



Lawson Middle School Bikeway Feasibility Study

Community Meeting #2



March 16, 2023



Project Information

- Project Website

cupertino.org/lawsonbikewaystudy

- Project Manager

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I WANT TO...	RESIDENTS	BUSINESSES	VISITORS	ONLINE SER
- Public Works				
+ Maintenance Services				
- Transportation & Mobility				
Local Roadway Safety Plan				
Neighborhood Traffic Calming Program				
Resident Permit Parking				
- Safe Routes 2 School				
SR2S Sign Up				
Lawson Bikeway Feasibility Study				
Crossing Guards				
+ What is Cupertino Safe Routes 2 School (SR2S)?				
+ Get Involved				
+ SR2S Resources				
+ SR2S Events				
+ Safe Routes to School Video Contest				
Suggested Routes to School Maps				
Travel Data				

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LAWSON BIKEWAY FEASIBILITY STUDY

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The City of Cupertino is working with Hexagon Transportation Consultants, Inc. to conduct a feasibility study to develop alternatives for a bikeway (bike lane or bike path) to Lawson Middle School. The goal of the study is to engage students, parents, school and district staff, neighbors, and the community in a dialogue to develop a bikeway design that will provide students safe access to the bike cages on campus while taking a variety of needs into consideration.



Study Scope:

As part of this study, Hexagon will complete the following:

- Conduct field observations to understand existing conditions, including pick-up and drop-off patterns and typical travel patterns for students biking and walking to school
- Collect data including but not limited to information relating to students biking to school, collisions in the area, parking demand in the campus parking lots and along the surrounding streets
- Conduct the following meetings:
 - Three Community Meetings
 - Bicycle Pedestrian Commission Meeting
 - City Council Meeting
- Develop three alternatives with concept drawings, an analysis of potential multi-modal transportation benefits or negative effects, and cost breakdown for each alternative

How to Participate Today

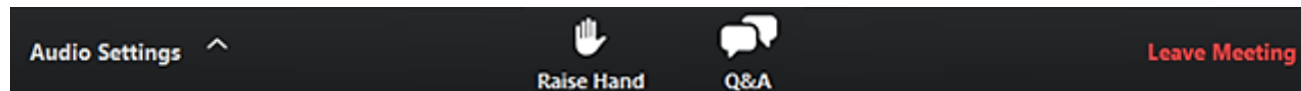
By Phone:

- ◆ **Raise hand:** dial 9
- ◆ **To unmute:** dial 6



On Zoom:

- ◆ Type question or comment in the **Q&A**
- ◆ Raise hand to ask a question or comment





Poll #1

Who is attending today's meeting?

- a) Student (past, current, future)
- b) Parent (past, current, future)
- c) Live along Vista Dr (opposite school)
- d) Live elsewhere in the neighborhood
- e) City/CUSD/School Staff
- f) Other members of the public



Agenda

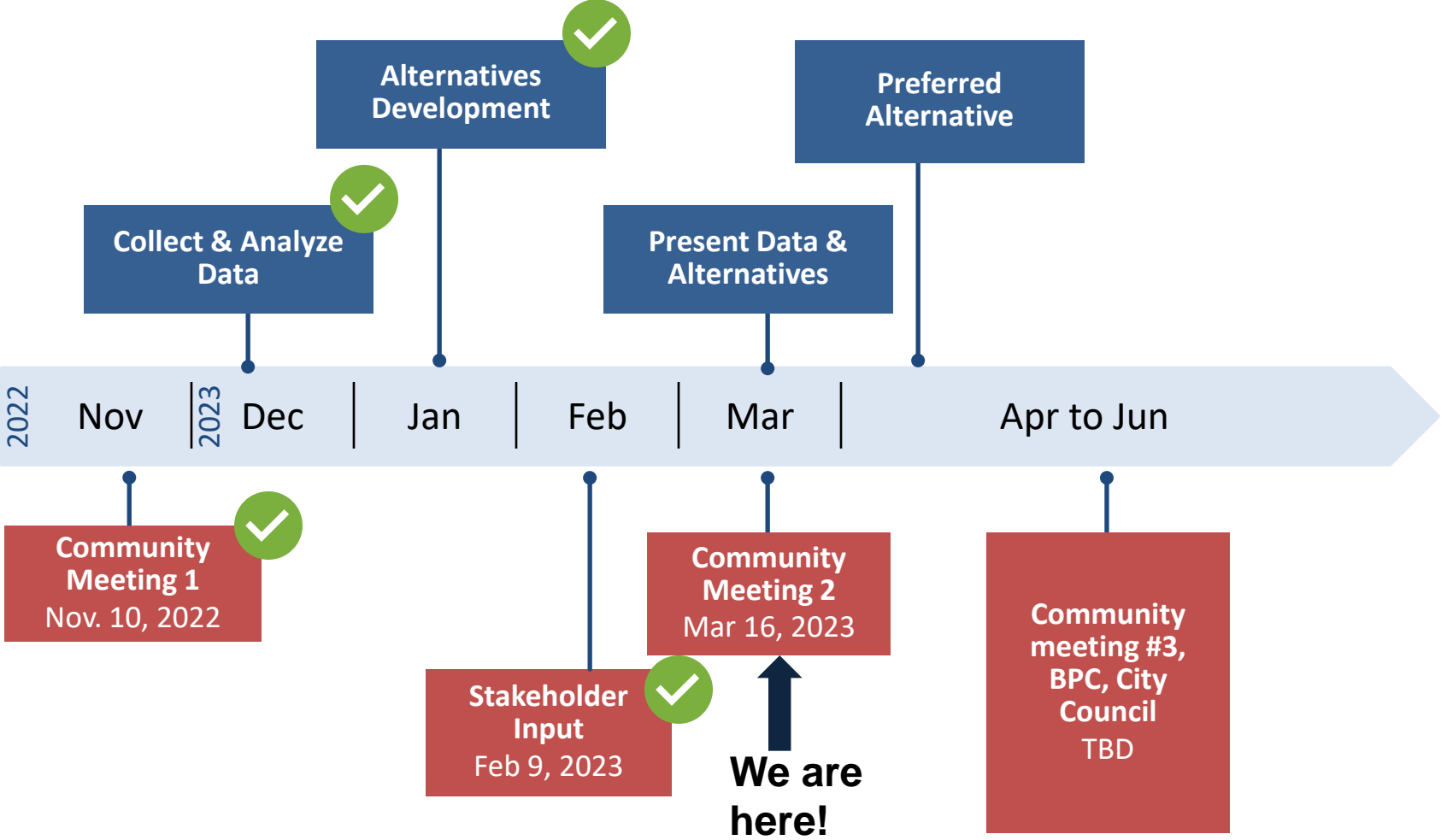
- Project Overview
- Study Process/Timeline
- What we've Heard
- Field Observations, Data Collection, Analysis
- Alternatives
- Next Steps



Project Overview

- 2016-2017: Citywide School Walk Audit identified need to improve bicycle safety at Lawson
- Lawson student biking grown from 3% in 2016 to 17% in 2022
- 2018-2022: Conditions and options explored by City / School / District / PTA / Parents
- 2022: City contracted with Hexagon to take a fresh look at conditions and options by conducting this feasibility study

Study Process/Timeline





What we've heard – Community Meeting #1

- **Considerations for potential improvements:**
 - Need to consider bikes + pedestrians + parking + drop off/pick up operations
 - Safety concerns occur in a narrow time window
- **Data collection considerations:**
 - A lot of bike activity on Lazaneo/Forest
 - Vehicular traffic operations on Blaney
 - Wednesday data collection (trash day)
- **Other issues:**
 - There are illegal vehicular movements
 - Coordinate with CUSD, Apple



What we've heard – Stakeholder Meeting



- Concerns with bikes/peds cutting through the CUSD parking lot.
- Generally supportive of the study's direction and the alternatives.

Field Observations

- Conducted for two days (Tuesday + Wednesday) in November 2022 during drop-off and pick-up times
- Observed conflict points for i) bike/pedestrian, ii) bike/vehicle, iii) vehicle/pedestrian
- Understood bicycle travel patterns, parent drop-off locations/behaviors



Observed Conflict Areas


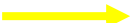
- 1 Peds and bikes sharing the sidewalk

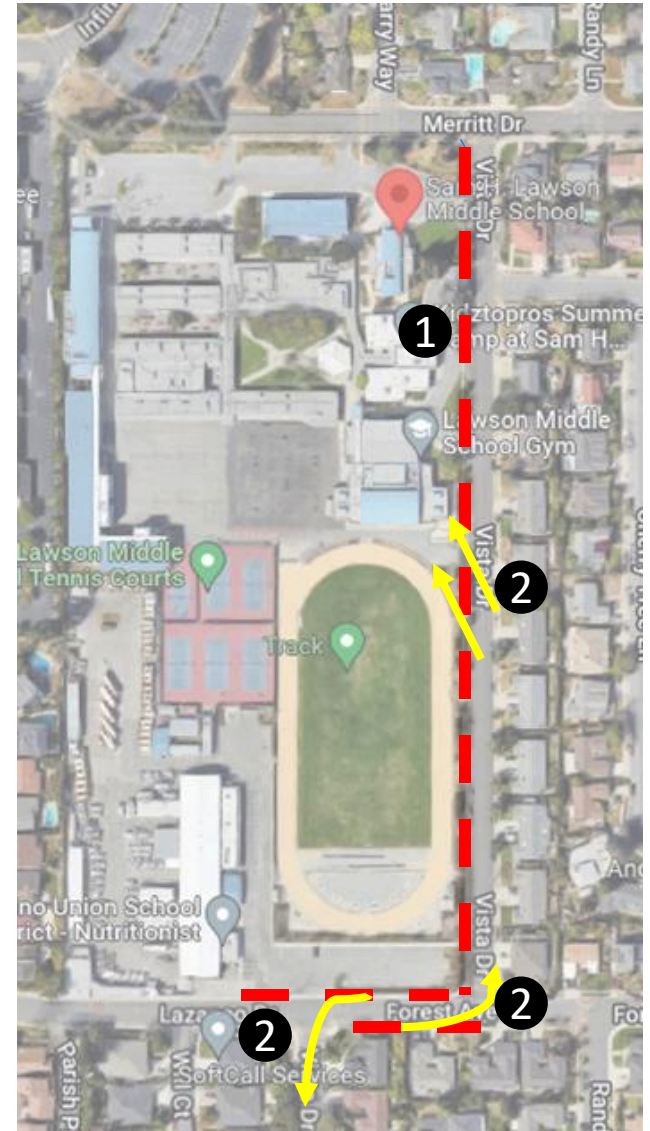
— — Bikes observed on sidewalk



Observed Conflict Areas

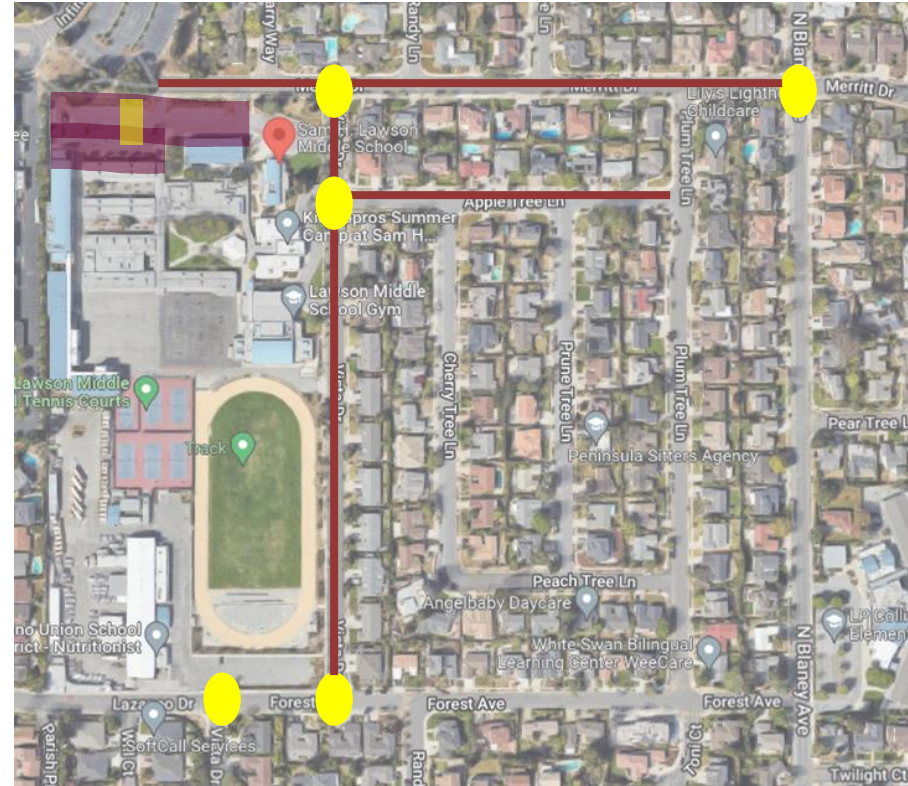
- 1 Peds and bikes sharing the sidewalk
- 2 Bicycles making wide turns, weaving across vehicles to cross

-  Bikes observed on sidewalk
-  Path of bike travel on street



Data Collection

- Bike/Ped/Vehicular turning movement counts at nearby intersections and School driveways
- Hourly parking counts on a typical school weekday and a Saturday



● Intersections counts ■ Parking Counts



Data Collection Findings



- **Vehicles**

- Low volumes (<200 vehs/hr each direction) on adjacent streets





- **Pedestrian**

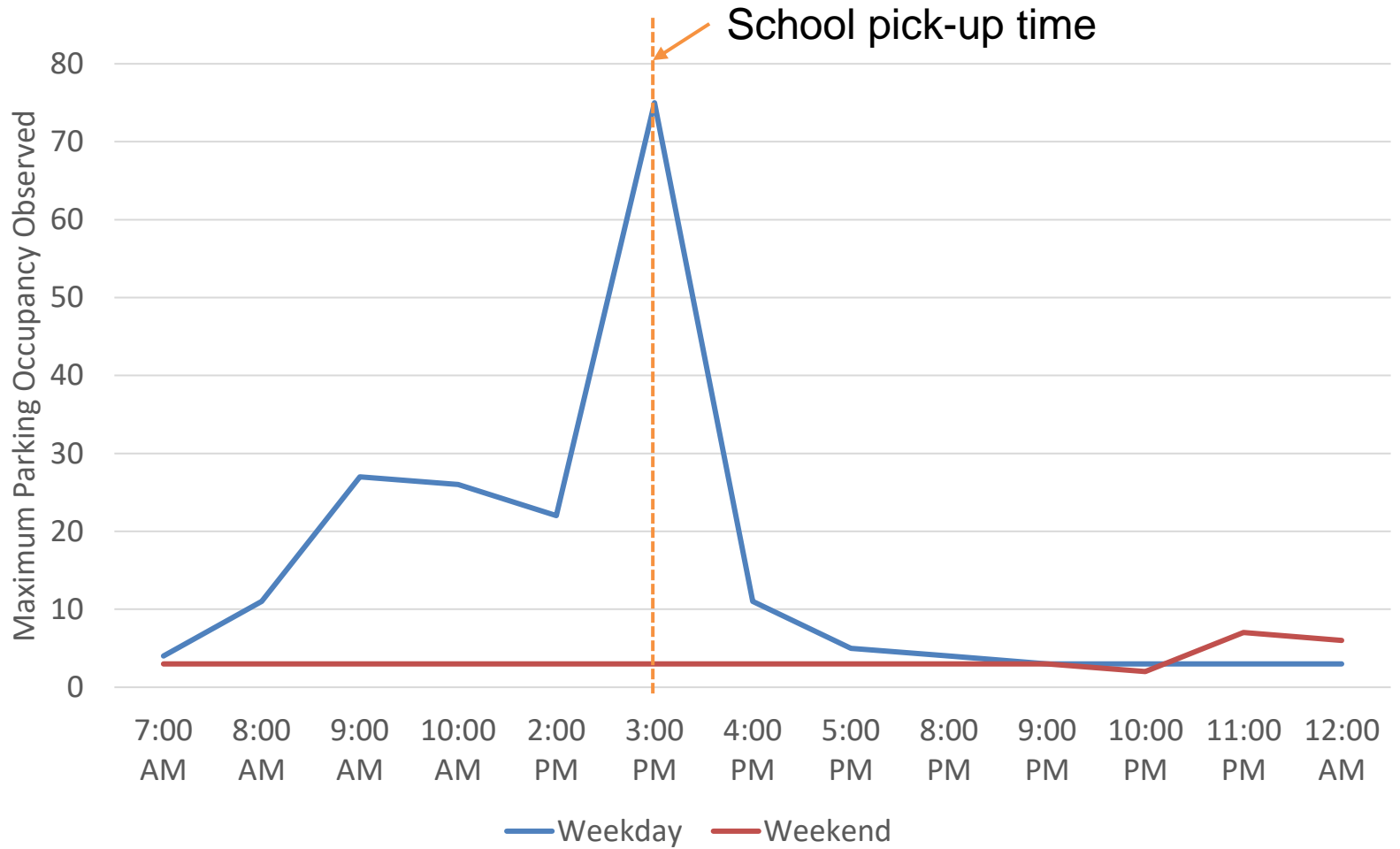
- High ped volumes (>100) south and north of the bike cage



- **Bikes**

- High bike volumes (>30) south of Vista bike cage
 - Low bike volumes (<10) north of Vista bike cage
- 
- 

Time of Day On-Street Parking Analysis- Vista Drive





Alternatives Analysis

- Developed **three improvement alternatives** based on:
 - Field observation
 - Data collection
 - Community input

Alternative 1

Bike Route and Sharrow Signage and Pavement Markings

- **Design Features**

- Bike Route signage
- Sharrow signage
- School zone warning signage
- Speed table on Vista Dr. in front of bike cage
- Median on Forest Ave at Vista Dr.





**Install
raised
median**





Install speed table to slow vehicle speeds



**Install bike route
signage**

Alternative 1

Bike Route and Sharrows Signage and Pavement Markings

- **Pros**

- Low cost
- Increased awareness for drivers
- Reduce vehicle speeds

- **Cons**

- Bike/Ped/Vehicle conflicts not addressed



Alternative 2

Two-way Mixed-Use Trail To Replace Existing Sidewalk

- **Design Features**
 - 14', two-way, continuous, mixed-use trail
 - Bike crossing enhancements at intersections
 - Wayfinding/Signage

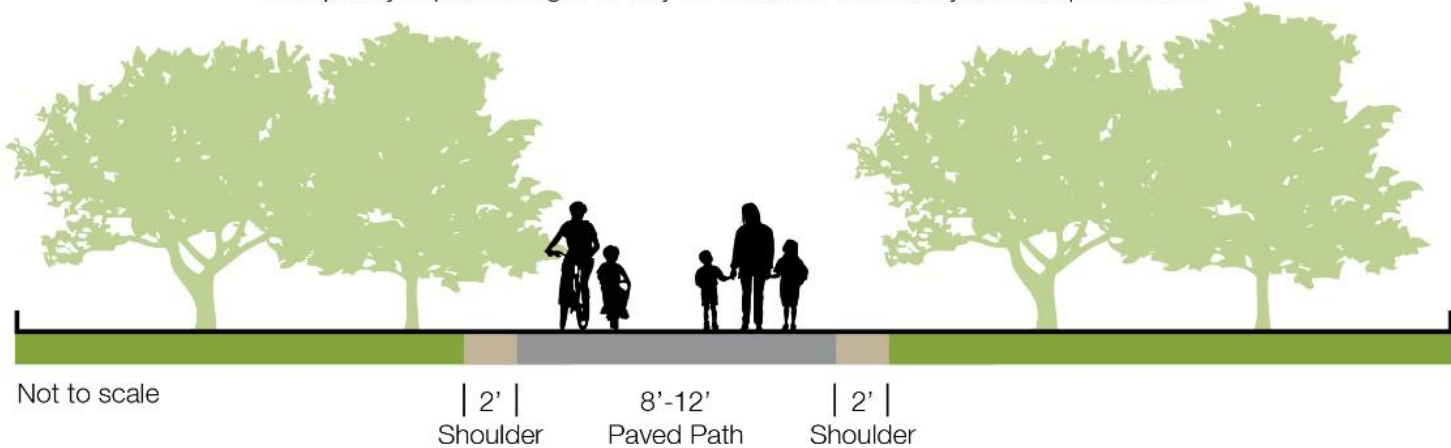


 Bike crossing enhancements

 Two-way Mixed-Use trail

SHARED-USE PATH (CLASS I)

Completely separated right-of-way for exclusive use of bicycles and pedestrians



Source: Aerial Imagery

Remove existing sidewalk and landscaping and build 14' multiuse path (10' path + 2' shoulders on each side)



Bike crossing enhancements

Bike crossing enhancements



With Alt 2

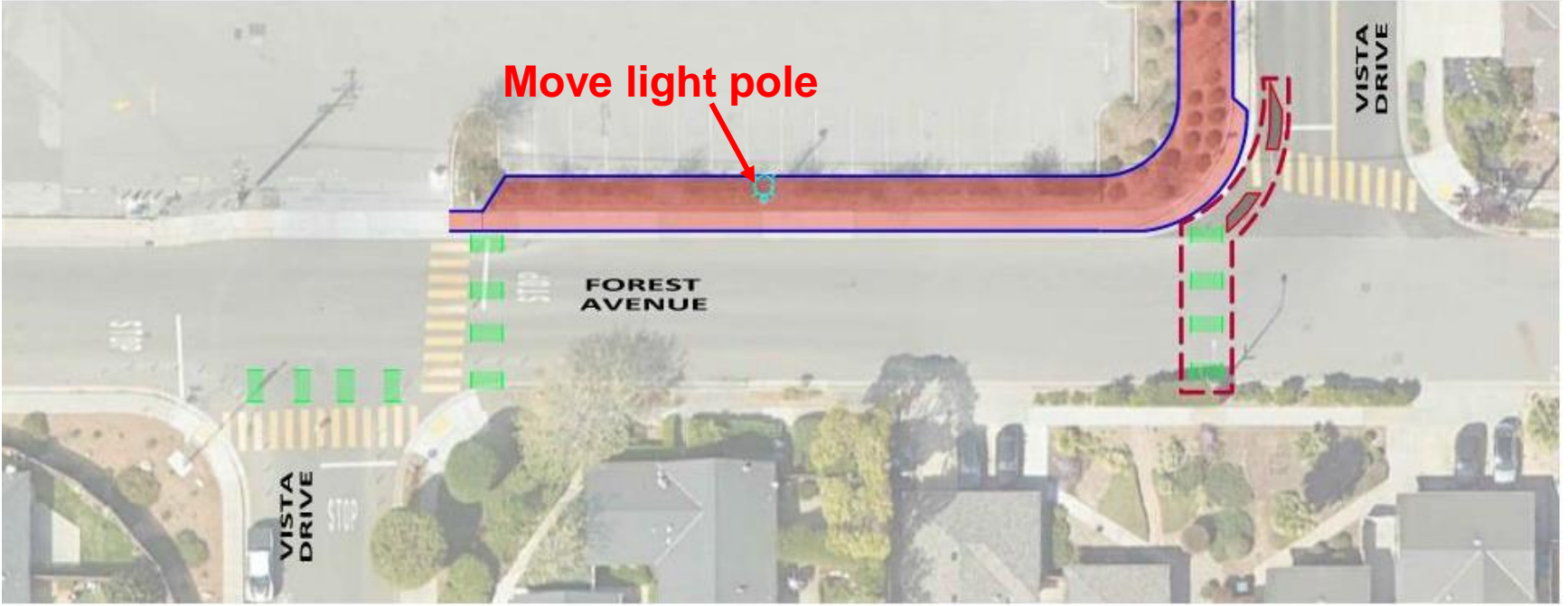
FOREST AVENUE

Currently

VISTA DRIVE

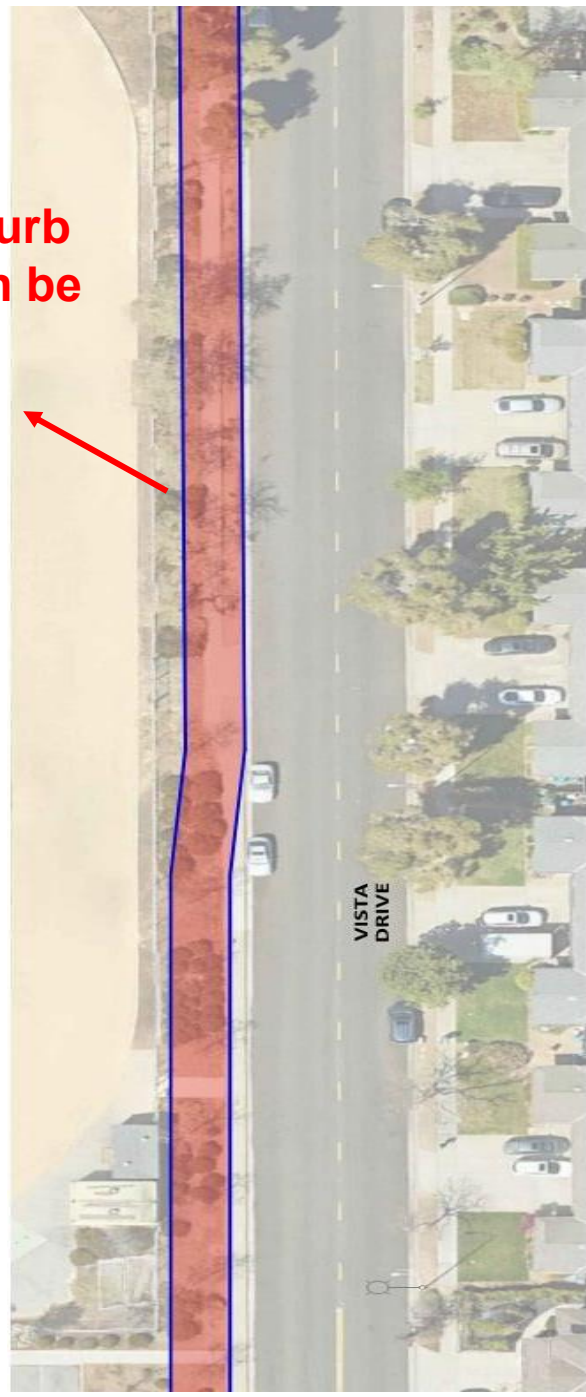
VISTA DRIVE



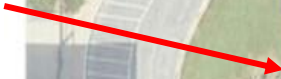




Trail can be placed between curb and fence. ~6' landscaping can be retained



Remove some existing trees

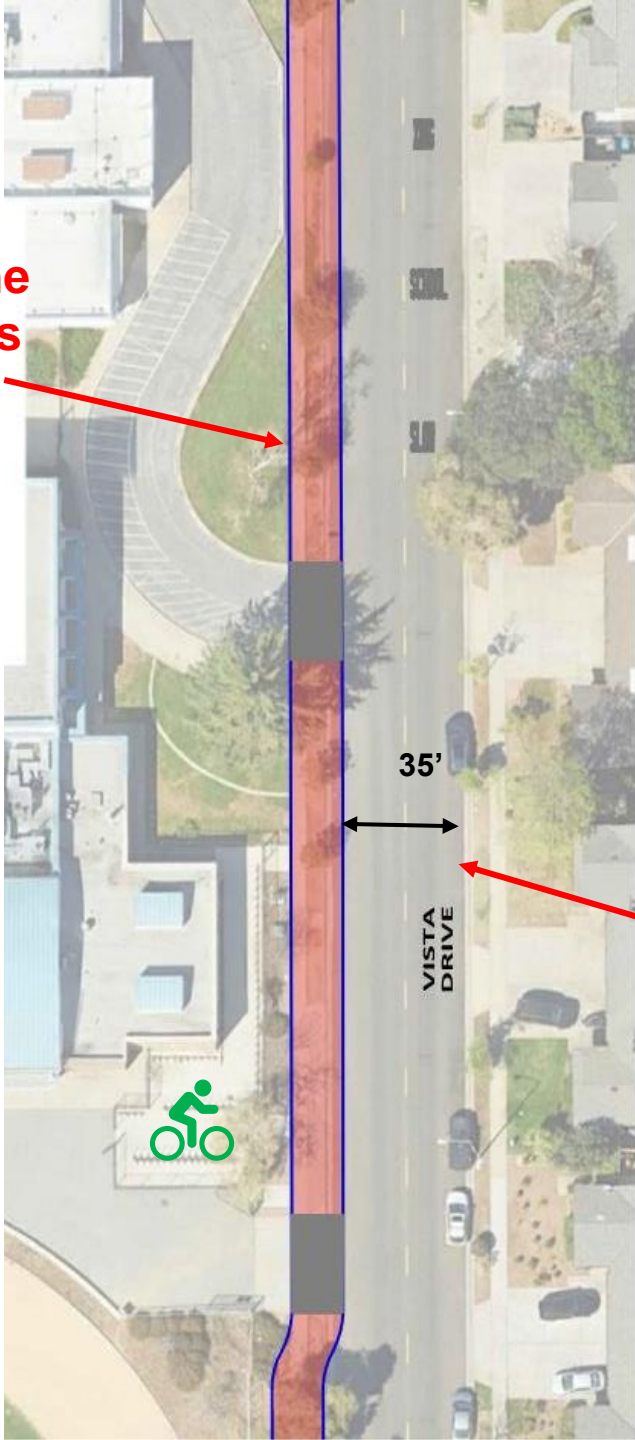
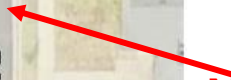


35'



VISTA DRIVE

Narrow travel lanes to fit a 12' multiuse path



Alternative 2

Two-way Mixed-Use Trail To Replace Existing Sidewalk

- **Pros**
 - Get bikes off Vista Dr. and Forest Ave eliminating bike/veh conflicts
 - Wide multi-use trail accommodates bikes and peds
 - Retain parking



Alternative 2

Two-way Mixed-Use Trail To Replace Existing Sidewalk

- **Cons**
 - Higher Cost
 - Removal of trees
 - Relocate utilities (incl. parking lot light)
 - Rebuild driveways
 - Move curb to narrow lanes



Alternative 2A

Two-way Mixed-Use Trail To Replace Existing Sidewalk with RRFB at Vista/Forest

- **Design Features**
 - Same as Alternative 2, except mixed-use trail starts at Forest Ave/Vista Dr.
 - RRFB at Forest Ave/Vista Dr.





Install RRFB



Source: Federal Highway Administration

Alternative 2A

Two-way Mixed-Use Trail To Replace Existing Sidewalk with RRFB at Vista/Forest

- Pros (compared to Alt 2)
 - Ease of construction
 - Straightforward bicycle facility
 - Less intrusion on CUSD property



Alternative 2A

Two-way Mixed-Use Trail To Replace Existing Sidewalk with RRFB at Vista/Forest

- Cons (compared to Alt 2)
 - Alt 2 provides better protection for WBL turning bikes
 - Alt 2 gets bikes off the street sooner



Alternative 3

On-street Two-Way Class IV Bike Facility

- **Design Features**
 - 8' + 3' buffer, two-way, Class IV bike facility
 - Bike crossing enhancements at intersections
 - Wayfinding/Signage



 Bike crossing enhancements



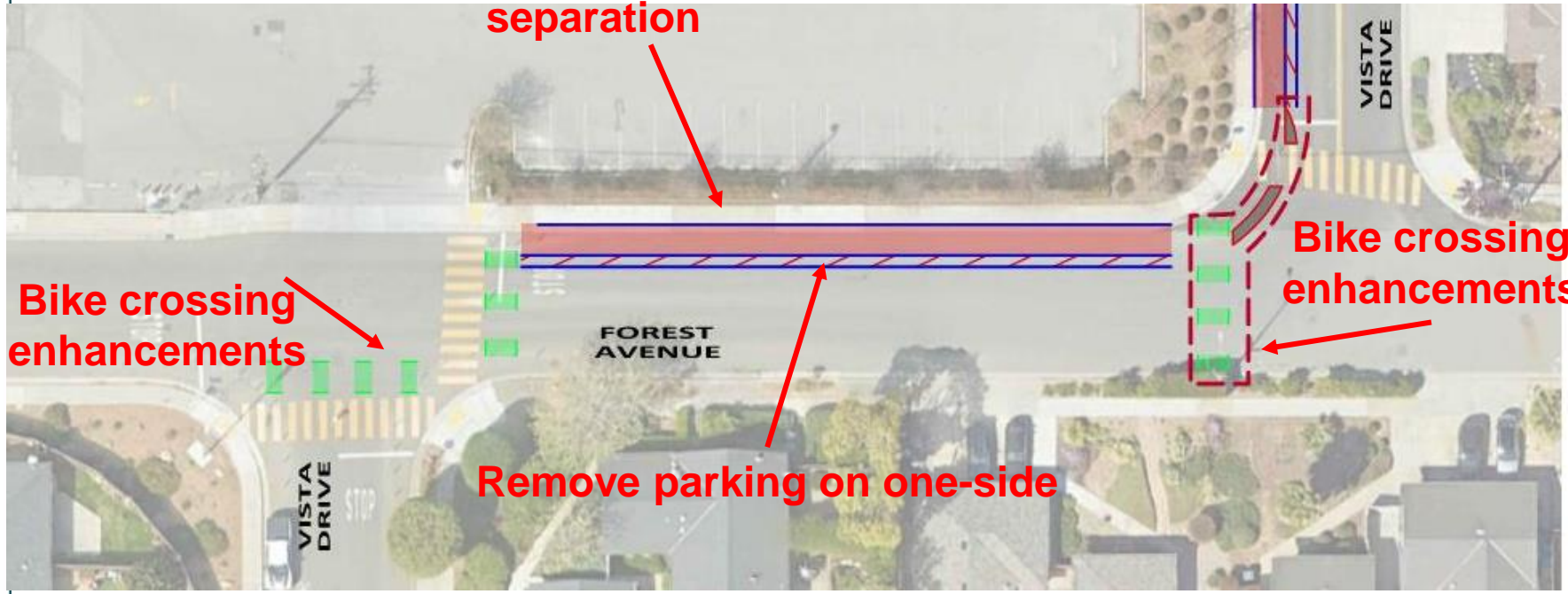
Class IV Bike Facility



Source: NACTO



8' two-way class IV bike path with 3' buffer and vertical separation

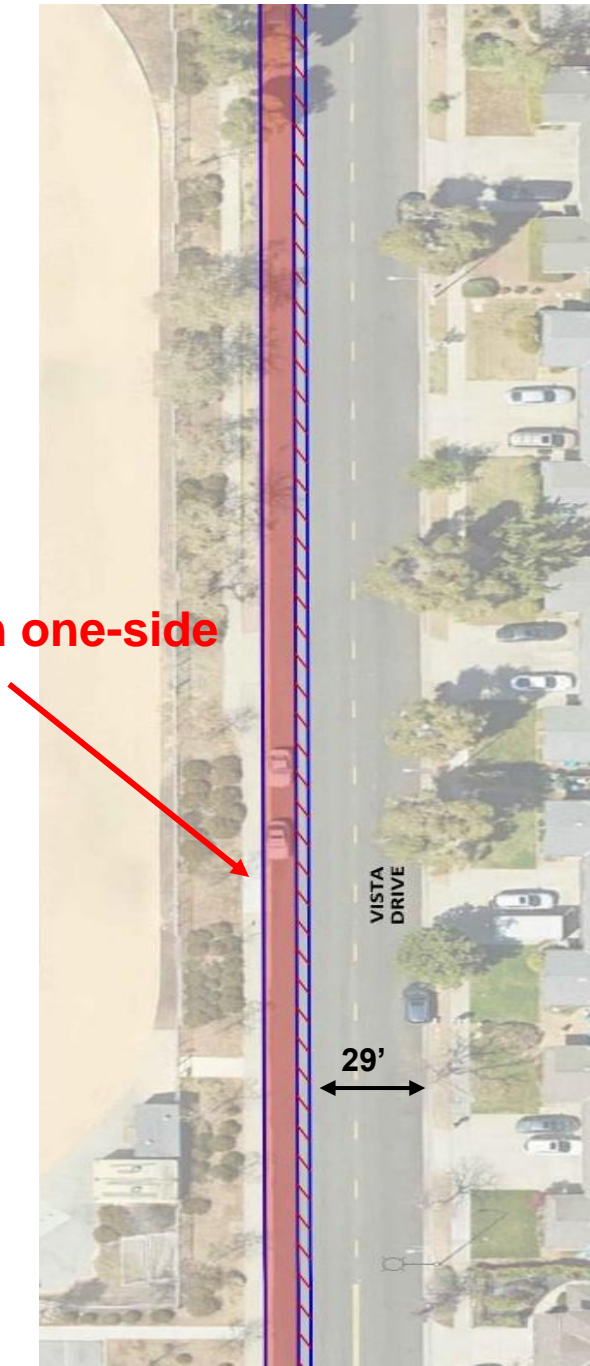


Bike crossing enhancements

Remove parking on one-side

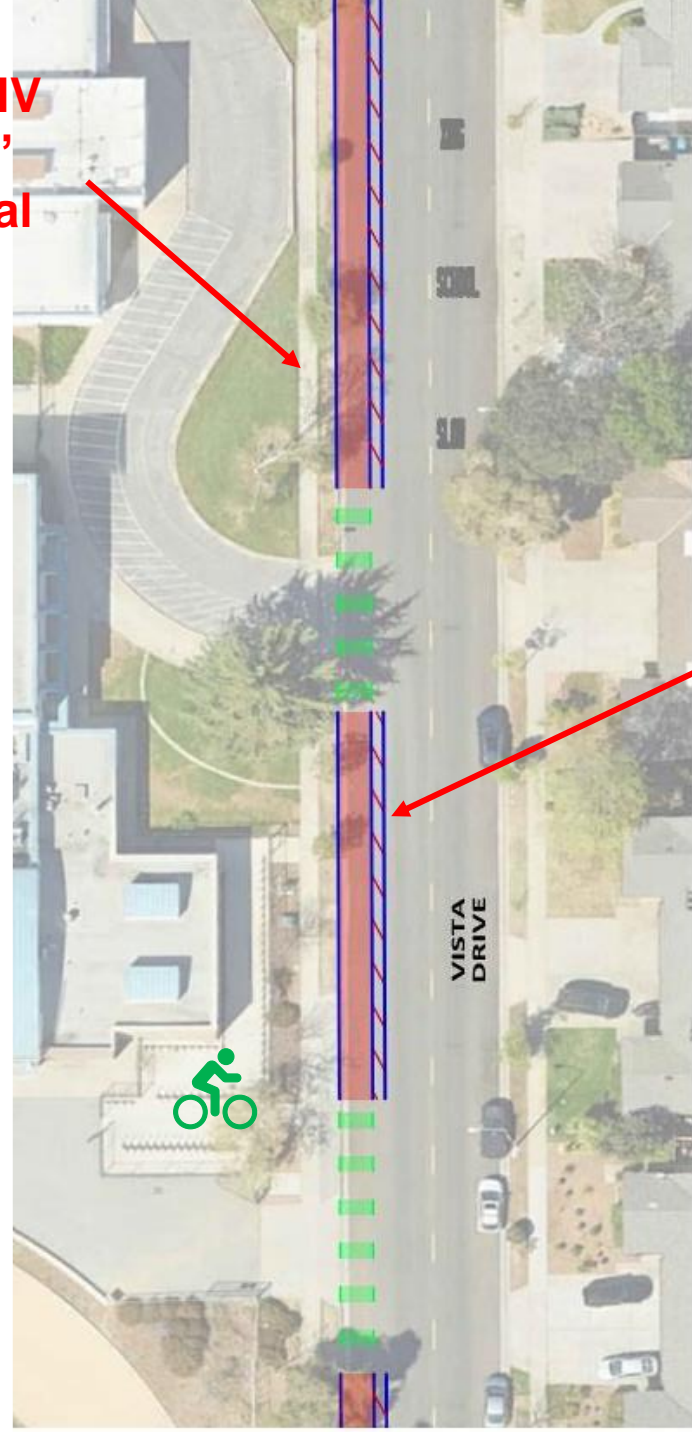
Bike crossing enhancements

Remove parking on one-side





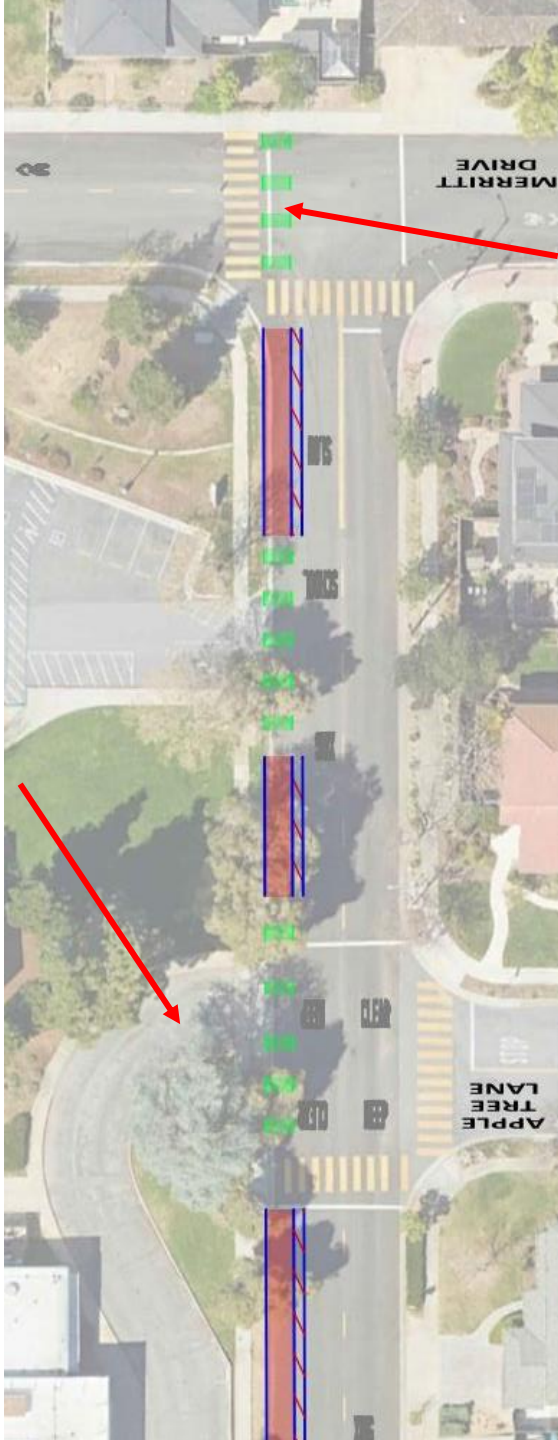
**8' two-way class IV
bike path with 3'
buffer and vertical
separation**



**Remove parking
on west side**



**Remove parking
on west side**



**Bike crossing
enhancements**

Alternative 3

On-street Two-Way Class IV Bike Facility

- **Pros**
 - Low cost
 - Eliminates bike/veh and bike/ped conflicts
 - Does not require removal of trees/relocating utilities
- **Cons**
 - Removal of Parking on one side of Vista Dr. & Forest Ave.



Alternatives Recap

Alt 1: Bike Route and Sharrow Signage and Pavement Markings

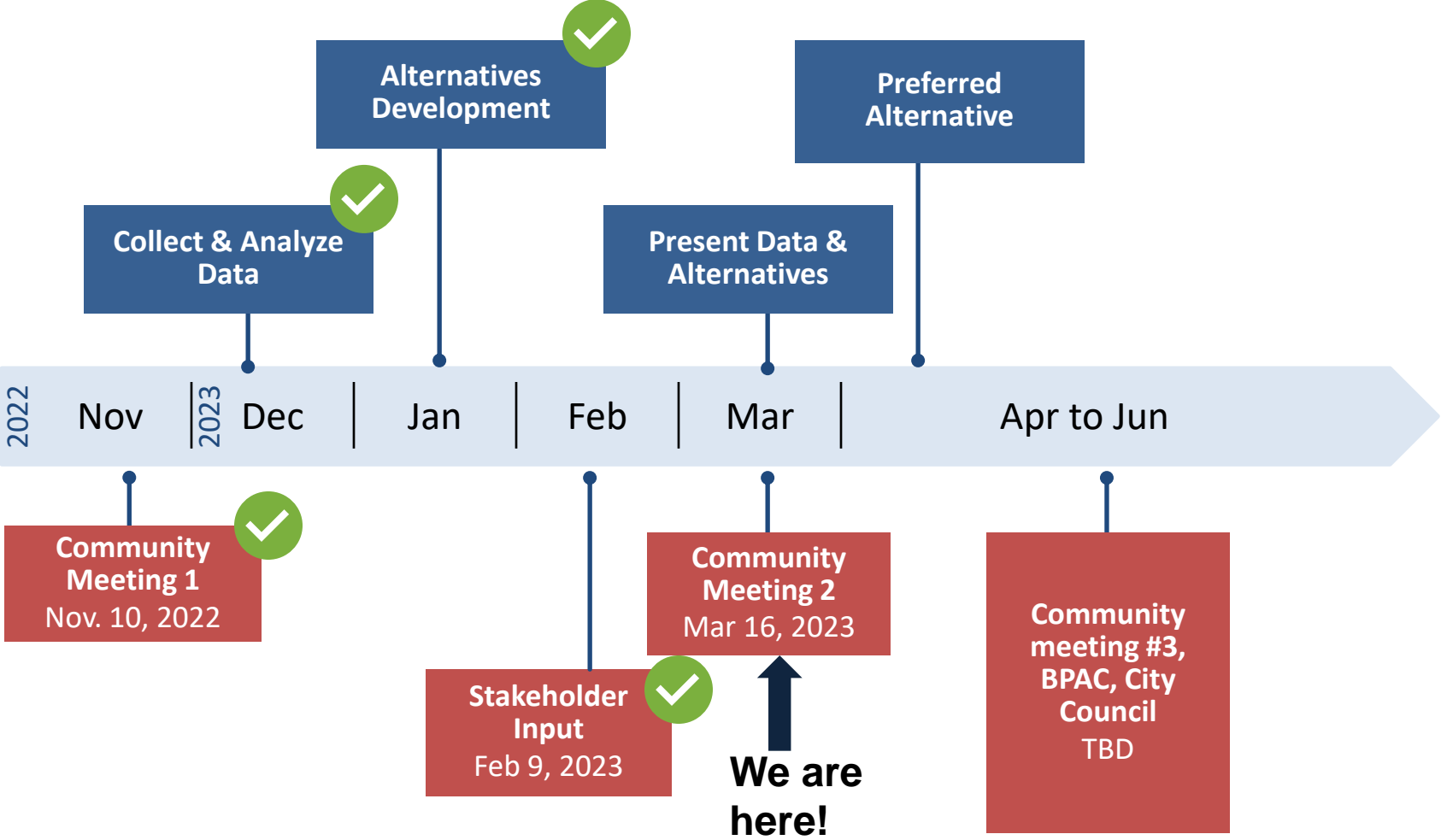
Alt 2: Two-way Mixed-Use Trail To Replace Existing Sidewalk

Alt 2A: Two-way Mixed-Use Trail To Replace Existing Sidewalk with RRFB at Vista/Forest

Alt 3: On-street Two-Way Class IV Bike Facility

Characteristics	Alt 1	Alt 2 & 2A	Alt 3
Addresses bike/ped/veh conflicts	+	++++	+++++
Relocate utilities		--	
Remove trees		--	
Removal of some on-street parking spaces			---
Cost to implement (order of magnitude)	\$	\$\$\$\$	\$\$
<i>'+' = pro; '-' = con</i>			

Study Process/Timeline



How to Participate Today

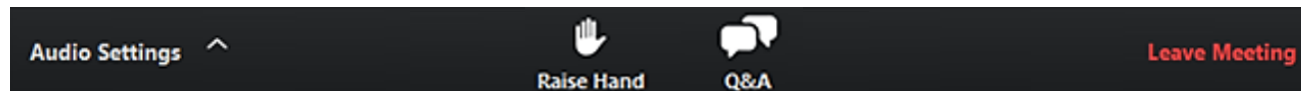
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Poll #2



Which alternative is your 1st preference?



A: Bike Route and Sharrow Signage and Pavement Markings (Alt 1)

B: Two-way Mixed-Use Trail To Replace Existing Sidewalk (Alt 2)



C: Two-way Mixed-Use Trail To Replace Existing Sidewalk with RRFB at Vista/Forest (Alt 2A)



D: On-street Two-Way Class IV Bike Facility (Alt 3)



E: No Change



Poll #3



Which alternative is your 2nd preference?



A: Bike Route and Sharrow Signage and Pavement Markings (Alt 1)

B: Two-way Mixed-Use Trail To Replace Existing Sidewalk (Alt 2)



C: Two-way Mixed-Use Trail To Replace Existing Sidewalk with RRFB at Vista/Forest (Alt 2A)



D: On-street Two-Way Class IV Bike Facility (Alt 3)



E: No Change



Poll #4

Preferred format for Community Meeting #3.

- A) Zoom (same as today)
- B) In-person
- C) Hybrid



Poll #5

Preferred time for Community Meeting #3.

- A) 6:30 pm (same as today)
- B) Start earlier (6:00 pm)
- C) Start later (7:00 pm)