June 26, 2024

Fernside Boulevard Traffic Calming & Bikeways Project

Transportation Commission

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

Project Phases

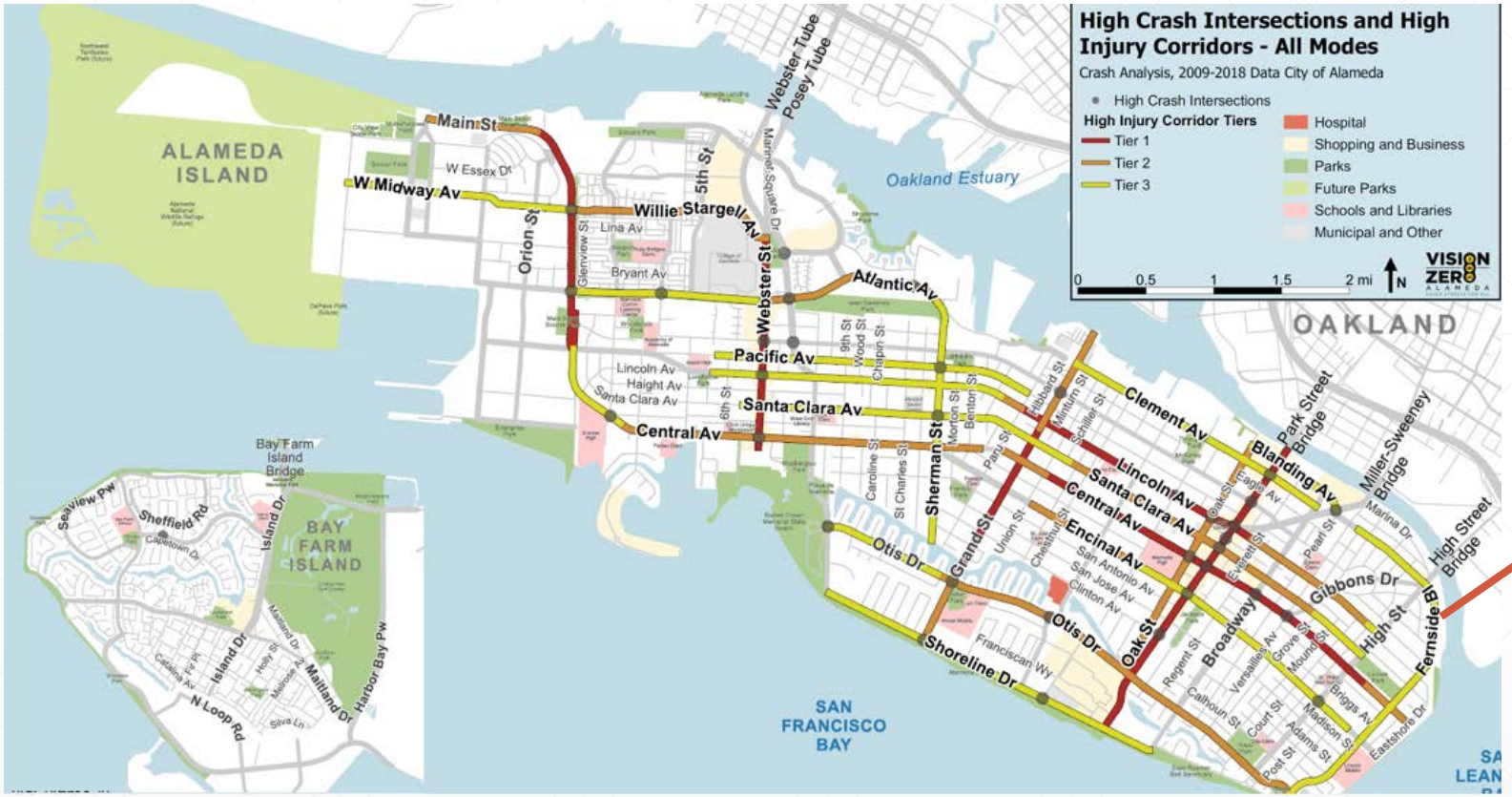
1. **Public outreach for existing conditions & initial input:** November 2023 - January 2024
2. **Public outreach for draft concept alternatives:** May-June 2024
3. **Public hearings for final design concept:** Fall/Winter 2024 Transportation Commission and City Council public hearings (including seeking City Council approval)
4. **Resurfacing and restriping on Fernside Blvd west of High St:** 2025 or 2026
5. **Construct full corridor project:** 2030 goal – timing depends on finding funding

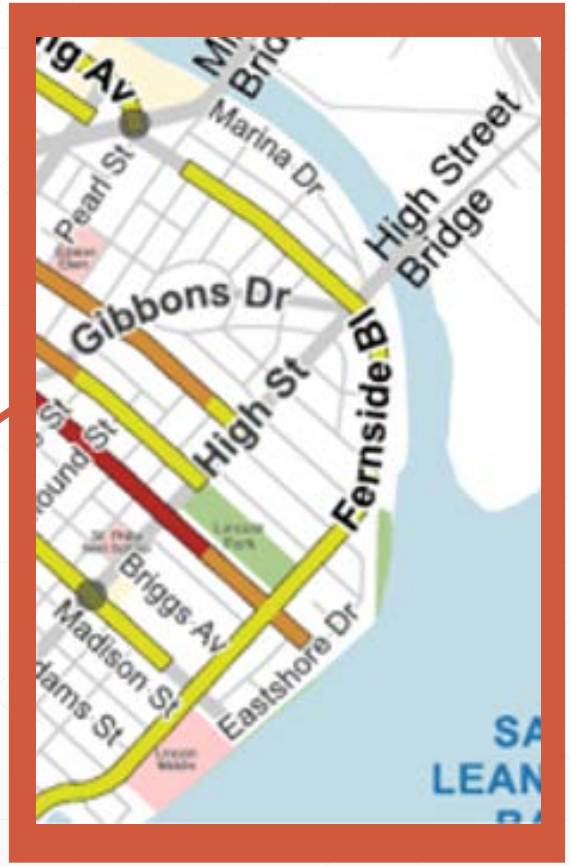
Why are we here?

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)*

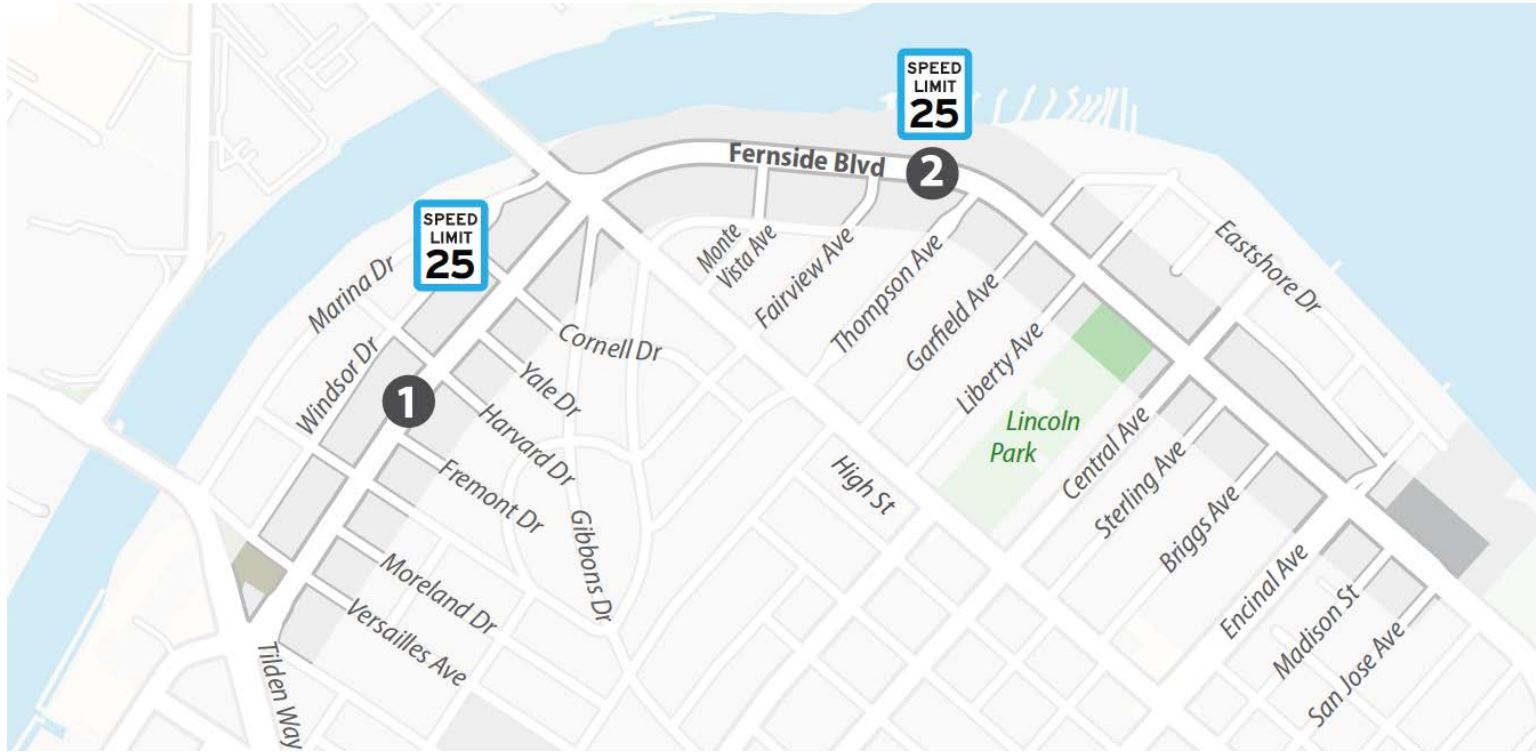
Fernside is a Tier 3 High Injury Corridor, All Modes





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



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

1

2

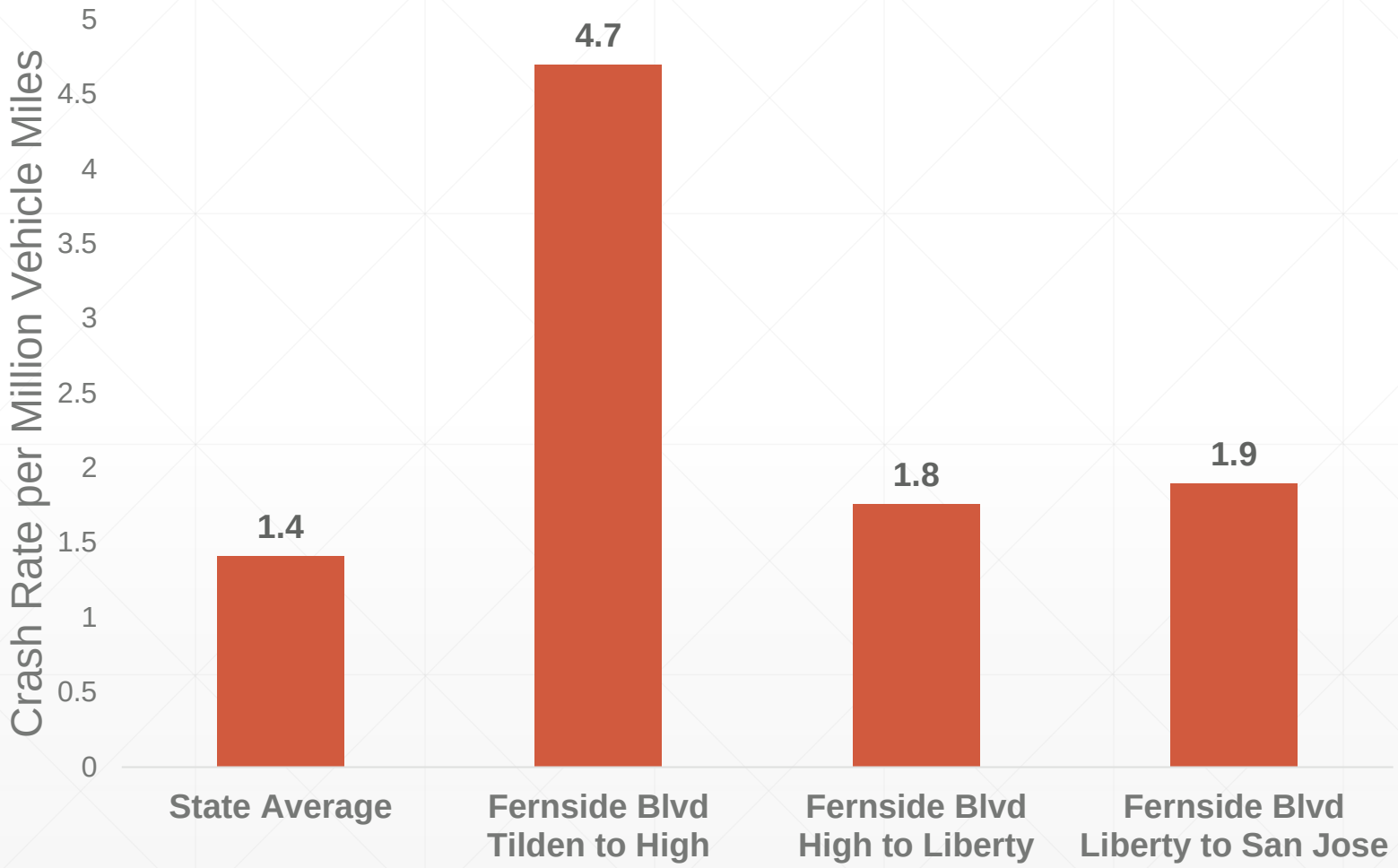
Speed survey conducted on 10/24/2023

High Crash Rate throughout the Corridor

64

crashes from 2017-2021

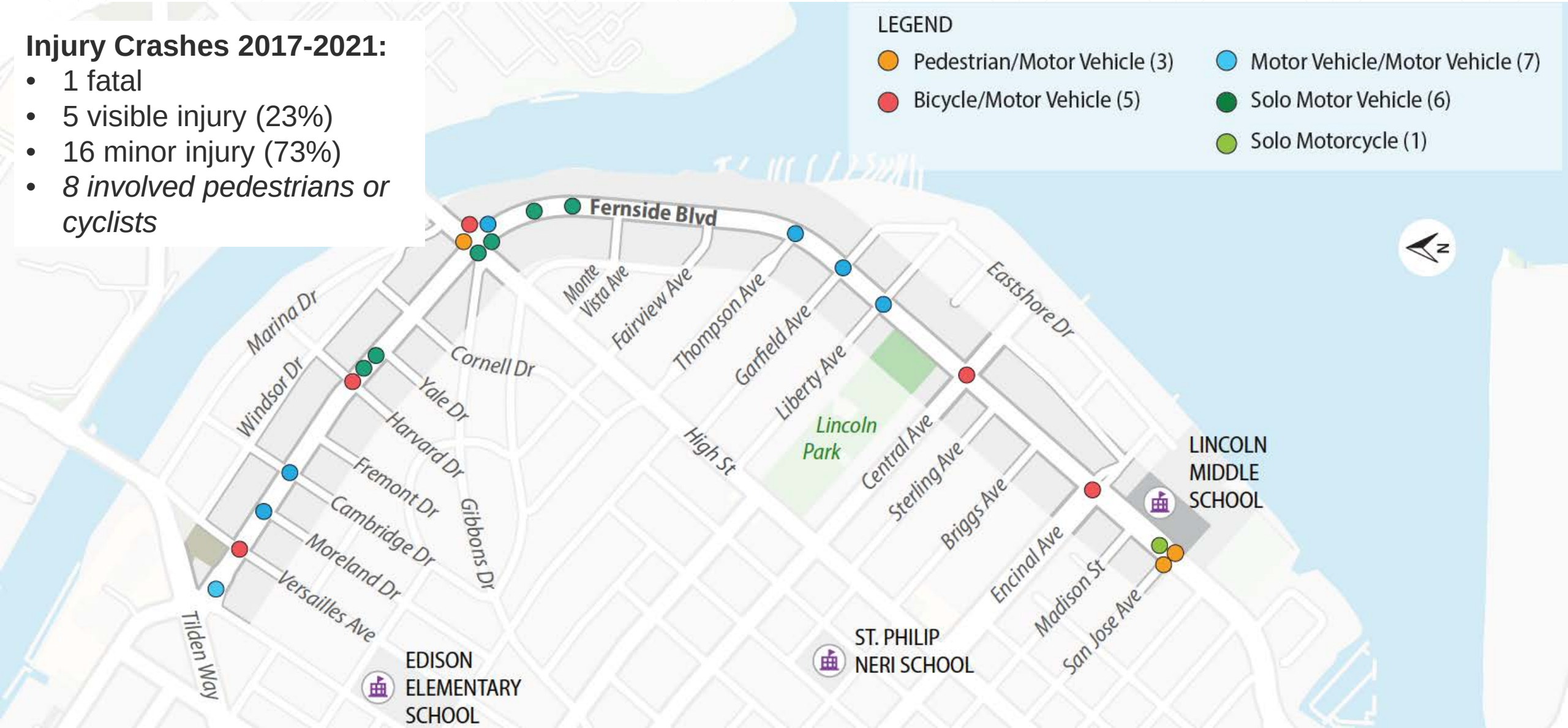
(including non-injury crashes)



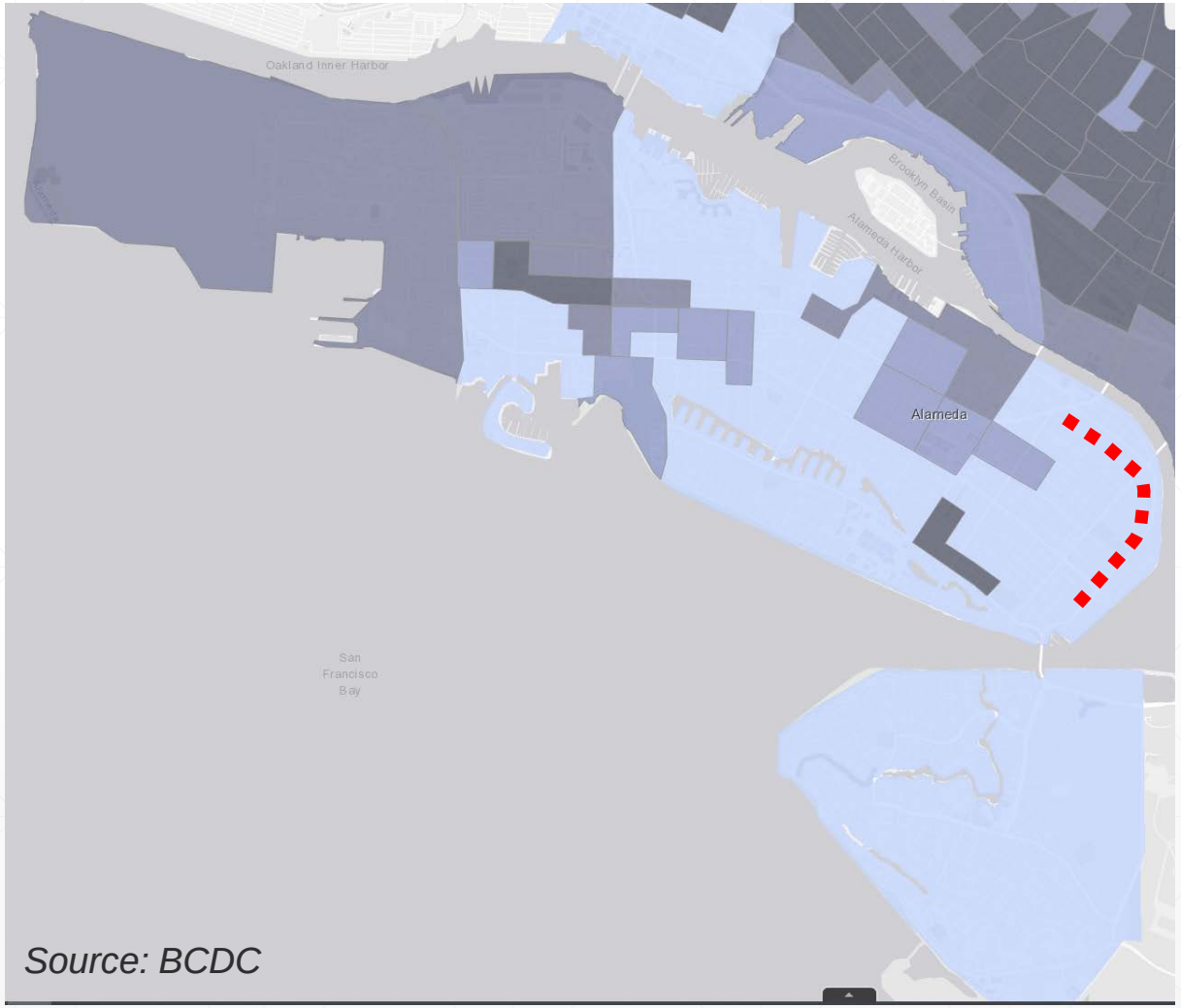
22 Injury Crashes from 2017-2021

Injury Crashes 2017-2021:

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



Fernside not in an Equity Priority Area



Highest social vulnerability

High social vulnerability

Moderate social vulnerability

Low social vulnerability

Source: BCDC

Active Transportation Plan: Low-Stress Bikeway + Ped Improvements

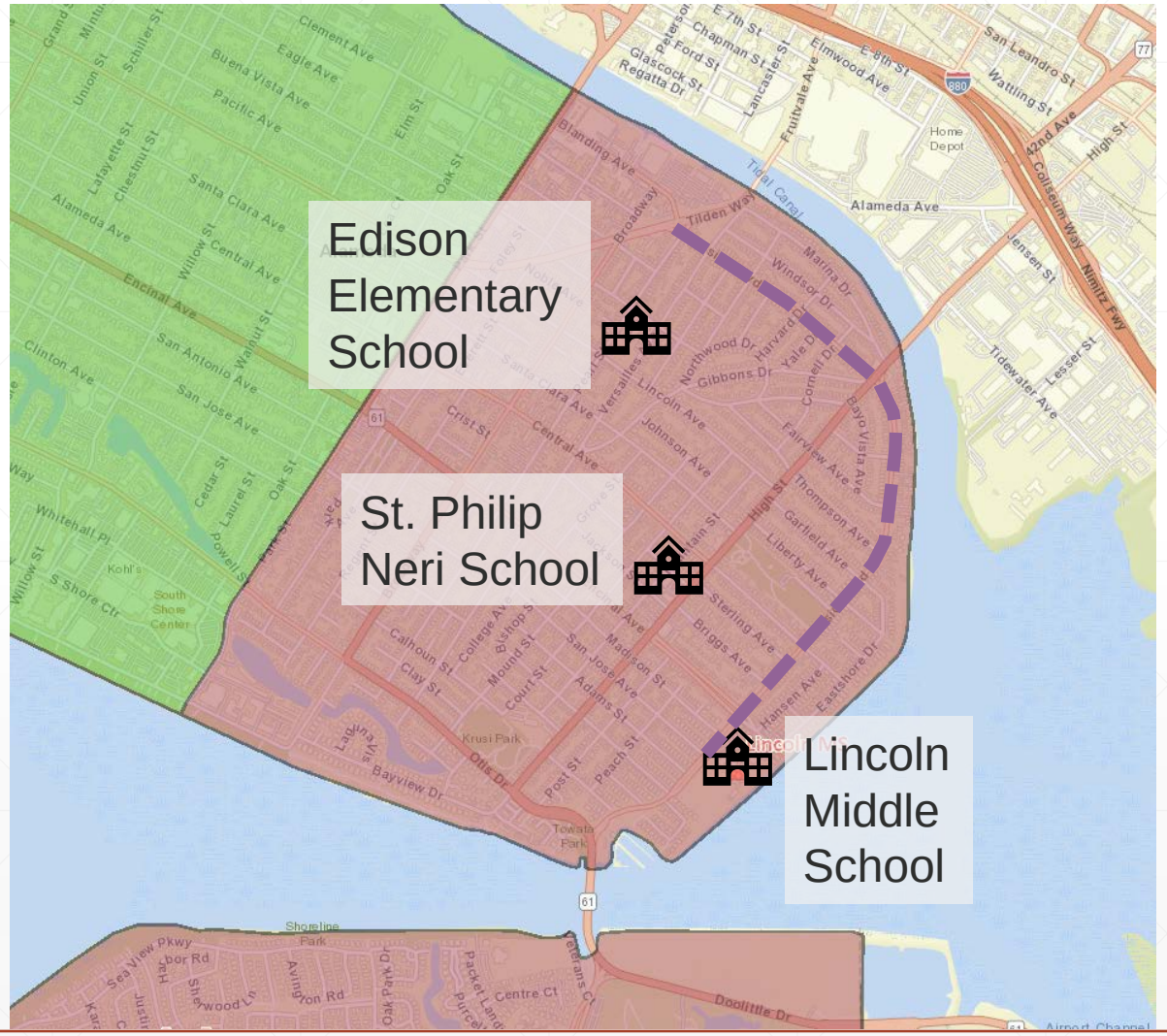
2030 Low-Stress Backbone Bikeway Network

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

Fernside is a Key School Access Route

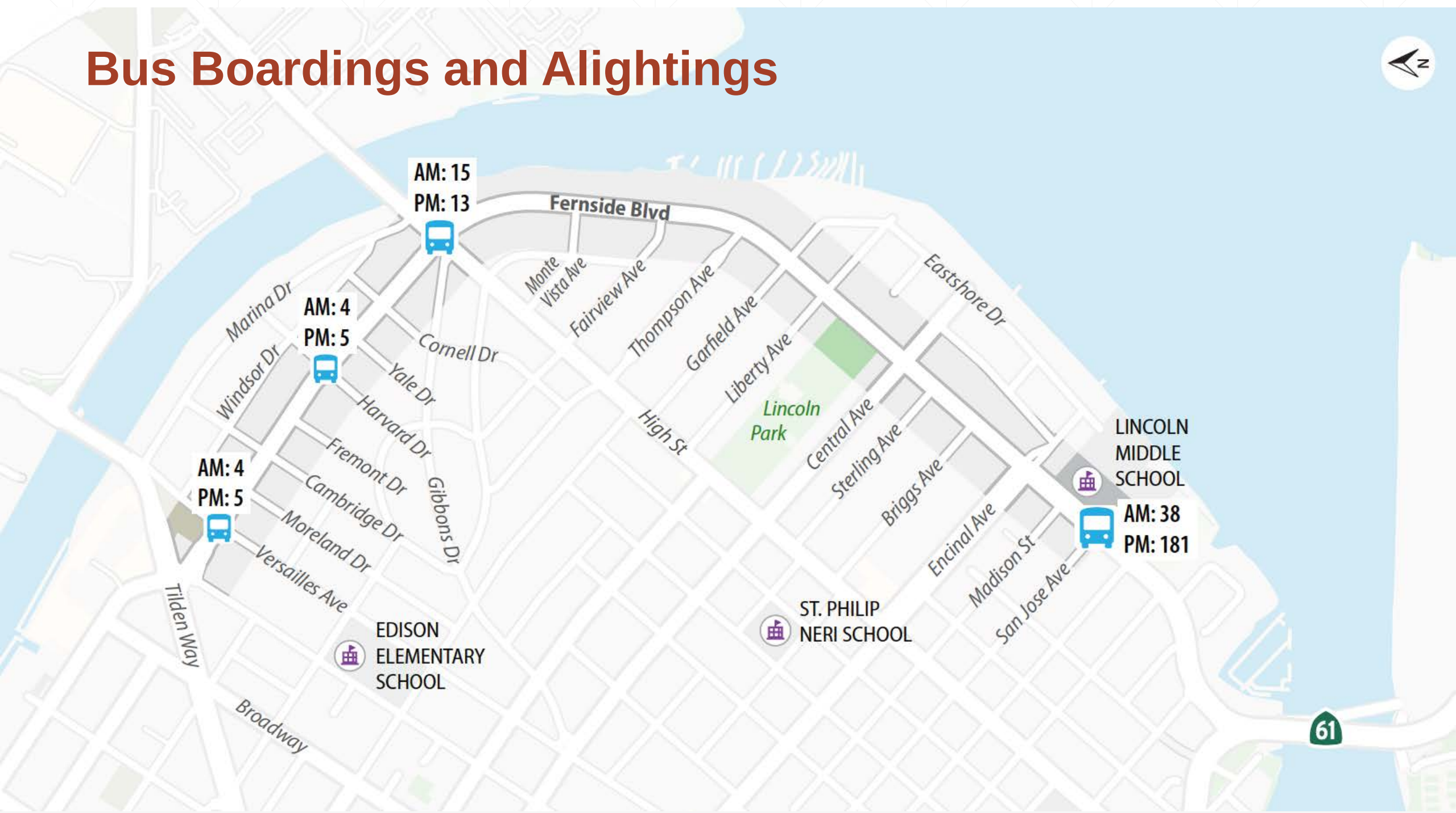
Approximately 30-40 pedestrians cross Fernside near Edison Elementary before and after school

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

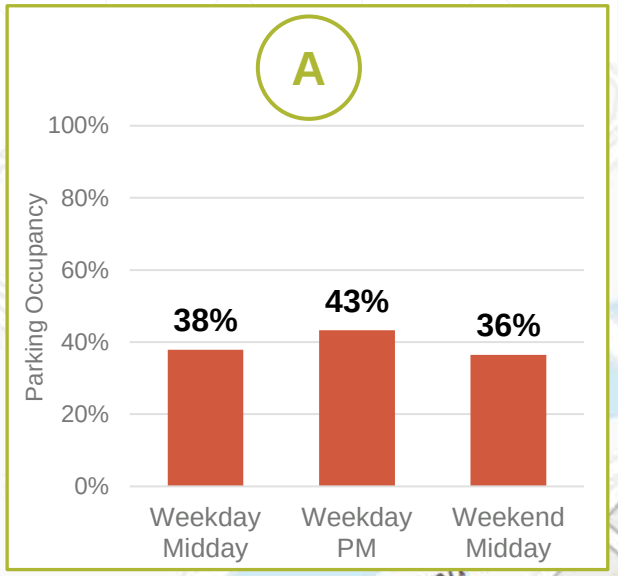


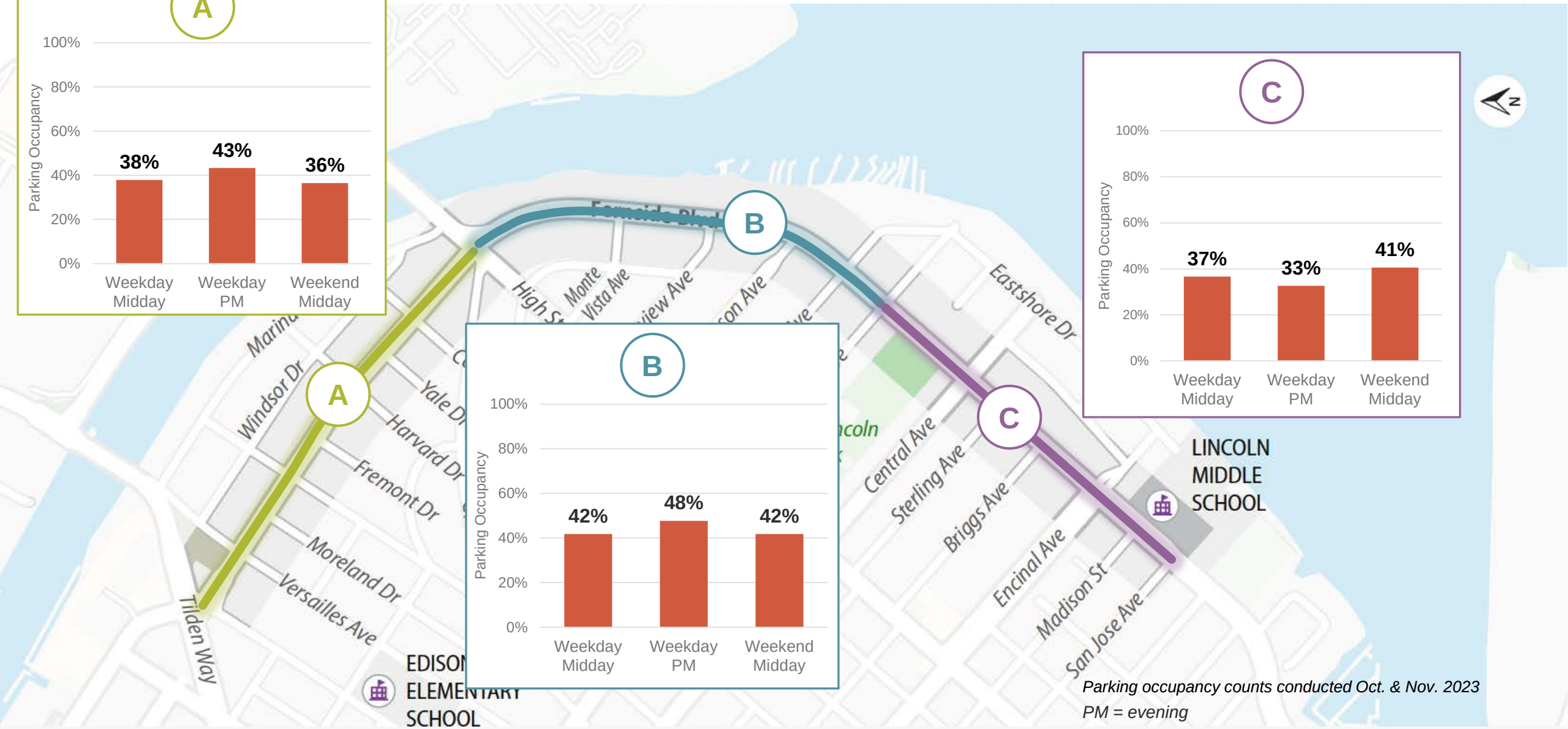
Map of AUSD middle school enrollment areas

Bus Boardings and Alightings



On-Street Parking Less Than 50% Occupied





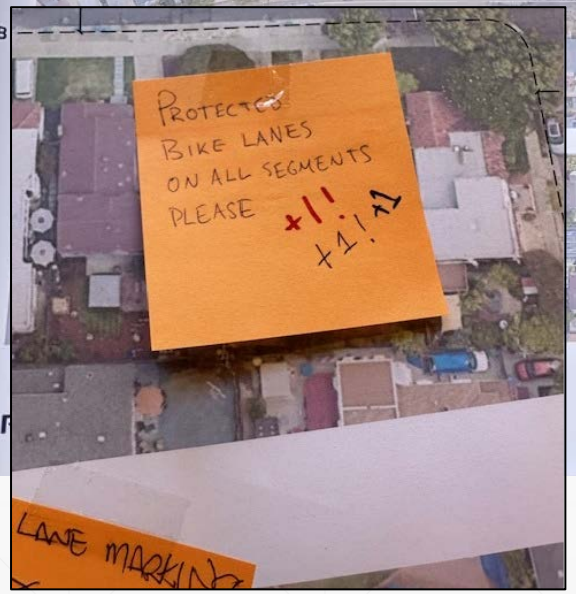
Parking occupancy counts conducted Oct. & Nov. 2023

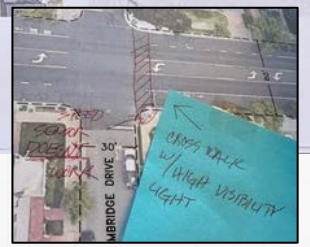
PM = evening

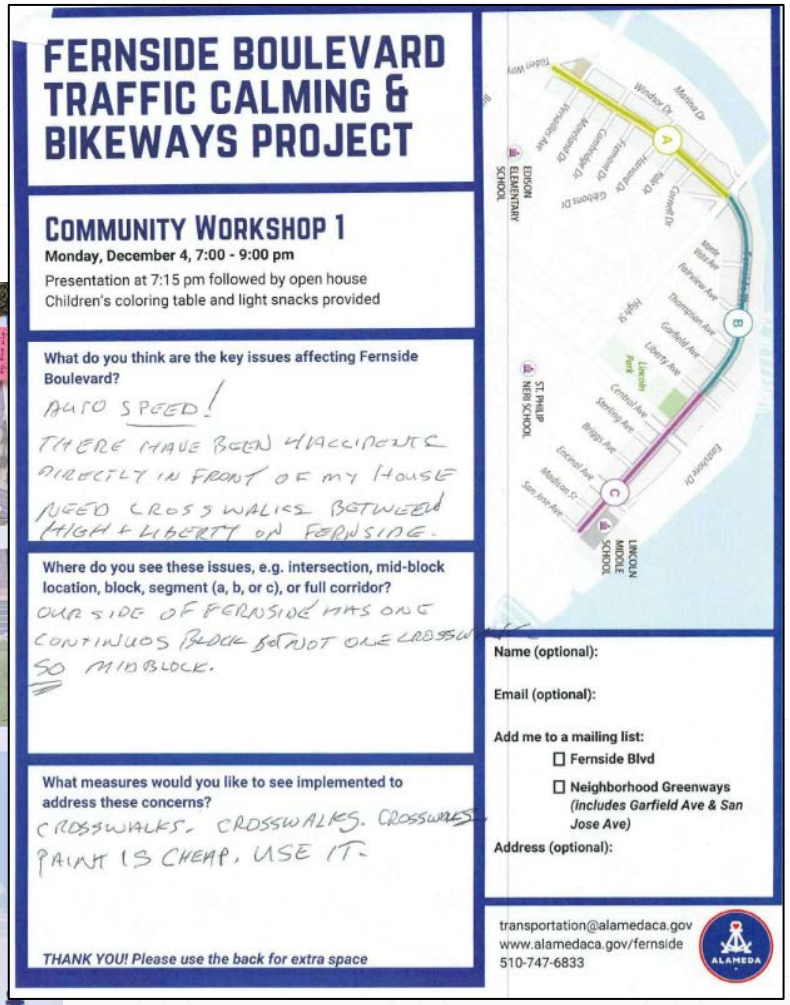
Winter 2023/2024 Community Engagement Participation

- 600 online survey participants
- 85 community workshop attendees
- 23 virtual community workshop attendees

Community Workshop Input







FERNSIDE BOULEVARD TRAFFIC CALMING & BIKEWAYS PROJECT

COMMUNITY WORKSHOP 1

Monday, December 4, 7:00 - 9:00 pm

Presentation at 7:15 pm followed by open house
Children's coloring table and light snacks provided

What do you think are the key issues affecting Fernside Boulevard?

AUTO SPEED!
THERE HAVE BEEN 4 ACCIDENTS DIRECTLY IN FRONT OF MY HOUSE
NEED CROSSWALKS BETWEEN HIGH + LIBERTY ON FERNSIDE.

Where do you see these issues, e.g. intersection, mid-block location, block, segment (a, b, or c), or full corridor?

OUR SIDE OF FERNSIDE HAS ONE CONTINUOS BLOCK BETWEEN ONE CROSSW
SO MIDBLOCK.

What measures would you like to see implemented to address these concerns?

CROSSWALKS. CROSSWALKS. CROSSWALKS.
PAINT IS CHEAP, USE IT.

THANK YOU! Please use the back for extra space

Name (optional):

Email (optional):

Add me to a mailing list:

- ☐ Fernside Blvd
- ☐ Neighborhood Greenways *(includes Garfield Ave & San Jose Ave)*

Address (optional):

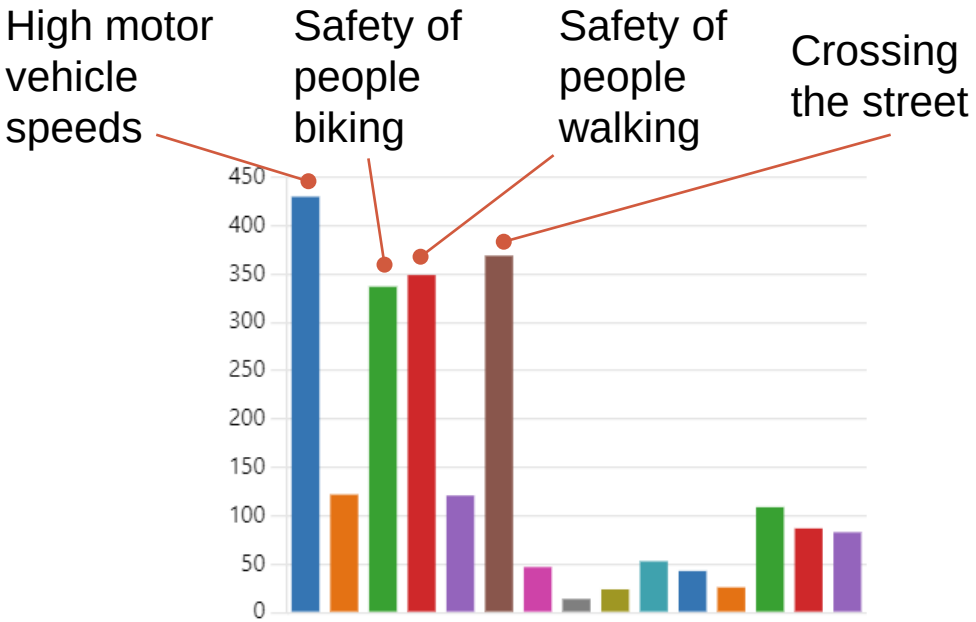
transportation@alamedaca.gov
www.alamedaca.gov/fernside
510-747-6833

ALAMEDA

155 individual map comments, 27 input forms collected

Online Survey

- 600 responses
- November 21 to December 17



“What do you find most challenging when using Fernside Blvd?”

“I would like to see more street trees”

“Crossing Fernside on foot is risky”

“Cars often speed through crosswalks”

“I would love more crosswalks”

“It’s difficult to get in or out of driveways”

“The intersection at High and Fernside is dangerous”

“Protected bike lanes would be great”

“The street is too wide”

“Cars are traveling way too fast”

“Its complicated to get to the two-way bike lane”

“Cars pass in the median”

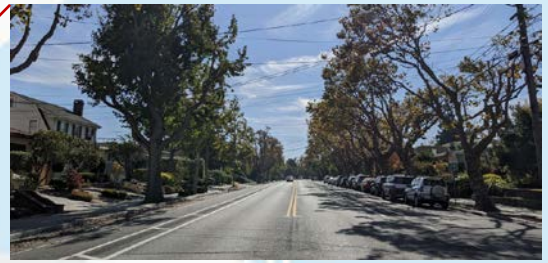
Describe your challenges when using Fernside Blvd and desired improvements?

Winter 2023/2024 Community Engagement Summary

- Most common improvements suggested
  - Pedestrian safety (flashing beacons, marked crosswalks)
  - Bicycle facilities (protected, facilitate safe routes to school)
  - Other traffic calming (address illegal vehicle passing, vertical speed elements, intersection improvements)
  - Others: reduce travel lane width, visual enhancements, increased enforcement
- 5-10% of respondents do not desire improvements / are satisfied with existing conditions

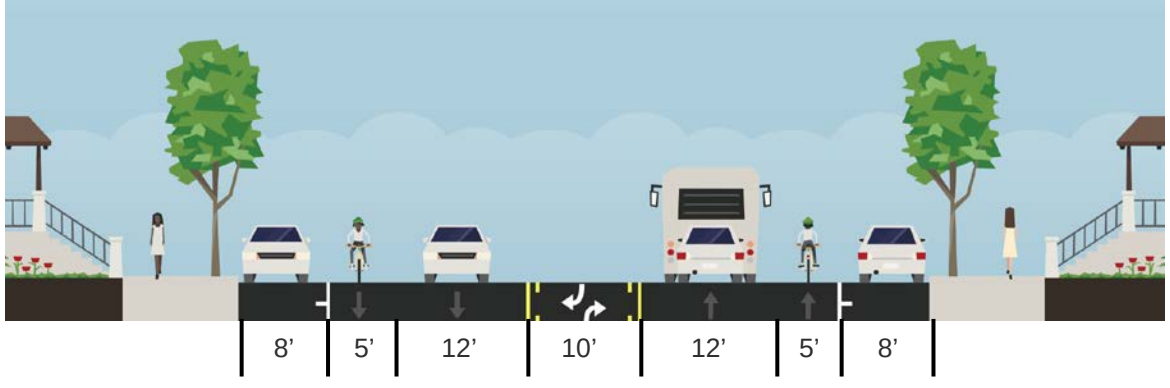
Concept Alternatives

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

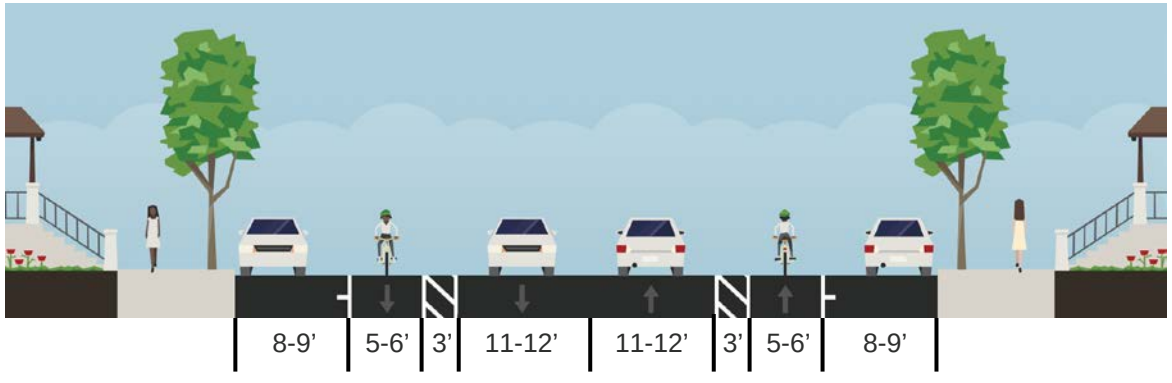
Fernside Boulevard Today: West of High St.

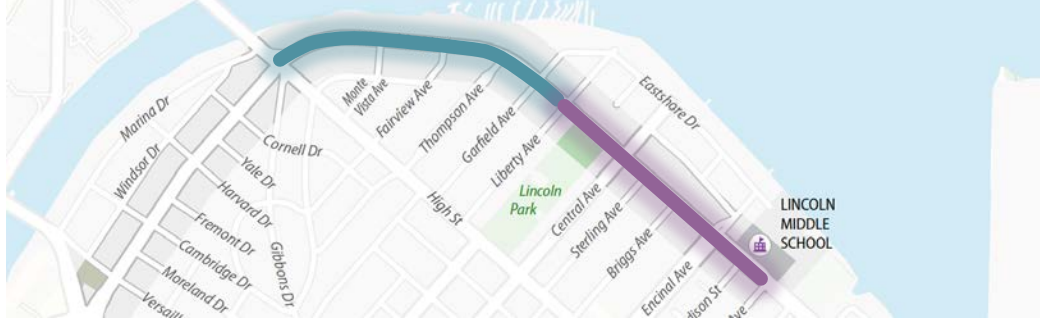


- Center vehicle turn lane
- Bike lanes adjacent to vehicle travel lanes
- ~1,000 feet between marked pedestrian crossings
- Flashing beacons at Versailles Ave. and Harvard Dr.

Fernside Boulevard Today: East of High St.

- No center vehicle turn lane
- Buffered bike lanes adjacent to vehicle travel lanes
- Over 2,000 feet between marked crossings at High St. and Garfield Ave.
- Flashing beacons at San Jose Ave.
- Stop control at Garfield Ave. and Central Ave.





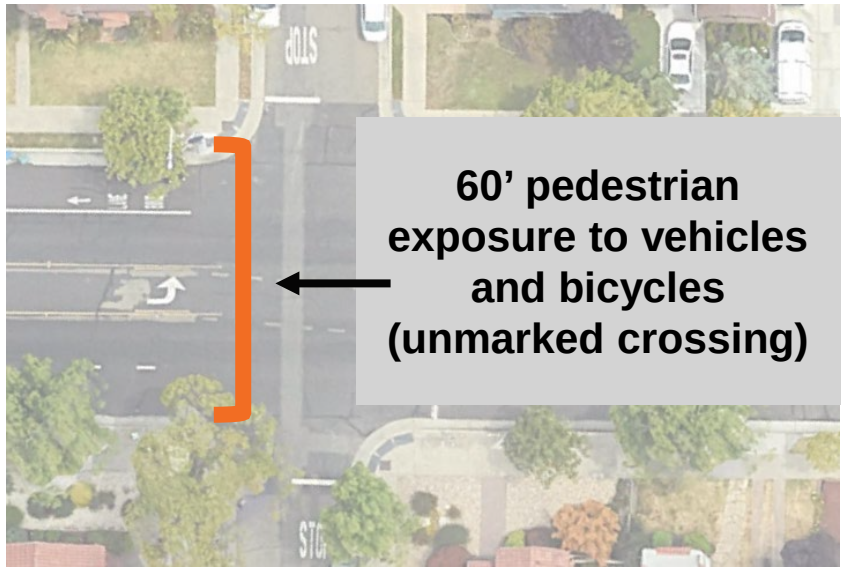
Concept Alternatives

- **Long-Term**
  - LT1a: One-Way Curb-Protected Bikeways
  - LT1b: One-Way Raised Bikeways
  - LT2a: Two-Way Curb-Protected Bikeway
  - LT2b: Two-Way Raised Bikeway

- **Near-Term (potential alignment with planned 2025 resurfacing)**
  - NT1: Buffered Bike Lanes
  - NT2: One-Way Separated Bikeways
  - NT3: Two-Way Separated Bikeway

Pedestrian Crossing Exposure Comparison

Existing Conditions

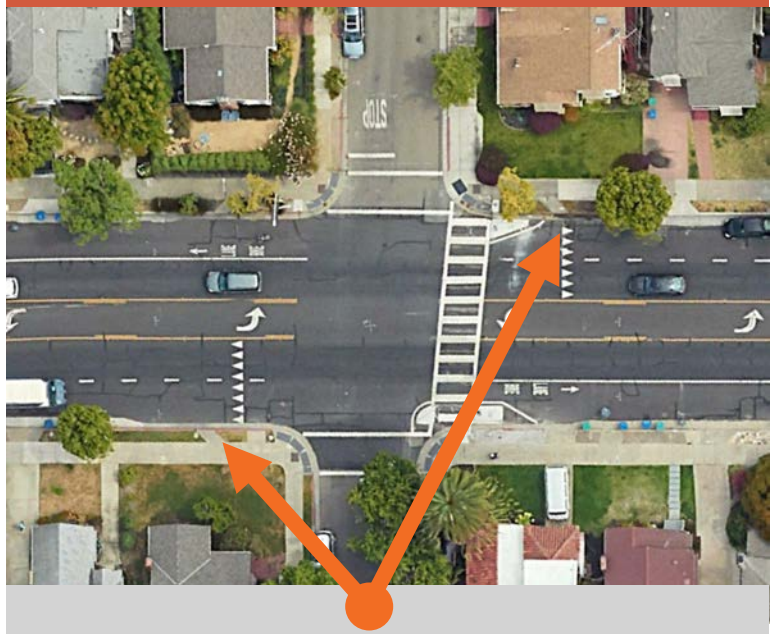


Long-Term Concepts

	PEDESTRIAN CROSSING EXPOSURE TO:
LT1a: One-Way Curb-Protected Bikeways	Bikes, 7 ft; Vehicles, 24–30 ft; Bikes, 7 ft
LT1b: One-Way Raised Bikeways	Bikes, 7 ft; Vehicles, 24–26 ft; Bikes, 7 ft
LT2a: Two-Way Curb-Protected Bikeway	Bikes, 14 ft; Vehicles, 24–28 ft
LT2b: Two-Way Raised Bikeway	Bikes, 14 ft; Vehicles, 24–26 ft

Transit Accessibility

Existing Conditions



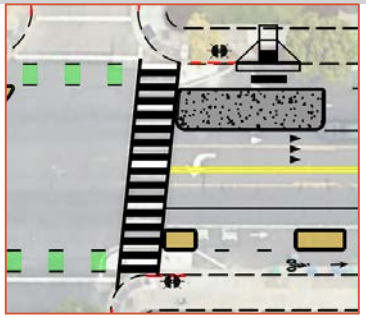
Bus stops against existing curb; non-accessible boarding location

Buses must merge into travel lane

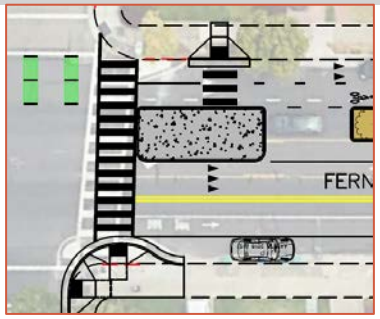
All Long-Term Concepts Include:

- Fully accessible bus boarding islands
- In-lane bus stops

Curb-Protected Concepts: accessible ramp across bikeway to sidewalk

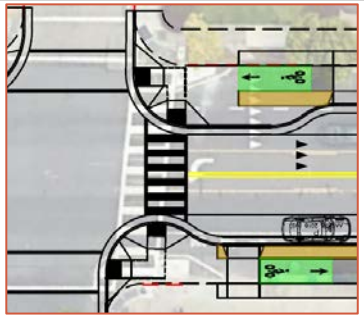


LT1a: One-Way Curb-Protected Bikeways

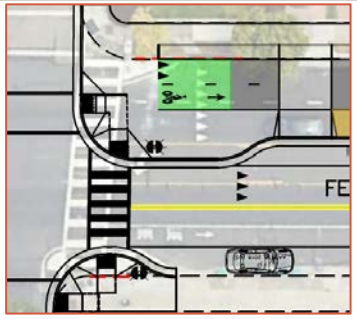


LT2a: Two-Way Curb-Protected Bikeway

Raised Concepts: level crossing across bikeway to sidewalk (easier access)

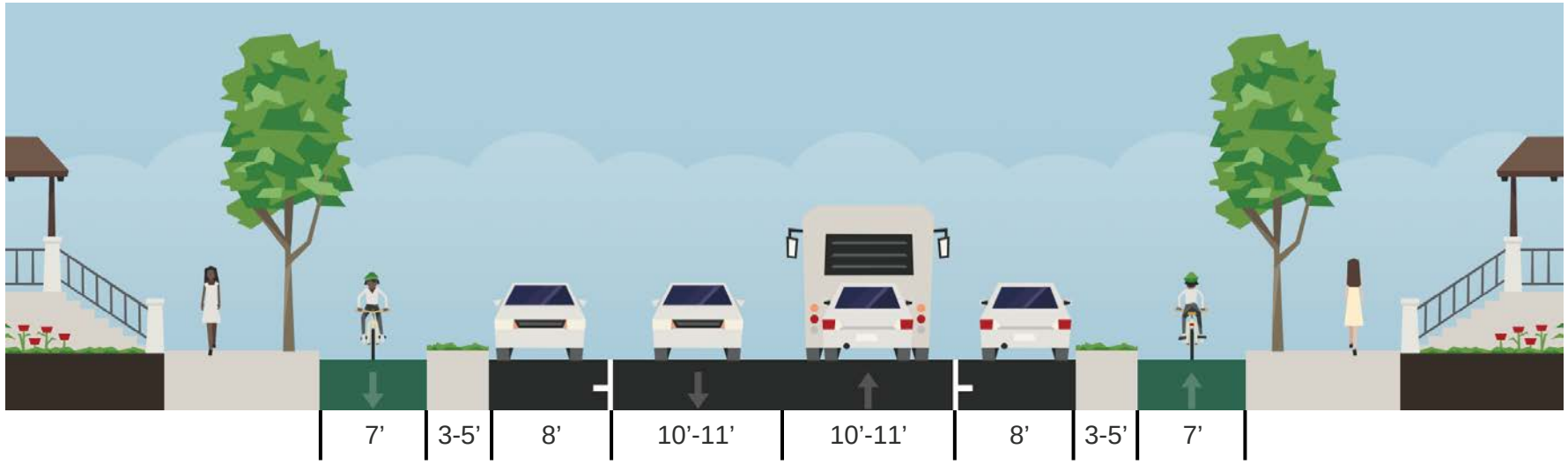


LT1b: One-Way Raised Bikeways



LT2b: Two-Way Raised Bikeway

LT1a: One-Way Curb-Protected Bikeways



All Long-Term options include:

- Removal of center turn lane west of High Street, narrower vehicle lanes to reduce speeds
- Reduced crosswalk distance across the path of motor vehicles by over 50%
- Additional curb extensions, marked crosswalks, and flashing beacons

Unique characteristics:

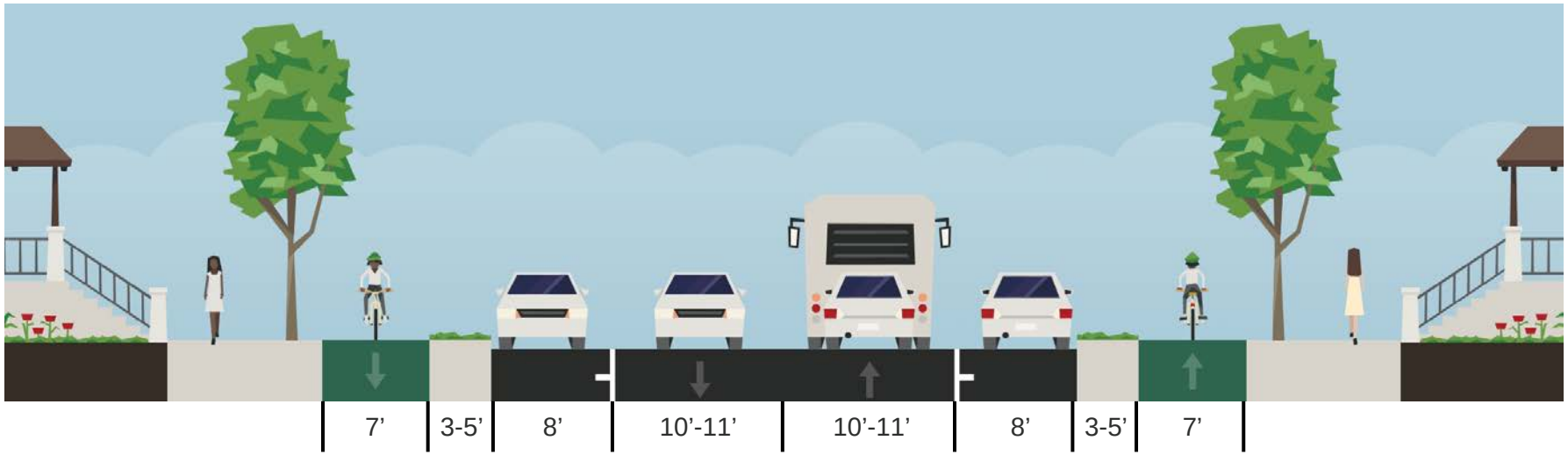
- Bikeways at roadway level, separated from vehicle lanes and located between curbs
- Vehicle parking lanes along new curb
- New narrow buffer strips that can be used as planting strips

LT1a: One-Way Curb-Protected Bikeways

Design Considerations:

- Facilitates simpler bikeway connections to side streets
- Driveway access crosses bikeway on both sides of street
- Utilize space in front of driveways for accessible loading zones
- More complex bikeway connection to existing 2-way bikeway south of Lincoln Middle School
- Removes 35-55% of vehicle parking (*current peak parking occupancy utilizes 41-48% of parking spaces*)

LT1b: One-Way Raised Bikeways



All Long-Term options include:

- Removal of center turn lane west of High Street, narrower vehicle lanes to reduce speeds
- Reduced crosswalk distance across the path of motor vehicles by over 50%
- Additional curb extensions, marked crosswalks, and flashing beacons

Unique characteristics

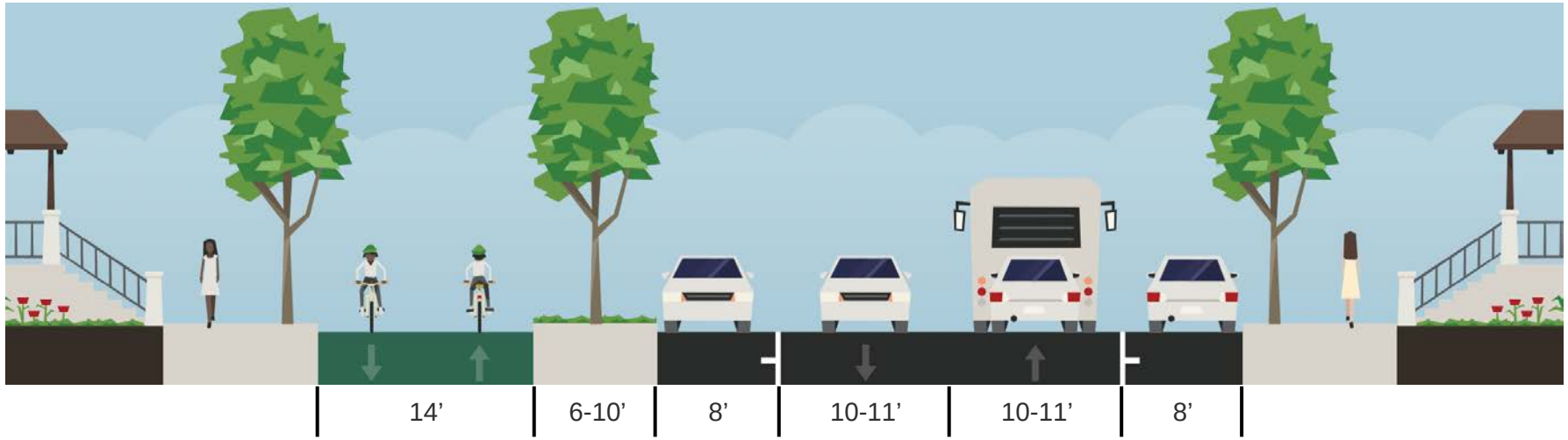
- Bikeways at sidewalk level, separated from vehicle travel lanes
- Vehicle parking along new curb
- New narrow buffer strips can be used as planting strips or accessible loading zones

LT1b: One-Way Raised Bikeways

Design Considerations:

- Facilitates simpler bikeway connections to side streets
- Driveway access crosses raised bikeway on both sides of street
- Can utilize new curb or space in front of driveways for accessible loading zones
- More complex bikeway connection to existing 2-way bikeway south of Lincoln Middle School
- Removes 20-40% of vehicle parking (*current peak parking occupancy utilizes 41-48% of parking spaces*)

LT2a: Two-Way Curb-Protected Bikeway



All Long-Term options include:

- Removal of center turn lane west of High Street, narrower vehicle lanes to reduce speeds
- Reduced crosswalk distance across the path of motor vehicles by over 50%
- Additional curb extensions, marked crosswalks, and flashing beacons

Unique characteristics

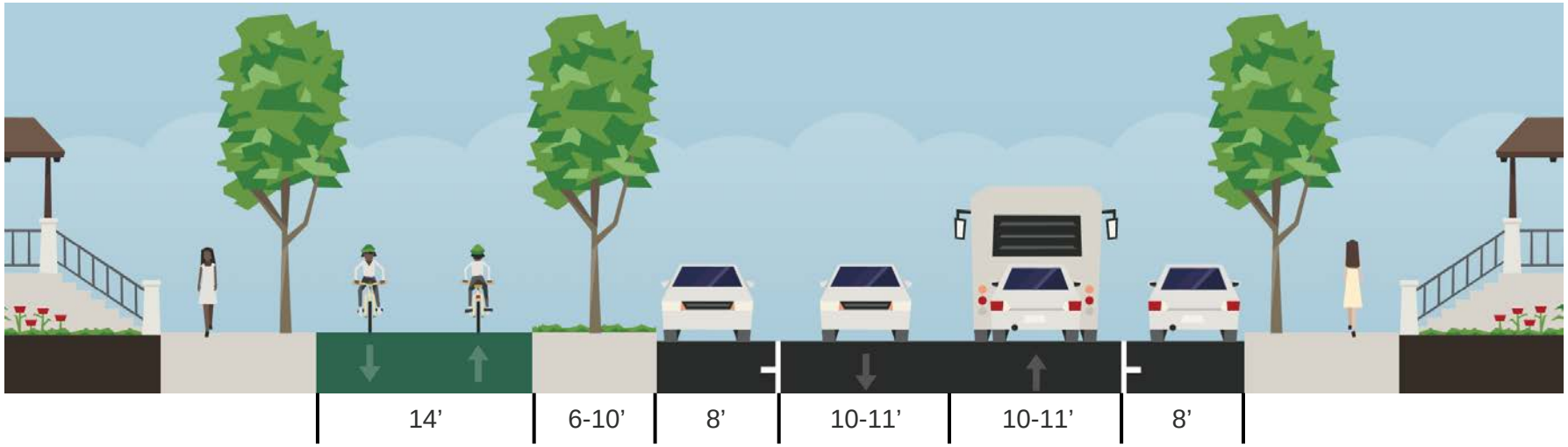
- 2-way bikeway at roadway level, separated from travel lanes, located between curbs on north side of street
- Vehicle parking lanes along new curb on north side of street
- New wider buffer strip can accommodate substantial landscaping, e.g. for planting trees

LT2a: Two-Way Curb-Protected Bikeway

Design Considerations:

- Bicyclists travel contra-flow at intersections
- Straightforward bikeway connection to existing 2-way bikeway south of Lincoln Middle School
- Utilize space in front of driveways for accessible loading zones
- Driveway access crosses bikeway on north side of street
- Removes 15-35% of vehicle parking, mostly from north (*current peak parking occupancy utilizes 41-48%*)

LT2b: Two-Way Raised Bikeway



All Long-Term options include:

- Removal of center turn lane west of High Street, narrower vehicle lanes to reduce speeds
- Reduced crosswalk distance across the path of motor vehicles by over 50%
- Additional curb extensions, marked crosswalks, and flashing beacons

Unique characteristics

- 2-way bikeway at sidewalk level, separated from travel lanes on north side of street
- Vehicle parking lanes along new curb on north side of street
- New wider buffer strip can accommodate substantial landscaping, e.g. for planting trees

LT2b: Two-Way Raised Bikeway

Design Considerations:

- Bicyclists travel contra-flow at intersections
- Straightforward bikeway connection to existing 2-way bikeway south of Lincoln Middle School
- Can utilize new curb or space in front of driveways for accessible loading zones
- Driveway access crosses bikeway on north side of street
- Removes 10-25% of corridor vehicle parking, mostly from north (*current peak parking 41-48%*)

Long-Term Alternatives Comparison

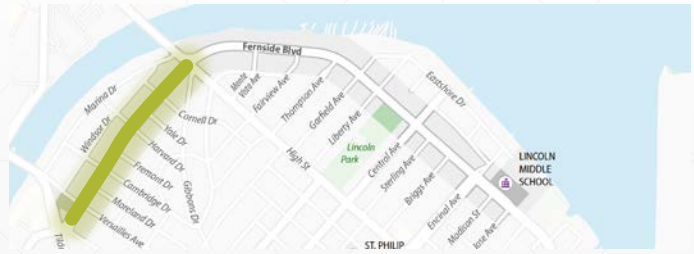
	LT1a	LT1b	LT2a	LT2b
	One-way		Two-way	
	Curb-protected	Raised	Curb-protected	Raised
Shorter pedestrian crossing distance	✓	✓	✓	✓
Additional marked crosswalks and flashing beacons	✓	✓	✓	✓
Vehicle speed reduction measures	✓	✓	✓	✓
Reduce vehicle illegal passing opportunities	✓	✓	✓	✓
Low stress, separated bikeways (alignment with adopted Active Transportation Plan)	✓	✓	✓	✓
Vehicle parking along the curb	✓	✓	✓	✓
Estimated on-street parking removal*	**35-55%**	20-40%	15-35%	10-25%
Construction Cost	**$$$**	**$$$$**	**$$$**	**$$$$**

**Current peak parking occupancy 41-48%*

Concept Alternatives

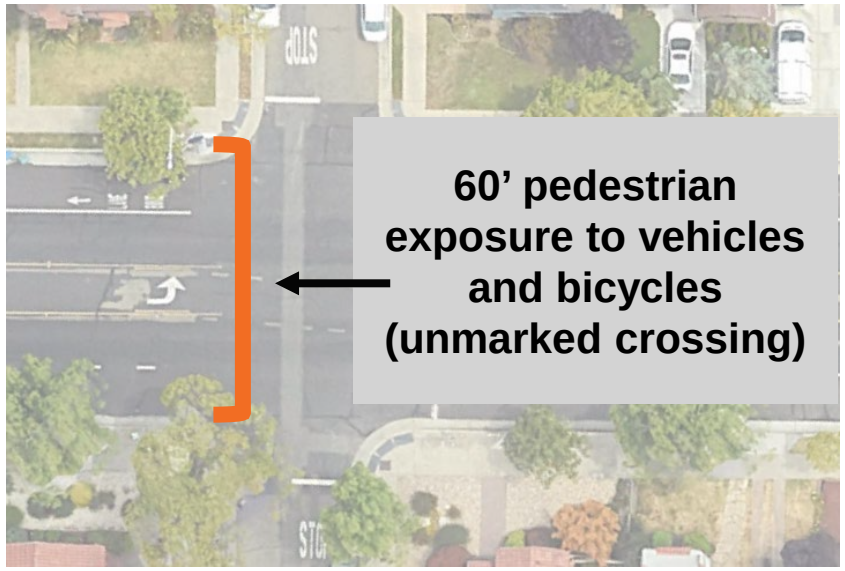
- **Long-Term**
  - LT1a: One-Way Curb-Protected Bikeways
  - LT1b: One-Way Raised Bikeways
  - LT2a: Two-Way Curb-Protected Bikeway
  - LT2b: Two-Way Raised Bikeway

- **Near-Term (potential alignment with 2025-2026 resurfacing)**
  - NT1: Buffered Bike Lanes
  - NT2: One-Way Separated Bikeways
  - NT3: Two-Way Separated Bikeway

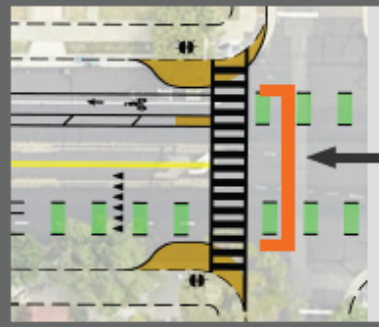


Near-Term Pedestrian Crossing Comparison

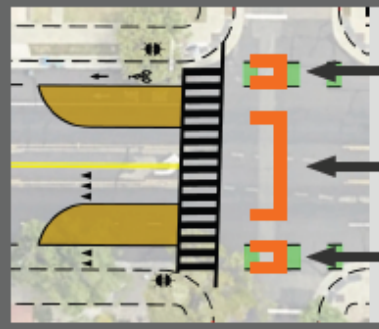
Existing Conditions



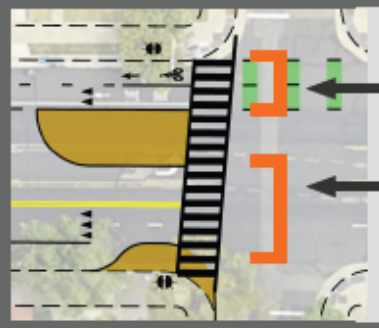
NT1: Buffered Bike Lanes



NT2: One-Way Separated Bikeways

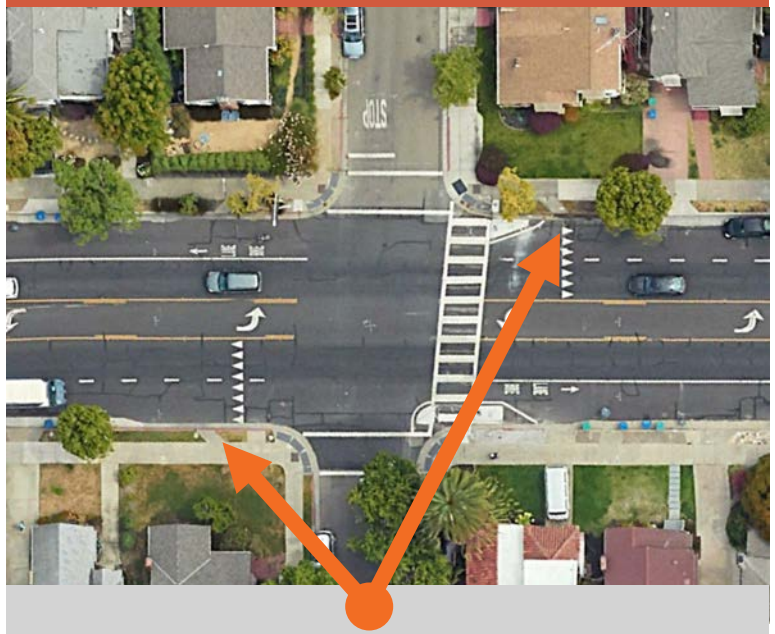


NT3: Two-Way Separated Bikeway



Near-Term Transit Accessibility

Existing Conditions

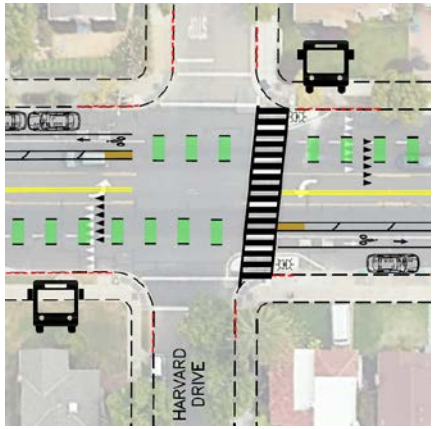


Bus stops against existing curb; non-accessible boarding location

Buses must merge into travel lane

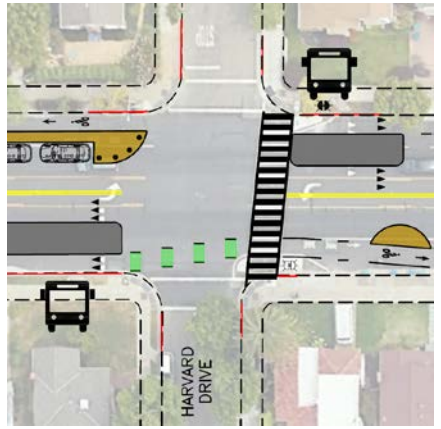
Near-Term Concepts:

NT1: Buffered Bike Lanes



Bus stop accessibility and transit operations not improved

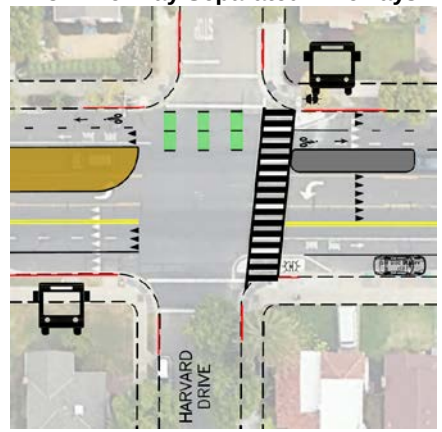
NT2: One-Way Separated Bikeways



Accessible bus boarding islands

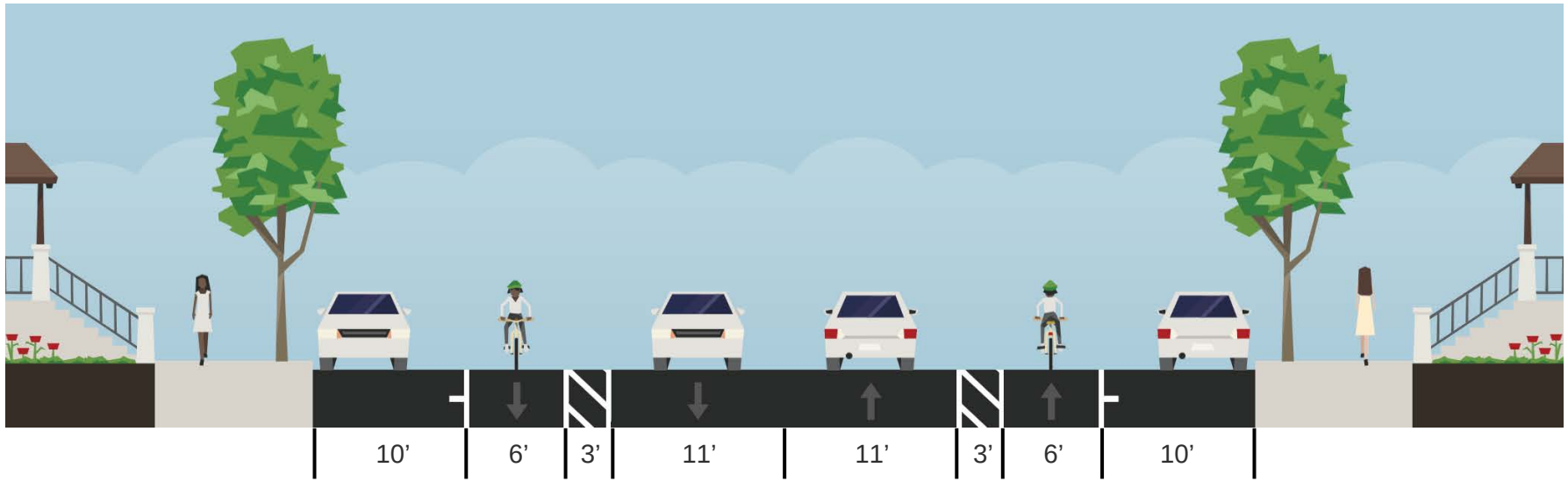
In-lane bus stops to improve transit operations

NT3: Two-Way Separated Bikeways



Bus stop accessibility and transit operations improved on north side only

NT1: Buffered Bike Lanes



Description:

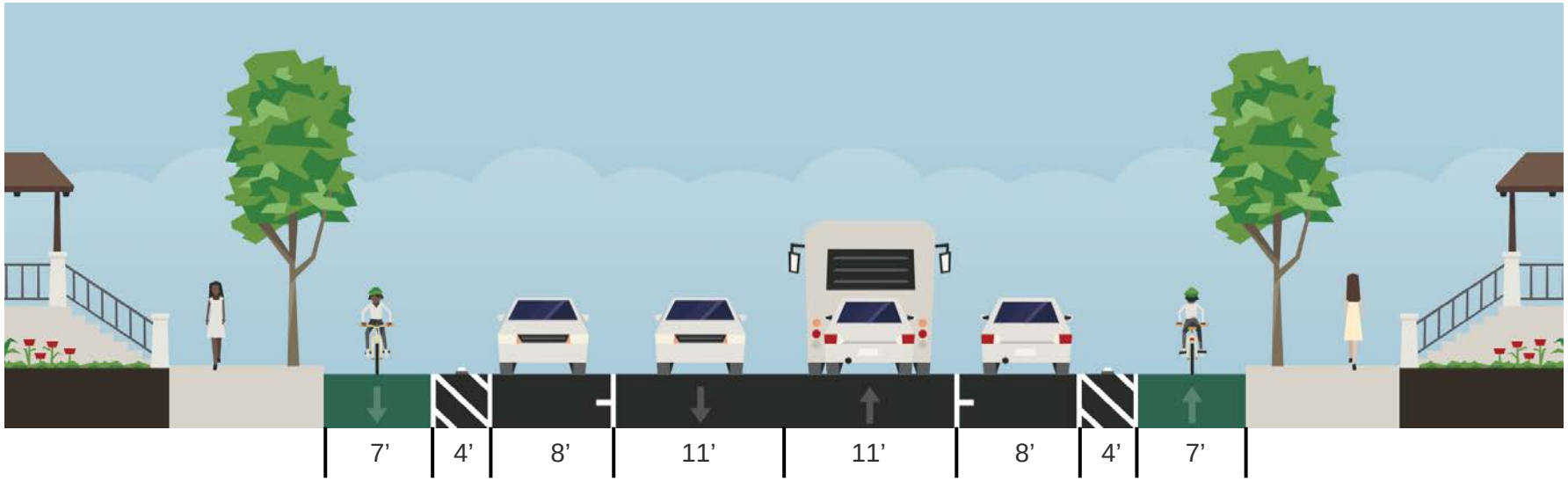
- Center turn lane removed, narrower vehicle travel lanes to reduce speeds
- Additional marked crosswalks *(and, if budget allows, additional flashing beacons*)
- Striped buffer between the bike lane and vehicle travel lane
- Vehicle parking along existing curb

NT1: Buffered Bike Lanes

Design Considerations:

- Does not provide physical separation between bicycles and vehicles
- Does not prevent illegal vehicle passing in bike lanes
- Utilize existing curb or space in front of driveways for accessible loading zones
- Continues existing buffered bike lanes from east of High Street
- Removes 10-20% of vehicle parking for standard intersection daylighting *(current peak parking occupancy utilizes 41-48% of parking spaces)*

NT2: One-Way Separated Bikeways



Description:

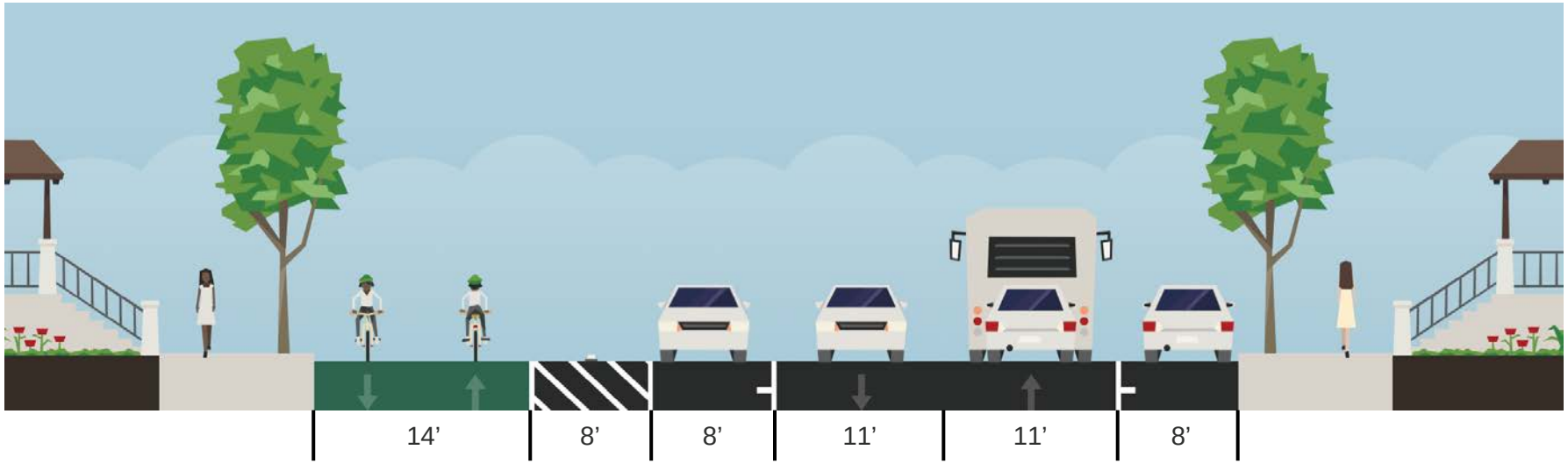
- Center turn lane removed, narrower vehicle travel lanes to reduce speeds
- Additional marked crosswalks (*and, if budget allows, additional flashing beacons*)
- Bikeways at roadway level, separated from vehicle travel lanes, between curb and parked vehicles
- Vehicle parking lanes shifted into roadway
- Narrow buffer strip can be used for planter boxes and other visual enhancements as budget allows

NT2: One-Way Separated Bikeways

Design Considerations:

- Provides physical separation between bicycles and vehicles
- Prevents drivers from illegally using the center turn lane or bike lane to pass other drivers
- Utilize parking spaces or space in front of driveways for accessible loading zones
- Straightforward bikeway connection to existing buffered bike lanes east of High Street
- Removes approximately 65-85% of vehicle parking *(current peak parking utilizes 41-48% of parking spaces)*
- Vehicle parking is not against the curb

NT3: Two-Way Separated Bikeway



Description:

- Center turn lane removed, narrower vehicle travel lanes to reduce speeds
- Additional marked crosswalks (*and, if budget allows, additional flashing beacons*)
- 2-way bikeway at roadway level, separated from vehicle travel lanes, between curb and parked vehicles
- Vehicle parking lane shifted into roadway on north side of street
- Wide buffer strip can be used for planter boxes and other visual enhancements as budget allows

NT3: Two-Way Separated Bikeway

Design Considerations:

- Provides physical separation between bicycles and vehicles
- Prevents drivers from illegally using the center turn lane or bike lane to pass other drivers
- Utilize parking spaces or space in front of driveways for accessible loading zones on north side; no roadway change on south side
- More complex bikeway connection to existing buffered bike lanes east of High Street
- Removes approximately 40-60% of vehicle parking *(current peak parking utilizes 41-48% of parking spaces)*
- Vehicle parking is not against the curb on north side of the street

Near-Term Alternatives Comparison

	NT1	NT2	NT3
		Separated Bikeways	
	Buffered Bike Lanes	One-Way	Two-Way
Shorter pedestrian crossing distance		✓	✓
Additional marked crosswalks and flashing beacons	✓	✓	✓
Vehicle speed reduction measures		✓	✓
Eliminate vehicle illegal passing opportunities		✓	✓
Low stress, separated bikeways (alignment with adopted bicycle plan network)		✓	✓
Vehicle parking along the curb	✓		
Estimated on-street parking removal*	10-20%	**65-85%**	**40-60%**
Construction Cost	$	$$	$$

**Current peak parking occupancy 41-48%*

Next Steps

Project Phases

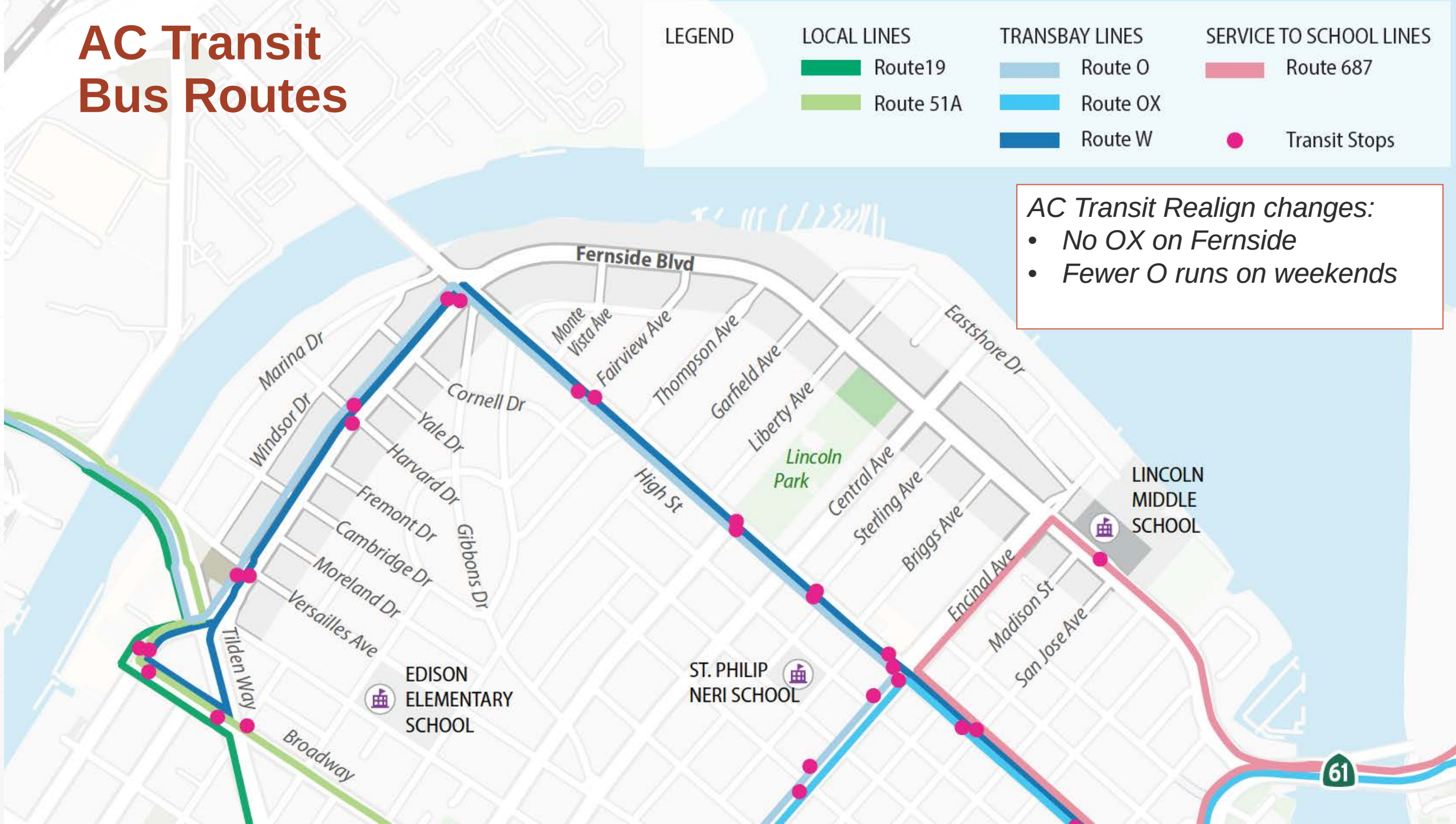
1. **Public outreach for existing conditions & initial input:** November 2023 - January 2024
2. **Public outreach for draft concept alternatives:** May-June 2024
3. **Public hearings for final design concept:** Fall/Winter 2024 Transportation Commission and City Council public hearings (including seeking City Council approval)
4. **Resurfacing and restriping on Fernside Blvd west of High St:** 2025 or 2026
5. **Construct full corridor project:** 2030 goal – timing depends on finding funding

Thoughts?

Feedback?

Additional Slides

AC Transit Bus Routes



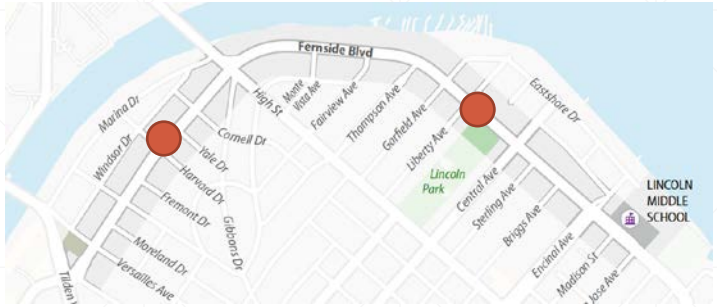
AC Transit Realign changes:

- *No OX on Fernside*
- *Fewer O runs on weekends*

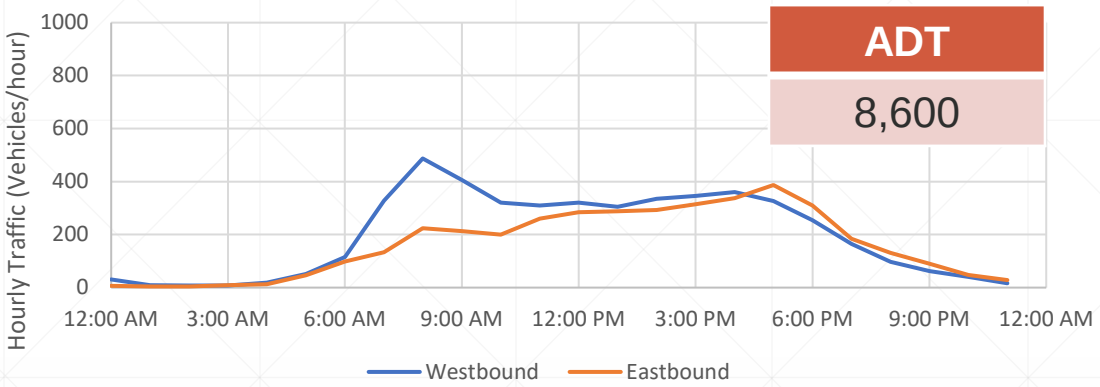
Average Daily Traffic Compares to Similar Roadways

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

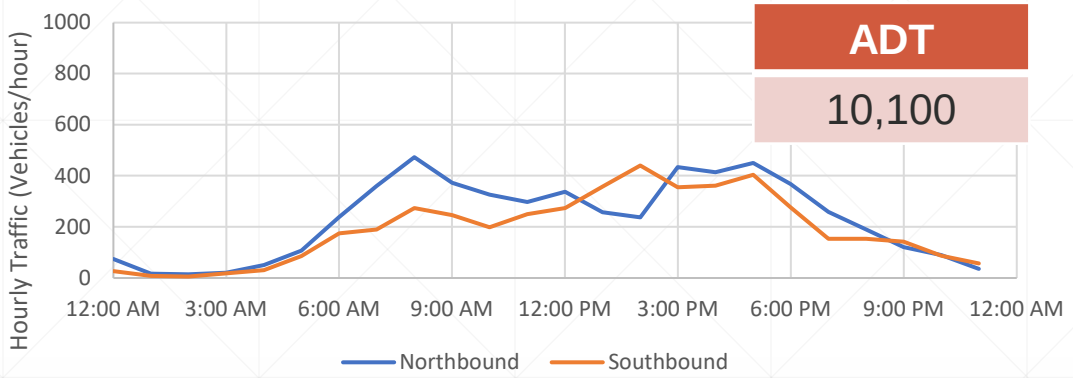
Fernside Carries 200 to 500 Vehicles per Hour in Each Direction



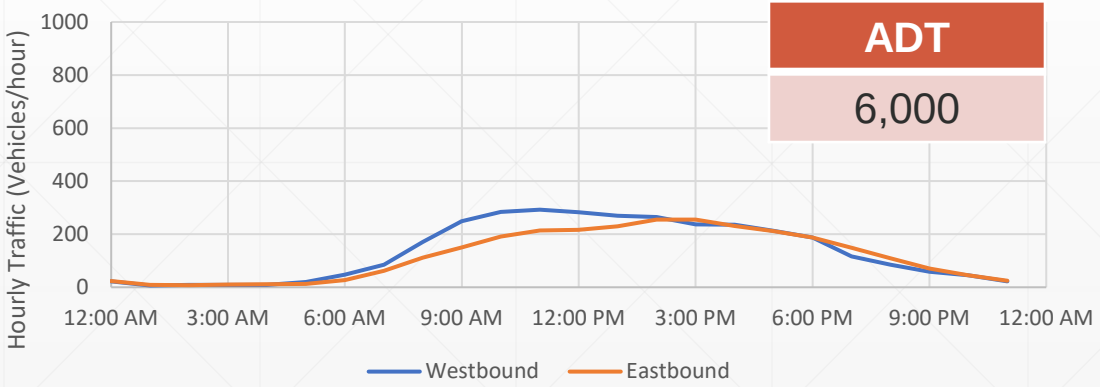
Fernside east of Harvard; Average T-Th



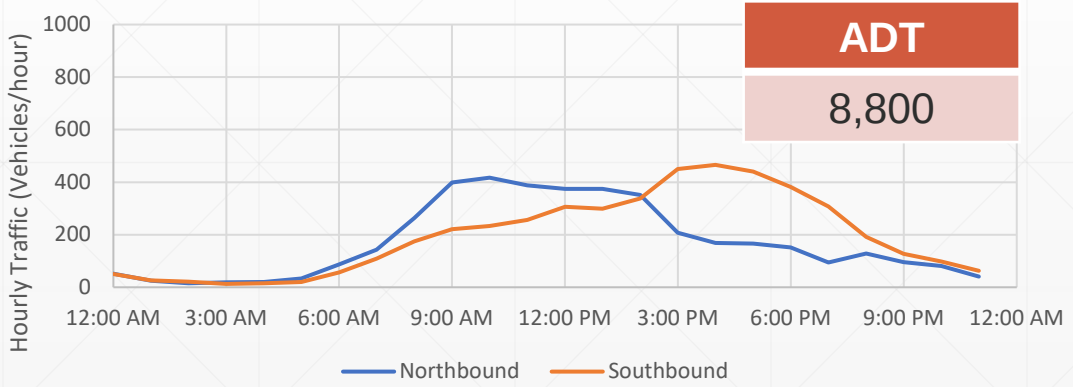
Fernside north of Central; Average T-Th



Fernside east of Harvard; Average Weekend

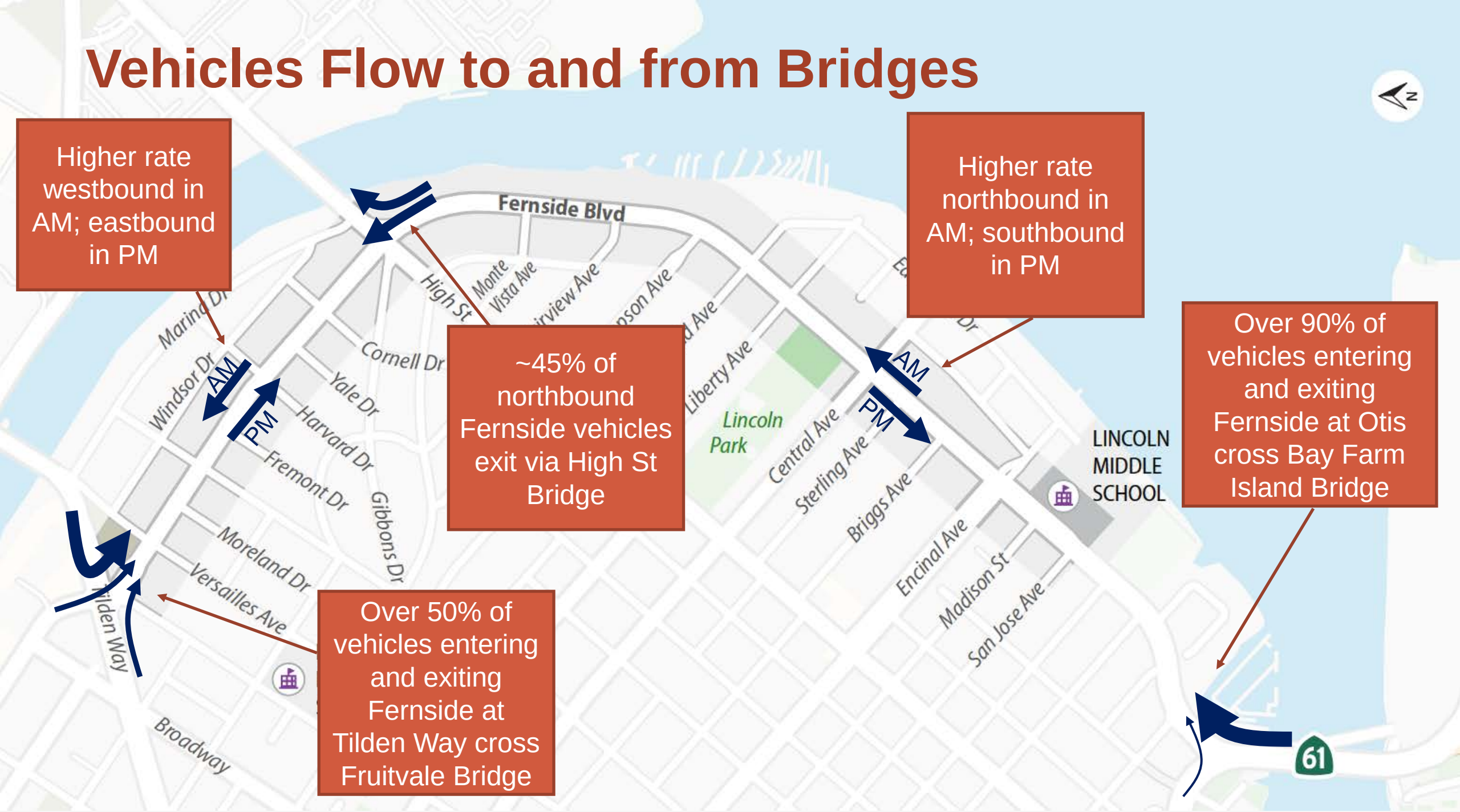


Fernside north of Central; Average Weekend



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

Vehicles Flow to and from Bridges



Pedestrian and Bicyclist Demand