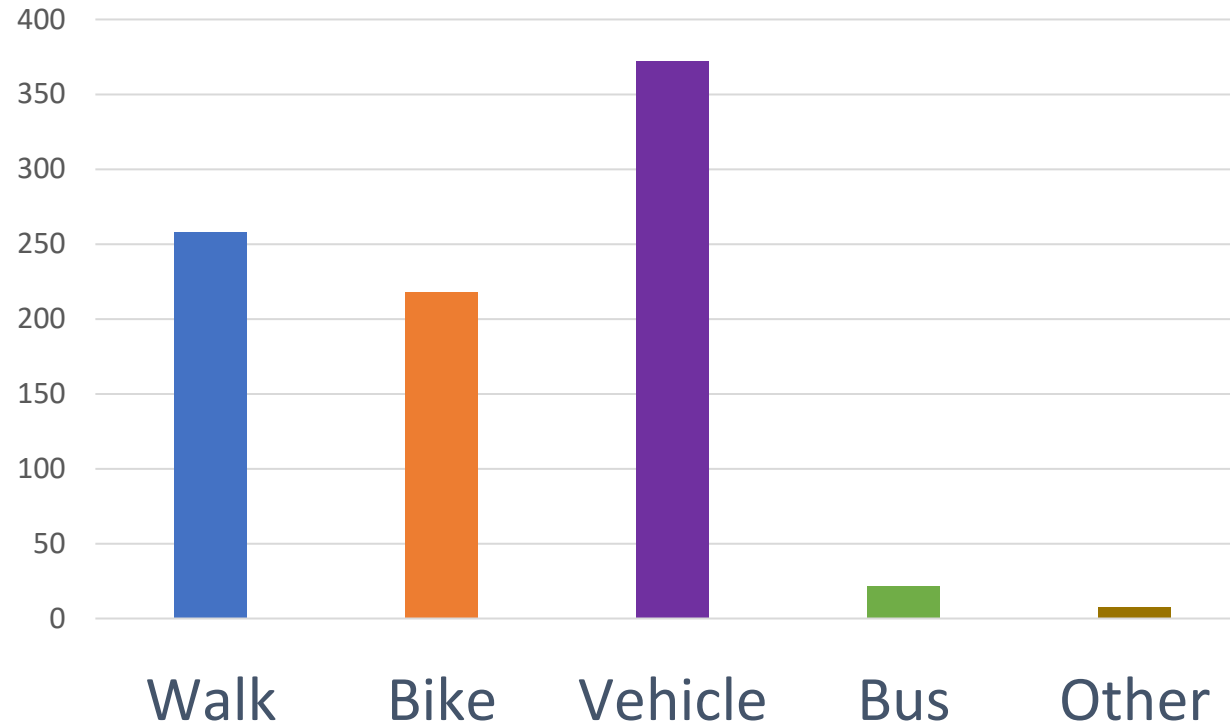


On-Street Parking Less Than 50% Occupied



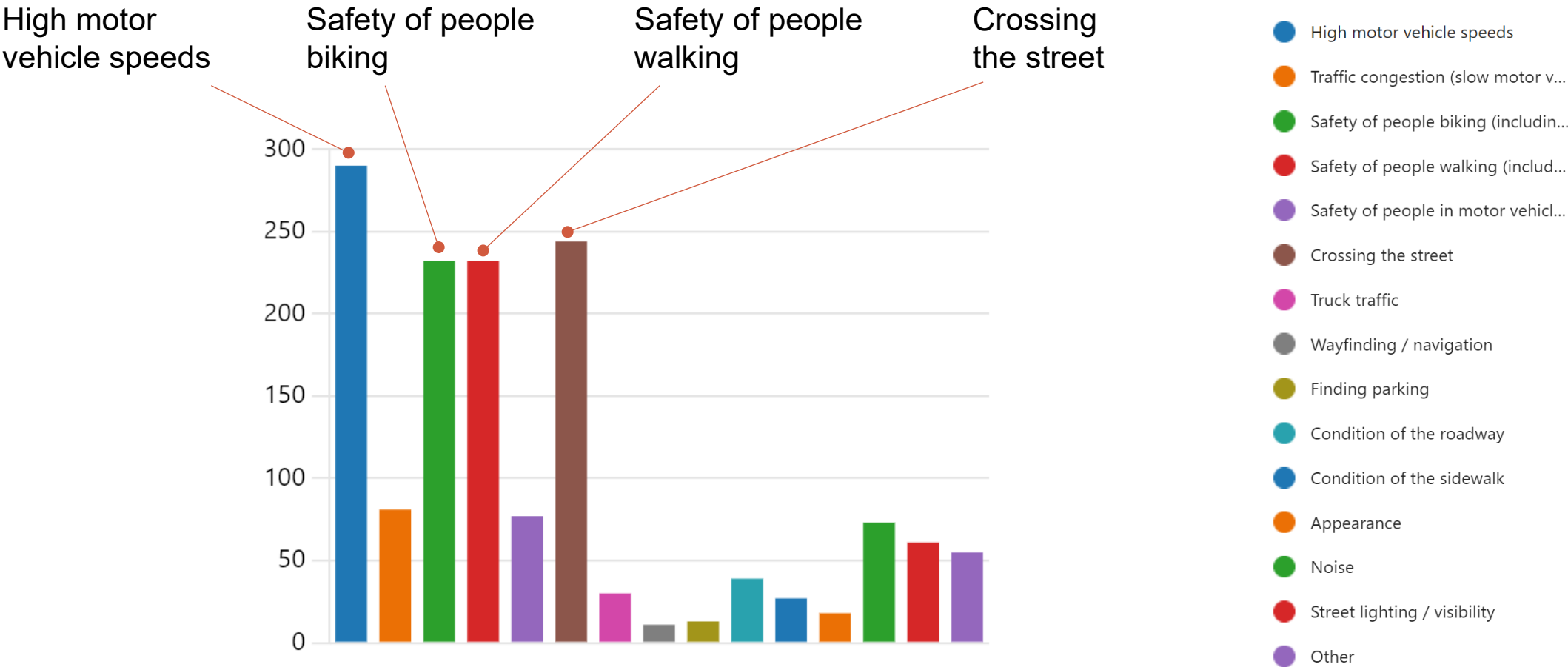
Parking occupancy counts conducted Oct. & Nov. 2023

Online Survey Results: 408 Responses as of Dec. 1



What mode(s) of travel do you often use when traveling along or crossing Fernside Boulevard?

Online Survey Results



What do you find most challenging when using Fernside Blvd?

Sample Survey Responses

"It's difficult to get in or out of driveways"

"Cars are traveling way too fast"

"The street is poorly lit"

"The intersection at High and Fernside is dangerous"

"Its complicated to get to the two-way bike lane"

"Crossing Fernside on foot is risky"

"Protected bike lanes would be great"

"Cars pass in the median"

"The street is too wide"

"I would to see more street trees"

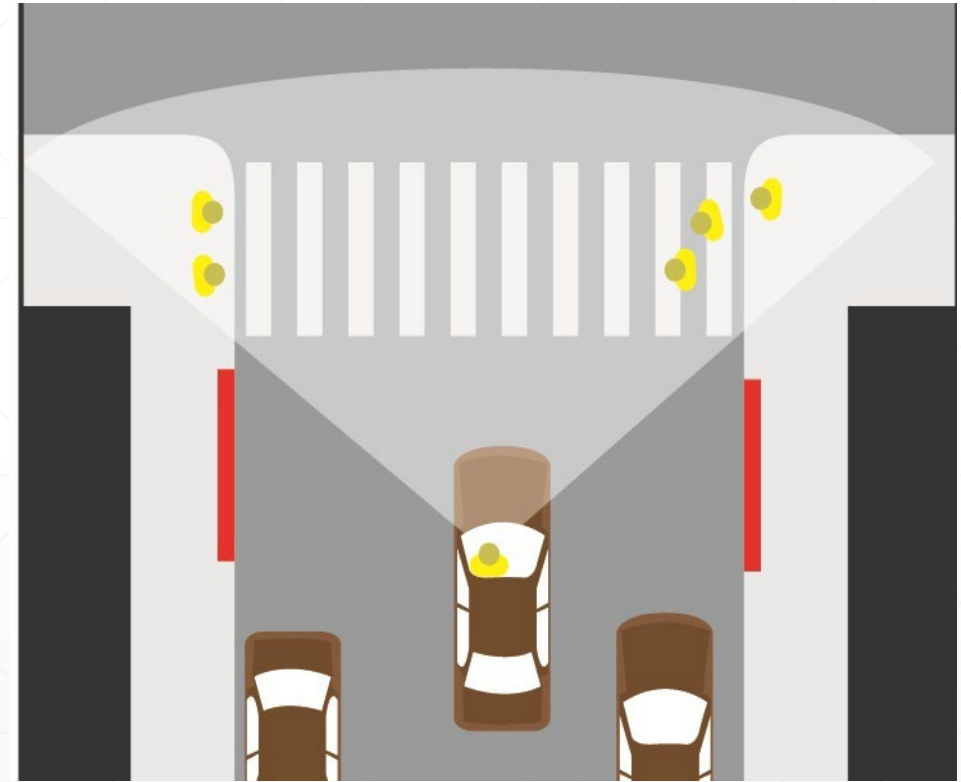
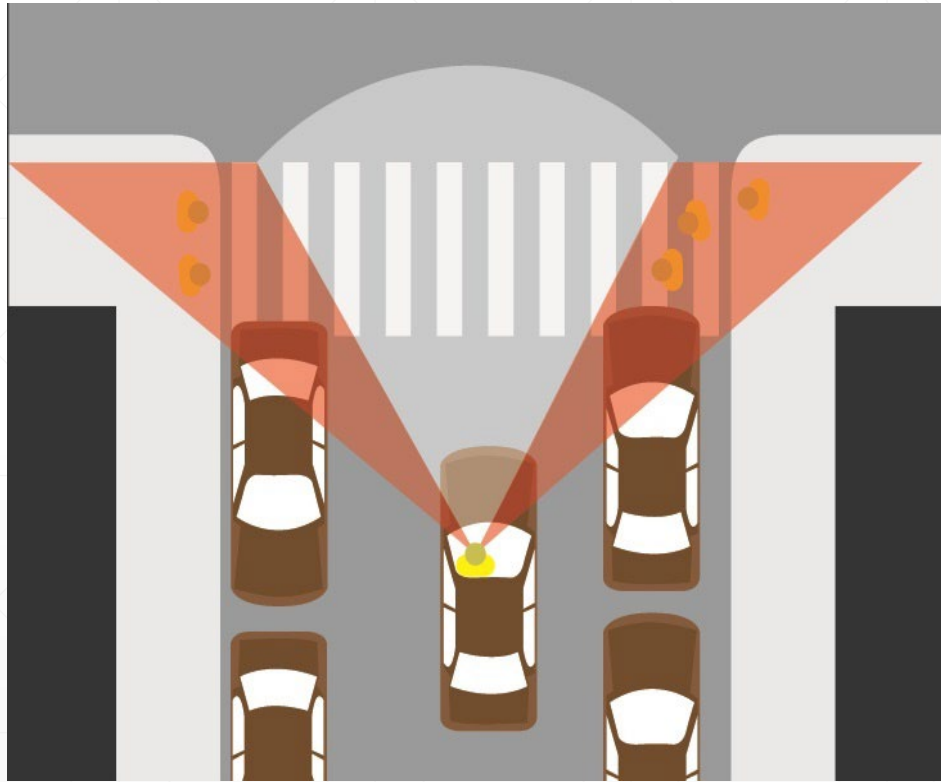
"Cars often speed through crosswalks"

"I would love more crosswalks"



Improvement Toolkit – Traffic Calming & Safety

Improved Sight Lines



High Visibility Crosswalks



Rectangular Rapid Flashing Beacon



Pedestrian Refuge Islands



Bulbouts



Speed Feedback Sign



Bus stop enhancements





Improvement Toolkit – Bikeways

Buffered Bicycle Lanes



Physically Separated Bike Lane: 1-Way



Physically Separated Bike Lane: 2-Way



Raised Bike Lane

