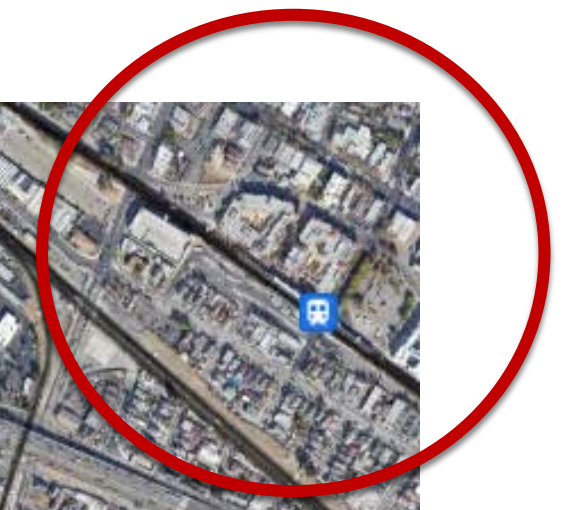
A photograph of a street intersection. In the foreground, a person is riding a bicycle across a crosswalk. To the left, a white car is stopped at a traffic light. In the background, there are residential houses, trees, and a clear blue sky. A large orange banner is overlaid on the bottom half of the image, containing the project title and date.

Clement Avenue/Tilden Way Project

Wednesday, December 14, 2022

Introduction

Clement Avenue Extension Alternatives at Tilden Way



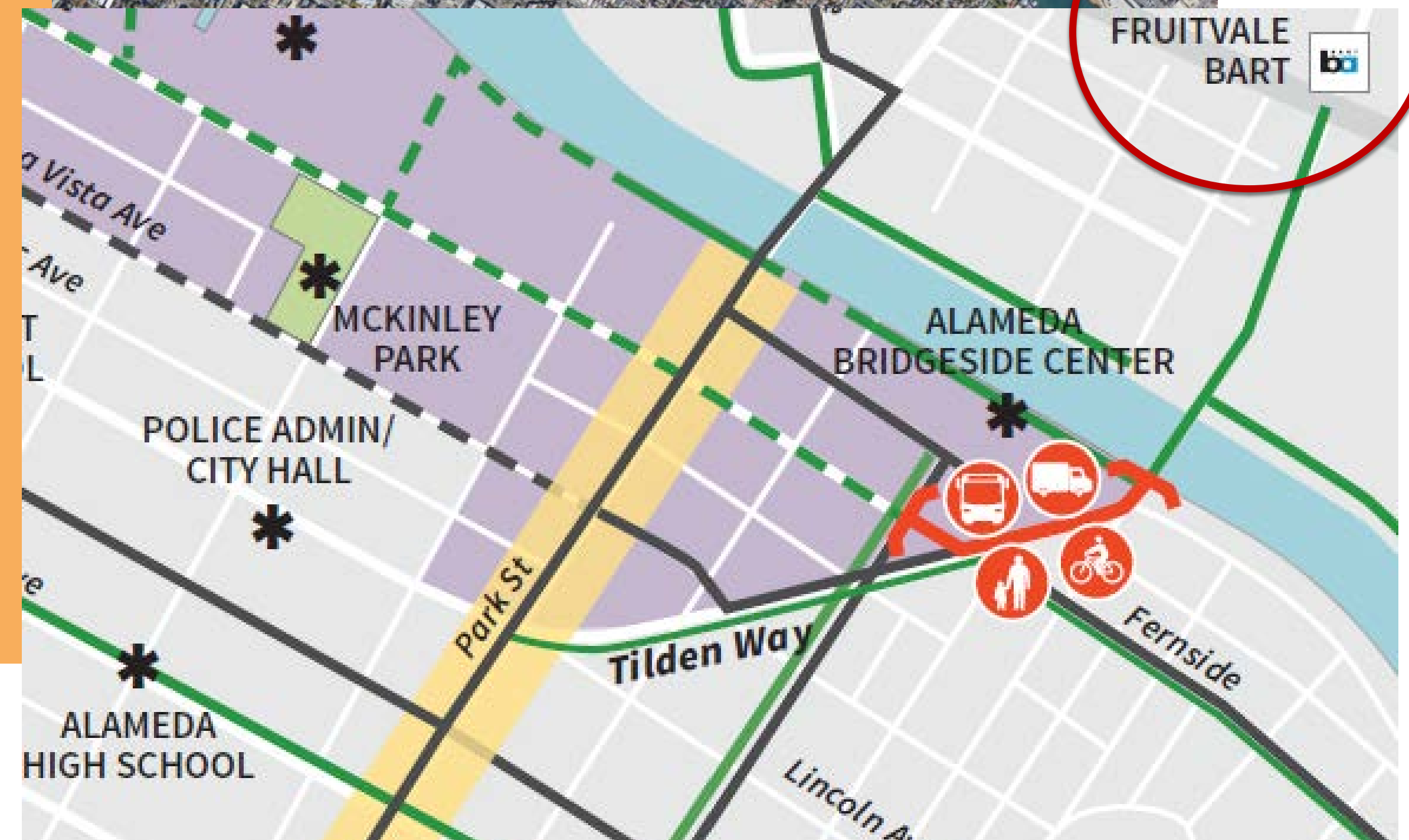
Project Team:

- City of Alameda
- Kittelson & Associates, Inc
- Stakeholder Participants:

City, AC Transit, Alameda Housing Authority, BART, Bike Walk Alameda, County, Edison School, Members of the Public

Engagement and Outreach Update:

- Letter to adjacent properties
- Outreach via social media, emails and sandwich boards
- Website: www.alamedaca.gov/ClementTilden



Project Goals and Intended Outcomes

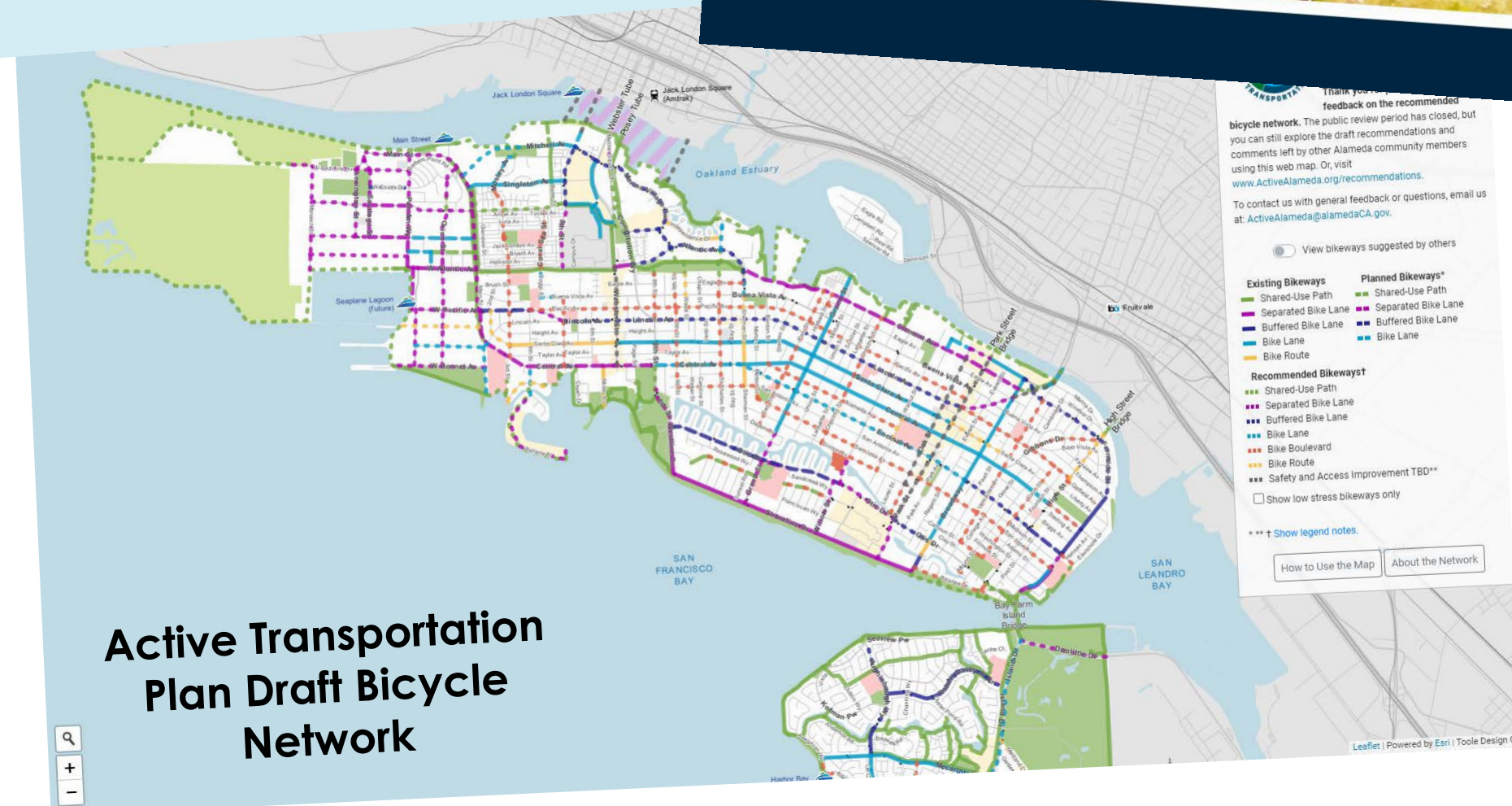
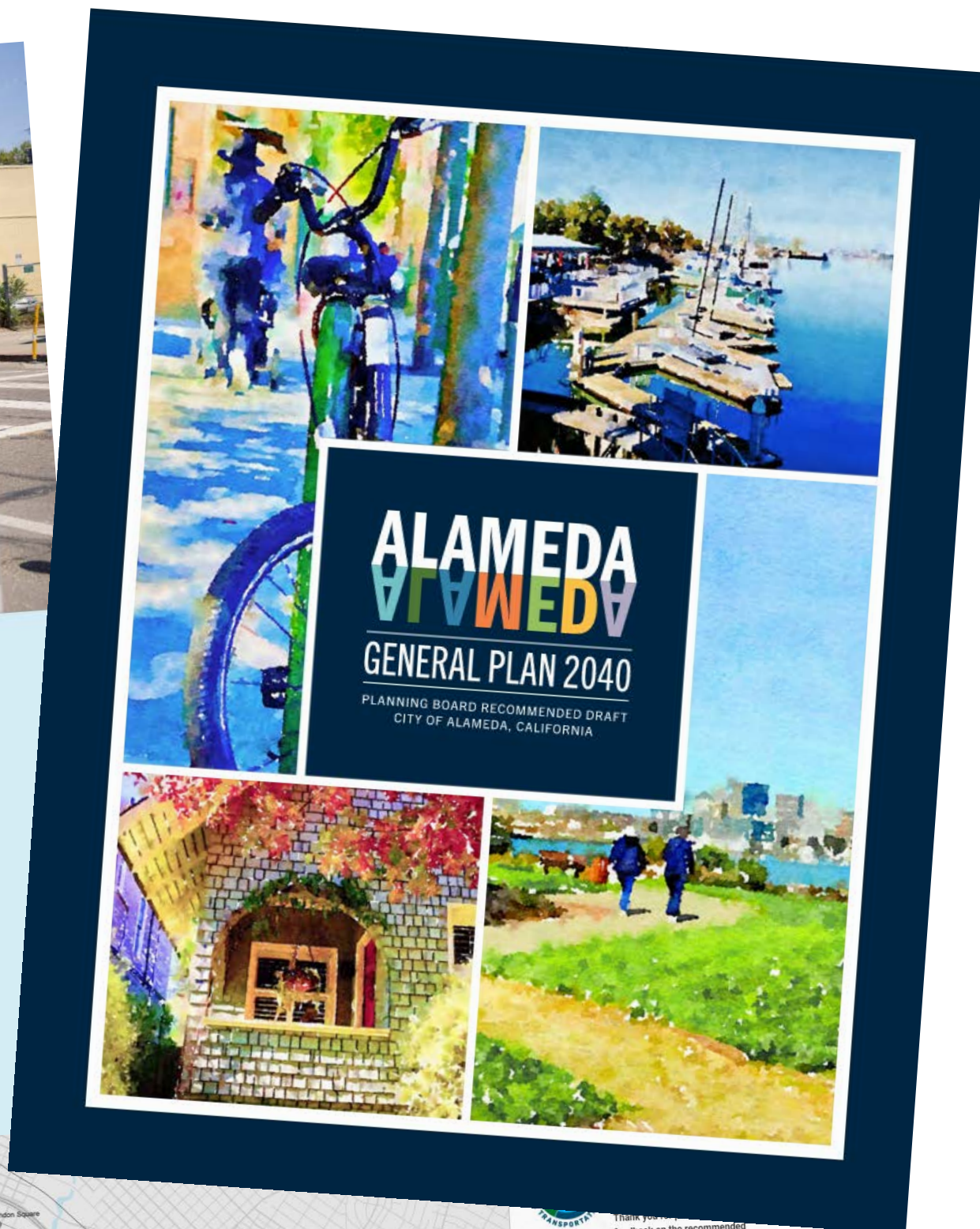
- Prioritize **safety**
- Improve **mobility** for all roadway users
- Provide **flood reduction** and **landscaping** opportunities
- Reduce **greenhouse gas** emissions
- **Comply** with City plans and policies



Alameda
Vision Zero Action Plan



November 3, 2021

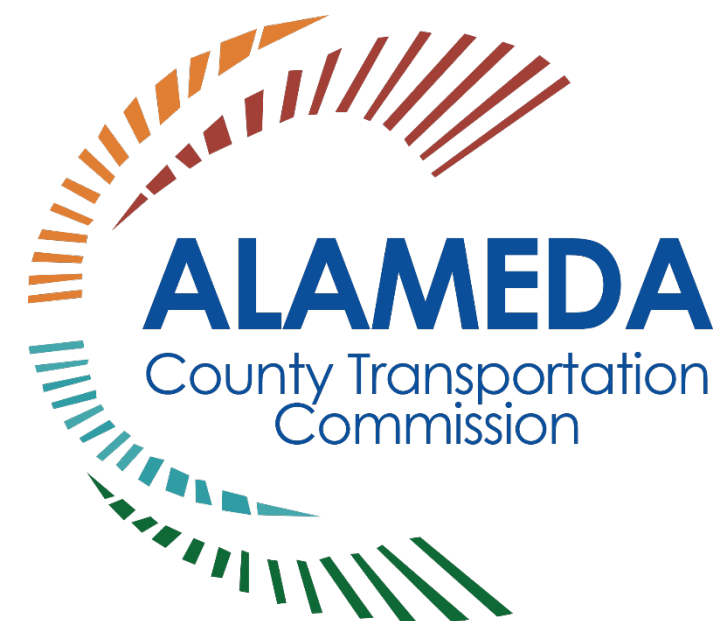


Background

- Measure BB grant for \$10 million
- Union Pacific property acquisition
- Environmental clean-up
- Fill gap in active transportation and truck network



**Clement Avenue & Tilden Way
Existing Routes/Facilities by Mode**



Project Timeline

Project webpage:
www.alamedaca.gov/ClementTilden

Early 2022

Existing Conditions Analysis
Existing conditions and project outcomes

Spring 2022

Brainstorming Initial Ideas
Gather and compile stakeholder input

Late 2022/
Early 2023

Project Development
Identify and refine preferred alternative

2023

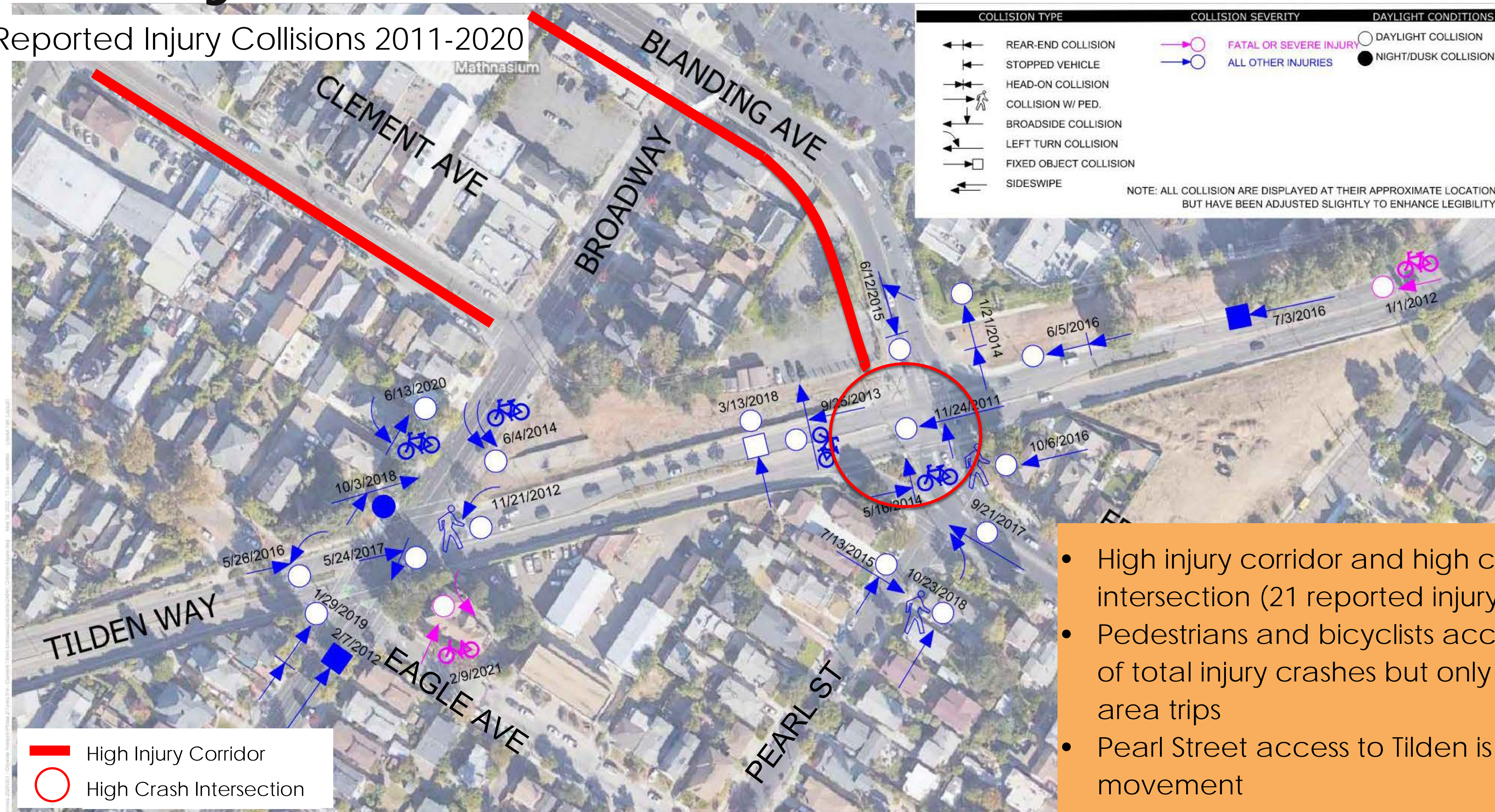
Final Design
Begin final design for preferred alternative

2024

Construction
Begin construction of preferred alternative

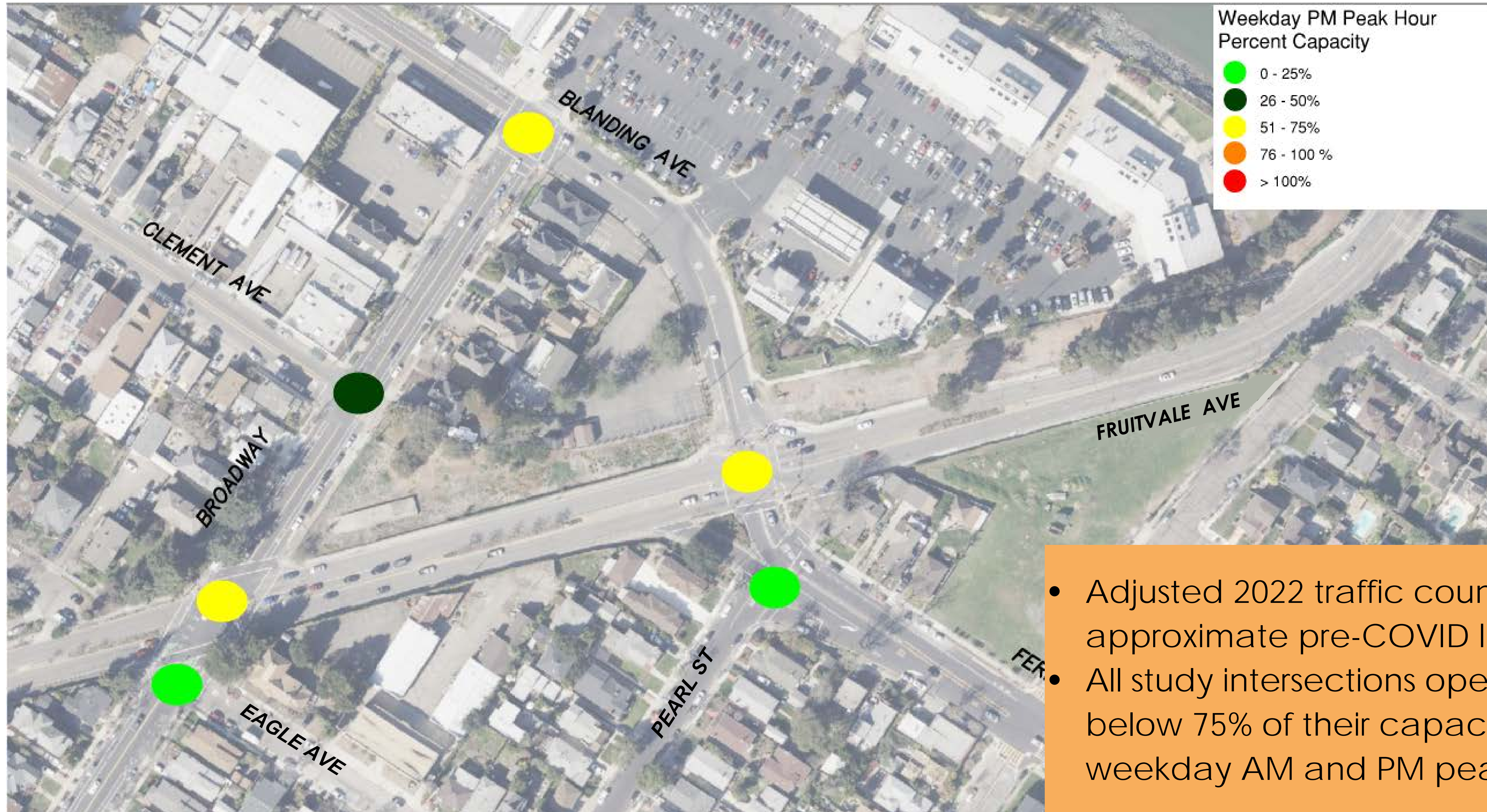
Safety

Reported Injury Collisions 2011-2020



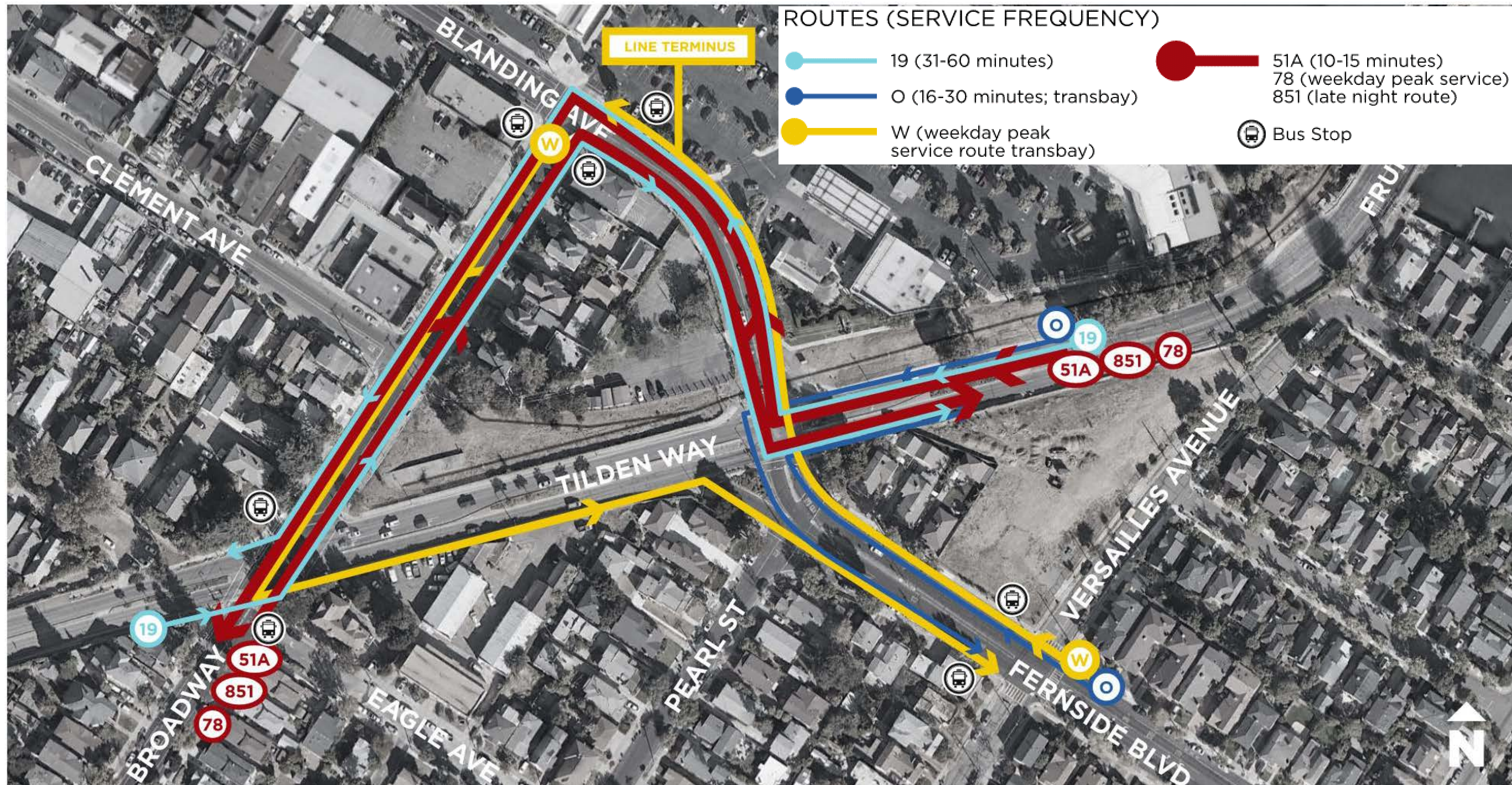
- High injury corridor and high crash intersection (21 reported injury crashes)
- Pedestrians and bicyclists account for 38% of total injury crashes but only 9% of study area trips
- Pearl Street access to Tilden is high conflict movement

Traffic Operations - Existing



- Adjusted 2022 traffic counts to approximate pre-COVID levels
- All study intersections operate at or below 75% of their capacity during the weekday AM and PM peak hour

Study Area AC Transit Bus Service



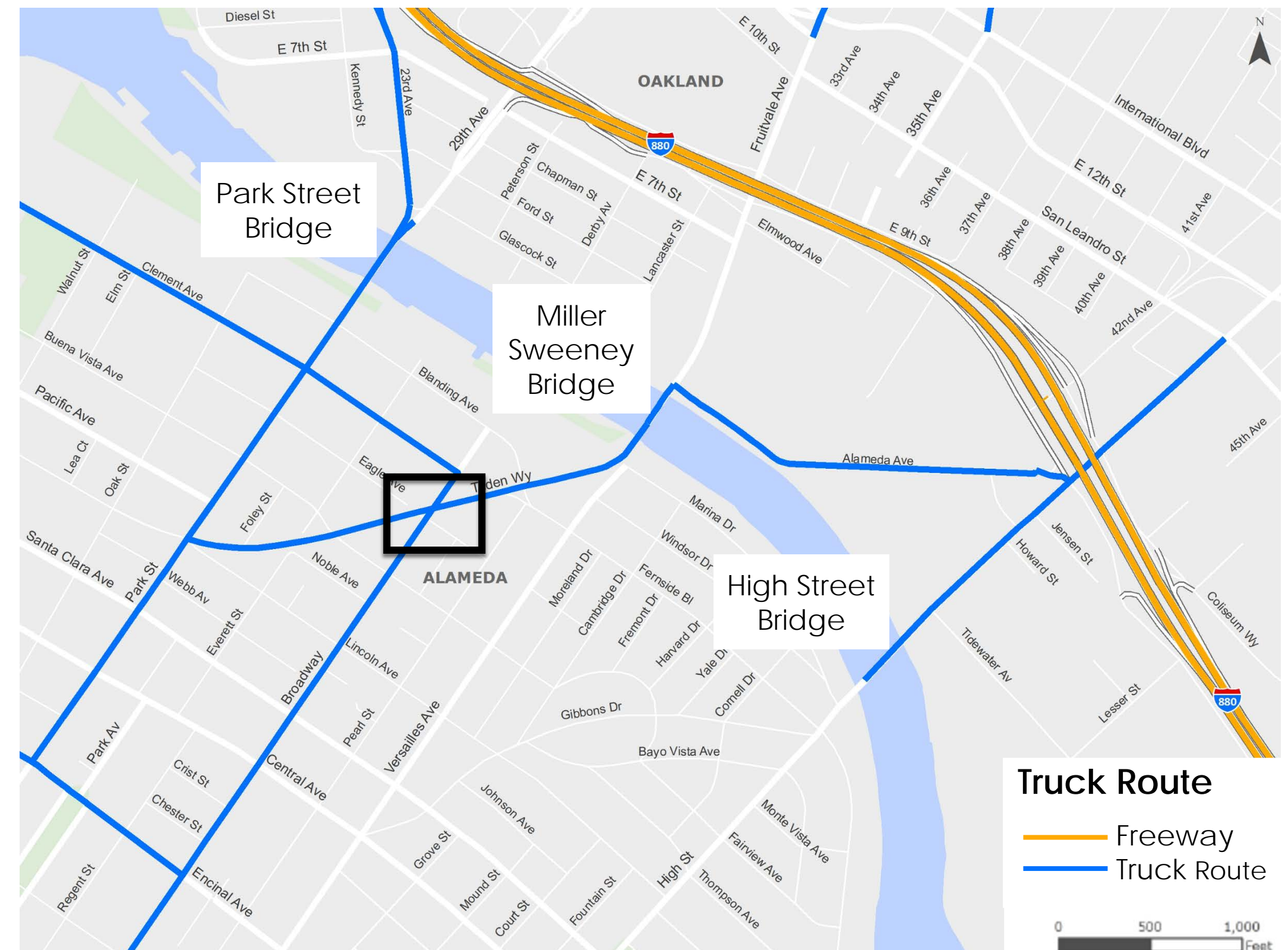
Truck Connections

Designated Truck Routes

- Alameda: Park St. Bridge and Miller-Sweeney Bridge
- Oakland: Park St. Bridge, Miller-Sweeney Bridge, and High St. Bridge

Truck Usage

- Trucks east of Broadway are funneled to Miller-Sweeney Bridge
- Trucks west of Broadway use Park Street (heavy truck usage on Park St)
- Clement eastbound truck extension may be redundant

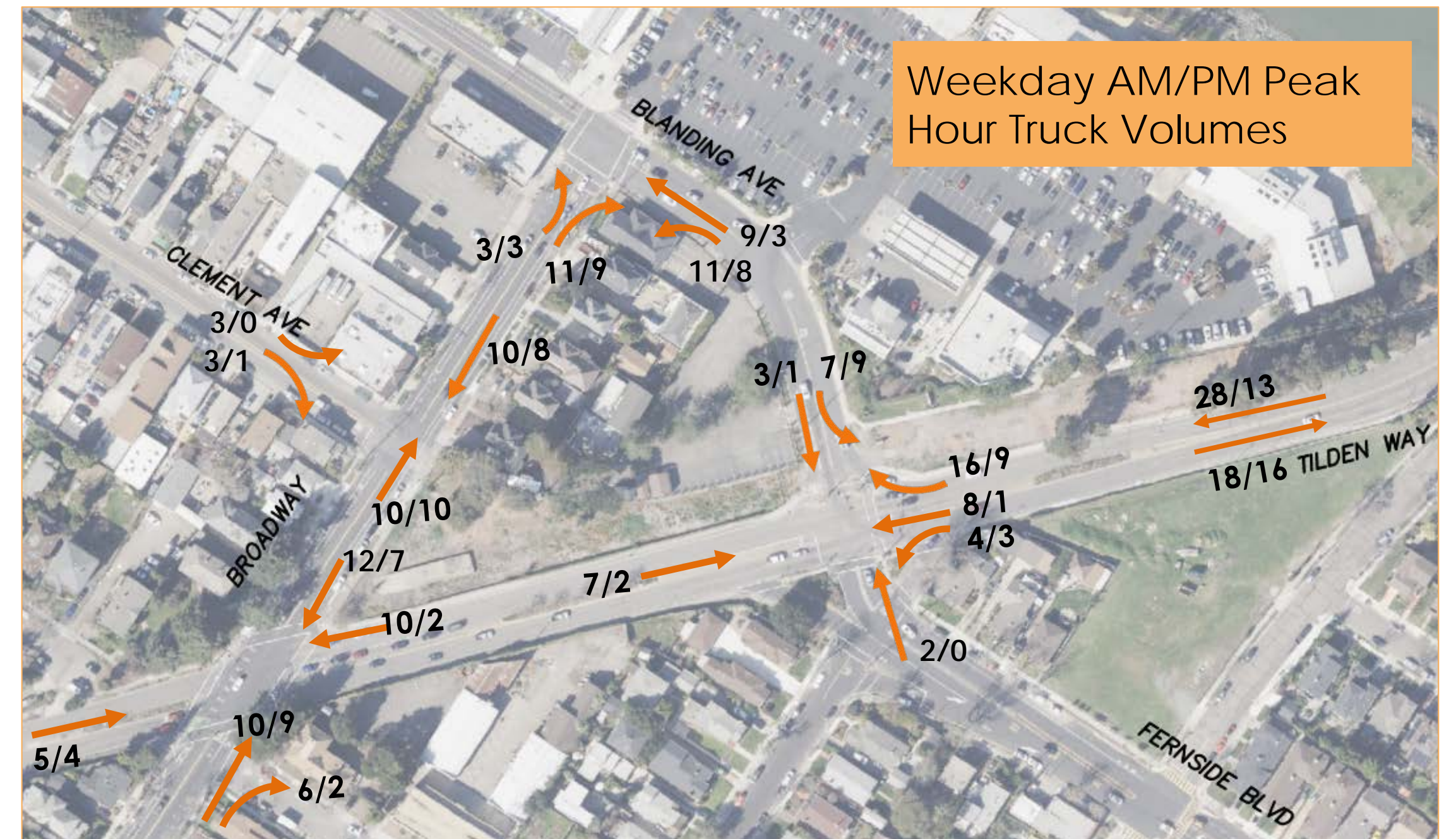


Note: Sharp right turn from Tilden to Broadway is on designated truck route.

Truck Volumes

Miller-Sweeney Bridge 2022 Truck Volumes

- Trucks account for 3.2% of daily traffic to/from Alameda (537 daily truck trips across bridge)
- Majority of truck volume along bridge is entering and exiting Broadway on Blanding Ave.
- Nearby Bridge Access:
 - Park Street Bridge (To the North)
 - High Street Bridge (To the South)
- **The project should continue to provide truck access to/from Nob Hill shopping center.**
- Eastbound truck connections along Clement may be less important than westbound.



Note: For legibility, truck movements with 0 or 1 truck in both peak periods are excluded.

Public Input

(2nd round of outreach)

Virtual Open House

- 31 attendees and 21 responses

In-Person Open House

- 19 attendees

Online Survey

- 175 respondents

- Most people supported a **roundabout**
- Many people favored **one-way extension** over a **two-way extension** of Clement Ave.
- Project team received requests to consider **extension for only biking and walking**.

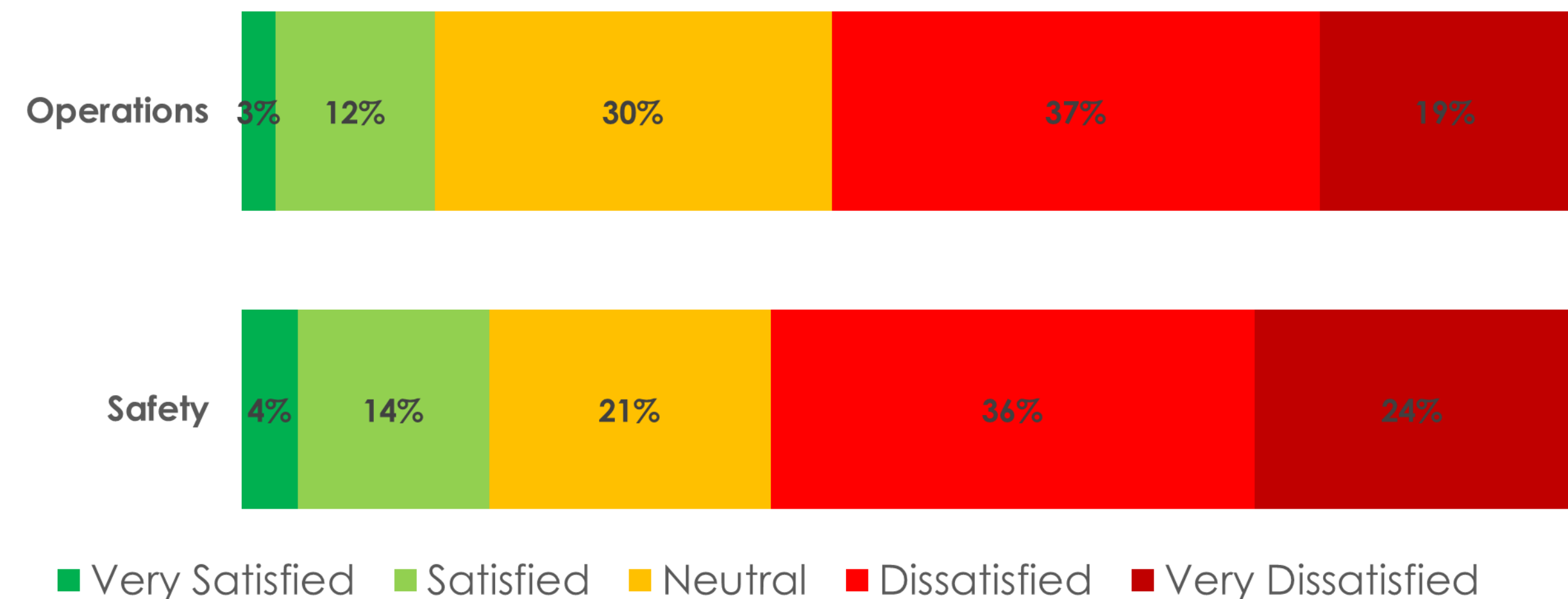
Desires:

- Safety improvements and slower speeds
- Better connectivity for bicyclists
- Better crossings for pedestrians
- More greenery and community space

Concerns:

- Through traffic and speeding on Clement Ave.
- Increase of truck traffic with extension
- Drivers' unfamiliarity with roundabouts
- Speeding along Pearl St and Fernside Blvd

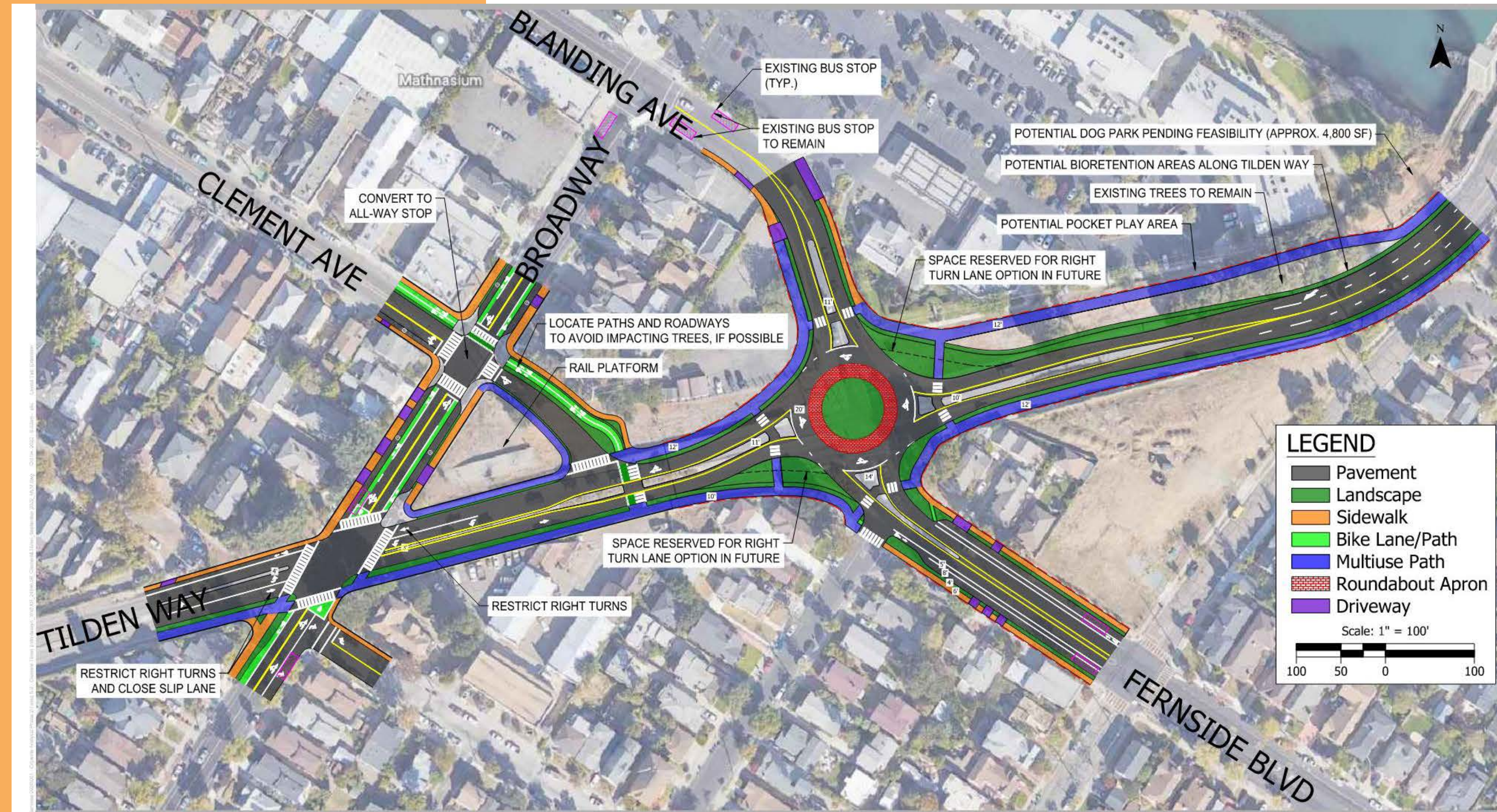
How satisfied are you with the Clement/Tilden project area?



Draft Concept

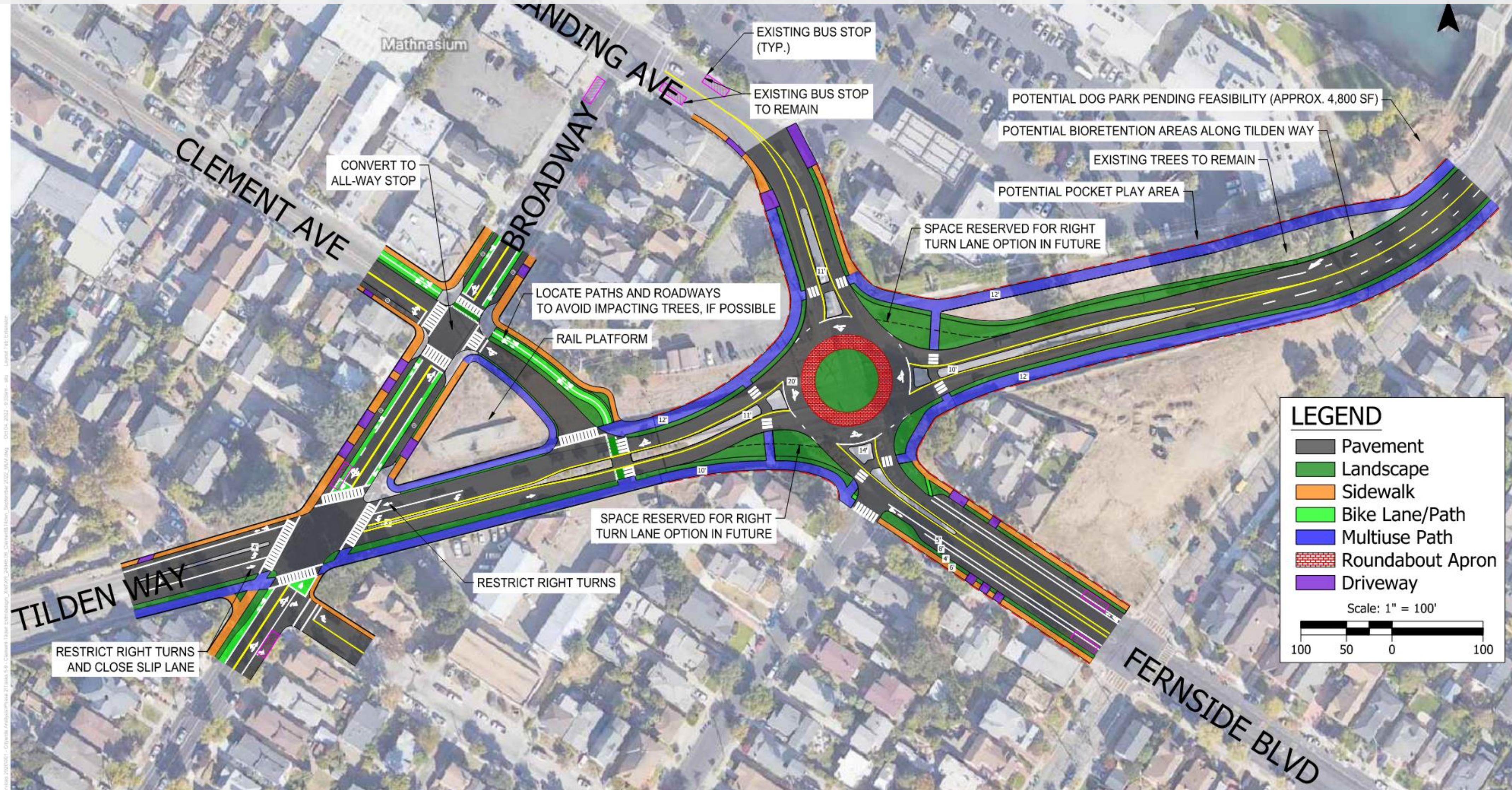
Westbound Clement Avenue Vehicle Extension w/ Cross Alameda Trail

Roundabout and one-way Clement
extension for westbound motorists
and both directions for active modes



Westbound Clement Avenue Vehicle Extension with Cross Alameda Trail

DRAFT Concept Design Subject to Change
Date: 9/28/2022



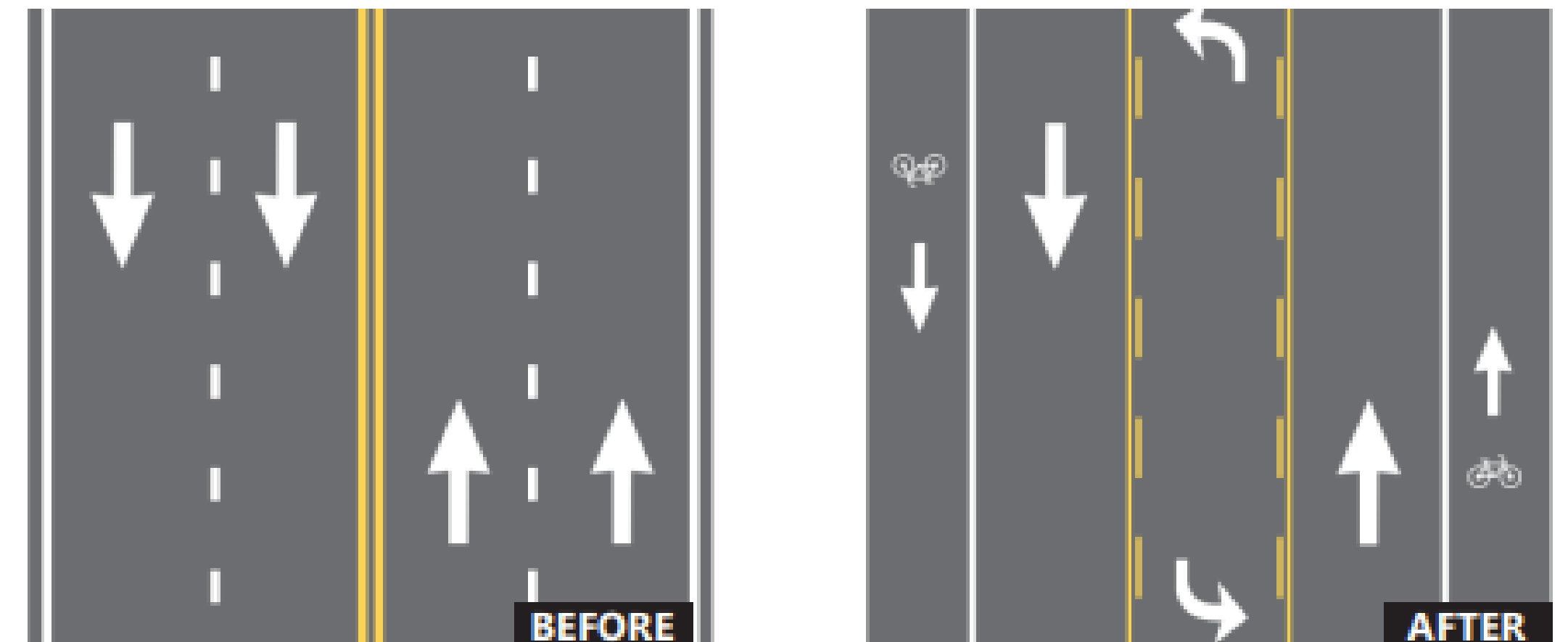
Overall Evaluation

	Westbound Clement Vehicle Extension with Cross Alameda Trail
Benefits Both Options Provide	<ul style="list-style-type: none">• Reduce speeds improve safety for everyone• Improve biking/walking facilities and connections in study area• Improve bus access• Add pocket park areas and reserves space for dog park
Considerations	<ul style="list-style-type: none">• Improves truck connections by providing one-way extension• Completes General Plan truck network• Reduces volumes at Broadway/Blanding• Reduces truck volumes along Park Street

Lane Reduction

Reduce number of travel lanes (commonly called "Road Diet")

- Lower speeds
- 19 – 47% crash reduction (right-angle, turning, rear end crashes)
- Shorter pedestrian crossings



Source: FHWA

Why Build Roundabouts?

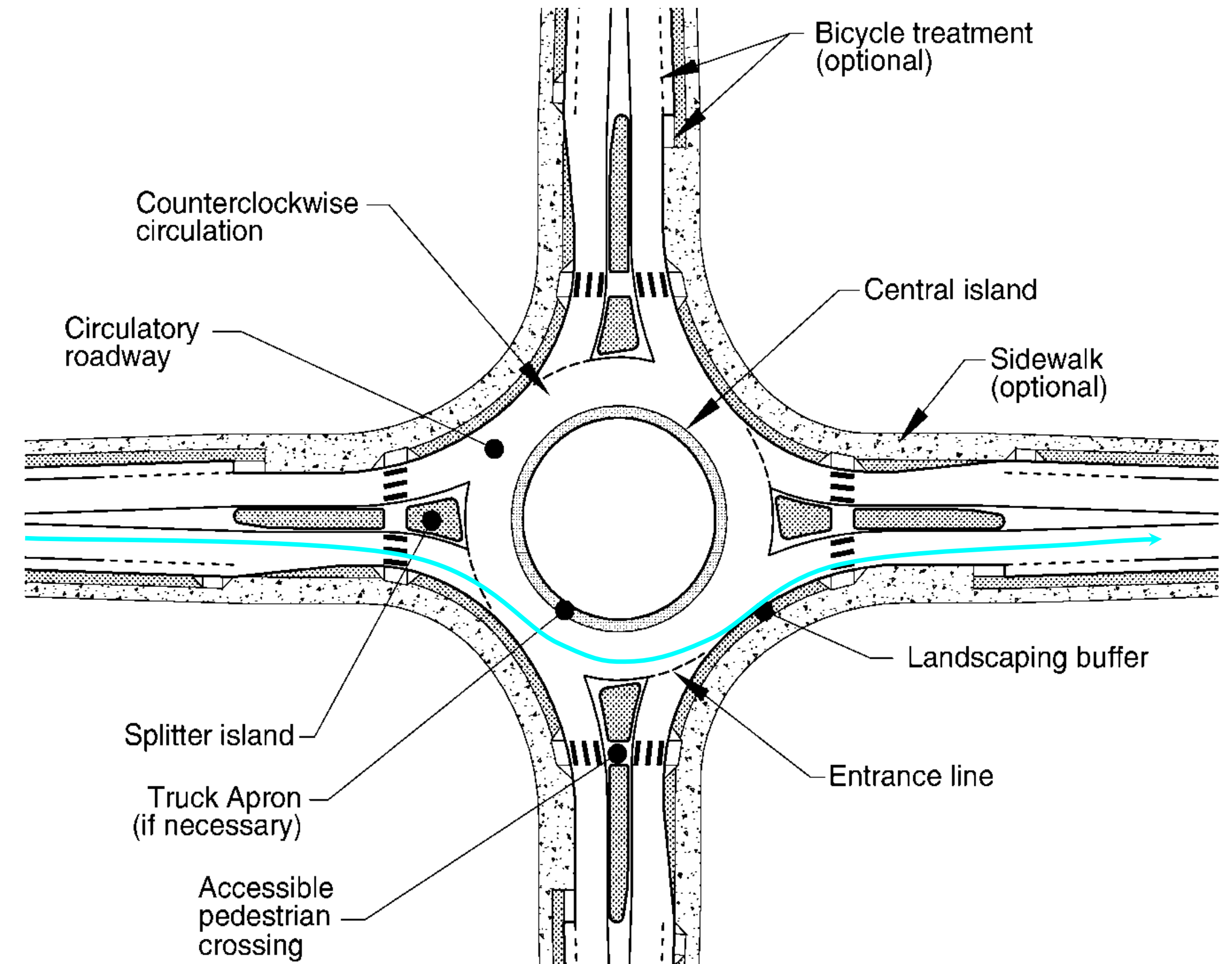
Roundabout benefits include:

- Safety performance
- Lower delay
- Environmental benefits (emissions, fuel savings)
- Access management
- Operations and maintenance costs
- Aesthetics



Vehicle Speeds: Reduced

- Geometry controls speeds
 - Max entry speed:
 - 25 mph for single-lane
 - 30 mph for two-lane
 - Circulating speeds 10 to 12mph
- Increased time for driver reaction
- Decreased chance for injury or fatality

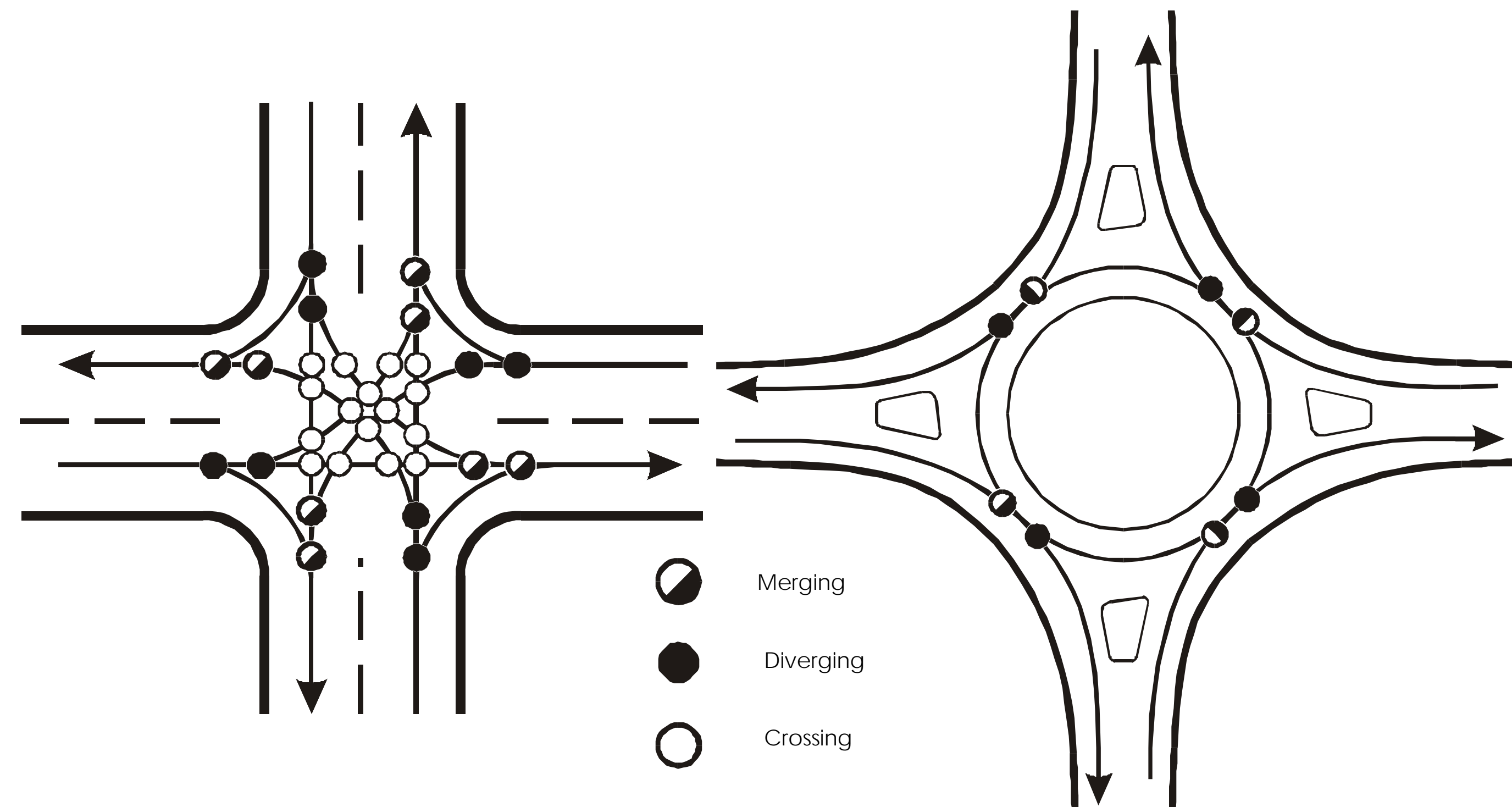


Safety Performance

Safety Statistics

- 90-100% reduction in fatalities
- 75% reduction in injuries
- 35% reduction in total crashes
- Lack of pedestrian and bicyclist crash frequency
- Reduction in conflict number and speeds

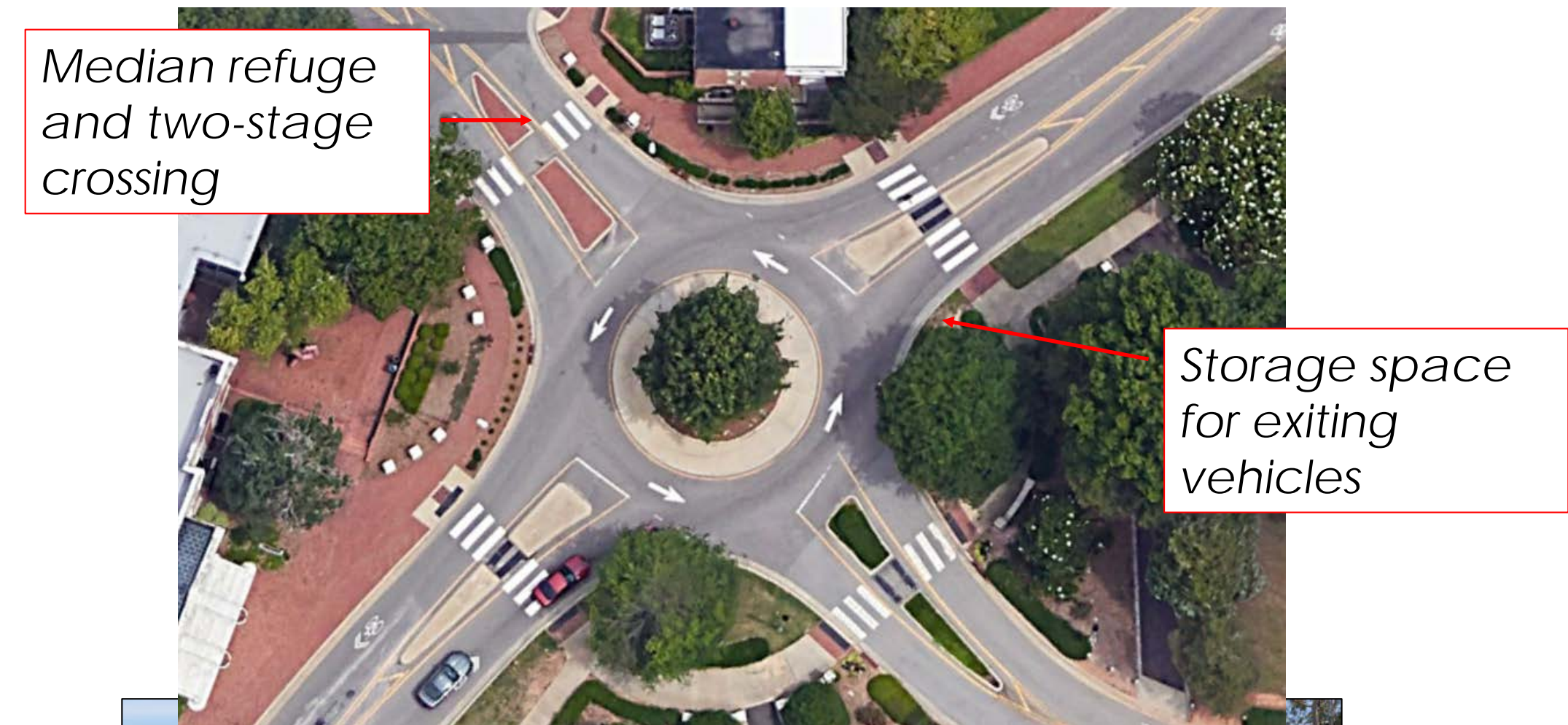
Roundabouts reduce conflict point number and severity



Source: NCHRP Report 572, NCHRP Report 672

Roundabouts and Pedestrians

- Benefits:
 - Slow vehicle speeds
 - Two-stage crossing
- Considerations:
 - Crosswalk alignment
 - Width of splitter island
 - Space for exiting vehicles to yield to pedestrians
 - Yield-controlled crossings



Sources: Google Earth; Kittelson

Roundabouts and Accessibility

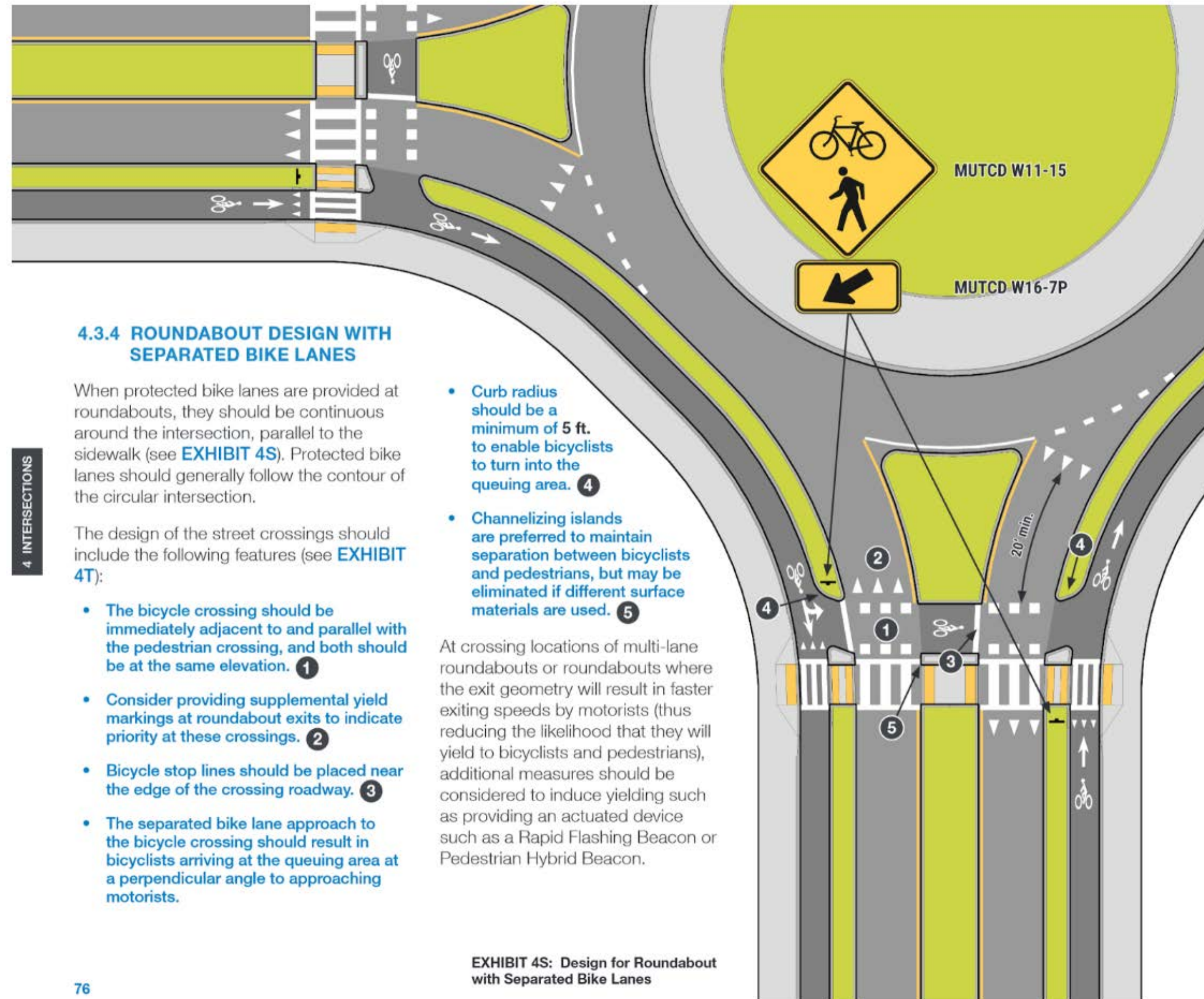
Considerations for Visually Impaired:

1. Well defined walkway edges
2. Separated walkways
3. Aligned detectable warnings
4. Perpendicular crossings
5. Contrasting crosswalk markings

Performance assessment detailed in NCHRP Report 834



Separate Bike/Ped Options



San Luis Obispo, California
Source: Brian Ray

Source: Massachusetts DOT Separated Bike Lane Planning and Design Guide

Roundabouts and Large Vehicles

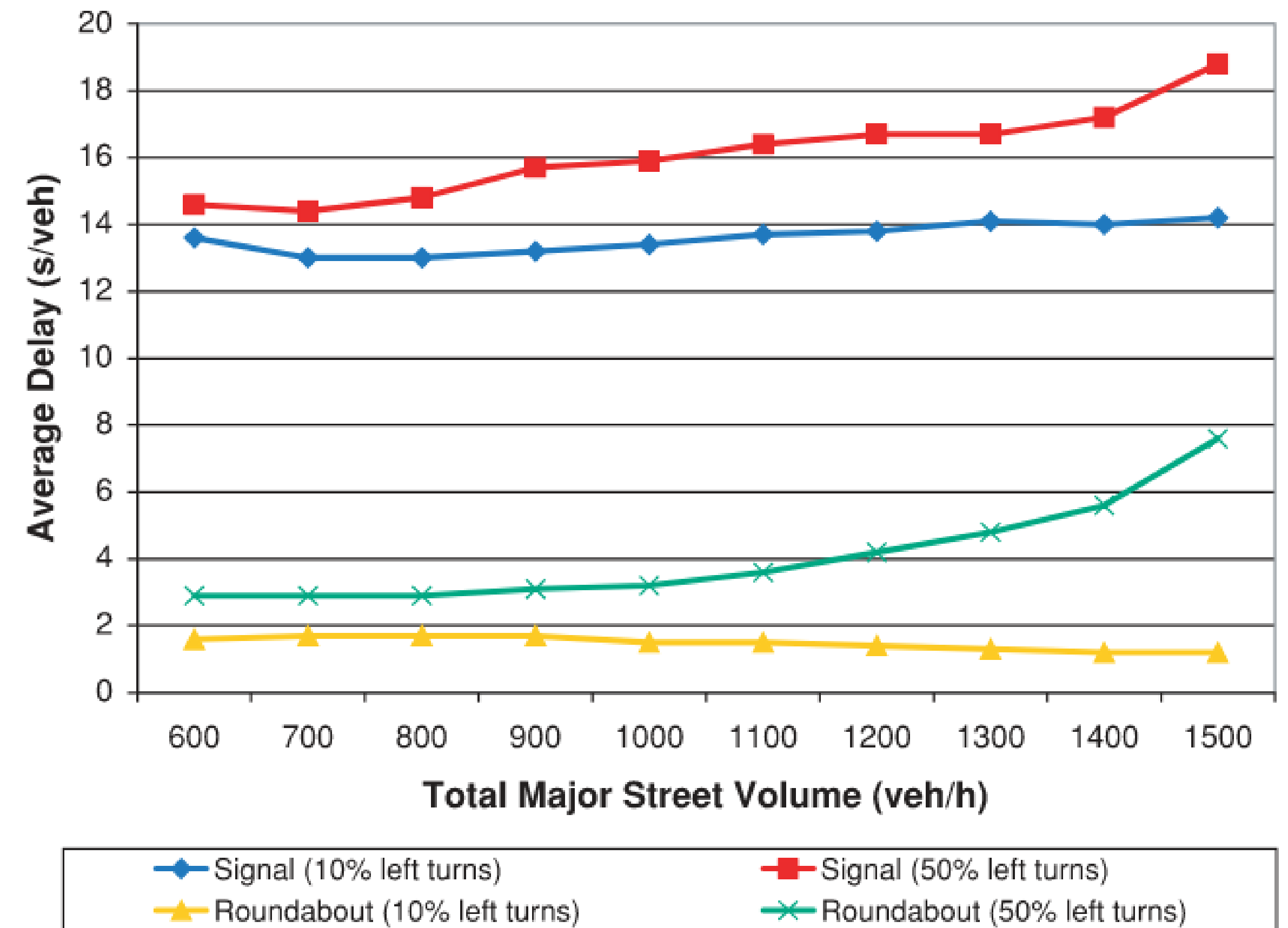
- “Design” versus “accommodate” larger vehicles
- Accommodations include:
 - Truck aprons
 - Placement of landscaping
 - Reinforced curbs



Reduced Travel Delay

- May solve existing or projected operational problem
 - Heavy delay on minor road
 - Large traffic signal delays
 - Heavy left-turning traffic
 - Stop control with large delays

Comparative Delay, Signal versus Roundabout
Intersection that meets Signal Warrants



Source: NCHRP Report 672, NCHRP Exhibit 3-19

Next Steps

- Transportation Commission: Wed, Jan 25
 - City Council: Tues, March 7
 - 2023: Design
 - 2024: Construction
-
- Project webpage:
www.alamedaca.gov/ClementTilden

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