January 8, 2025

Fernside Boulevard Traffic Calming & Bikeways Project

Commission on Persons with Disabilities

Parametrix | Parisi TRANSPORTATION CONSULTING

1.3 Mile Corridor Project

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

Project Phases

Commission on Persons with Disabilities Agenda

1. **Public outreach for existing conditions & initial input:** November 2023 -January 2024
2. **Public outreach for draft concept alternatives:** May-June 2024

June 2024

3. **Public hearings for final design concept:** Winter 2024 Commission and City Council public hearings (including seeking City Council approval)

January 2025

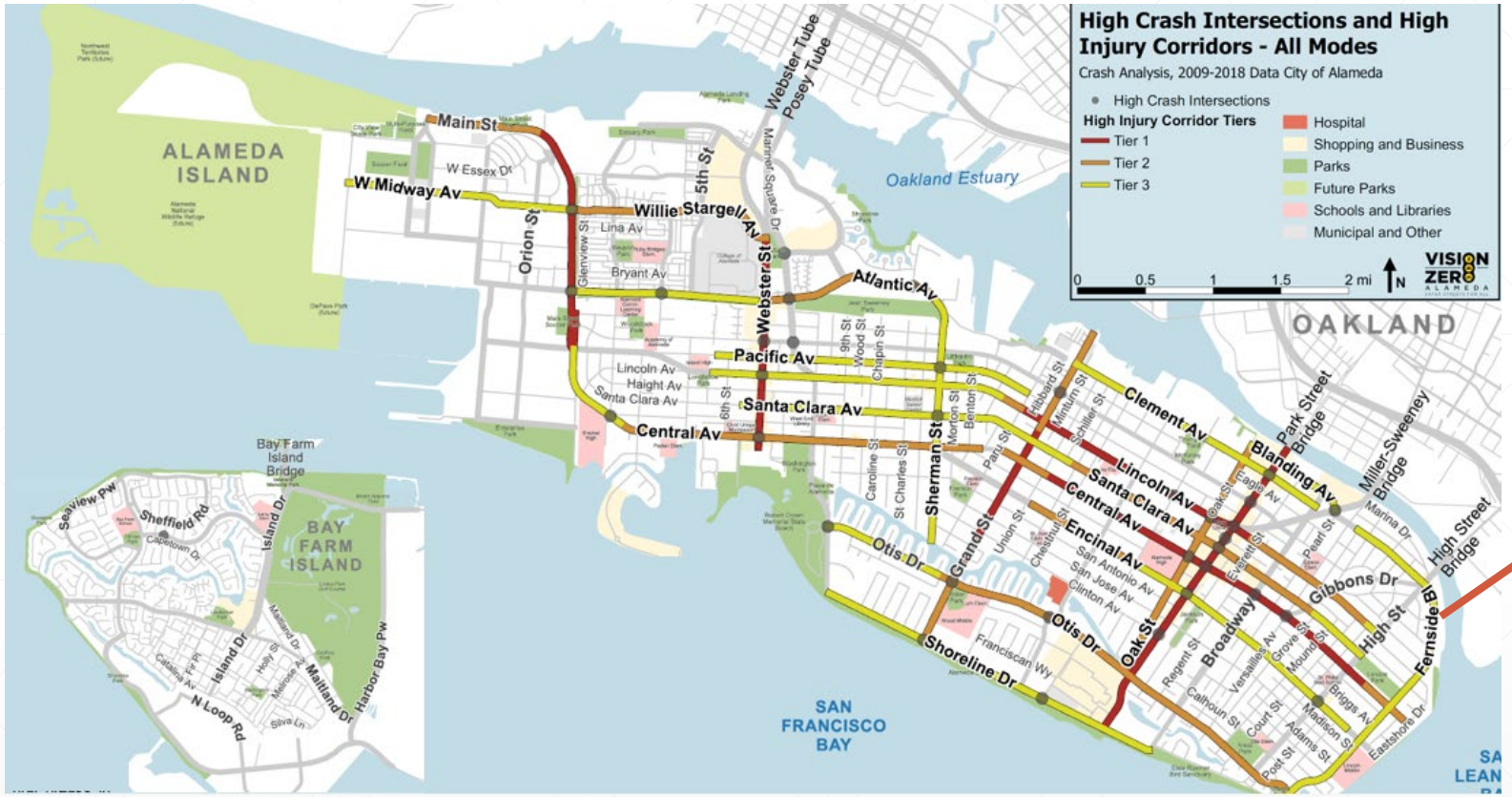
4. **Resurfacing and restriping on Fernside Blvd west of High St:** 2026
5. **Construct full corridor project:** 2030 goal – timing depends on finding funding

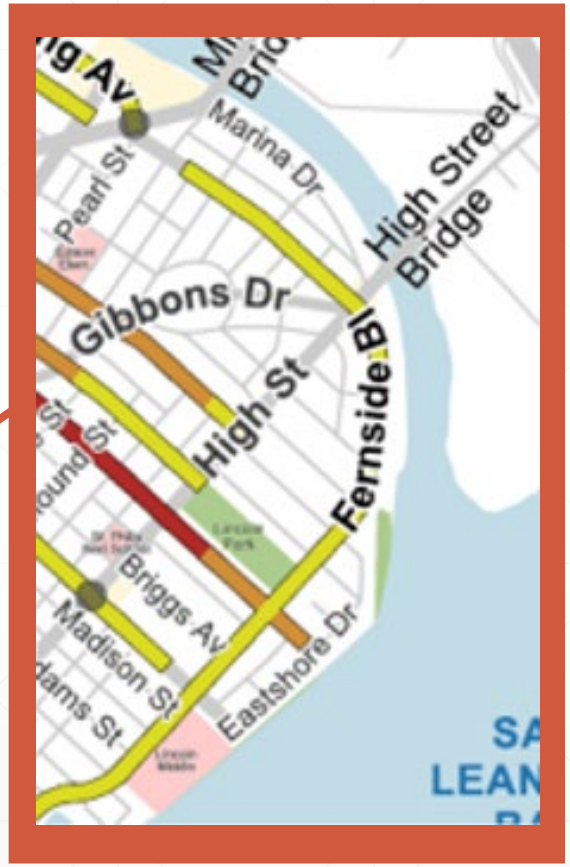
Why the Fernside Project?

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

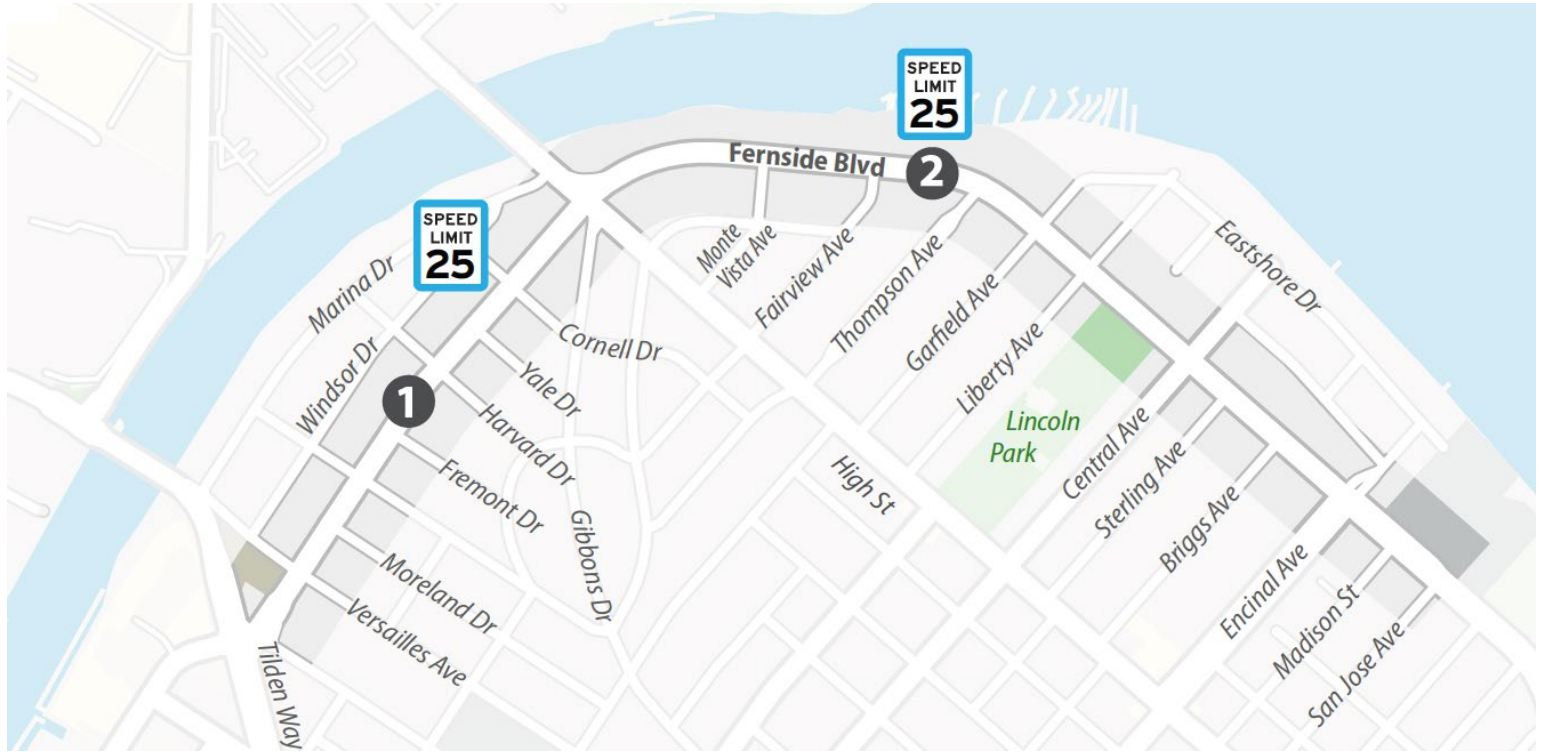




Existing Speed Limit is 25 mph, but Actual Vehicle Speeds are Higher

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

1



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

2

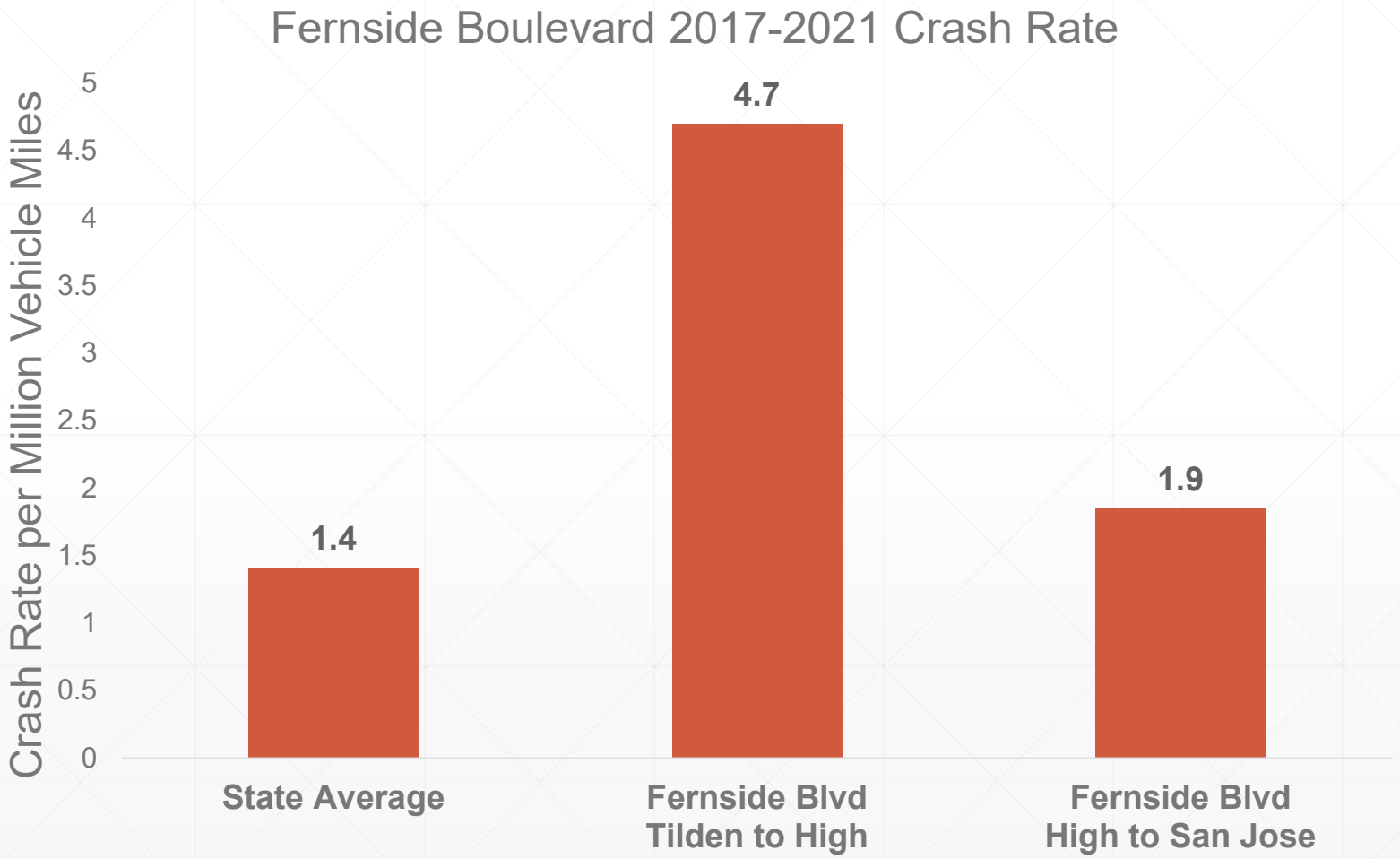
Speed survey conducted on 10/24/2023

High Crash Rate throughout the Corridor

64

crashes from 2017-2021

(including non-injury crashes)



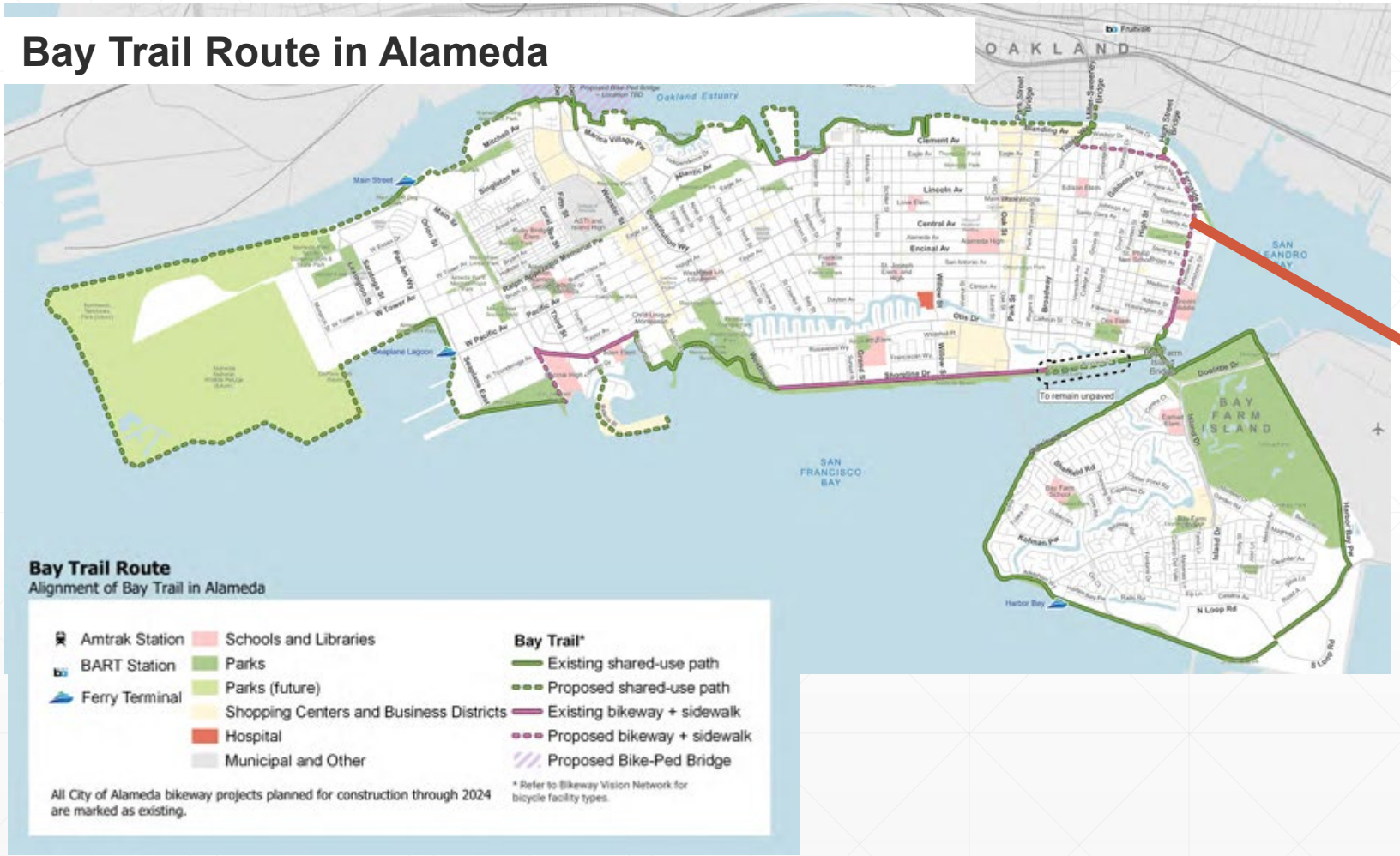
Active Transportation Plan: Low-Stress Bikeway + Ped Improvements

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

San Francisco Bay Trail

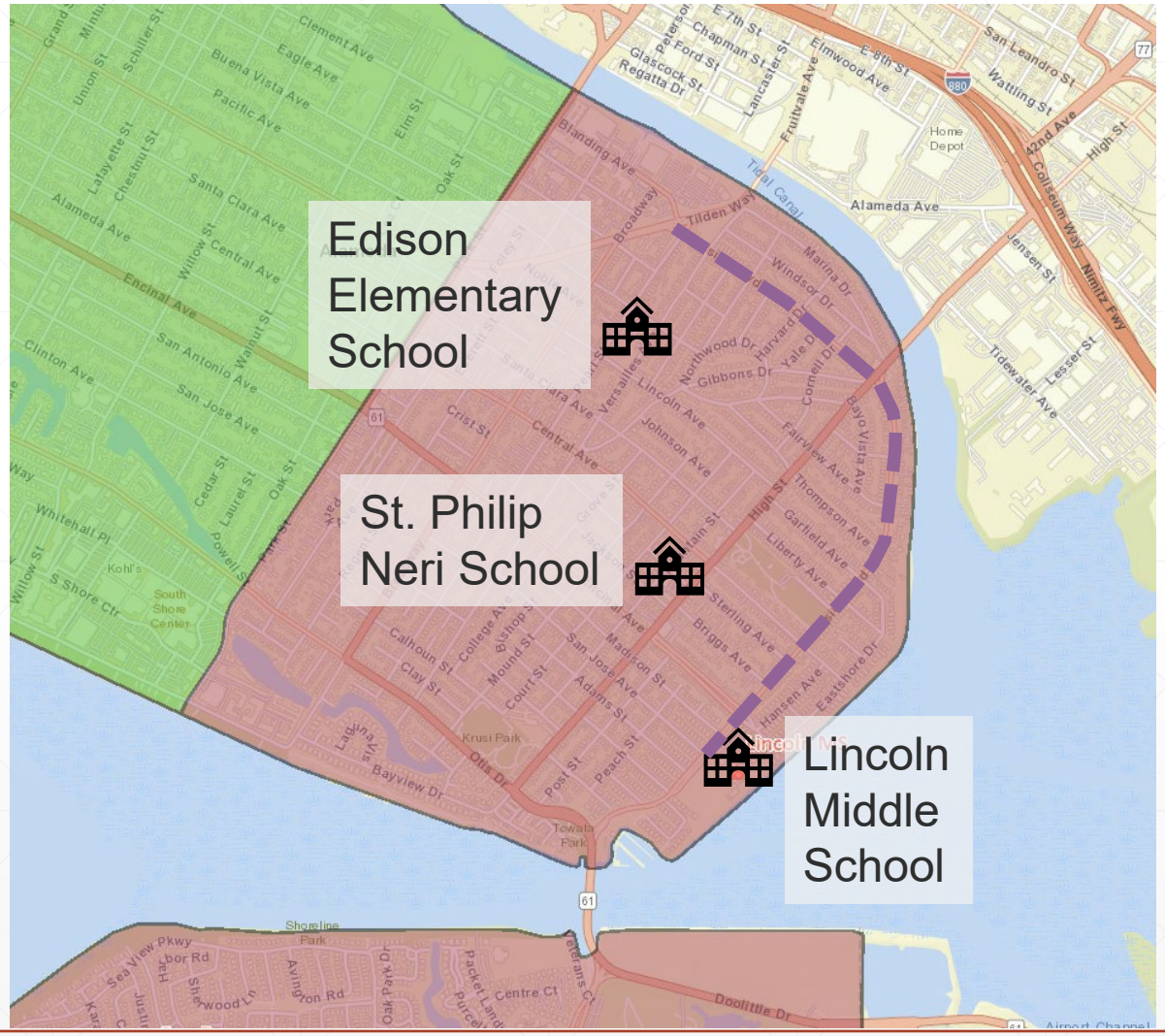
Bay Trail Route in Alameda



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

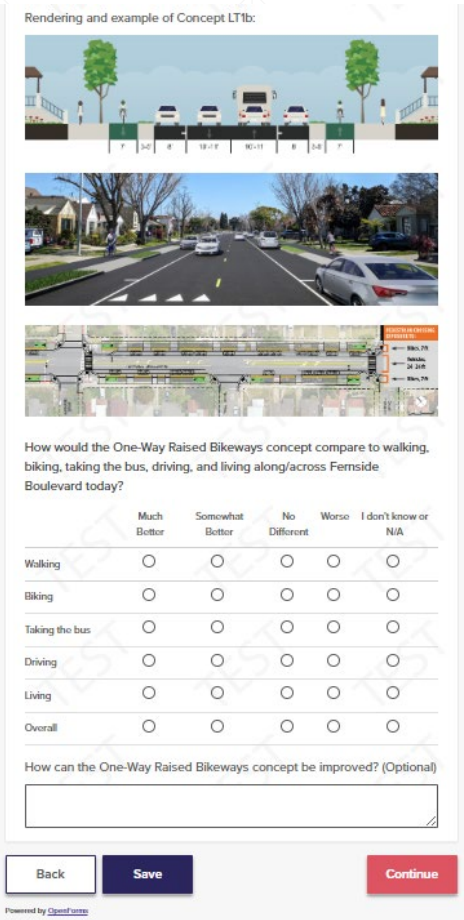
Fernside Project Public Outreach Numbers

Two phases of public outreach with a wide reach:

- **200** total attendance at **5** Fernside Project public workshops
- **5** public hearings at City commissions
- **1,115** total responses to **3** online surveys
- **1,950** total flyers sent in **3** postal mail notices
- **20** email bulletin mailings
- **4** news articles
- *Information boosted to homeowners' associations, schools, and other community groups*

Spring 2024 Community Engagement: Design Concept Alternatives

- **304** online survey responses
- **40** in-person community workshop attendees
- **13** virtual community workshop attendees

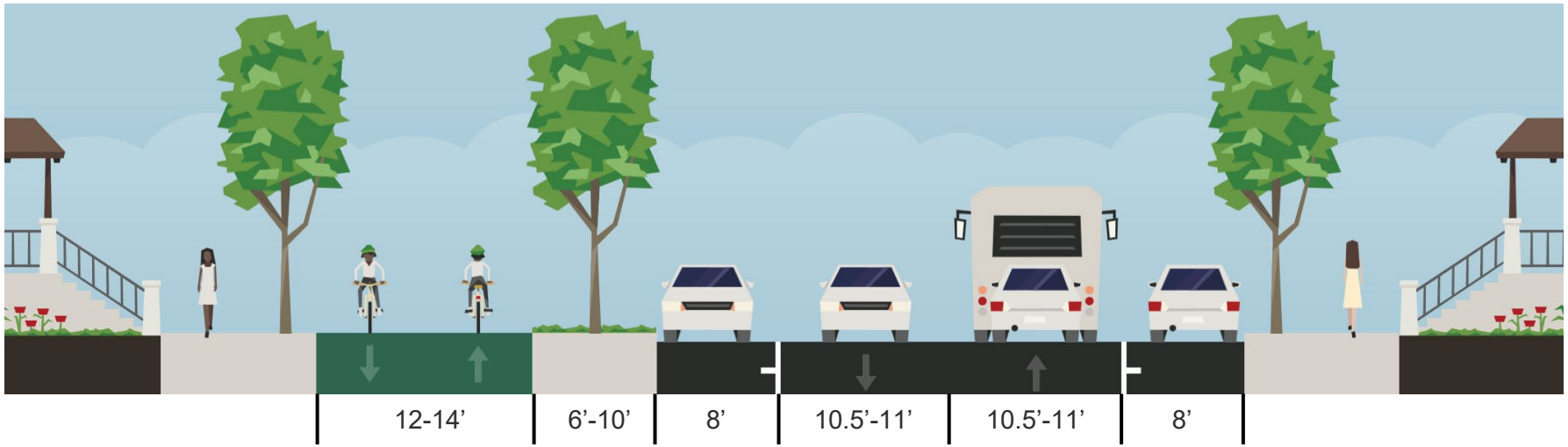


Long-Term Concept Recommendation

Recommended Long-Term Concept: Pedestrian Median Islands with Two-Way Protected Bikeway

Recommended (plus pedestrian medians)

Pedestrian Median Islands with Two-Way Protected Bikeway

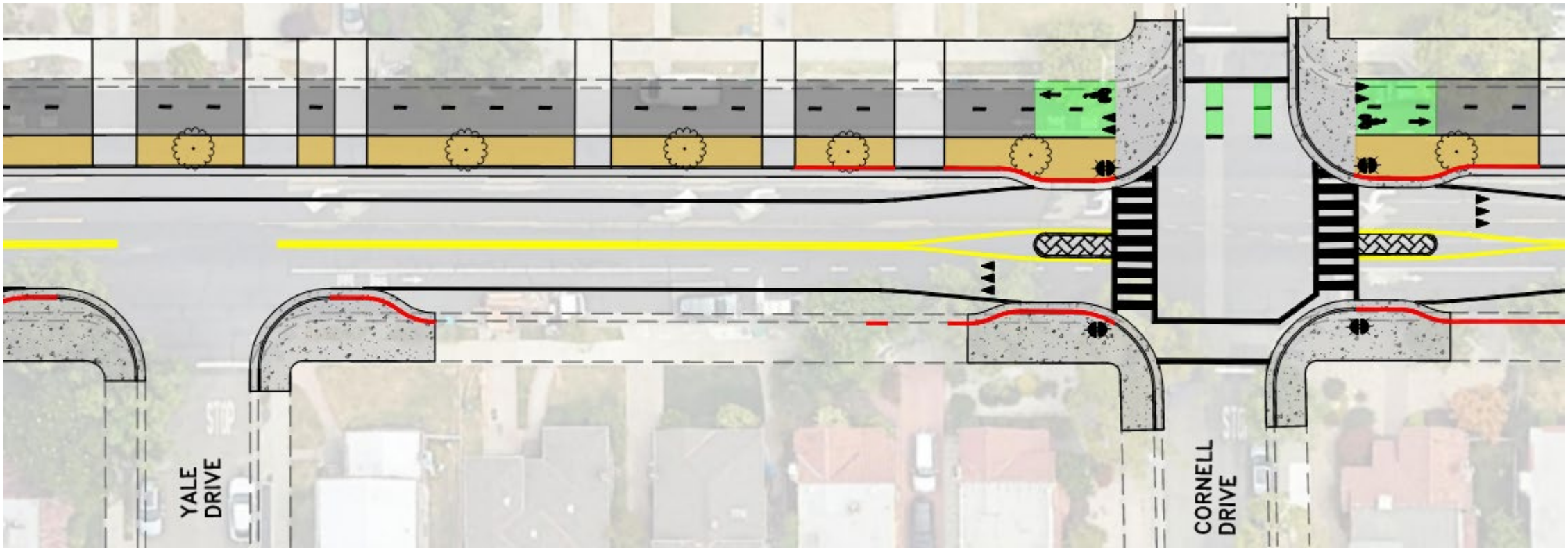


Improvements:

- Median islands at approach to 4-way intersections and other traffic calming elements
- Pedestrian safety improvements
- 2-way bikeway separated from vehicle travel lanes
- New wide buffer strip can accommodate substantial landscaping, e.g. for planting trees
- Estimated construction cost: $20.5 million with all bikeways raised to sidewalk level *(less for median-protected bikeways)*

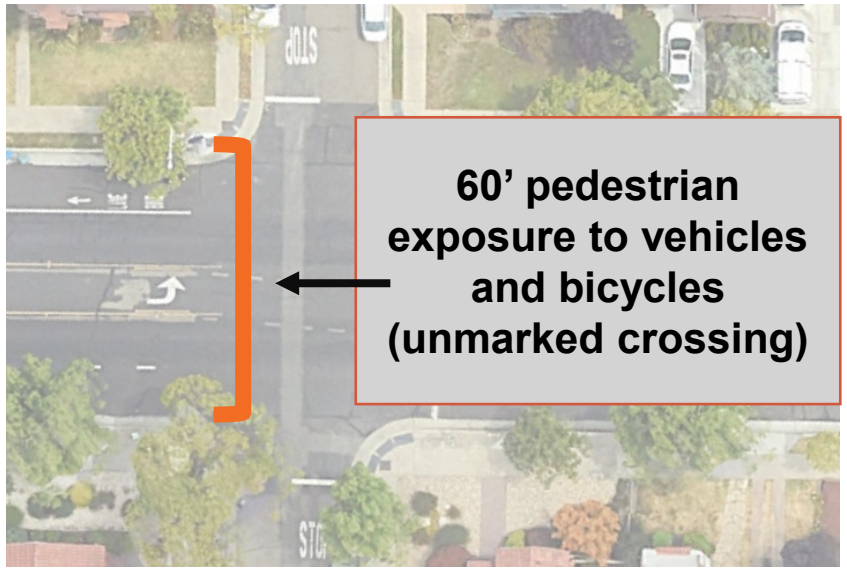
Long-Term Concept: Traffic Calming

- Narrower travel lanes, new median islands, and curb extensions reduce vehicle traffic speeds
- Removal of center left turn lane and new separated bikeway reduce reckless driving maneuvers

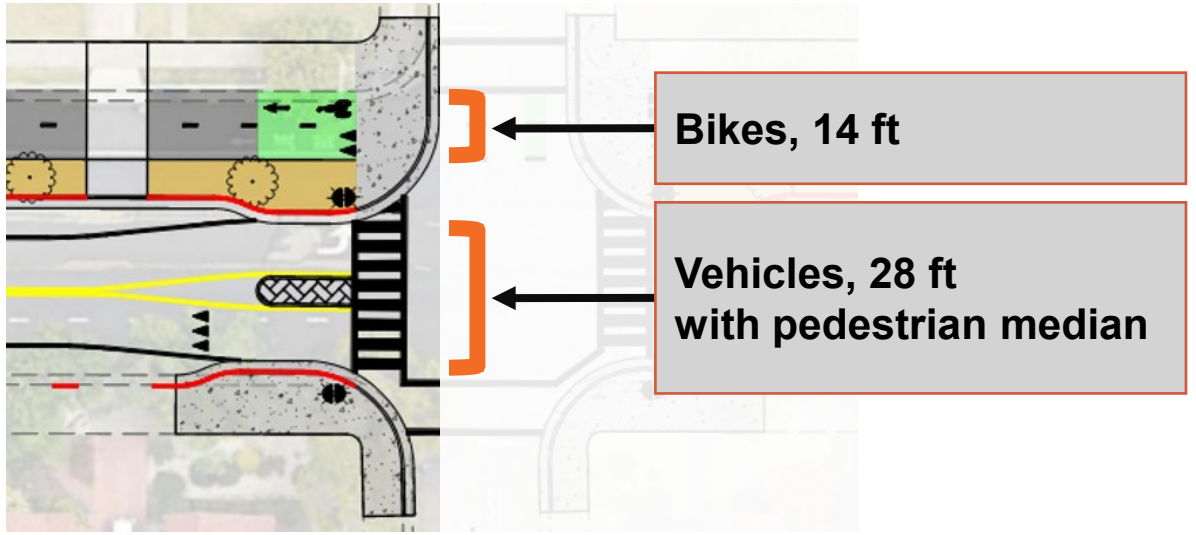


Long-Term Concept: Pedestrian Safety

Existing Conditions



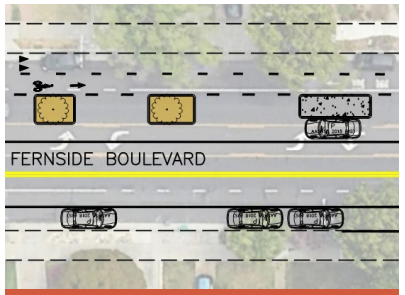
Pedestrian Median Islands with Two-Way Protected Bikeway



- New curb extensions and bikeway shorten pedestrian crossing distances and exposure to vehicles
- New median islands increase pedestrian safety
- New marked crossings improve motorist yielding

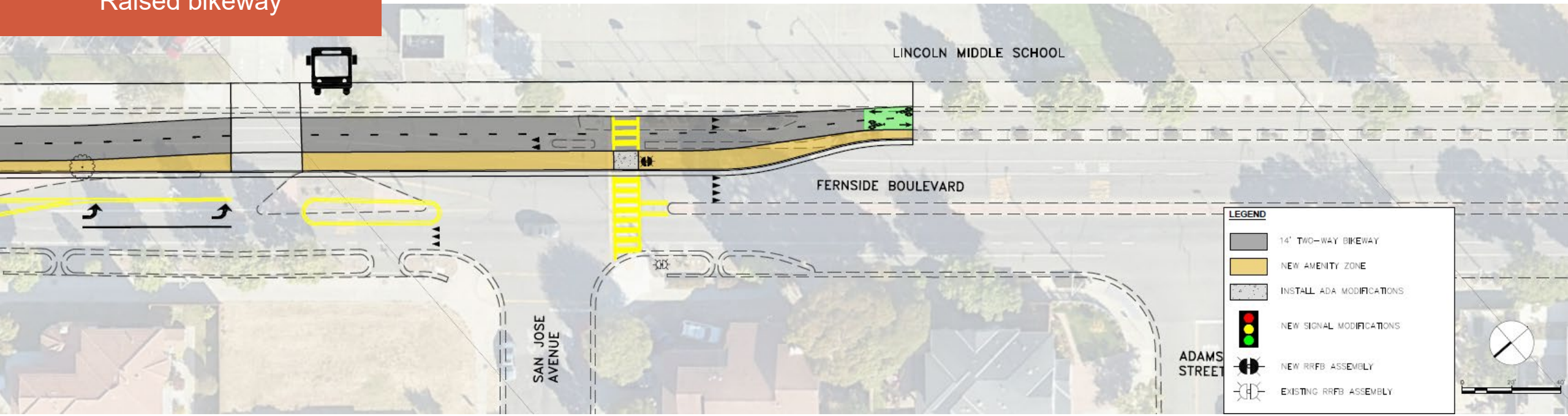
Long-Term Concept: Bikeways

- Separated two-way bikeway on north and east side of Fernside provides low-stress, all ages and abilities facility connecting to Cross Alameda Trail and Bay Farm Bicycle Bridge.
- Preferred bikeway design: raised to sidewalk level.
  - Pending funding availability and/or engineering needs, part of the project may need to be constructed as a curb-protected bikeway at roadway grade.



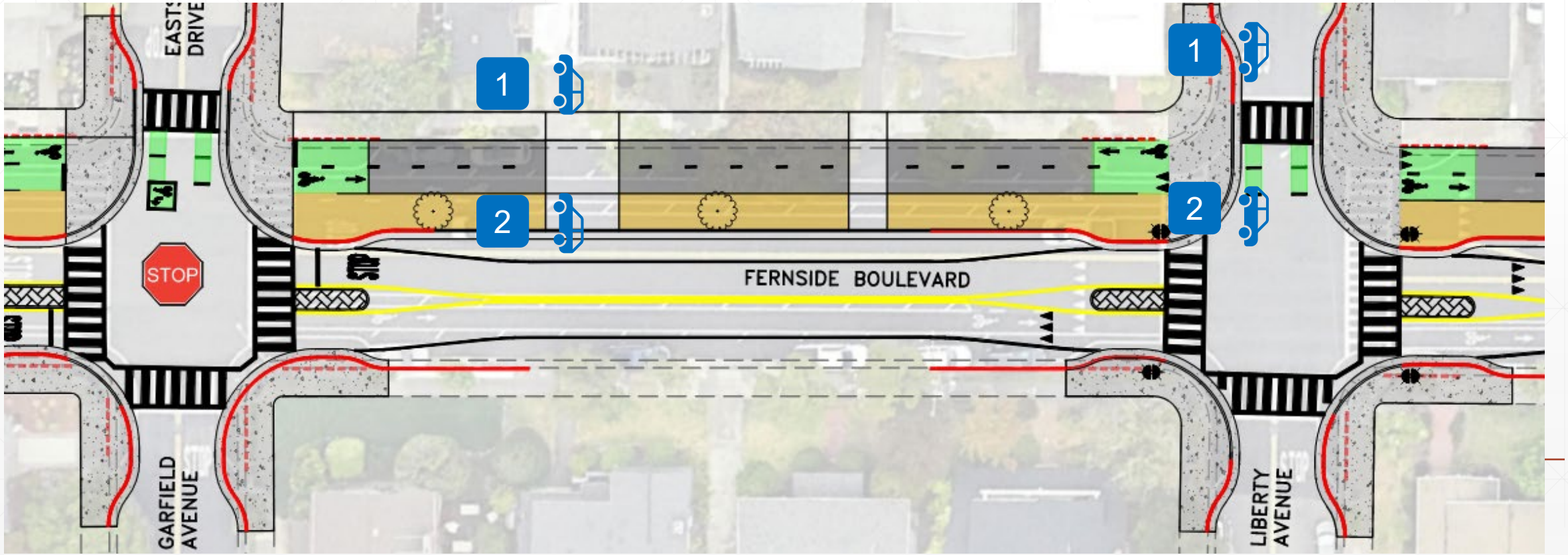
Curb-protected bikeway

Raised bikeway



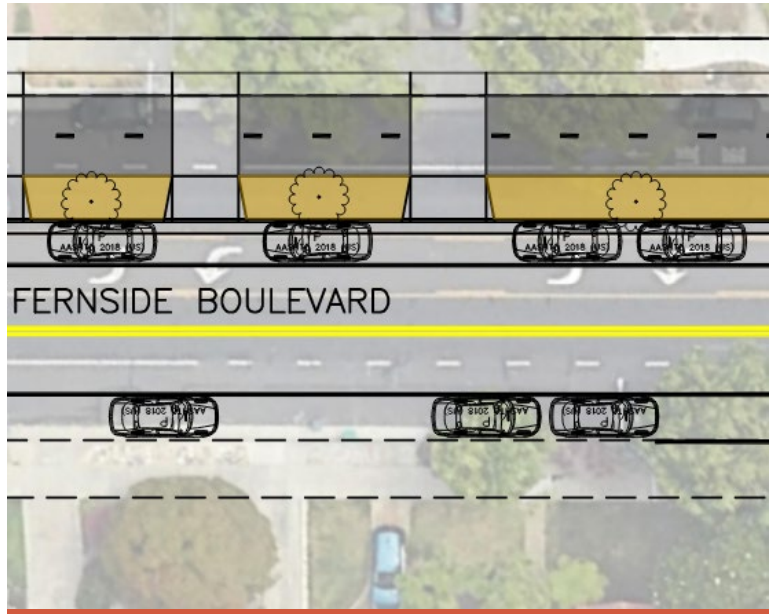
Long-Term Concept: Vehicle Movements & Driveway Access

- Two motor vehicle lanes (one in each direction)
- Two-way bikeway makes pulling out of driveways easier: wider buffer strip + parking lane allows drivers to wait for an opening in traffic without blocking the bike lane *(2-stage stop approach)*
- Retain turn pockets approaching High St and Encinal Ave

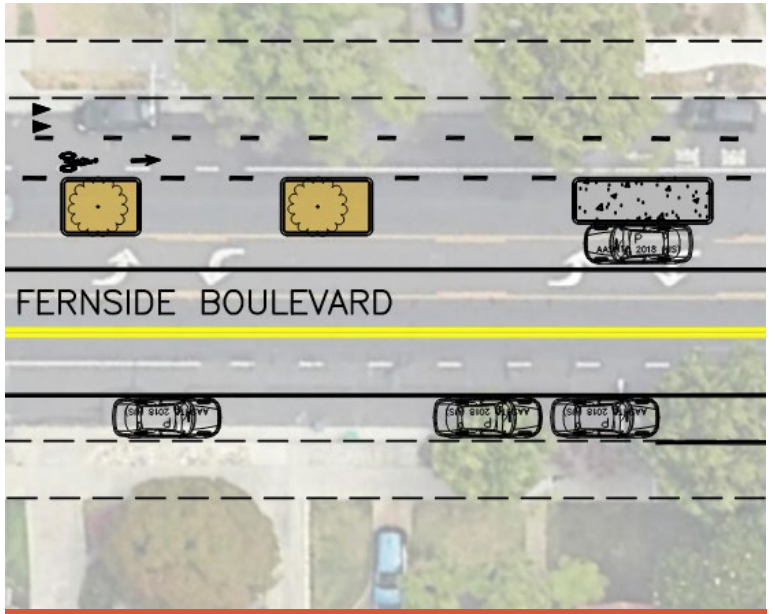


Long-Term Concept: On-Street Parking

- Curbside parking on both sides of the street
- Raised bikeway: ~23% of on-street parking removed to comply with CA daylighting standards and accommodate pedestrian median islands
- Curb-protected bikeway: more parking loss
- Peak parking occupancy across the corridor is less than 50% (over half of spaces available)



Raised bikeway



Curb-protected bikeway

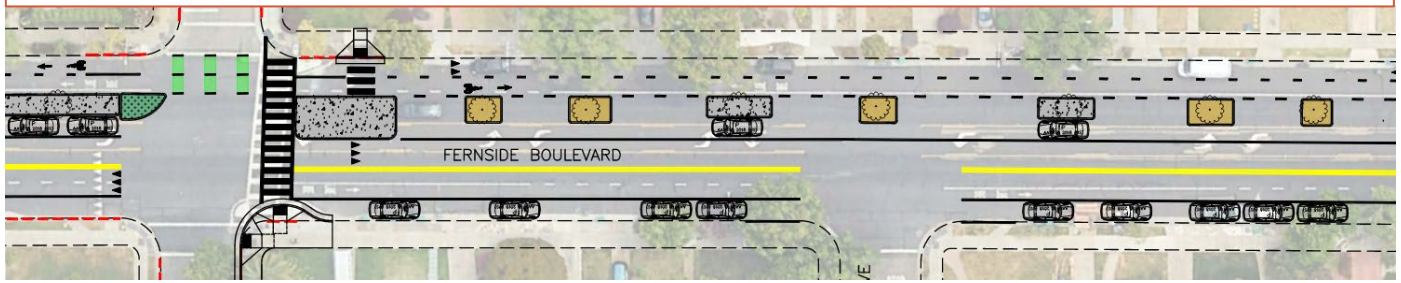
Long-Term Concept: Transit Accessibility

Existing Conditions

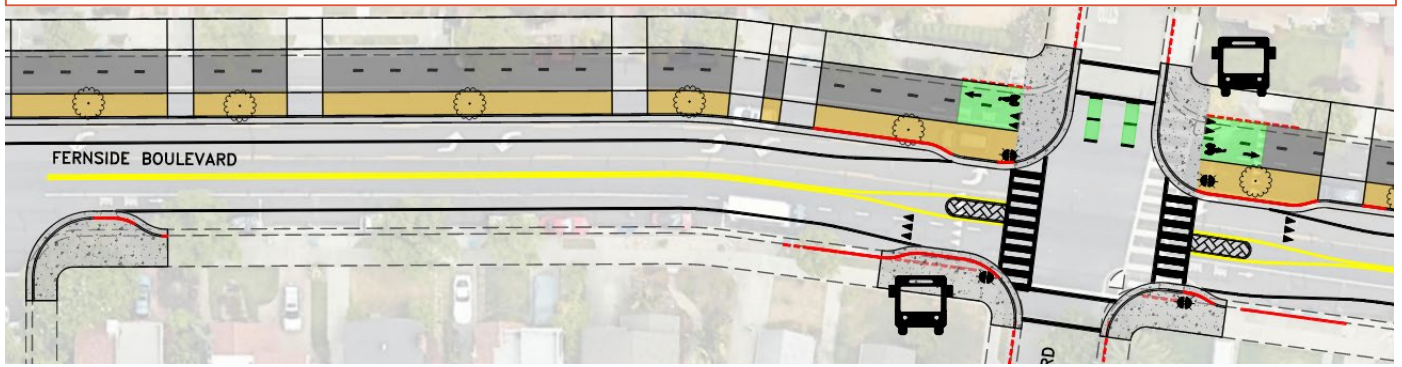
- Bus stops against existing curb; non-accessible boarding location
- Buses must merge into travel lane

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

Curb-Protected Bikeway: accessible ramp across bikeway to sidewalk



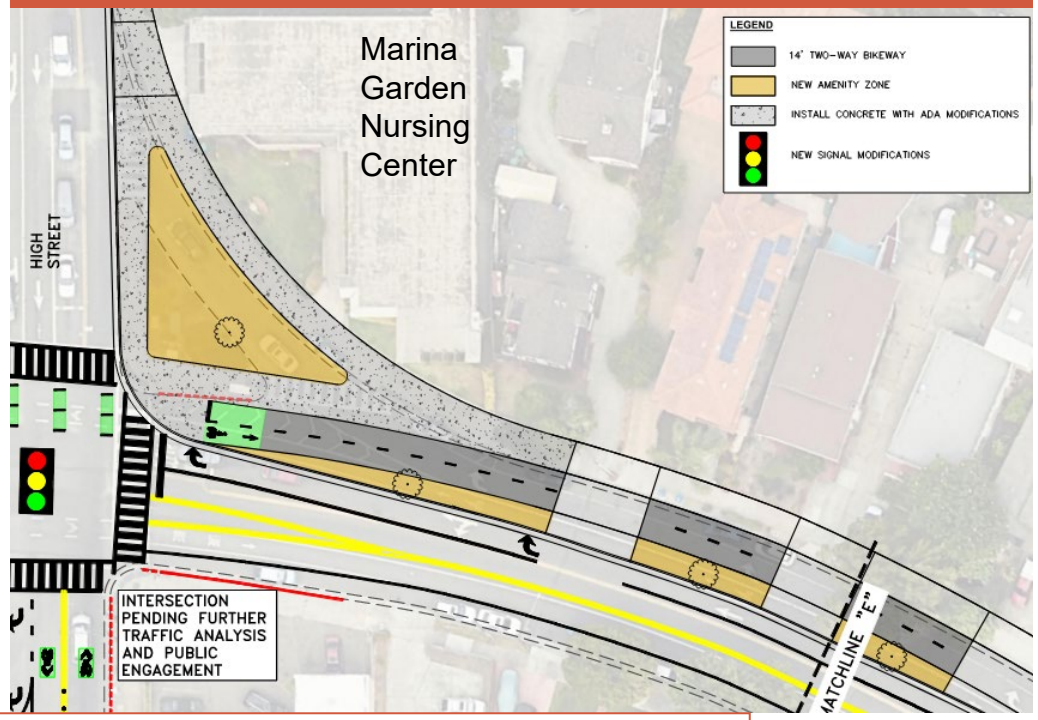
Raised Bikeway: level crossing across bikeway to sidewalk



Long-Term Concept: Visitor Loading/Unloading

Existing Conditions

Recommended Concept



- South side of street: Similar to existing conditions
- North side of street: New bikeway crossing
  - Raised bikeway (preferred): Cross bikeway via driveway or median
  - Curb-protected bikeway: Cross bikeway via driveway
- Marina Garden Nursing Center: New accessible loading zone

Pedestrian Median Islands with Two-Way Protected Bikeway

Considerations for detailed design:

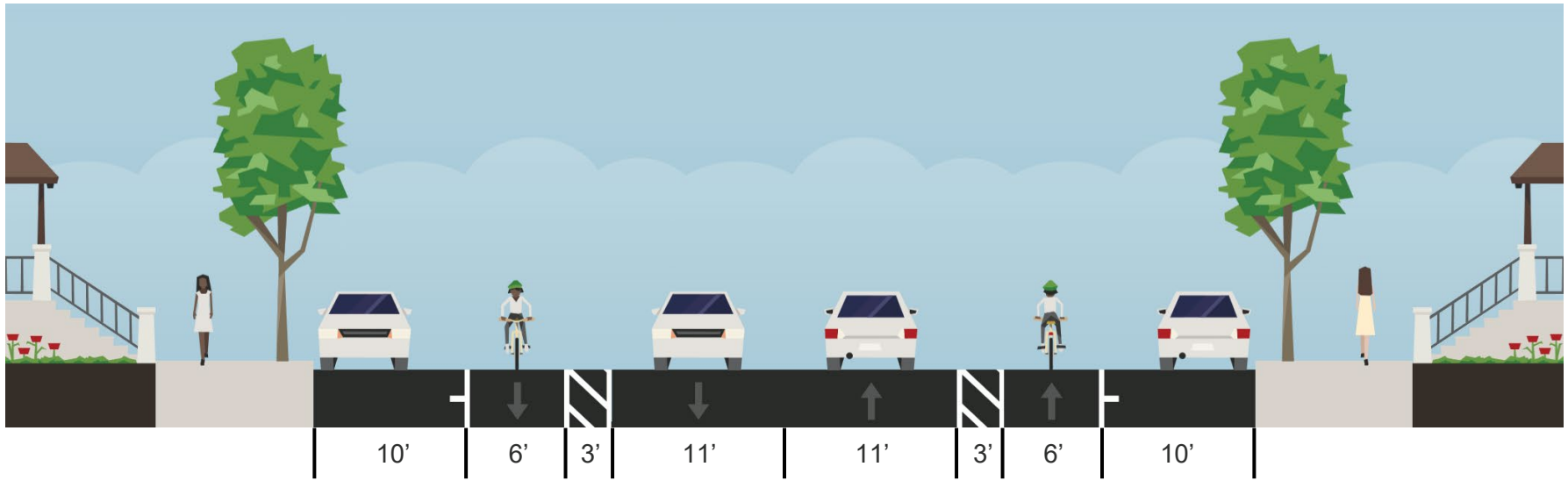
- Lane width: 10.5 ft vs. 11 ft
- Locations of curb-protected vs. raised bikeway
- Locations for blue zones & design for an accessible loading zone at Marina Garden Nursing Center
- Median island details at 4-way intersections
- Buffer strip design: landscaping, accessible loading, waste bin staging/pickup, delivery vehicles
- Fernside/High/Gibbons: traffic analysis, public engagement
- Drainage
- Lighting

Near-Term Concept Recommendation

Recommended Near-Term Concept: Quick-Build Median Islands with Buffered Bike Lanes

Recommended (plus pedestrian medians)

Quick-Build Median Islands with Buffered Bike Lanes
(Tilden Way to High St)

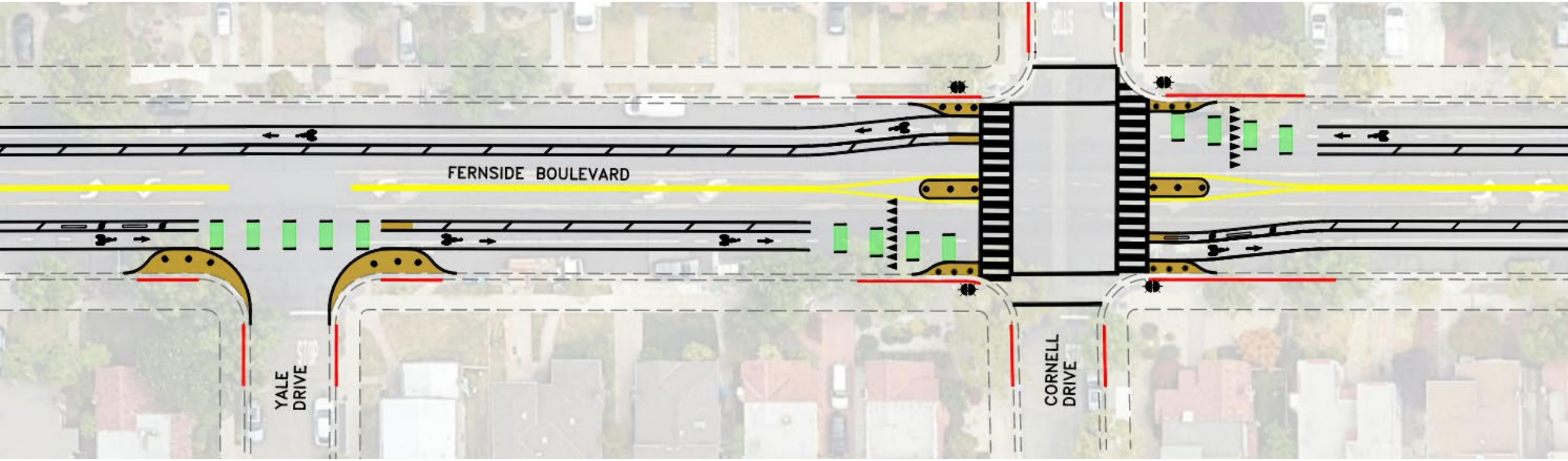


Improvements:

- Quick-build pedestrian median islands at approaches to 4-way intersections
- Pedestrian safety improvements
- Buffered bike lanes with additional delineation / buffer hardening where feasible
- Estimated construction cost, including pavement: $1.5 million

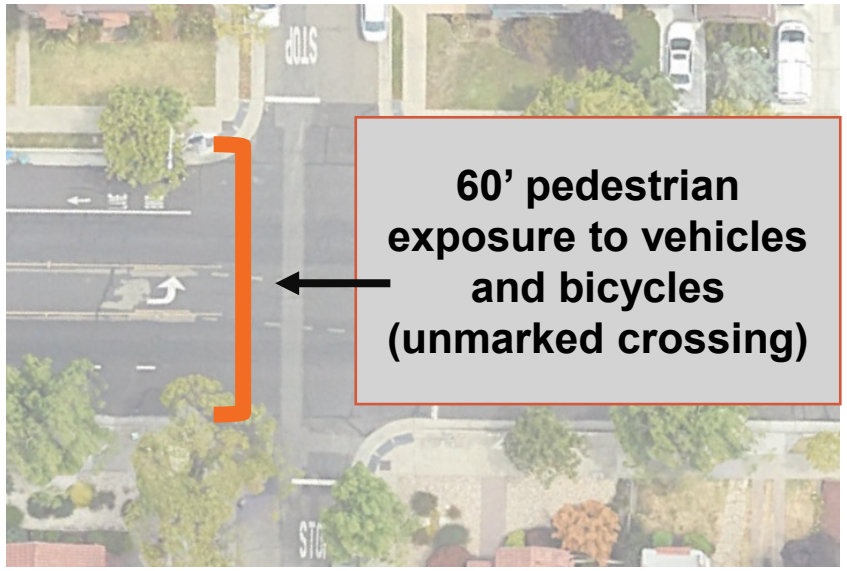
Near-Term Concept: Traffic Calming

- Narrower travel lanes, new pedestrian median islands and curb extensions reduce vehicle traffic speeds
- Removal of center left turn lane reduces reckless driving maneuvers
- Buffered bike lane would *not* prevent drivers from using the bike lane for illegal passing maneuvers, except where buffer hardening is possible



Near-Term Concept: Pedestrian Safety

Existing Conditions



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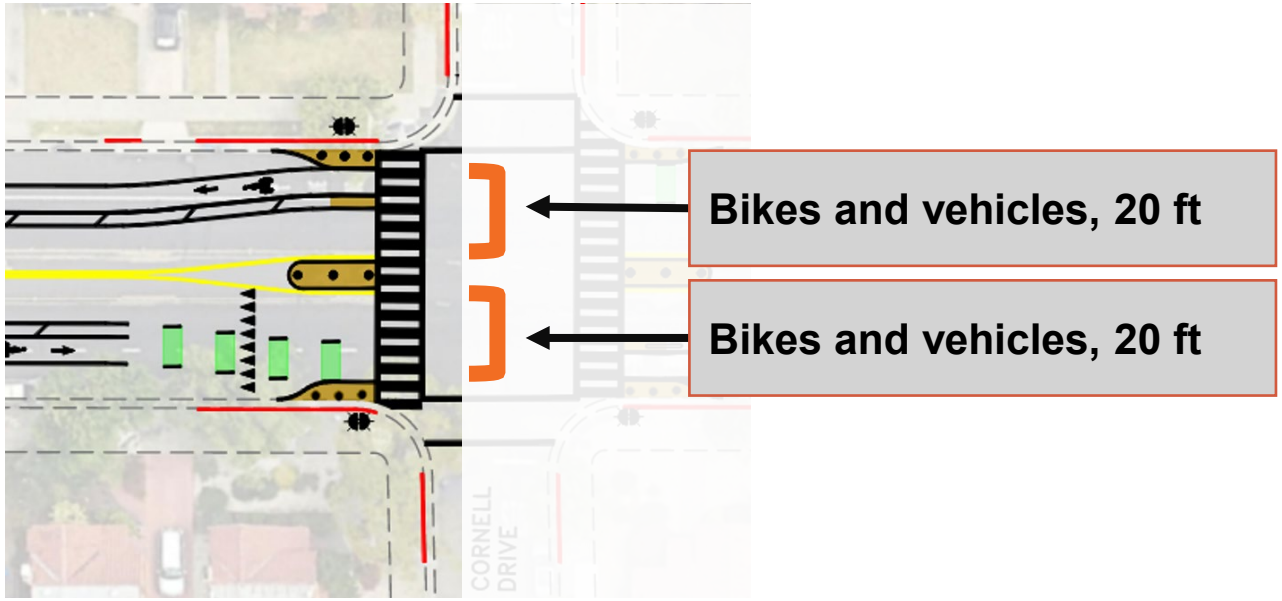
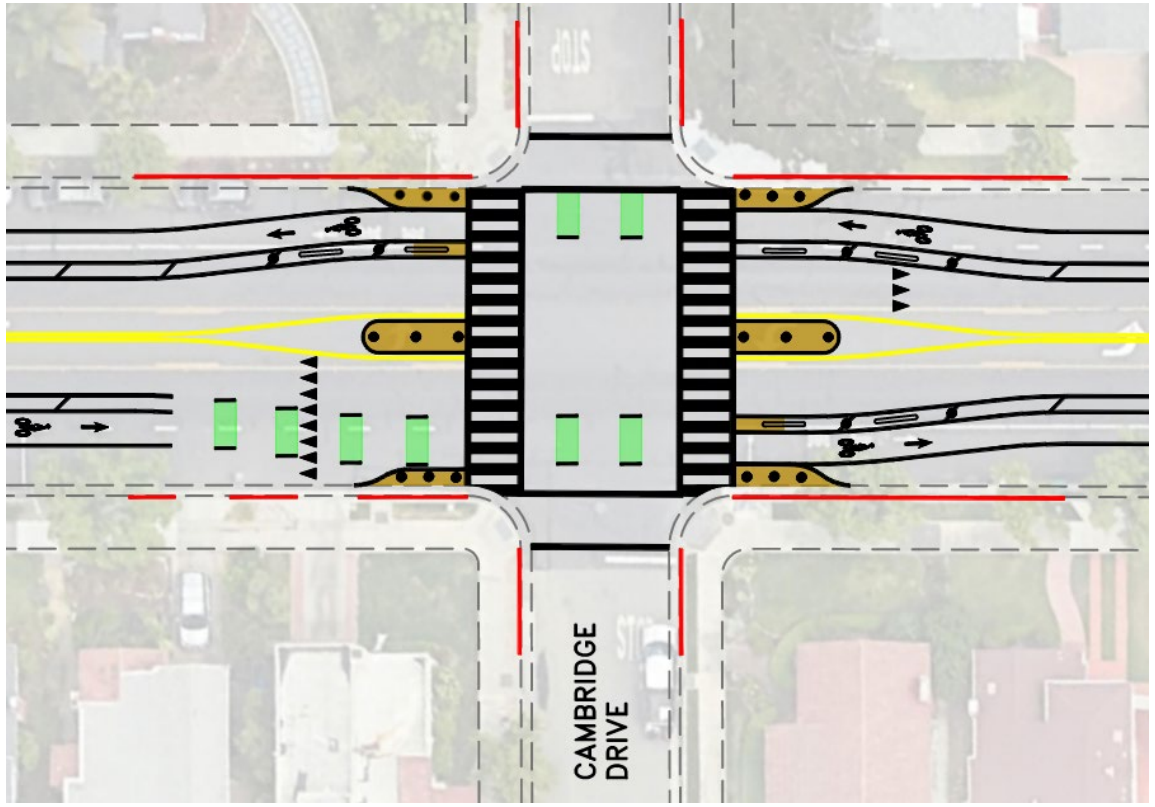
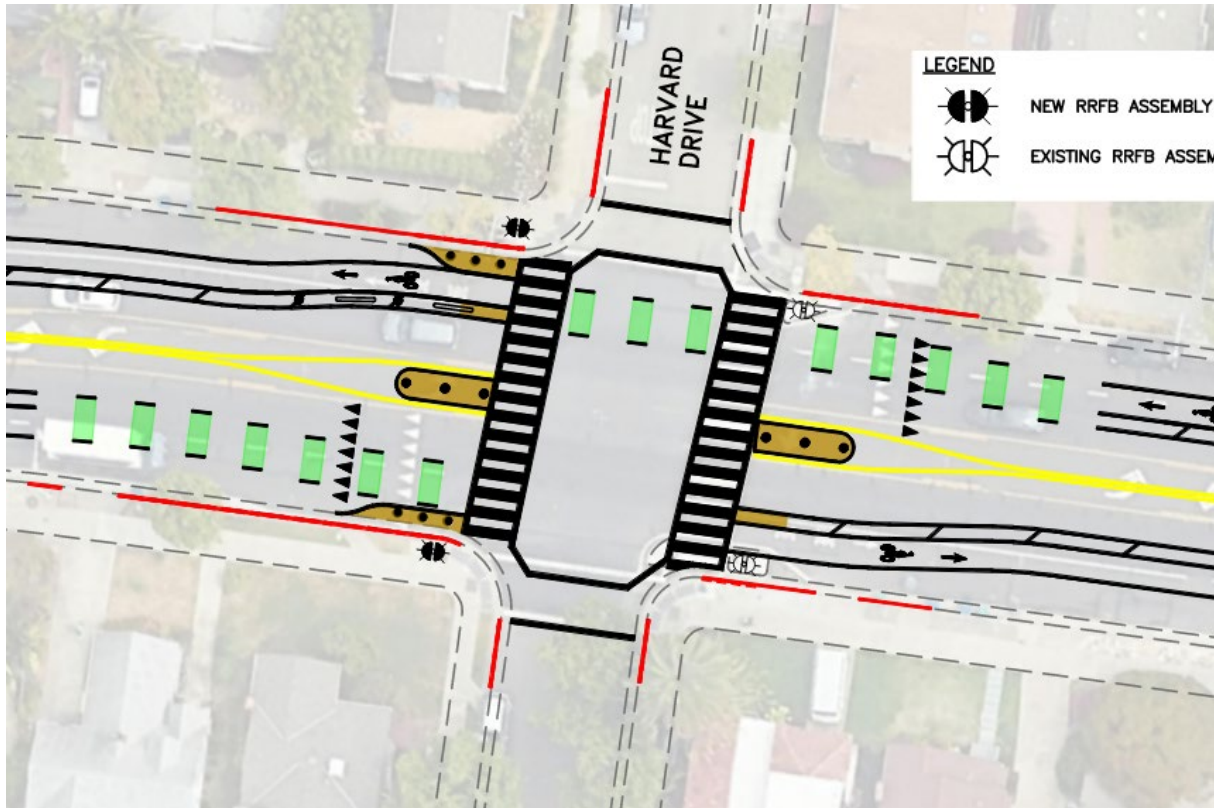


- New paint-and-bollard curb extensions and median islands make crossing easier
- New marked crossings improve motorist yielding

Near-Term Concept: Bikeways

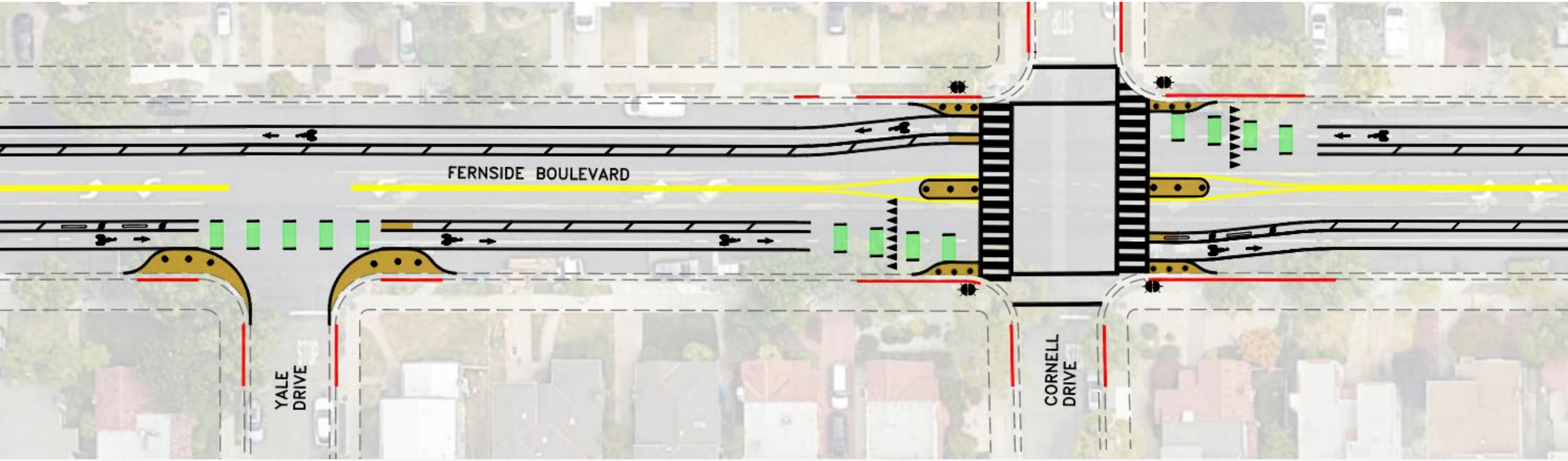
- Continue the painted buffered bike lanes currently east of High St.
- Incorporate vertical hardening in the buffer at some intersections. *Opportunities to harden the bike lane are limited due to the number of driveways.*





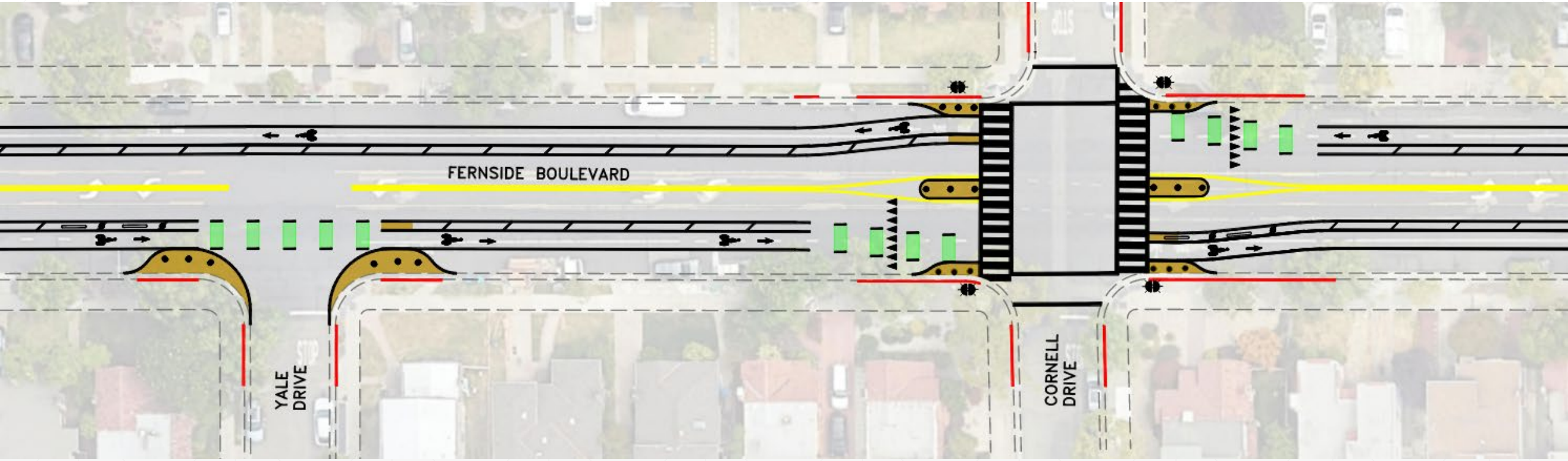
Near-Term Concept: Vehicle Movements & Driveway Access

- Two motor vehicle lanes (one in each direction) like current design east of High St
- Driveway access similar to existing

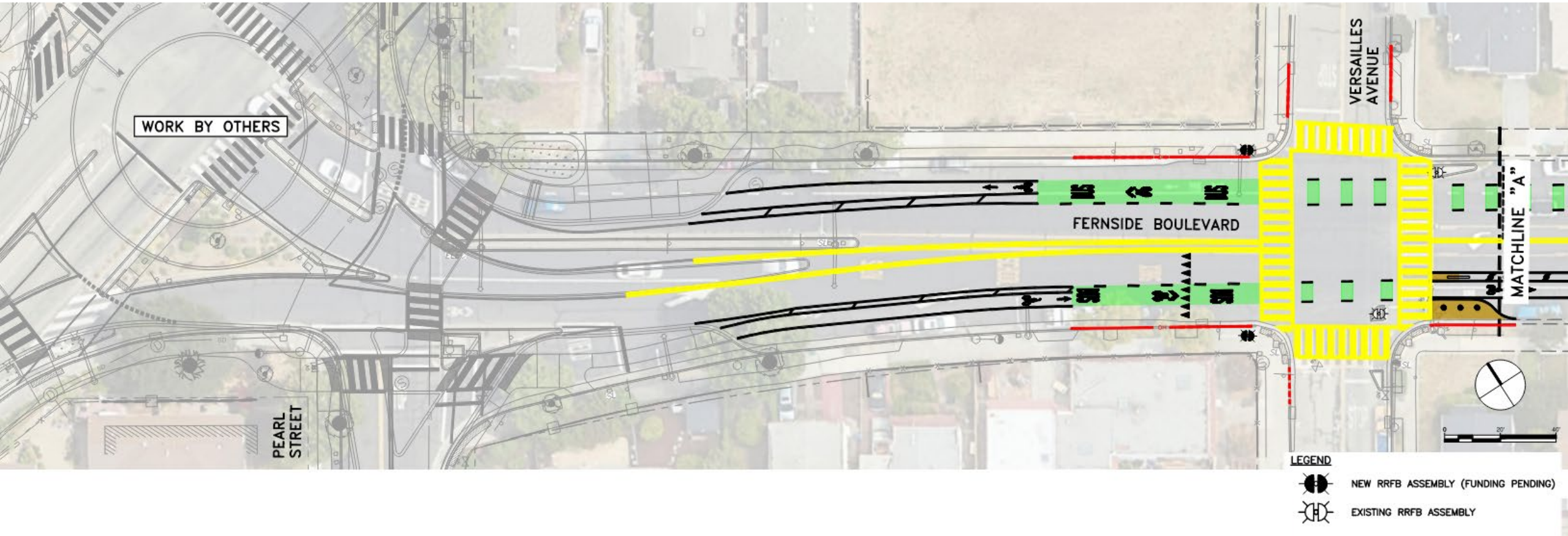


Near-Term Concept: On-Street Parking

- Curbside parking on both sides of the street
- ~24% of on-street parking would be removed to comply with California daylighting standards and accommodate the pedestrian median islands
- Peak parking occupancy across the corridor is less than 50% (over half of spaces available)



Quick-Build Median Islands with Buffered Bike Lanes



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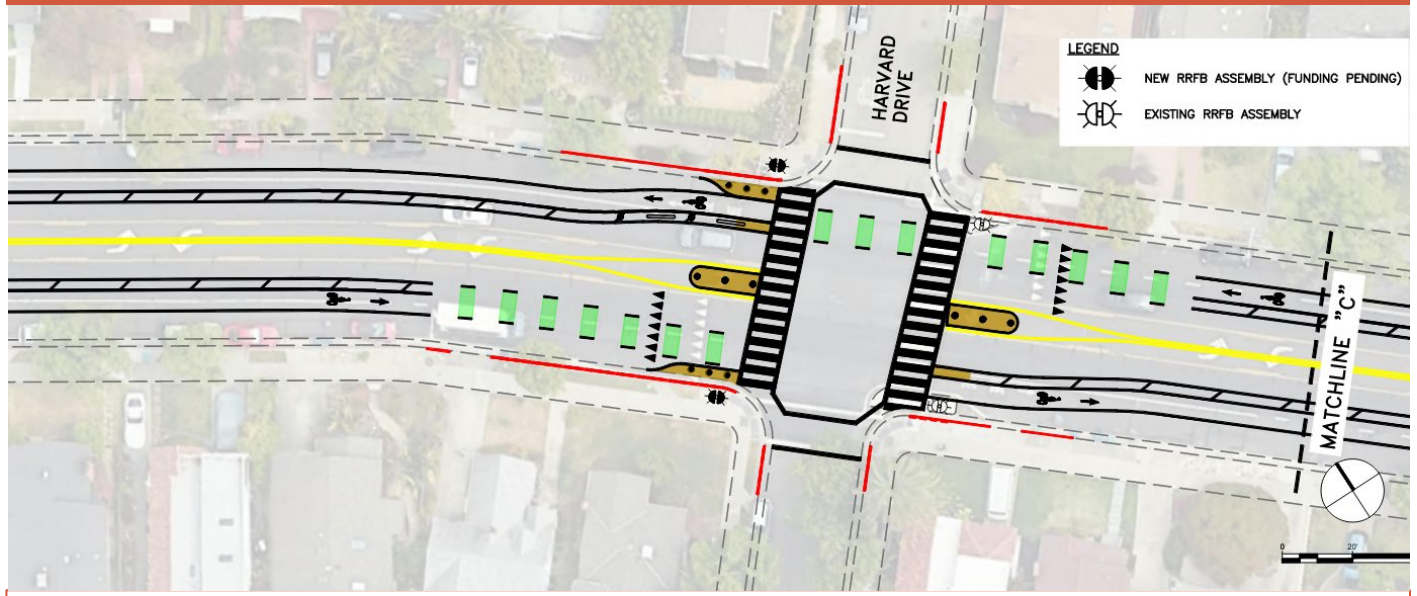
Quick-Build Median Islands with Buffered Bike Lanes

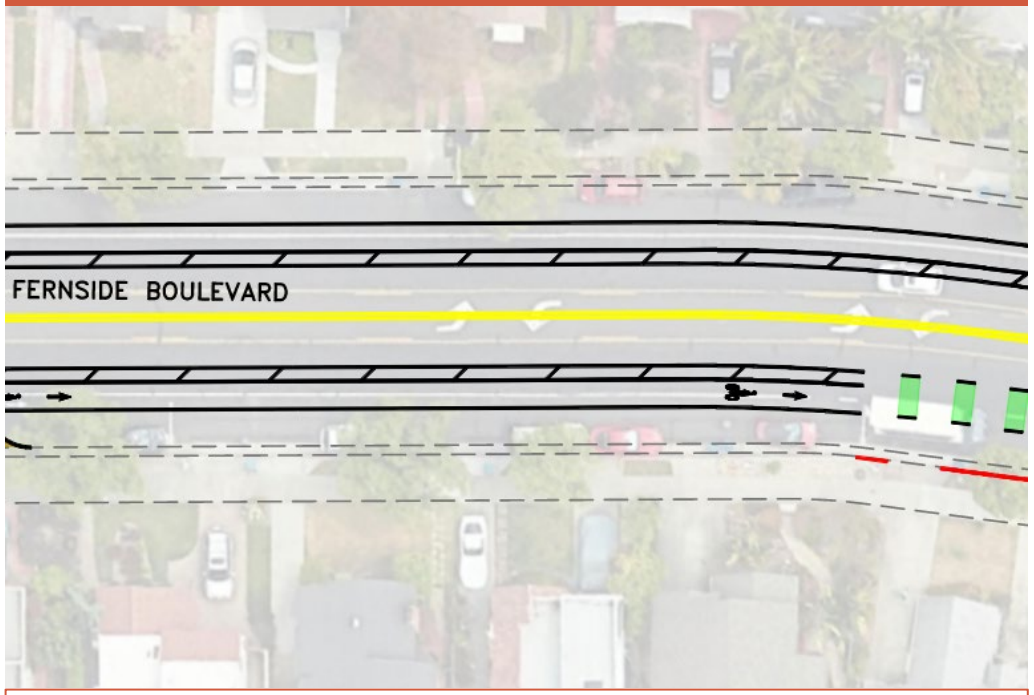


- Bus stop accessibility and transit operations not changed

Near-Term Concept: Visitor Loading/Unloading

Existing Conditions

Recommended Concept



- Similar to existing conditions

Buffered Bike Lanes with Quick-Build Median Islands

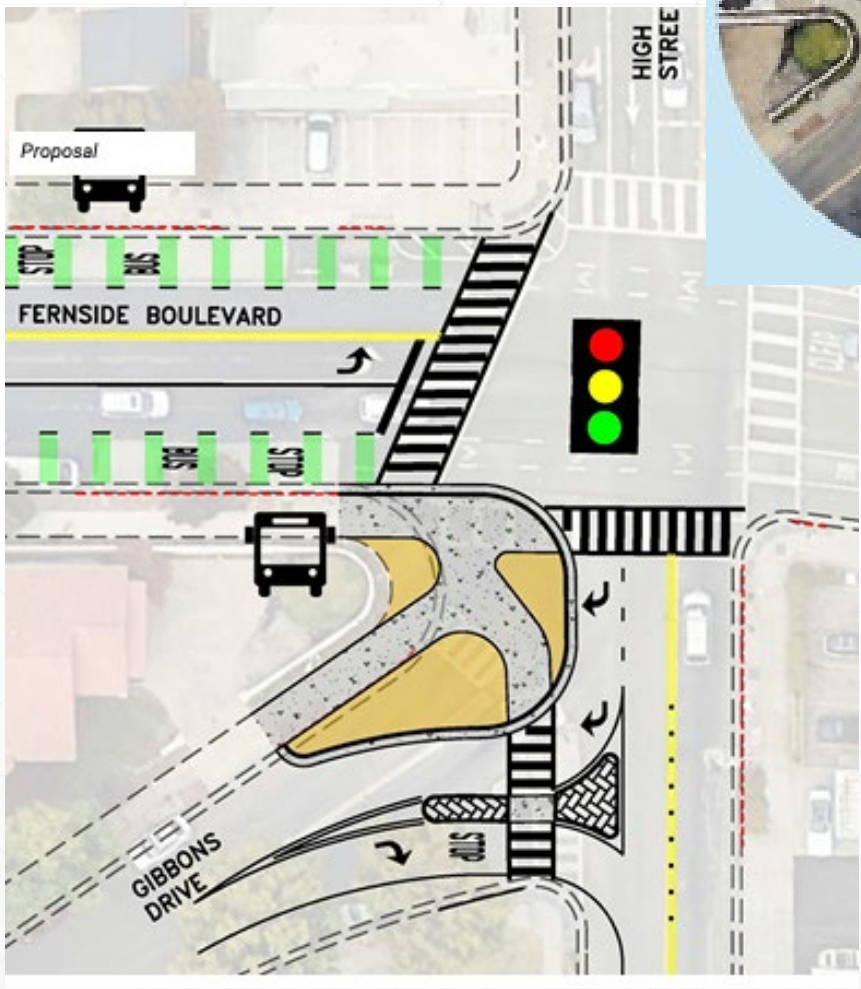
Considerations for detailed design:

- Design specifications for vertical elements
- Additional flashing beacon installations
- Gibbons/Fernside/High design details
- Need for new on-street blue zones

High/Gibbons/Fernside Intersection

Fernside/High/Gibbons Intersection

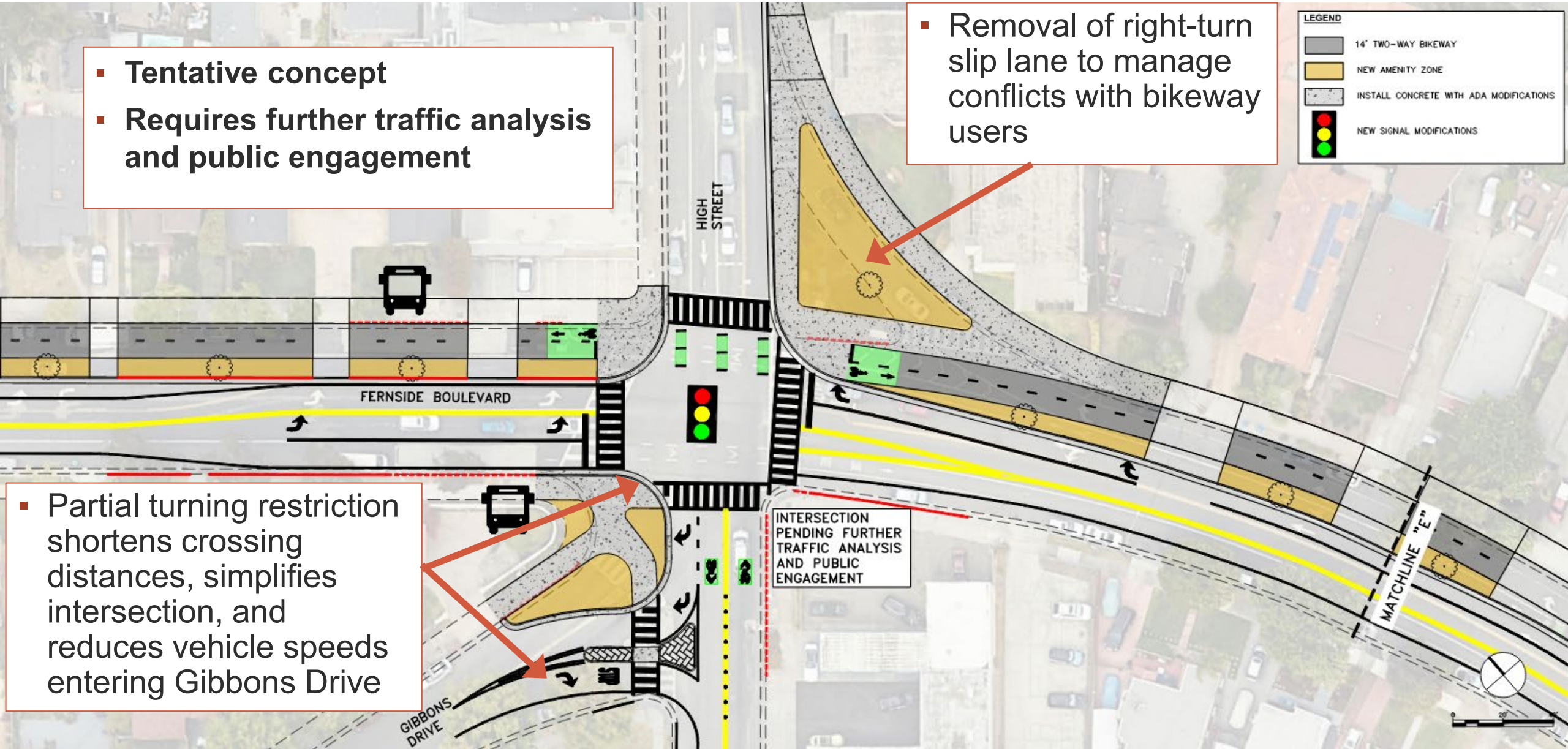
- **During design, concluded that the intersection needed more attention**
- **Proposed design to limit eastbound Gibbons Dr traffic to right-turn only onto High St**
  - Shorter pedestrian crossings
  - Simpler geometry
  - Shorter traffic signal wait times
  - Reduced speeds entering Gibbons
  - Less cut-through traffic on Gibbons
  - *More study needed to determine spillover onto nearby streets*



Fernside/High/Gibbons Intersection

- **Public feedback more negative than anticipated**
  - Major concerns about impacts to nearby neighborhood streets, like Bayo Vista and Cornell
- **Recommendation**
  - Not an opportunity for a streamlined public process
  - More traffic study and public engagement to determine a long-term intersection treatment
  - Include changes at Gibbons Dr and westbound Fernside slip lane in study and engagement
  - Move forward with general Fernside concepts with assumption that this intersection treatment will be determined later

Long-Term Concept: Fernside/High/Gibbons



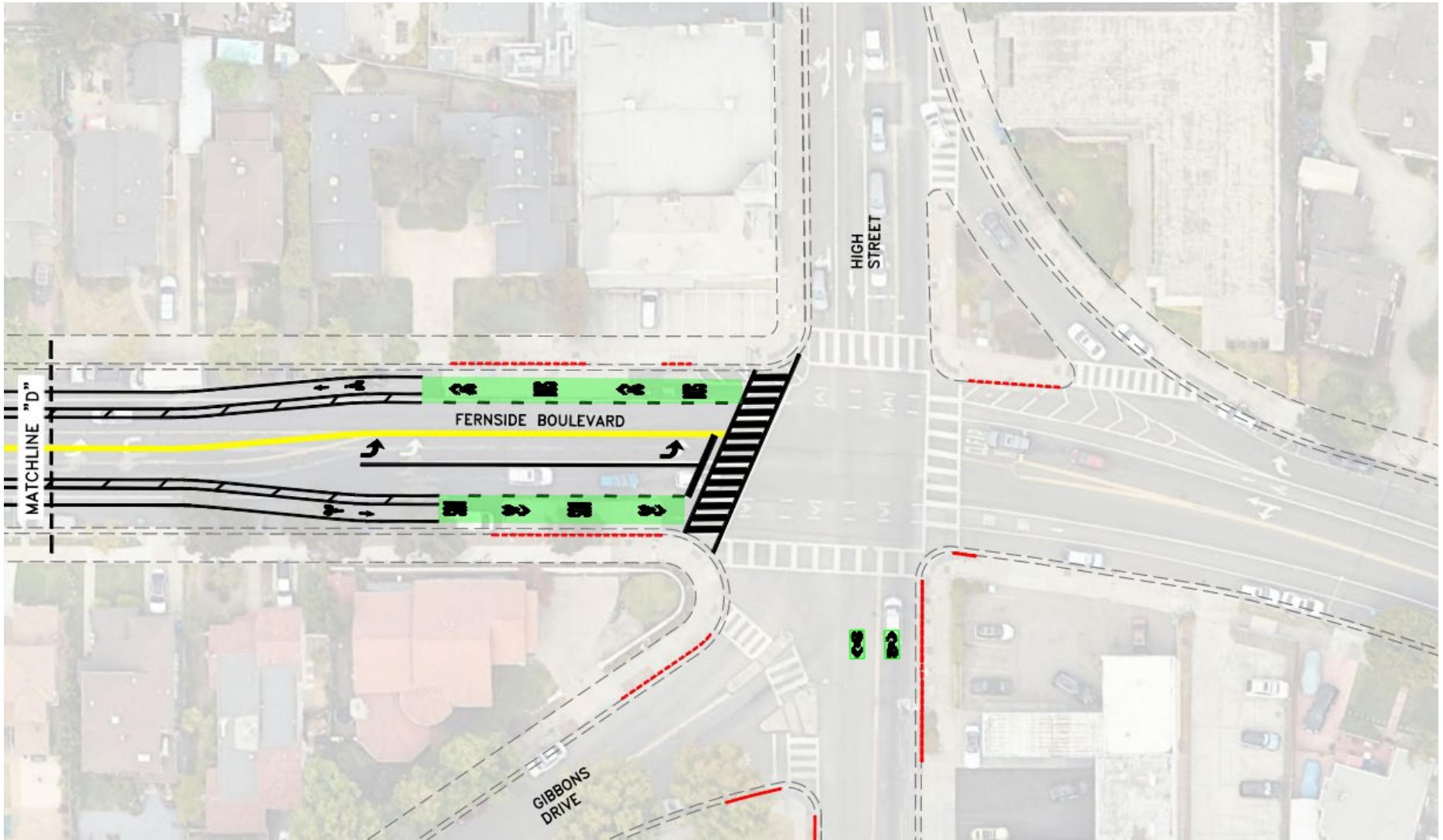
- **Tentative concept**
- **Requires further traffic analysis and public engagement**

- Removal of right-turn slip lane to manage conflicts with bikeway users

- Partial turning restriction shortens crossing distances, simplifies intersection, and reduces vehicle speeds entering Gibbons Drive

Near-Term Concept: Fernside/High/Gibbons

- No substantial near-term changes



Next Steps

Project Phases

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2. **Public outreach for draft concept alternatives:** May-June 2024
3. **Public hearings for final design concept:** November 2024-Early 2025 Commission and City Council public hearings (including seeking City Council approval)
4. **Resurfacing and restriping on Fernside Blvd west of High St:** 2026
5. **Construct full corridor project:** 2030 goal – timing depends on finding funding

Staff Recommendation

- Review and discuss near-term and long-term draft final design concepts for the Fernside Traffic Calming & Bikeways Project

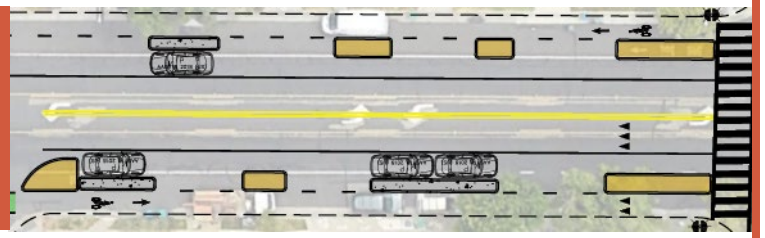
Backup Slides

Spring 2024 Concept Alternatives

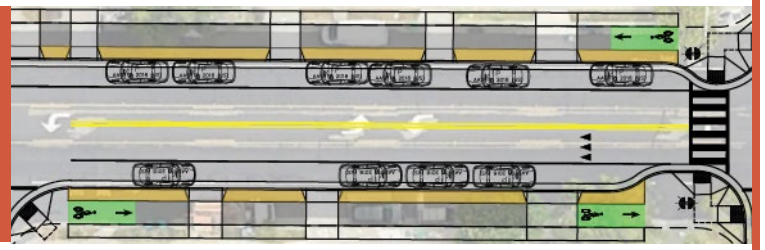
Spring 2024 Concept Alternatives

Long-Term Concepts

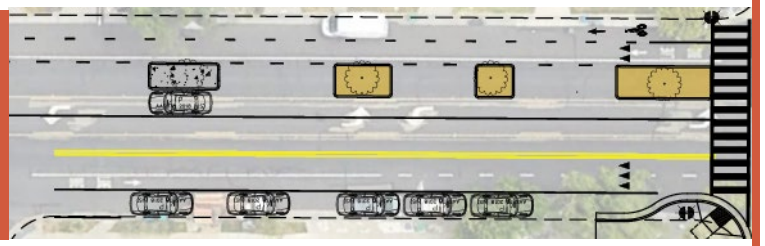
LT1a: One-Way Curb-Protected Bikeways



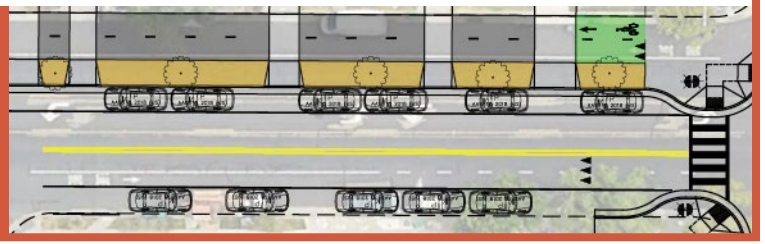
LT1b: One-Way Raised Bikeways



LT2a: Two-Way Curb-Protected Bikeway



LT2b: Two-Way Raised Bikeway



Spring 2024 Long-Term Concept Input

How important is it to include these design aspects on Fernside Boulevard in the long term?									
	Narrower travel lanes to reduce speeds	Shorter pedestrian crossing distances	Additional marked crosswalks	Flashing beacons at crossings without stop signs	One-way bikeways so bicyclists travel the same direction as drivers	Two-way bikeway that provides a wider combined space for bicyclists	Bikeways that are raised to sidewalk level	Abundant on-street parking	Ease of entering / exiting driveways from the street
Extremely Important	45%	42%	48%	52%	33%	18%	17%	23%	35%
Important	25%	30%	36%	32%	23%	22%	19%	22%	29%
Neutral	9%	16%	12%	11%	24%	21%	23%	16%	18%
Less Important	7%	5%	2%	3%	7%	11%	12%	18%	11%
Not Important	14%	8%	2%	3%	13%	28%	29%	21%	7%

- **Pedestrian improvements** and **reducing vehicle speeds** were identified as long-term priorities
- Ease of driveway access was identified as **more important** than abundant on-street parking
- **One-way bikeways** identified as slightly more important than two-way

Long-Term Alternatives Comparison

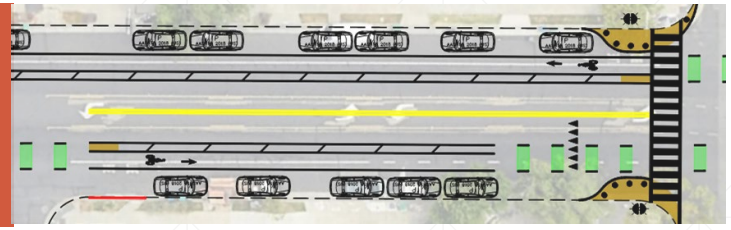
Alternative:	Existing	LT1a	LT1b	LT2a	LT2b
		One-way		Two-way	
		Curb-protected	Raised	Curb-protected	Raised
Pedestrian Safety	Poor	Fair	Good	Good	Excellent
Bicyclist Safety & Level of Stress	Poor	Fair	Good	Good	Excellent
Traffic Calming	Poor	Good	Good	Good	Good
Transit Operations and ADA-Compliant Stops	Fair	Good	Good	Good	Good
Vehicle Operation	Good	Fair	Fair	Good	Good
Neighborhood Amenity	Poor	Fair	Fair	Excellent	Excellent
Potential for ADA Parking	Fair	Fair	Excellent	Fair	Good
Other Services (Garbage, Delivery, Maintenance)	Good	Fair	Good	Fair	Good
Estimated On-Street Parking Removal*	-	40-60%	25-45%	20-40%	15-30%
Estimated Construction Cost and Constructability	-	$16 MM	$23 MM	$15 MM	$21 MM

**Current peak parking occupancy 41-48%*

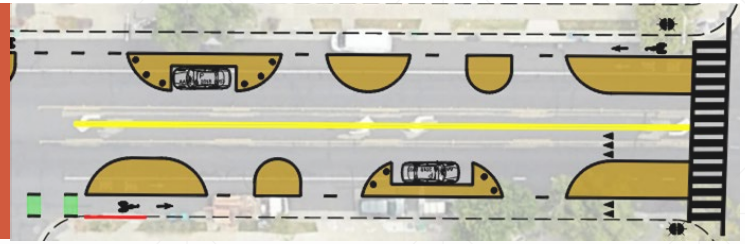
Spring 2024 Near-Term Concept Alternatives

Near-Term Concepts

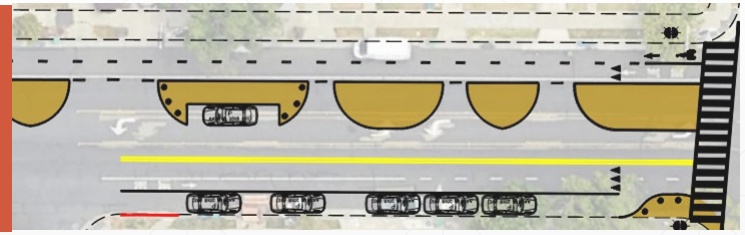
NT1: Buffered Bike Lanes



NT2: One-Way Separated Bikeways



NT3: Two-Way Separated Bikeway



Spring 2024 Near-Term Concept Input

How would each near-term concept compare to walking, biking, taking the bus, driving, and living along/across Fernside Boulevard today?

NT1: Buffered Bike Lanes

	Walking	Biking	Taking the bus	Driving	Living	Overall
Much Better / Better	31%	62%	9%	14%	38%	50%
No Different	55%	21%	51%	42%	34%	24%
Worse	10%	14%	12%	21%	15%	17%

NT2: One-Way Separated Bikeways

	Walking	Biking	Taking the bus	Driving	Living	Overall
Much Better / Better	46%	67%	15%	20%	36%	44%
No Different	35%	8%	38%	21%	11%	7%
Worse	18%	20%	21%	44%	40%	38%

NT3: Two-Way Separated Bikeway

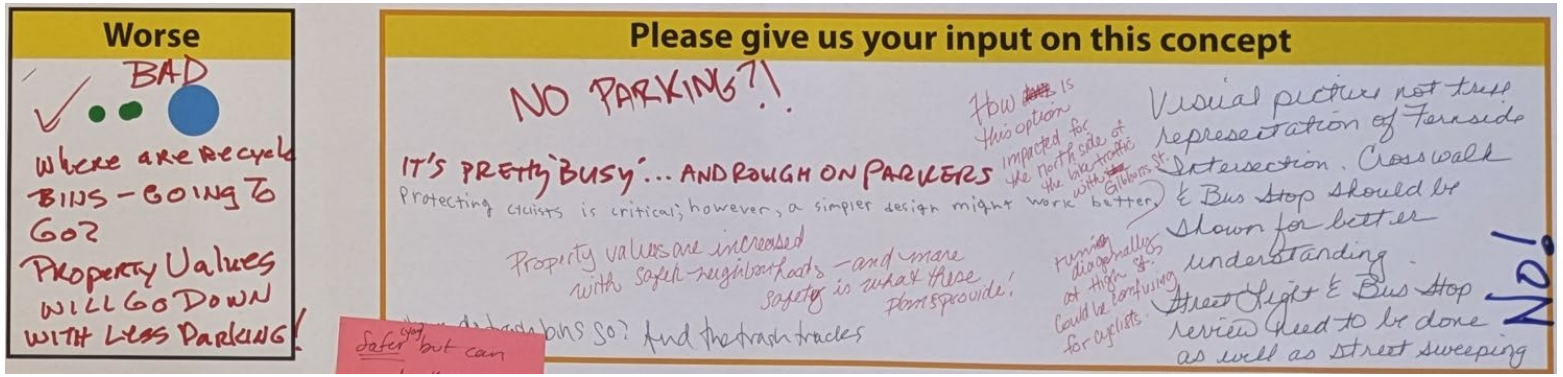
	Walking	Biking	Taking the bus	Driving	Living	Overall
Much Better / Better	40%	60%	15%	19%	36%	41%
No Different	31%	7%	35%	21%	8%	7%
Worse	22%	26%	23%	44%	43%	41%

- Highest priorities based on input: Addressing **illegal vehicle passing maneuvers, reducing speeding, and pedestrian improvements**
- Separated Bikeways rated as **better for pedestrians and bicyclists** compared to Buffered Bike Lanes, *but*
- Separated Bikeways scored lower **for drivers, residents, and overall** compared to Buffered Bike Lanes.

Near-Term Separated Bikeway Input

- Written comments widely mixed and **highly emphatic.**
- Survey responses for One-Way Separated Bikeways: **81 negative comments and 15 positive written comments.**
- Written **comment opposition to separated bikeways**: parking impacts (~20% of comments), visual clutter (~6%), driveway access (~4%), and others.
- Transportation Commission input urged prioritizing traffic calming and bike/ped safety.

"This is asking for people to complain"



"This is insanity for drivers and people who live on Fernside"

"A foolish and needlessly complicated plan"

"Don't have cars park 'floating' in the middle of the street"

Near-Term Alternatives Comparison

Alternative:	Existing	NT1	NT2	NT3
		Buffered Bike Lanes	One-Way Separated Bike Lanes	Two-Way Separated Bikeway
Pedestrian Safety	Poor	Fair	Good	Good
Bicyclist Safety & Level of Stress	Poor	Fair	Good	Good
Traffic Calming	Poor	Fair	Good	Good
Transit Operations and ADA-Compliant Stops	Fair	Fair	Good	Good
Vehicle Operation	Good	Good	Fair	Fair
Neighborhood Amenity	Poor	Fair	Fair	Fair
Potential for ADA Parking	Fair	Fair	Fair	Fair
Other Services (Garbage, Delivery, Maintenance, etc.)	Good	Good	Fair	Fair
Estimated On-Street Parking Removal*	-	20-30%	65-85%	45-65%
Estimated Construction Cost and Constructability	-	$1,000,000	$2,100,000	$2,000,000

**Current peak parking occupancy 41-48%*

Roundabout Feasibility Evaluation: Fernside/Encinal

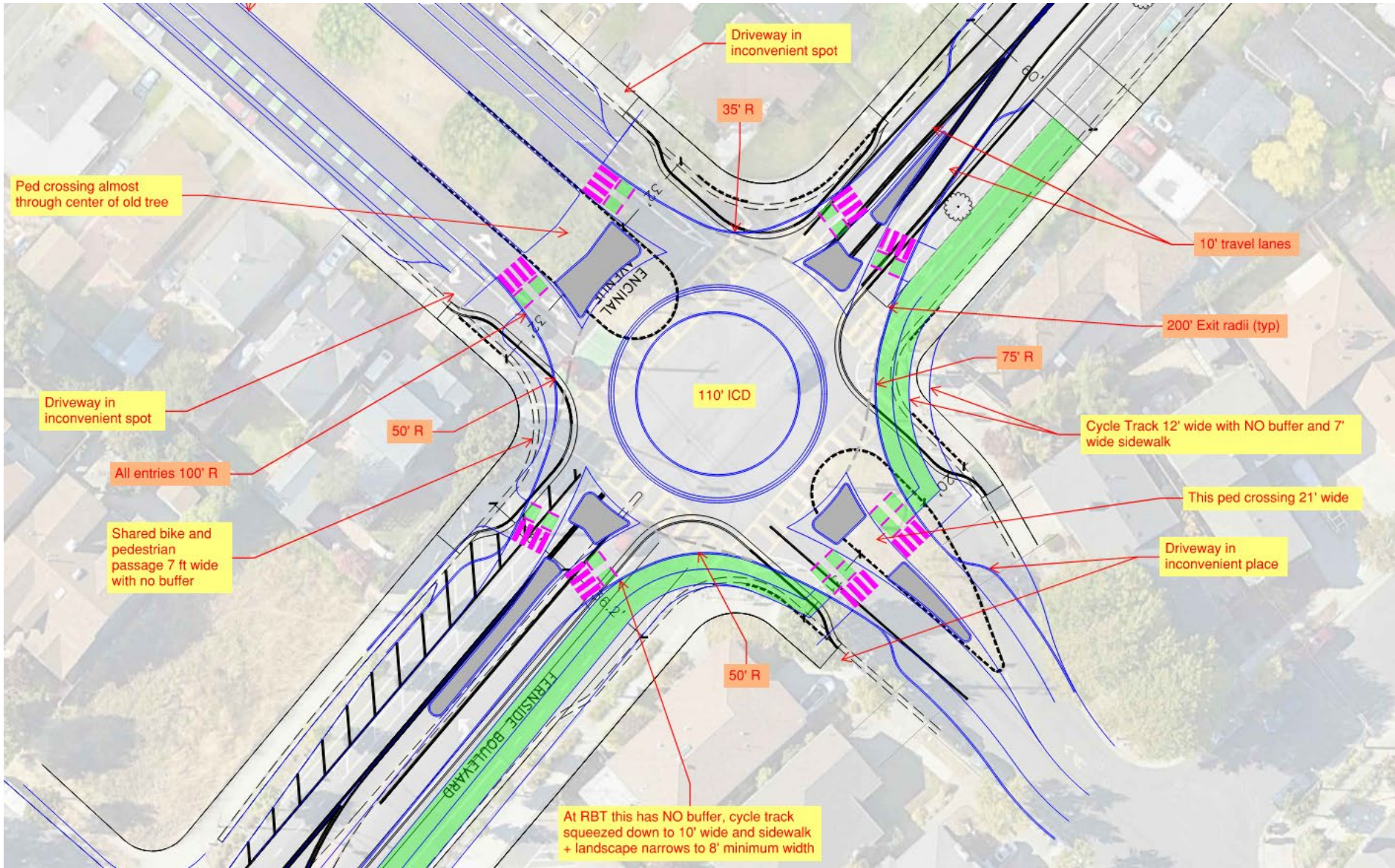
<u>Not recommended at this time</u>

Pros:

- Traffic calming influence near school
- Shortened crossing distances

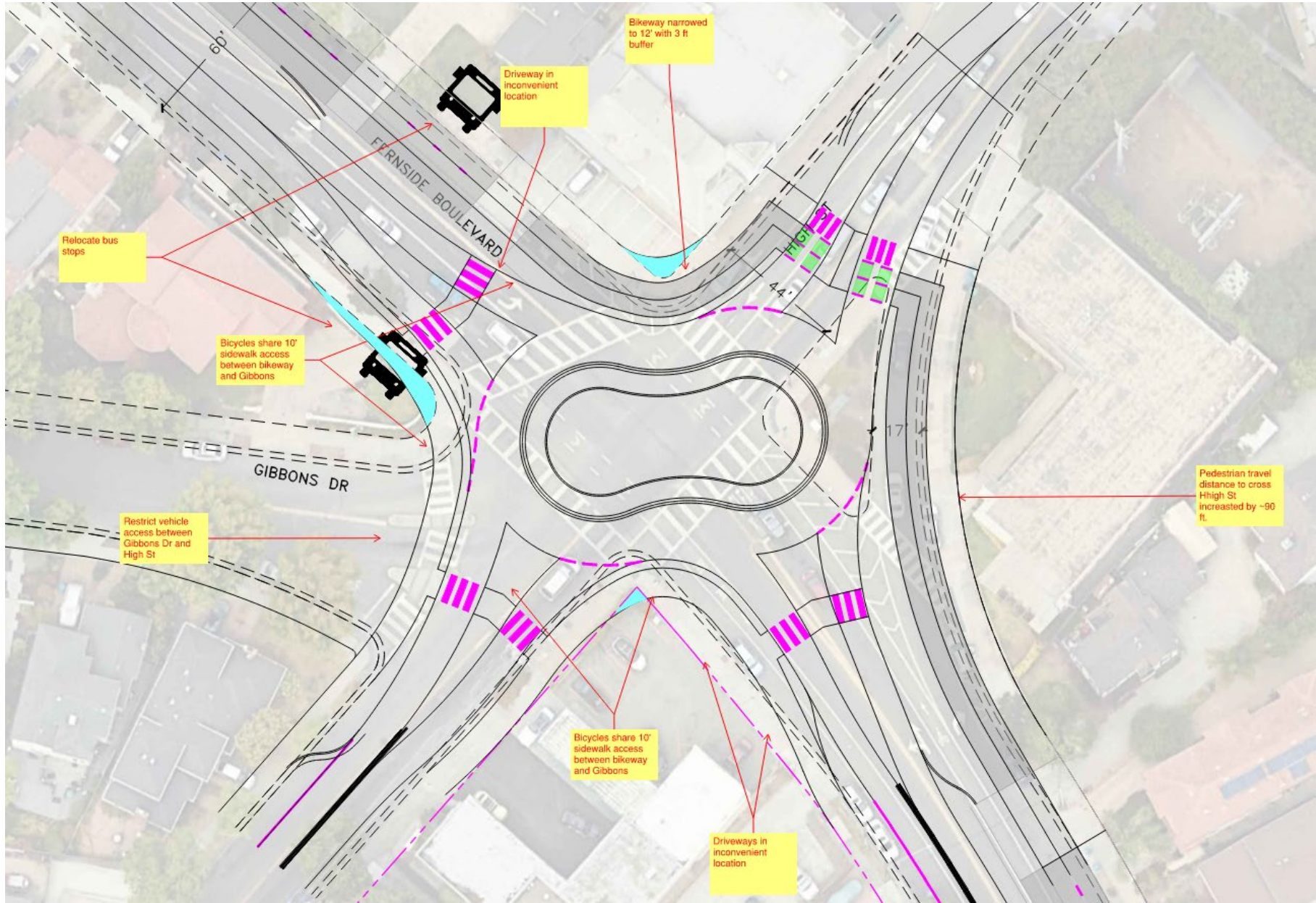
Cons:

- Lengthened paths of pedestrian and bicycle travel
- Driveways in inconvenient location
- Median island details
- Construction cost (est. addl ~$2 million)



Roundabout Not Recommended at Fernside/High

- Lengthened paths of pedestrian and bicycle travel
- Non-traditional travel lane configuration
- Driveways in inconvenient location
- Requires relocation of bus stops
- Right-of-way impacts
- Construction Cost
- (est. addl ~$3 million)

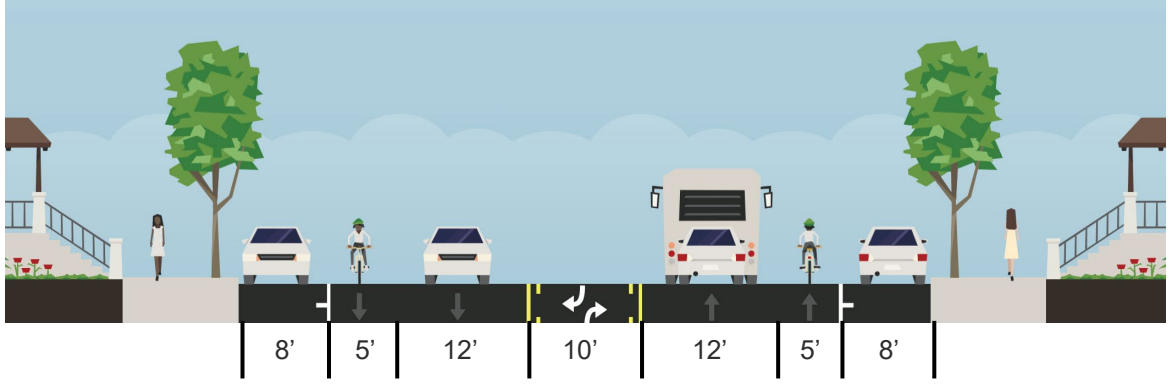


Project Background

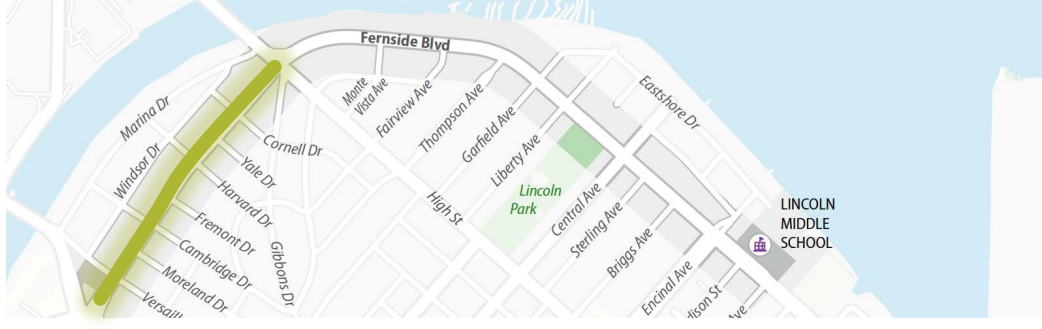
Varied Segments

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.

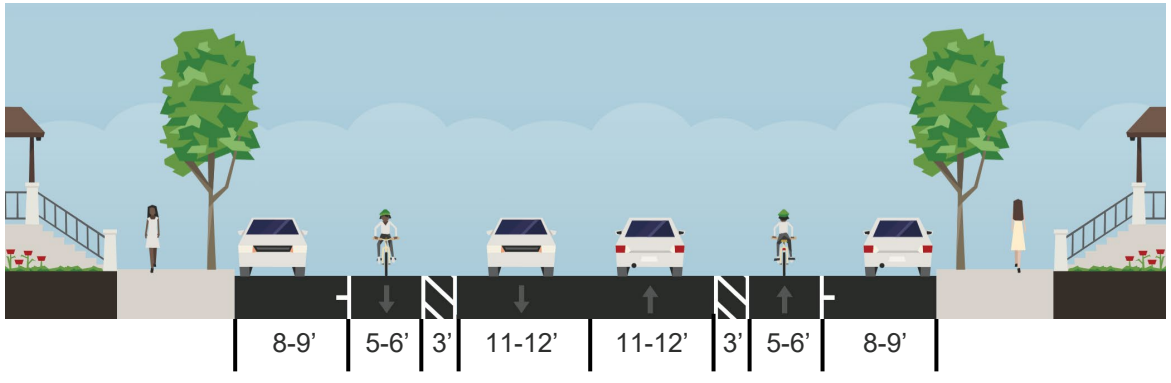


- Center vehicle turn lane
- Bike lanes adjacent to vehicle travel lanes
- ~1,000 feet between marked pedestrian crossings
- Flashing beacons at Versailles Ave. and Harvard Dr.

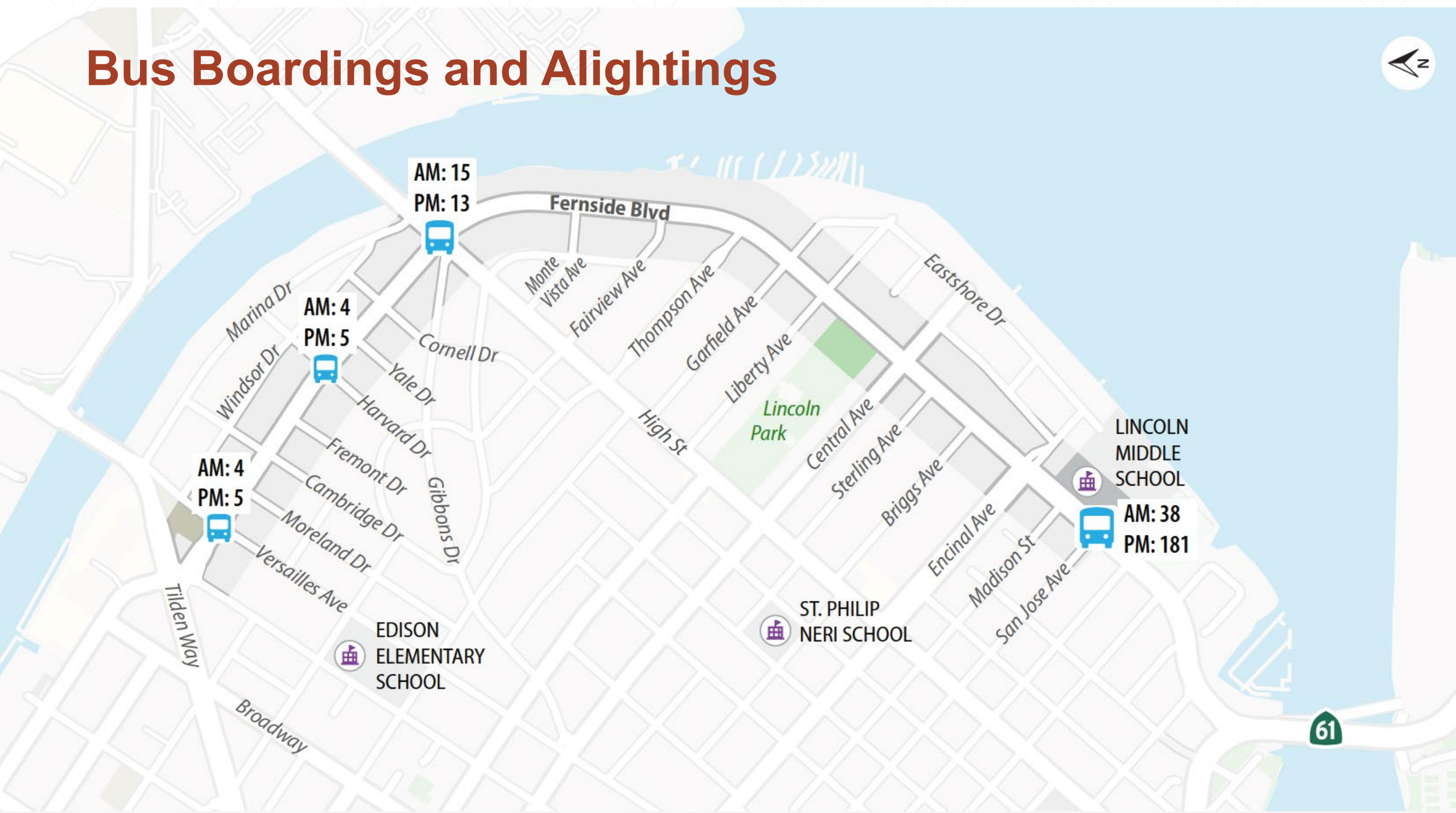


Fernside Boulevard Today: East of High St.

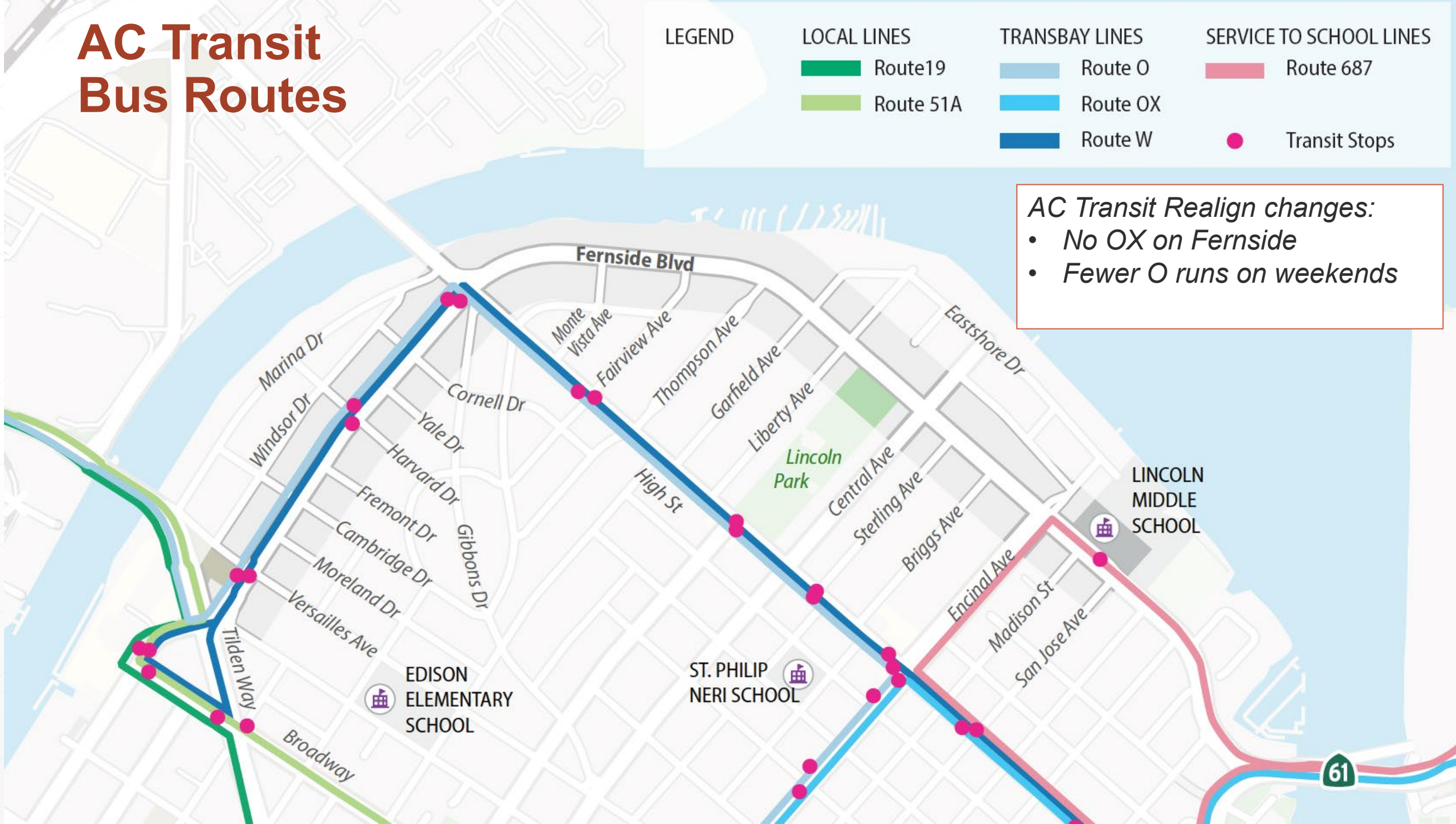
- No center vehicle turn lane
- Buffered bike lanes adjacent to vehicle travel lanes
- Over 2,000 feet between marked crossings at High St. and Garfield Ave.
- Flashing beacons at San Jose Ave.
- Stop control at Garfield Ave. and Central Ave.



Bus Boardings and Alightings



AC Transit Bus Routes



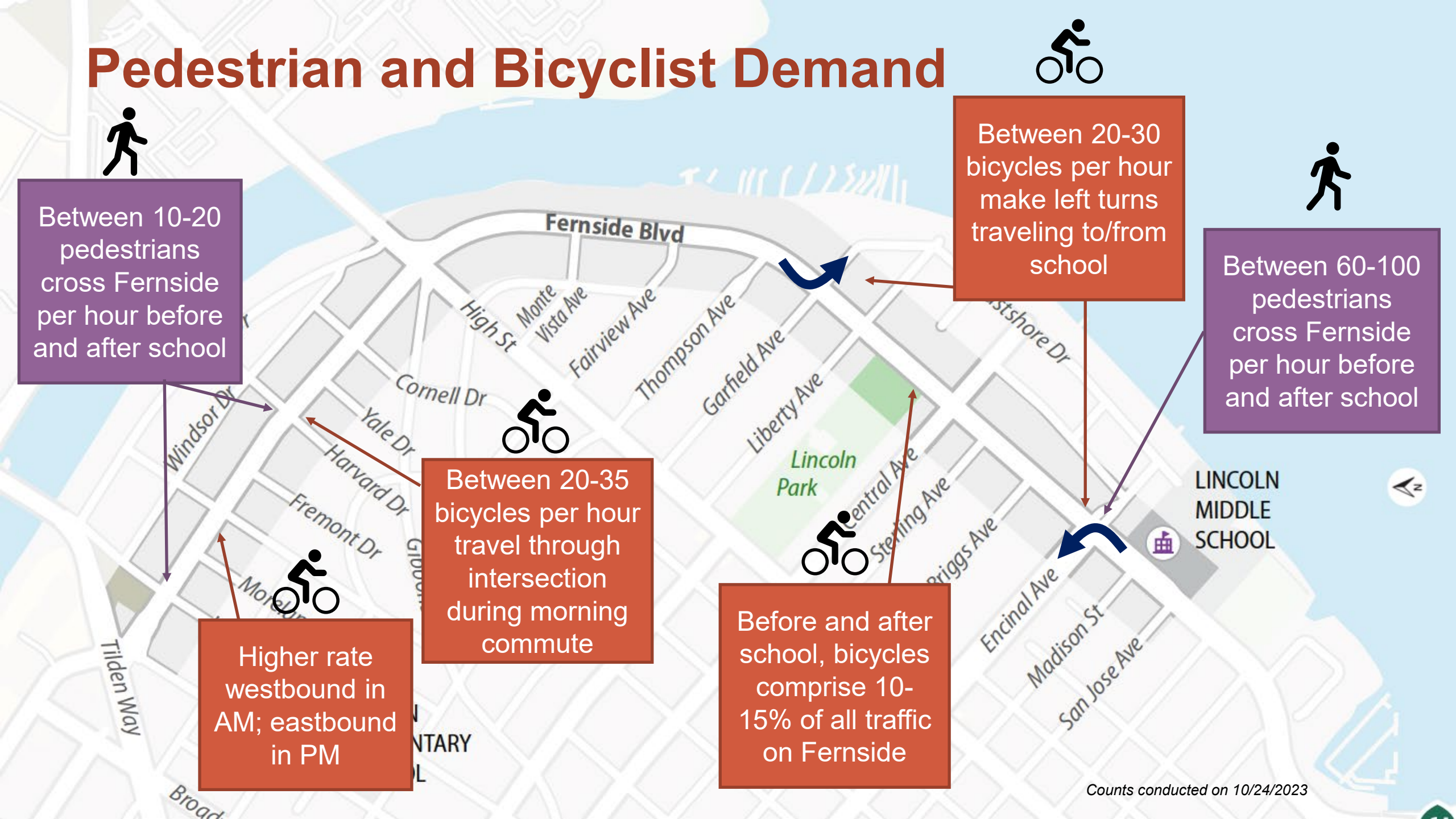
AC Transit Realign changes:

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

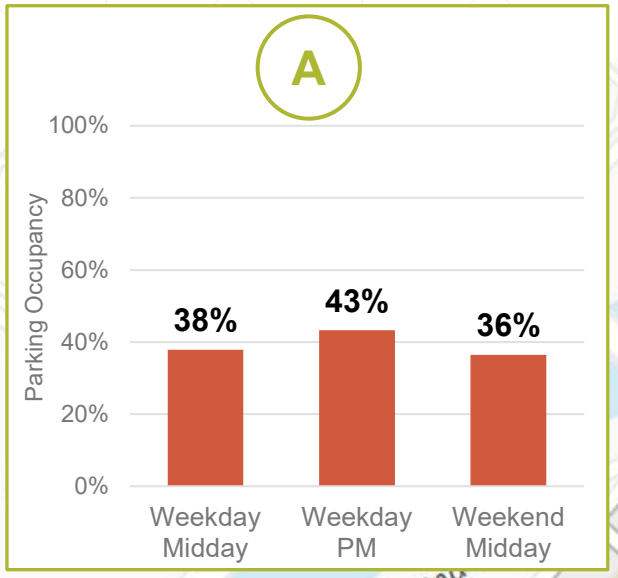
Average Daily Traffic Compared to Similar Roadways

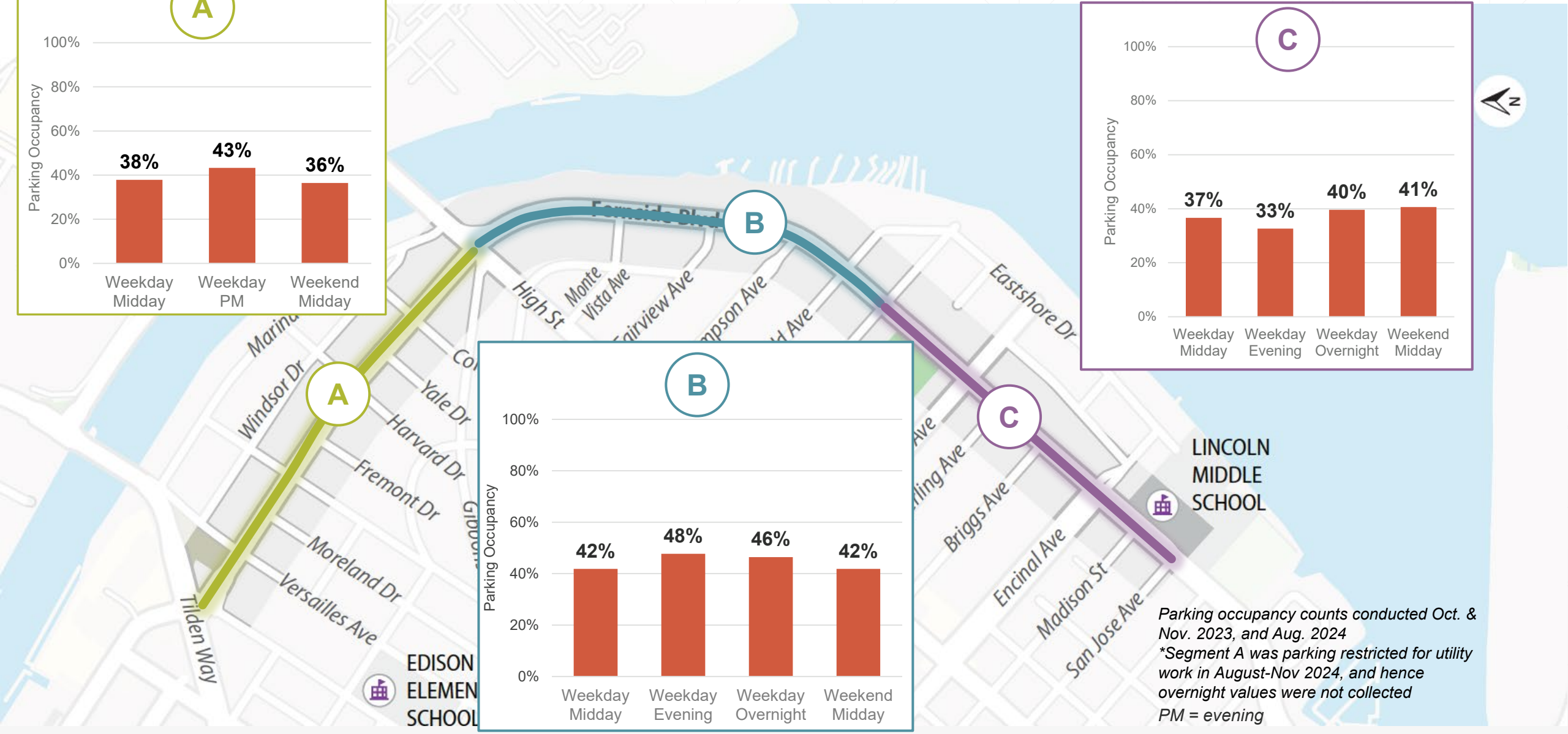
Traffic counts measured between 10/12/2023 and 10/18/2023

Pedestrian and Bicyclist Demand



On-Street Parking Less Than 50% Occupied





Parking occupancy counts conducted Oct. & Nov. 2023, and Aug. 2024
**Segment A was parking restricted for utility work in August-Nov 2024, and hence overnight values were not collected*
PM = evening