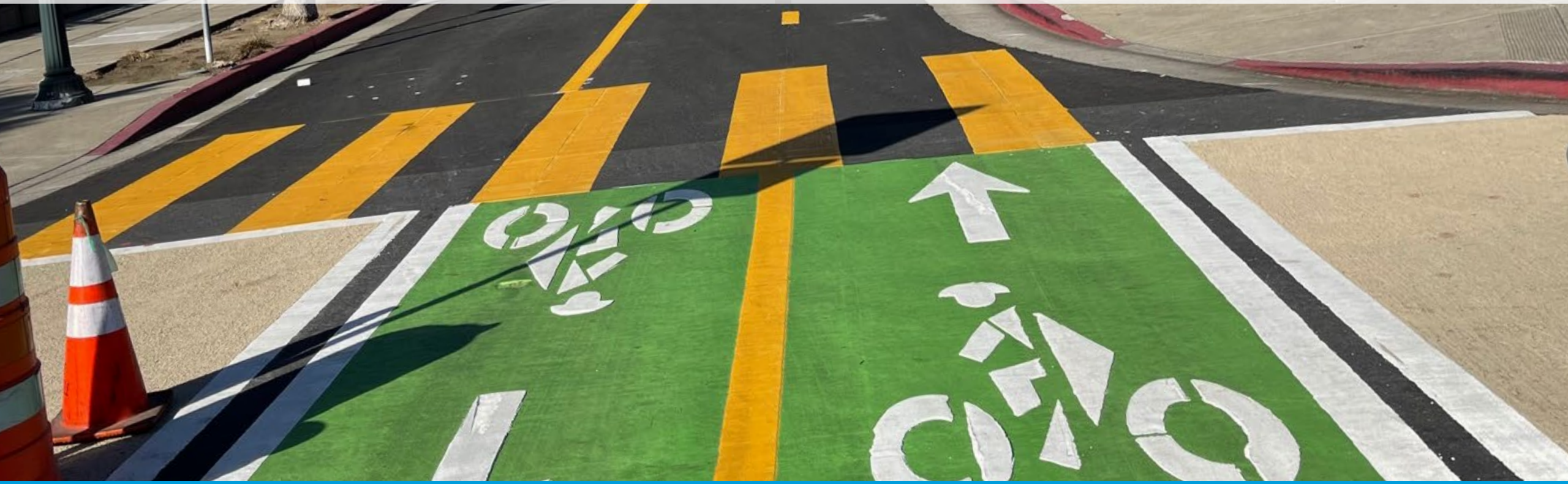
ALAMEDA COUNTY TRANSPORTATION COMMISSION

# Countywide Bikeways Network



## Bikeways Academy: All Ages and Abilities Design Fundamentals

# Welcome to the Bikeways Academy

**Agenda**

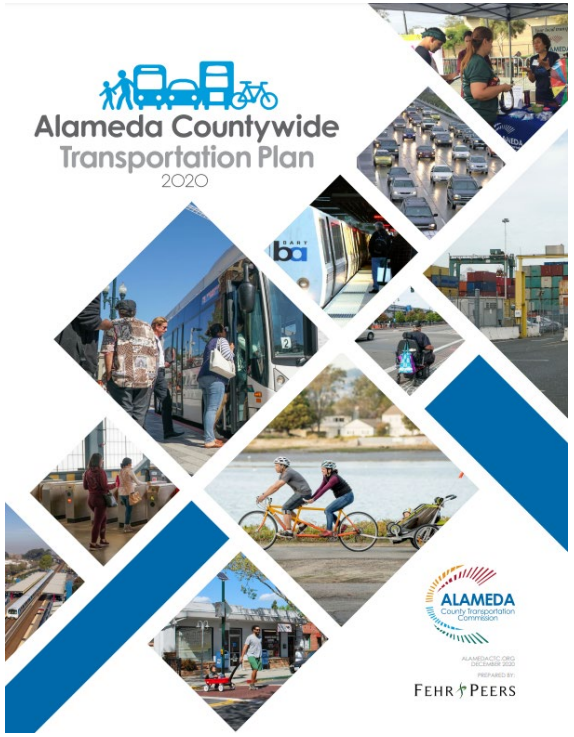
- Introduction to the Countywide Bikeways Network
- Countywide Bikeways Design Expectations
- Introduction to Website Resources and Design Principles
- Discussion and Next Steps

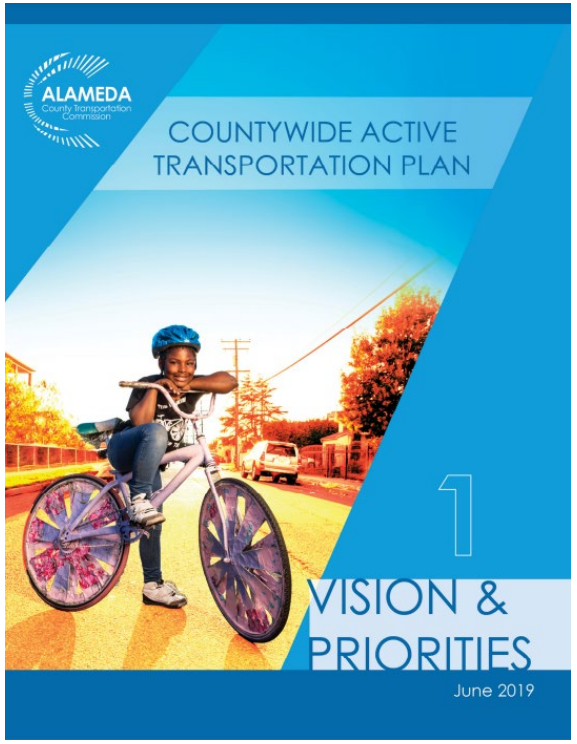
# About Alameda CTC

- Roles:
  - **Plan**: Coordinate countywide transportation planning efforts
  - **Fund**: Program local, regional, state and federal funding
  - **Deliver** projects and programs including those approved by voters with Measure B/BB sales tax and the Vehicle Registration Fee
- Governed by 22-member Commission of local jurisdiction and transit agency representatives

# What is the Countywide Bikeways Network?

Countywide Bikeways Network **builds off priorities already identified** in the Countywide Active Transportation Plan and Countywide Transportation Plan to form a **cohesive network** of **safe** and **comfortable** bike routes of **countywide importance**.

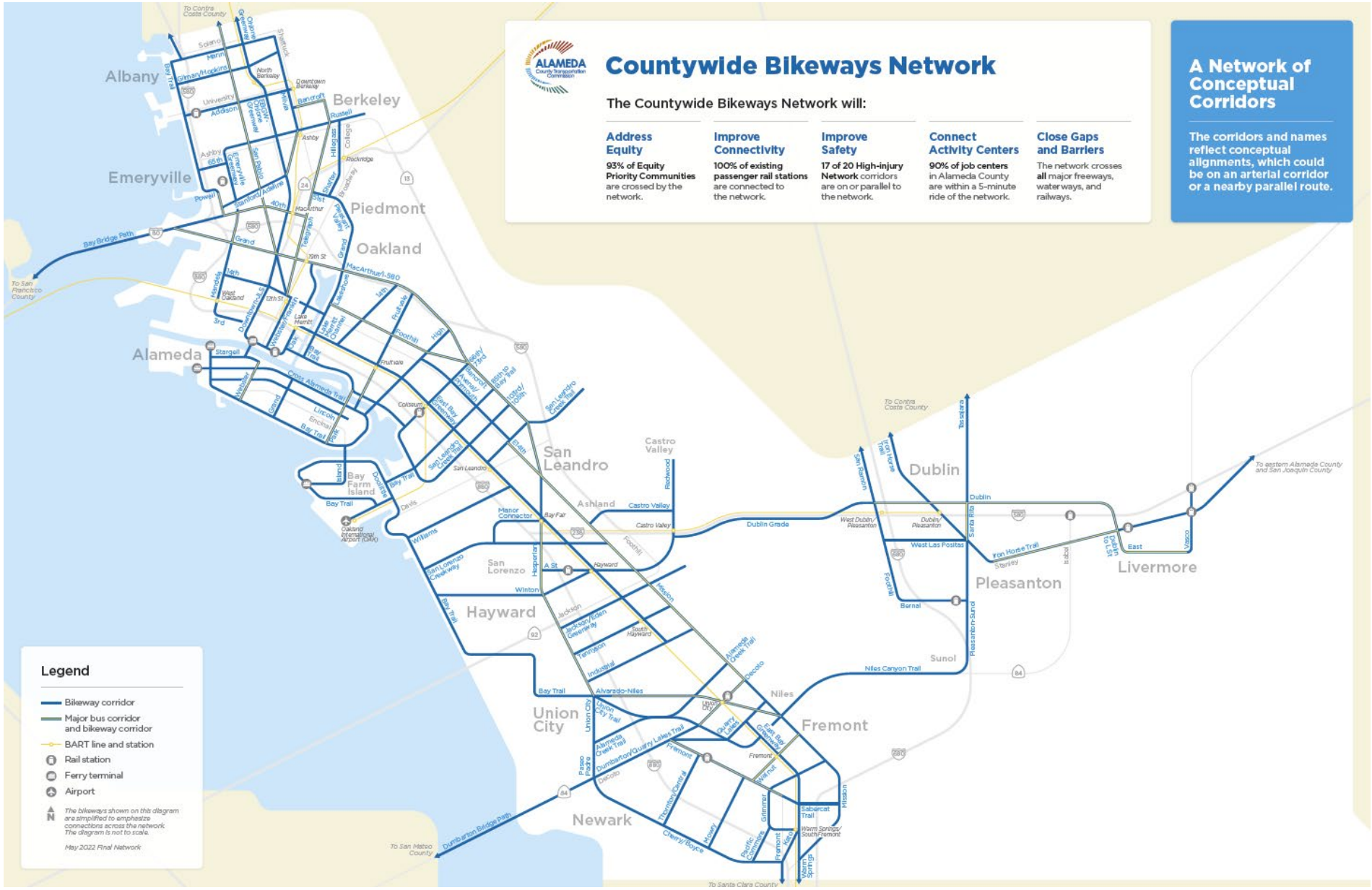


# Countywide Bikeway Network (Approved May 2022)

Mapping for illustrative purposes only

Corridors and names represent conceptual alignments, not specific routes.



# A Network for All Ages and Abilities (AAA)

## Children

## Older Adults

## People of Color

## People with Disabilities



## Cargo and Families

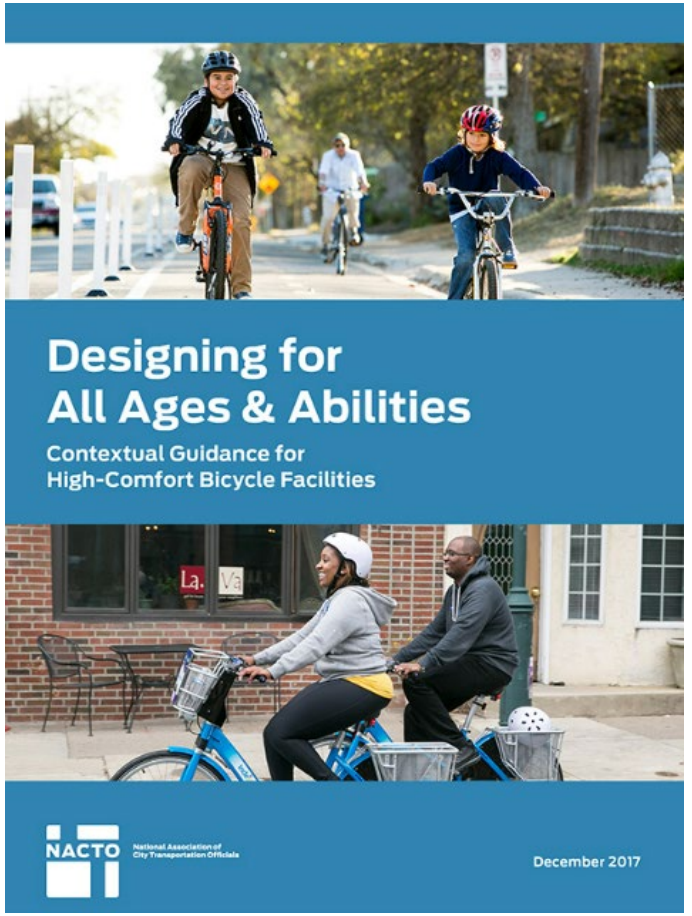
## Women

## And Confident Riders!

# A Network for All Ages and Abilities

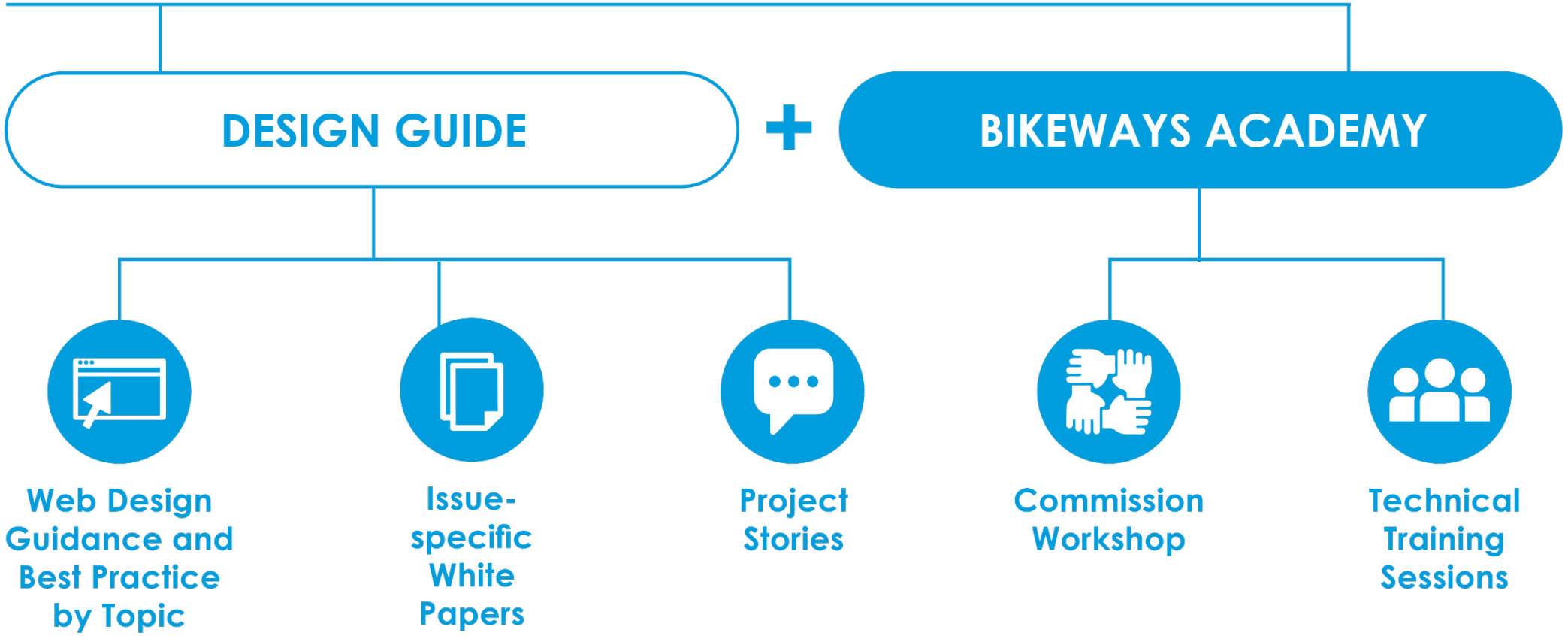
**Adopted Policy:**

- Use NACTO methodology to set AAA standard
- Require Complete Corridors Approach to balance competing needs
- Develop Design Expectations
- Support with Design Resources




Images Source: NACTO

# Key Implementation Tasks for 2023



# Bikeways Academy: 2023 Sessions

**Spring:** Design Fundamentals

**Summer:** Phasing and Implementation Panel

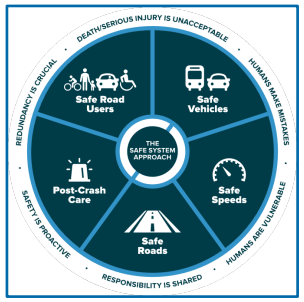
**Fall:** Commission Workshop

**Winter:** Phasing and Implementation Key Findings

# Countywide Bikeways Design Expectations

All Ages and Abilities Bikeways

Separate Modes




Apply the Safe System Approach

Prioritize Transit

Be Accessible

Continue Through Intersections

Use Durable Materials

# New Design Resource Guide

- Application of AAA policy for practice
- Direction and citation of national guides
- Orients designers to available resources with links to further reading

# All Ages and Abilities Bikeways

Countywide Bikeways Facilities are expected to incorporate All Ages and Abilities design principles defined in the NACTO Contextual Guidance for Selecting All Ages and Abilities (AAA) Bikeways.

**Contextual Guidance for Selecting All Ages & Abilities Bikeways**

| Roadway Context | | | | All Ages & Abilities Bicycle Facility |
|---|---|---|---|---|
| Target Motor Vehicle Speed* | Target Max. Motor Vehicle Volume (ADT) | Motor Vehicle Lanes | Key Operational Considerations | |
| *Any* | | *Any* | *Any of the following:* high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡ | **Protected Bicycle Lane** |
| < 10 mph | Less relevant | No centerline, or single lane one-way | Pedestrians share the roadway | **Shared Street** |
| ≤ 20 mph | ≤ 1,000 – 2,000 | | < 50 motor vehicles per hour in the peak direction at peak hour | **Bicycle Boulevard** |
| | ≤ 500 – 1,500 | | | |
| ≤ 25 mph | ≤ 1,500 – 3,000 | Single lane each direction, or single lane one-way | Low curbside activity, or low congestion pressure | **Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane** |
| | ≤ 3,000 – 6,000 | | | **Buffered or Protected Bicycle Lane** |
| | Greater than 6,000 | | | **Protected Bicycle Lane** |
| | Any | Multiple lanes per direction | | |
| Greater than 26 mph† | ≤ 6,000 | Single lane each direction | Low curbside activity, or low congestion pressure | **Protected Bicycle Lane, or Reduce Speed** |
| | | Multiple lanes per direction | | **Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed** |
| | Greater than 6,000 | *Any* | *Any* | **Protected Bicycle Lane, or Bicycle Path** |
| High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts | | *Any* | High pedestrian volume | **Bike Path with Separate Walkway or Protected Bicycle Lane** |
| | | | Low pedestrian volume | **Shared-Use Path or Protected Bicycle Lane** |

Image source: NACTO

# Resources by Topic

| What resource *should* I be looking at? | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Bikeway Selection | Design Guidance | Separated Bike Lane | Bike Lane | Bike Blvd | Other Bikeways | Inter-section Design |
| NACTO All Ages and Abilities Guide | ✓ | | | | | | |
| FHWA Bikeway Selection Guide | ✓ | | | | | | |
| FHWA Separated Bike Lane Guide | | ✓ | ✓ | | | | |
| Mass DOT Separated Bike Lane Guide | | ✓ | ✓ | | | | ✓ |
| NACTO Don't Give Up at the Intersection | | ✓ | ✓ | | | | ✓ |
| Caltrans DIB 89 | | ✓ | ✓ | | | | |
| NACTO Urban Bikeway Guide | | ✓ | | ✓ | ✓ | ✓ | |

# NACTO AAA Contextual Guidance in Practice

All Speeds*
All Volumes

≤ 6,000 ADT
≤ 25 MPH

≤ 2,000 ADT
≤ 20 MPH

Ferry Point, Alameda

West Street, Oakland

Roosevelt Avenue & Channing Way, Berkeley

*While no maximum speed is outlined in the AAA guidance, lowering speeds is a fundamental Safe System approach.

# AAA Toolbox

# Separated Bikeways and Shared Use Paths

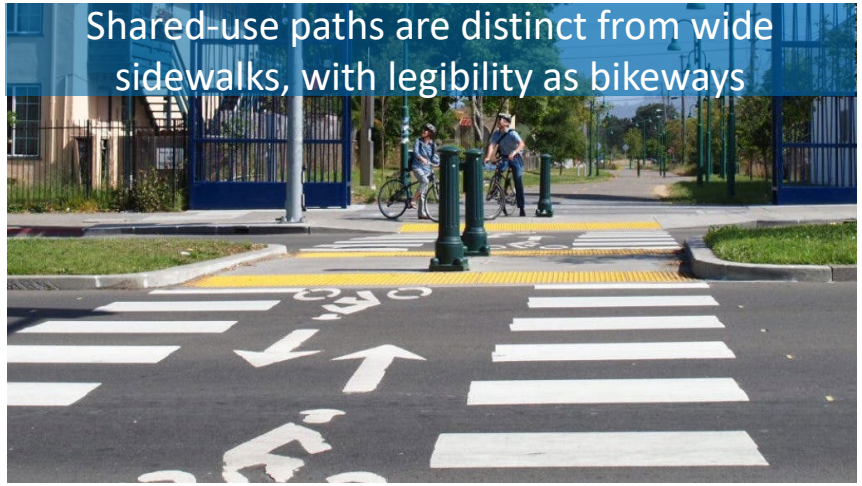
All Speeds*

All Volumes

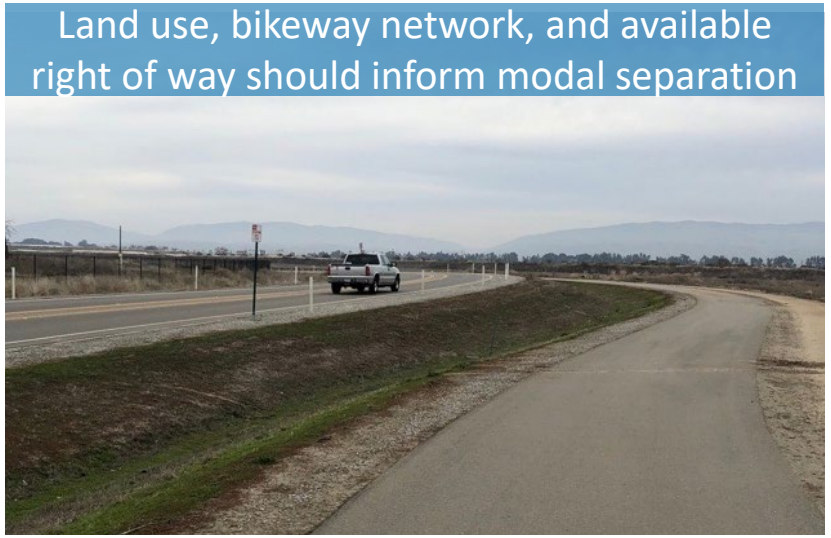
*While no maximum speed is outlined in the AAA guidance, lowering speeds is a fundamental Safe System approach.

## Context and Design Considerations


Harrison Street, Oakland




West Street Path at University Ave, Berkeley




W. Jack London Blvd, Livermore


Bancroft Avenue, Berkeley

# AAA Toolbox

## Bike Lanes and Buffered Bike Lanes

≤ 6,000 ADT

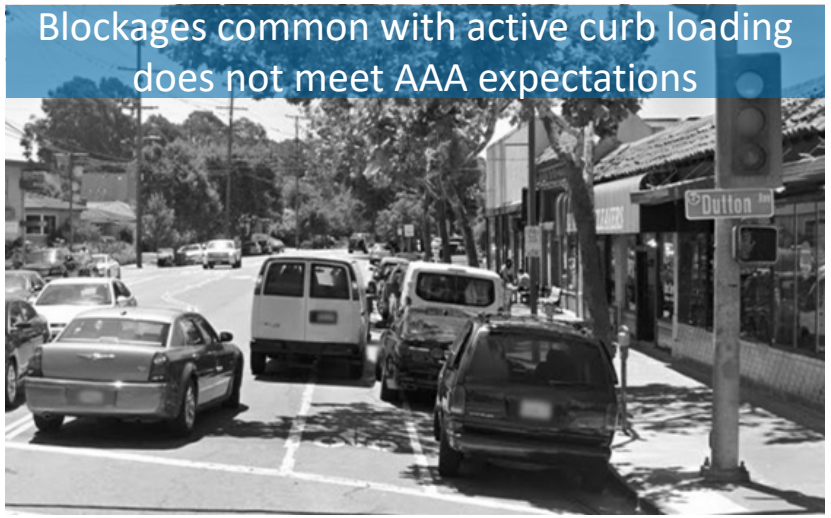
≤ 25 MPH

## Context and Design Considerations


West Street, Oakland


W Broward Boulevard, Ft. Lauderdale, Florida


2nd Street, Fremont




Bancroft Avenue, San Leandro

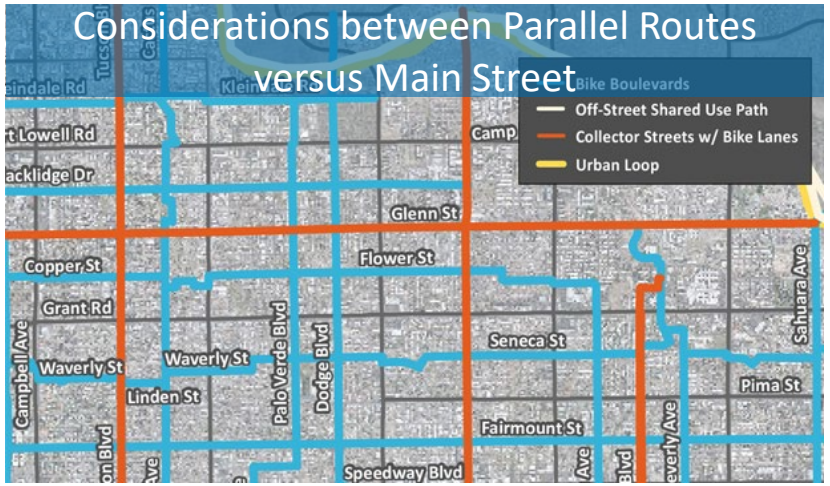
# AAA Toolbox

## Bicycle Boulevards/ Neighborhood Greenways

≤ 2,000 ADT

≤ 20 MPH

## Context and Design Considerations





Shafter Avenue, Oakland


Horton Street, Emeryville


Roosevelt Ave & Channing Way, Berkeley

# AAA Toolbox

## Buffered Bike Lanes

## Local Application

## West Street Road Diet Project



West Street & MacArthur Boulevard, Oakland


# Apply the Safe System Approach

Countywide Bikeways Facilities are expected to address the Countywide or local High-injury Networks.


Image source: FHWA

# Safe System Approach

- FHWA Zero Deaths and Safe System Resources
- FHWA Primer on Safe System Approach for Pedestrian and Bicycle
- ITE Safe System Approach Resources

## Guides, Standards, and Resources



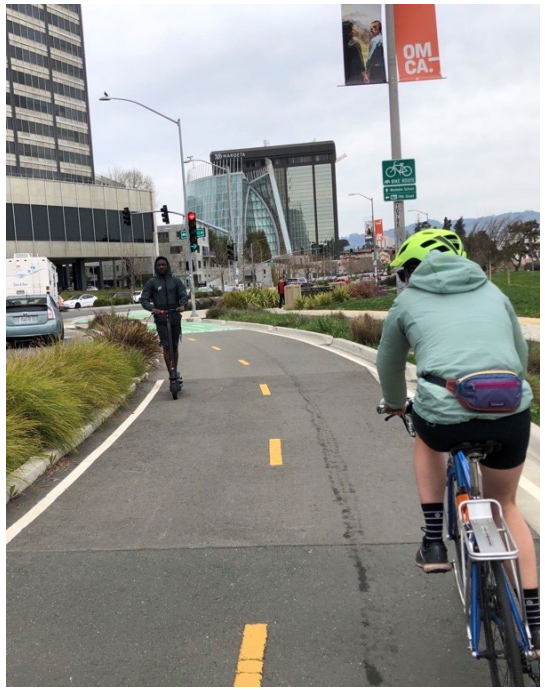

Image sources: FHWA

Design Toolbox

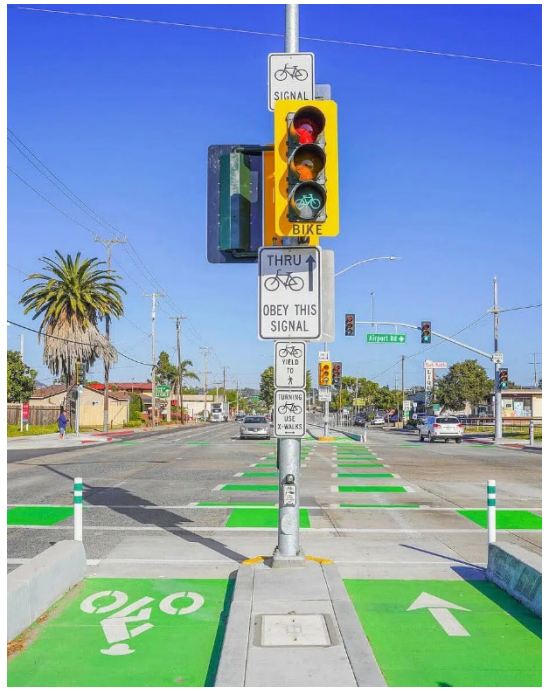
# Safe System Approach

# Safe System Design

## Safe roads: avoiding bicycle crashes



Lakeside Drive, Oakland




North Fremont Street, Monterey

Bancroft Avenue, Berkeley

**What are the safety needs and design strategies on the corridor?**

- Separate users in space
- Separate users in time
- Increase attentiveness and awareness

Design Toolbox

# Safe System Approach

## Safe roads: managing speed



West Street, Oakland

Stanley Ave/Valley Ave/ Bernal Ave, Pleasanton

**What speed management strategies are you considering?**

- Speed Limit and Target Speed Setting
- Residential and Arterial Traffic Calming
- Corner Radius Lowers Turn Speeds

Image sources: FHWA, City of Oakland

# Separate Modes

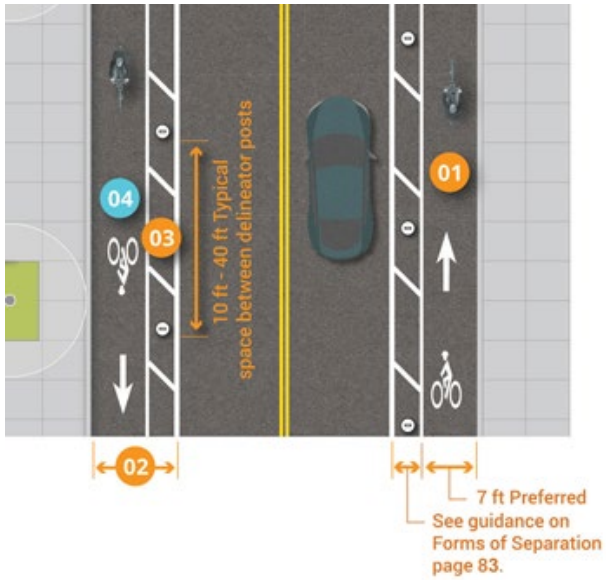
Countywide Bikeways Facilities are expected to maximize separation between all modes, to the extent feasible, and reduce or avoid conflict points.

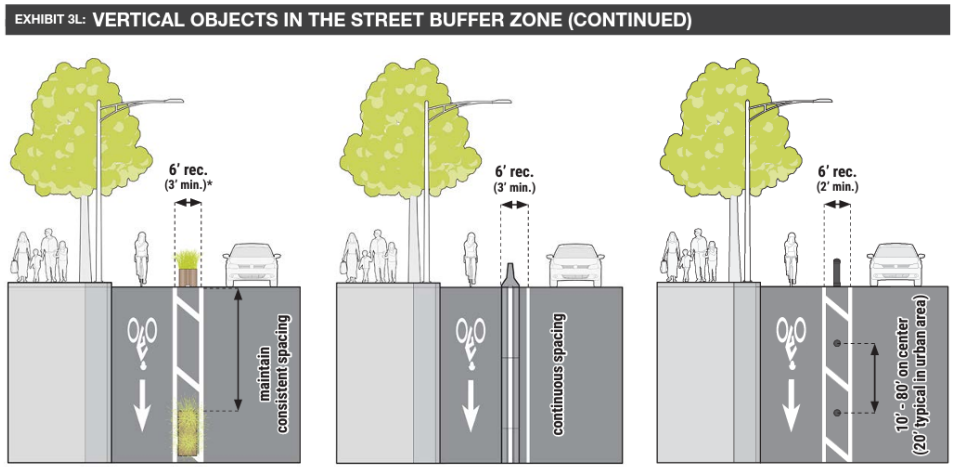
Harrison Street, Oakland

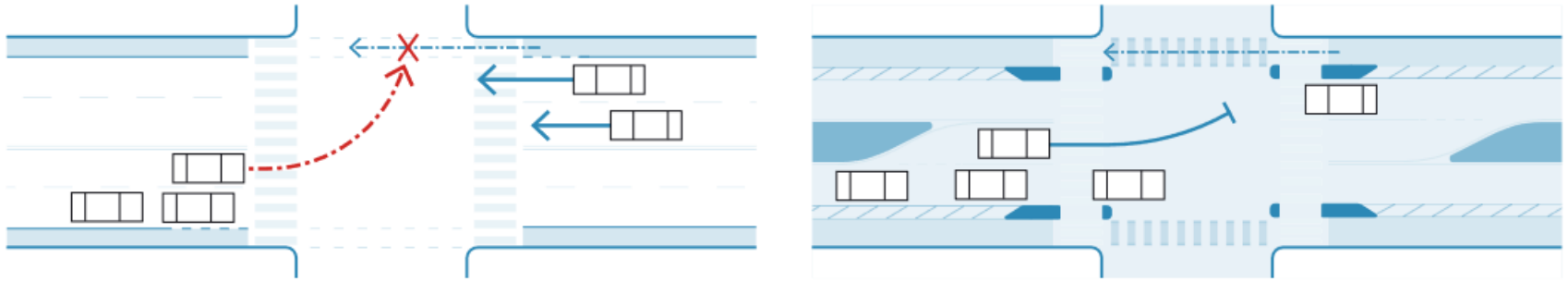
# Separated Bike Lanes

- FHWA Separated Bike Lane Planning and Design Guide
- Mass DOT Separated Bike Lane Guide
- Caltrans DIB 89
- NACTO Urban Bikeway Design Guide with Designing for All Ages and Abilities

## Guides, Standards, and Resources



A common "multiple threat" conflict, where reduced visibility for motor vehicles turning across multiple travel lanes increase bicyclists' risk at crossings. The 4-to-3 lane conversion is a common technique for managing motor vehicle traffic flow while reducing the multiple threat conflict, though two-way left turn lanes introduce turn conflicts at mid-block locations (e.g. driveways).

Image sources: FHWA, NACTO, MassDOT

# Design Toolbox

## Separated Bike Lanes

## Key Design Differences

### Direction of Travel

Harrison Street, Oakland

Bancroft Avenue, Berkeley

**What direction of travel is best suited for your bikeway design?**

- Most common
- Provides access to both sides of the street
- Intuitive for those used to vehicular travel
- Can work well with phased implementation
- Needs space for two buffers

- Intersections more sensitive
- Provides access to one side of the street
- Space efficient
- Consider at edge conditions with limited access (parks, waterways) or in contexts with high wrong way riding

Design Toolbox

# Separated Bike Lanes

## Key Design Differences

## Bikeway Height

Christie Avenue, Emeryville

Shoreline Drive, Alameda

**What bikeway height fits your project context and scope?**

- Cost, drainage, feasibility considerations
- More separation from vehicles

- Lower cost, flexible design
- Additional considerations for maintenance

Carefully consider design and legibility of loading zones and bikeway/ sidewalk delineation to ensure functionality + ADA

# Design Toolbox

## Separated Bike Lanes

## Key Design Differences

## Paths & Median Bikeways

Bicycle paths or shared-use paths are sometimes used too. Their design needs can be very similar to raised separated bike lanes.

Buchanan Street, Albany

Median greenways can provide a trail experience, with important access and intersection considerations

Mandela Parkway, Oakland

**Is a path or median greenway a good fit for your corridor?**

- Access to one or both sides of street
- Shared or dedicated bikeway
- Separate sidewalk with building or loading access
- Consider at transitional locations

- Double the conflicting turn movements
- No direct access to street frontage
- Consider at generous right of way with landscape opportunity

Design Toolbox

# Separated Bike Lanes

## Curb Use

## Key Design Differences

27th Street, Oakland

Harrison Street, Oakland

**What is the curb demand on your bikeway corridor?**

- ADA parking and loading
- Get people/goods to the sidewalk
- Wider buffer dimensions
- Determining appropriate materials

- Quality and width of buffer important for separation from moving traffic
- More options for buffer style and material

# Prioritize Transit

Countywide Bikeways Facilities are expected to prioritize transit operations and transit rider comfort along with multimodal safety.

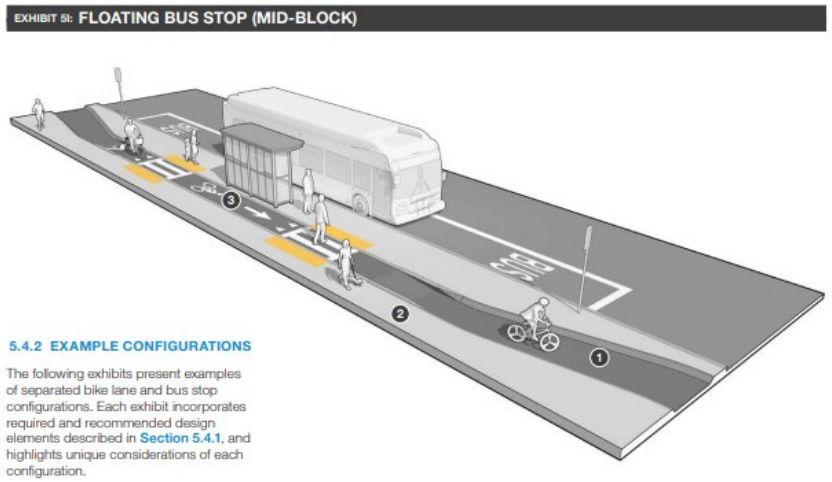
Use the Complete Corridors Approach described in the Countywide Transportation Plan (CTP) to balance multimodal priorities.

Hearst Avenue, Berkeley

# Transit

- NACTO Transit Street Design Guide
- MassDOT Separated Bikeway Design Guide
- FHWA Separated Bike Lane Guide

## Guides, Standards, and Resources



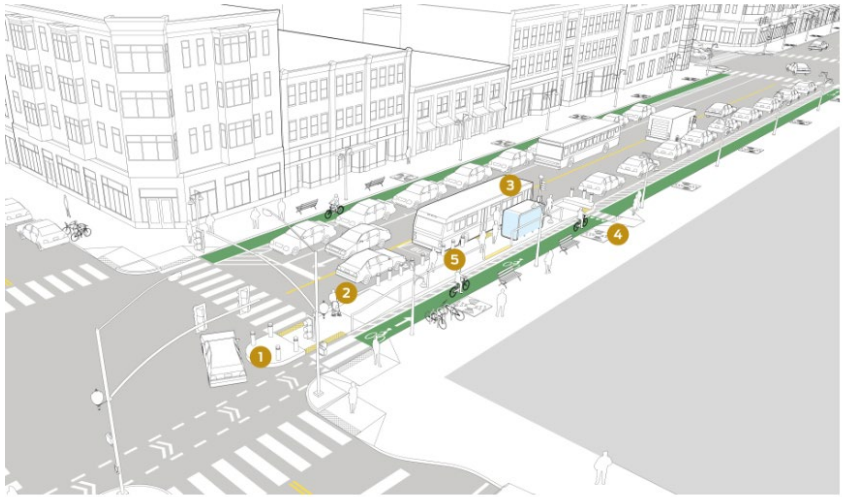



*Figure 16*

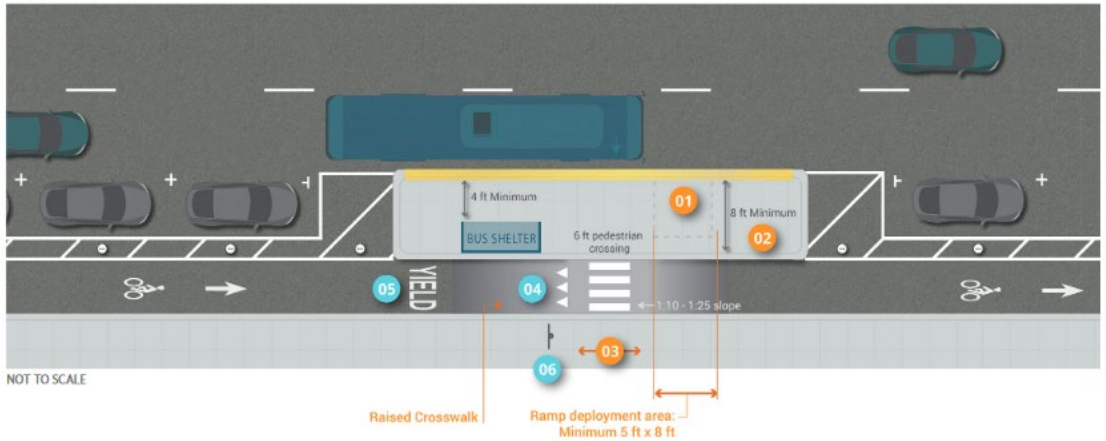



Image sources: MassDOT, NACTO, FHWA

# Transit

# Planning and Coordination

## Bus Corridor Planning Considerations

San Pablo Avenue, Oakland

Kala Bagai Way, Berkeley

**Is the bikeway corridor also transit corridor?**

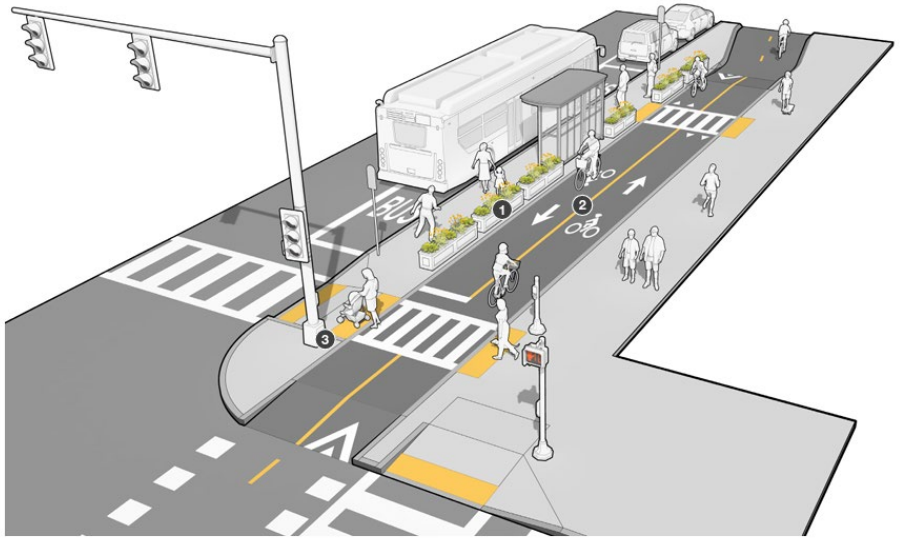
- Coordinate with transit agency staff early and often
- Corridor-specific needs and opportunities for transit
- Routing considerations on very constrained corridors
- Bus operations impacts for design options
- Stop spacing, location, and opportunities for upgrades
- Passenger access and experience

# Transit

# Design

## Bus Design Considerations


Telegraph Avenue, Oakland



**Does your separated bikeway corridor include bus stops?**

- Stop location, length, crosswalk clearance
- Speed and proximity of adjacent traffic
- Bikeway separation and channelization
- Clear space for ADA and ramp deployment
- Stop amenities

Image sources: Bike East Bay, MassDOT

# Be Accessible

Countywide Bikeways Facilities are expected to use best practices for accessibility and universal design.

# Accessibility

## User Focus

Wheelchair/Mobility Device User

People needing more time to cross

User with Visual Impairment

People biking and walking

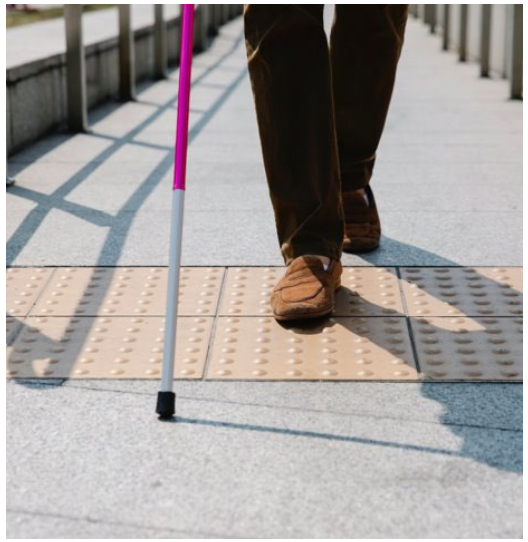
# Accessibility

- 2010 ADA Standards (2010 ADAS)
- MUTCD
- Public Right of Way Accessibility Guidelines (PROWAG)
- California Building Code (CBC) 11B
- Caltrans Design Information Bulletin (DIB 82-06)
- Caltrans Standard Plans (A88A, A88B, A90A, A90B)
- Local Agency Standard Plans
- Local ADA Coordinator/Group
- FHWA Accessible Shared Streets
- FHWA Designing Sidewalks and Trails for Access

## Guides, Standards, and Resources

*Figure 4-3:*
*Excessive slope differences between gutter and ramp can cause a wheelchair to tip forward.*

*Figure 4-4:*
*Excessive slope differences between a gutter and a ramp can cause wheelchairs to flip over backward.*



Source: FHWA Designing Sidewalks and Trails for Access

# Accessibility

# Planning Considerations

Telegraph Avenue, Oakland

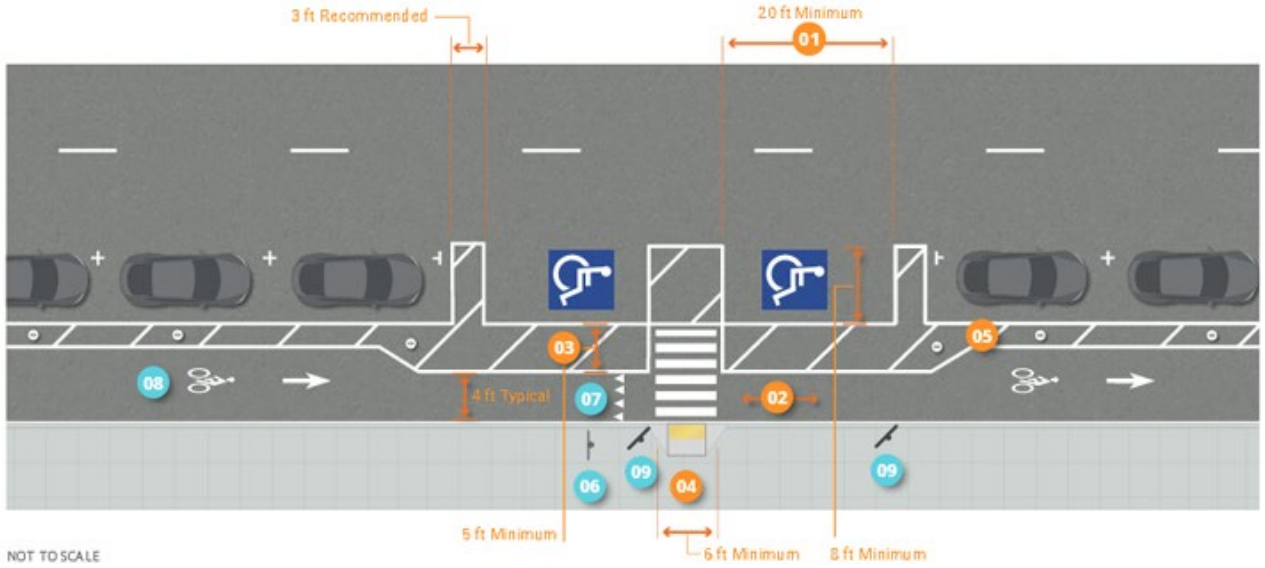
Liberty Street & Sundale Drive, Fremont

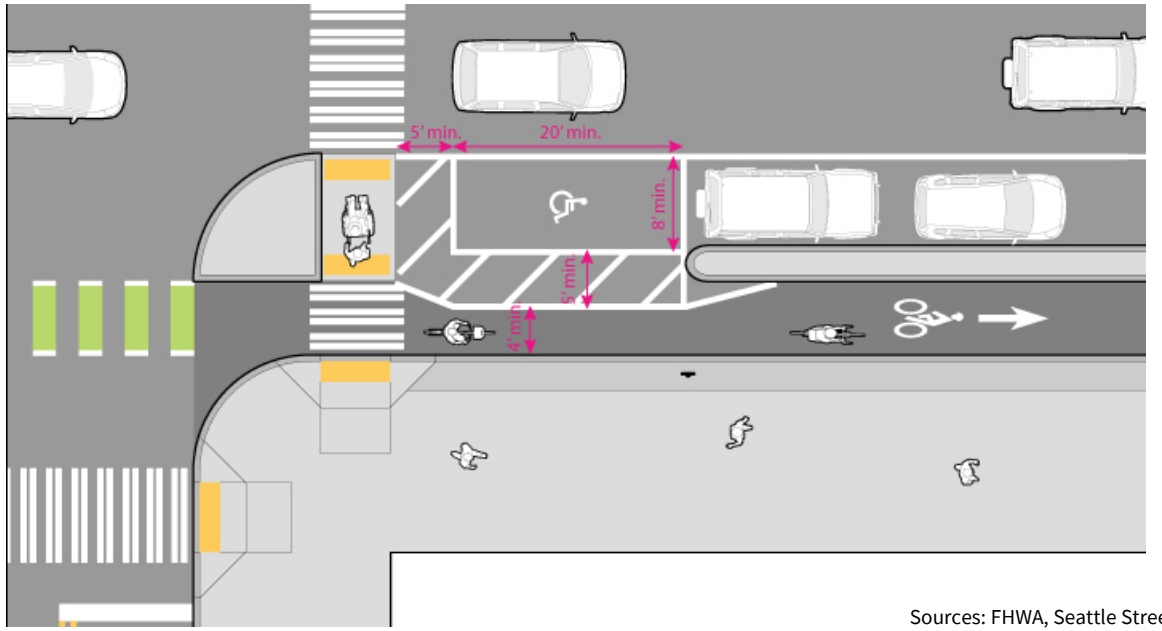
**What accessibility benefits and considerations apply to your corridor?**

- Stakeholder coordination outreach (include local ADA coordinator)
- Bikeway separation legibility and navigability
- Materials, color contrast
- Bikeway width
- Grade and cross slope for shared-use paths
- Safety co-benefit
- Crosswalk configuration, crossing distance, upgrade opportunities
- Loading and curb access

# Accessibility

## Curb Access




Sources: FHWA, Seattle Streets Illustrated

# Continue Through Intersections

Countywide Bikeways Facilities are expected to continue protection through intersections.

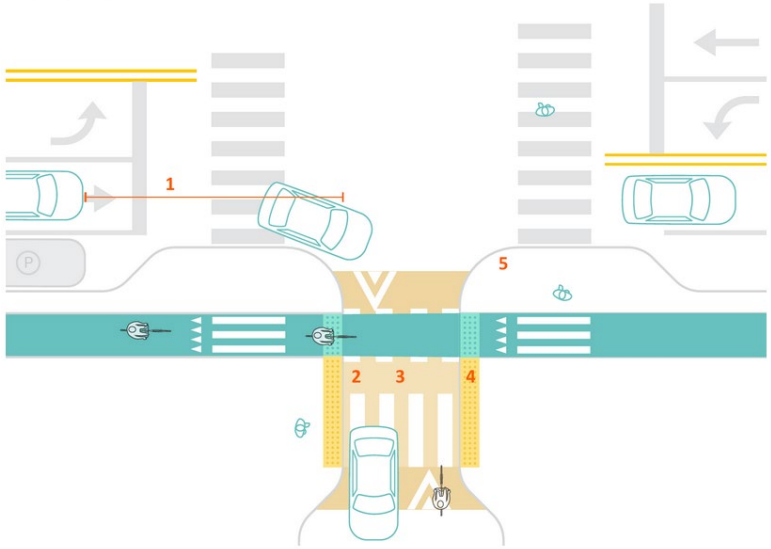

Grand Street at Otis Drive, Alameda

# Intersection Design

- NACTO Don't Give Up at the Intersection
- MassDOT Separated Bikeway Design Guide Chapters 4 and 6
- USDOT & FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

## Guides, Standards, and Resources

Minor Street Crossing Diagram




| Roadway Configuration | Posted Speed Limit and AADT | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Vehicle AADT <9,000 | | | Vehicle AADT 9,000–15,000 | | | Vehicle AADT >15,000 | | |
| | ≤30 mph | 35 mph | ≥40 mph | ≤30 mph | 35 mph | ≥40 mph | ≤30 mph | 35 mph | ≥40 mph |
| 2 lanes (1 lane in each direction) | ❶ 2 4 5 6 | ❶ 5 6 7 9 | ① 5 6 ❼ ❾ | ❶ 4 5 6 | ❶ 5 6 7 9 | ① 5 6 ❼ ❾ | ❶ 4 5 6 7 9 | ① 5 6 7 9 | ① 5 6 ❾ |
| 3 lanes with raised median (1 lane in each direction) | ❶ 2 3 4 5 | ❶ ❸ 5 7 9 | ① ❸ 5 ❼ ❾ | ① 3 4 5 7 9 | ① ❸ 5 ❼ ❾ | ① ❸ 5 ❼ ❾ | ① ❸ 4 5 7 9 | ① ❸ 5 ❼ ❾ | ① ❸ 5 ❾ |
| 3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane) | ❶ 2 3 4 5 6 7 9 | ❶ ❸ 5 6 7 9 | ① ❸ 5 6 ❾ | ① 3 4 5 6 7 9 | ① ❸ 5 6 ❼ ❾ | ① ❸ 5 6 ❾ | ① ❸ 4 5 6 7 9 | ① ❸ 5 6 ❾ | ① ❸ 5 6 ❾ |
| 4+ lanes with raised median (2 or more lanes in each direction) | ❶ ❸ 5 7 8 9 | ❶ ❸ 5 7 8 9 | ① ❸ 5 8 ❾ | ① ❸ 5 7 8 9 | ① ❸ 5 ❼ 8 ❾ | ① ❸ 5 8 ❾ | ① ❸ 5 7 8 9 | ① ❸ 5 8 ❾ | ① ❸ 5 8 ❾ |
| 4+ lanes w/o raised median (2 or more lanes in each direction) | ❶ ❸ 5 6 7 8 9 | ① ❸ 5 ❻ 7 8 9 | ① ❸ 5 ❻ 8 ❾ | ① ❸ 5 ❻ 7 8 9 | ① ❸ 5 ❻ ❼ 8 ❾ | ① ❸ 5 ❻ 8 ❾ | ① ❸ 5 6 7 8 9 | ① ❸ 5 ❻ 8 ❾ | ① ❸ 5 ❻ 8 ❾ |

Given the set of conditions in a cell,

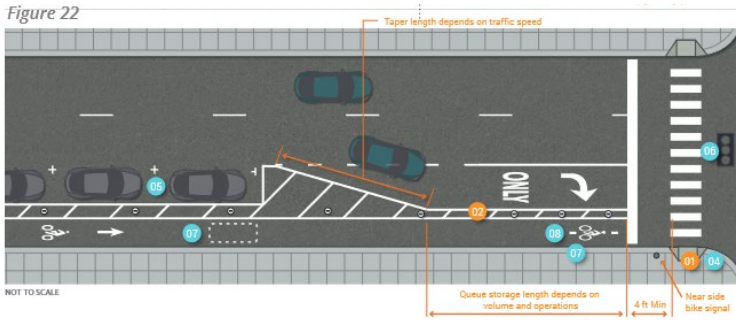
- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

EXHIBIT 2A: MOTORIST'S VIEW AT SEPARATED BIKE LANE

Figure 22

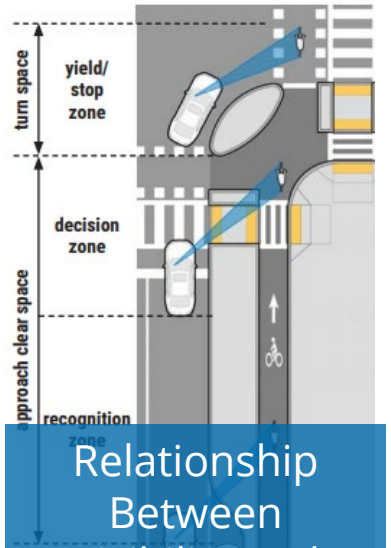



Sources: MassDOT, NACTO, FHWA

# Design Toolbox

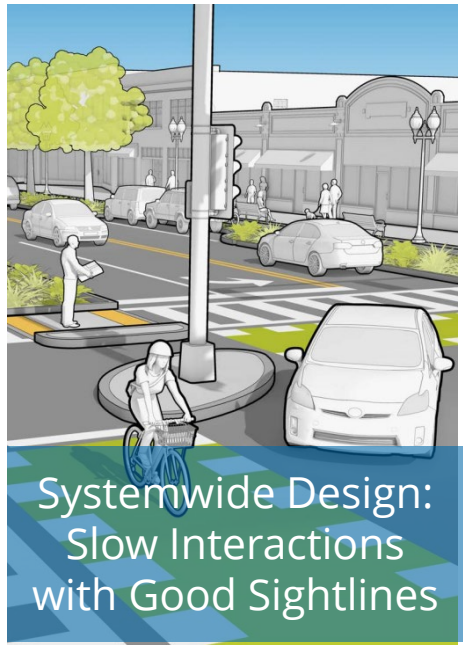
# Intersections

## Intersection Design Principles




Relationship Between Visibility and Turn Speed

Plan for Bicyclist Access to Bike Network & All Streets



Systemwide Design: Slow Interactions with Good Sightlines

Data-Driven Approach for Protected Conflicting Turns

| Separated Bike Lane Operation | Motor Vehicles per Hour Turning across Separated Bike Lane | | | |
|---|---|---|---|---|
| | Two-way Street | | | One-way Street |
| | Right Turn | Left Turn across One Lane | Left Turn across Two Lanes | Right or Left Turn |
| One-way | 150 | 100 | 50 | 150 |
| Two-way | 100 | 50 | 0 | 100 |

EXHIBIT 6A: Considerations for Time-separated Bicycle Movements

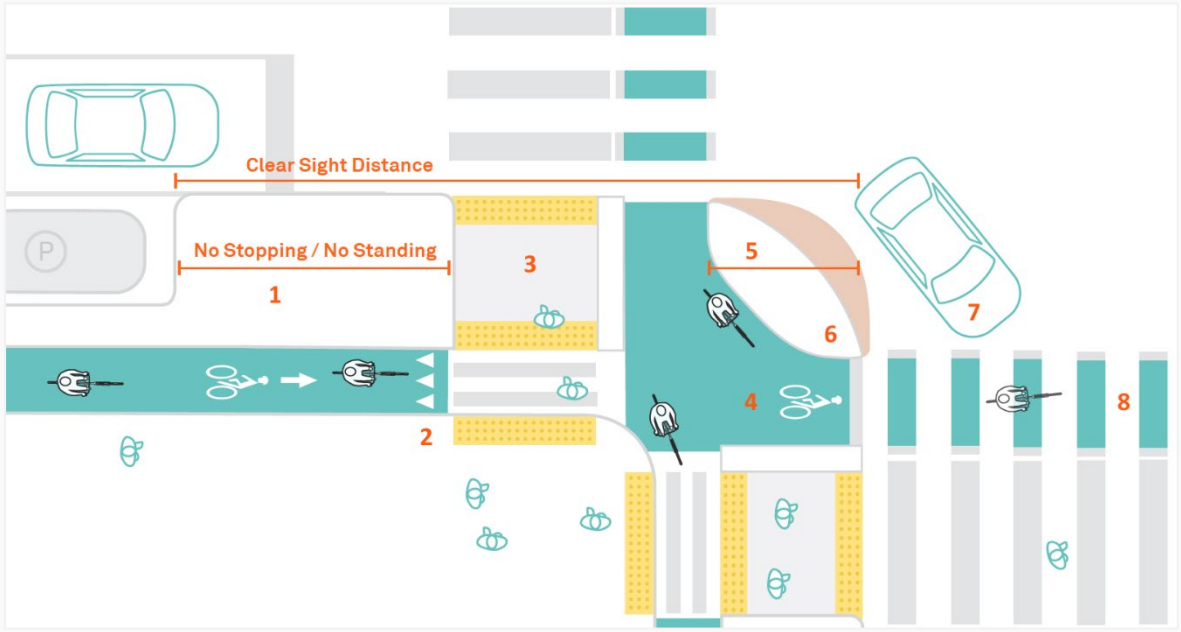
Sources: MassDOT, City of Fremont

# Design Toolbox

# Intersections

## Protected Intersections


Grand Street at Otis Drive, Alameda




**What are the key elements of a protected intersection?**

- Slow interactions, good sightlines
- Pedestrian refuges and raised corner islands
- Advance queue area for bikes
- Clear sight distance

Image sources: NACTO Don't Give Up at the Intersection

# Design Toolbox

# Intersections

## Bike Boulevard Intersections

Table 1. Application of pedestrian crash countermeasures by roadway feature.

| Roadway Configuration | Posted Speed Limit and AADT | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Vehicle AADT <9,000 | | | Vehicle AADT 9,000–15,000 | | | Vehicle AADT >15,000 | | |
| | ≤30 mph | 35 mph | ≥40 mph | ≤30 mph | 35 mph | ≥40 mph | ≤30 mph | 35 mph | ≥40 mph |
| **2 lanes** (1 lane in each direction) | ❶ 2 4 5 6 | ❶ 5 6 7 9 | ① 5 6 ❼ ❾ | ❶ 4 5 6 | ❶ 5 6 7 9 | ① 5 6 ❼ ❾ | ❶ 4 5 6 7 9 | ① 5 6 7 9 | ① 5 6 ❾ |
| **3 lanes with raised median** (1 lane in each direction) | ❶ 2 3 4 5 | ❶ ❸ 5 7 9 | ① ❸ 5 ❼ ❾ | ① 3 4 5 7 9 | ① ❸ 5 ❼ ❾ | ① ❸ 5 ❼ ❾ | ① ❸ 4 5 7 9 | ① ❸ 5 ❼ ❾ | ① ❸ 5 ❾ |
| **3 lanes w/o raised median** (1 lane in each direction with a two-way left-turn lane) | ❶ 2 3 4 5 6 7 9 | ❶ ❸ 5 6 7 9 | ① ❸ 5 6 ❾ | ① 3 4 5 6 7 9 | ① ❸ 5 6 ❼ ❾ | ① ❸ 5 6 ❾ | ① ❸ 4 5 6 7 9 | ① ❸ 5 6 ❾ | ① ❸ 5 6 ❾ |
| **4+ lanes with raised median** (2 or more lanes in each direction) | ❶ ❸ 5 7 8 9 | ❶ ❸ 5 7 8 9 | ① ❸ 5 8 ❾ | ① ❸ 5 7 8 9 | ① ❸ 5 ❼ 8 ❾ | ① ❸ 5 8 ❾ | ① ❸ 5 7 8 9 | ① ❸ 5 8 ❾ | ① ❸ 5 8 ❾ |
| **4+ lanes w/o raised median** (2 or more lanes in each direction) | ❶ ❸ 5 6 7 8 9 | ① ❸ 5 ❻ 7 8 9 | ① ❸ 5 ❻ 8 ❾ | ① ❸ 5 ❻ 7 8 9 | ① ❸ 5 ❻ ❼ 8 ❾ | ① ❸ 5 ❻ 8 ❾ | ① ❸ 5 ❻ 7 8 9 | ① ❸ 5 ❻ 8 ❾ | ① ❸ 5 ❻ 8 ❾ |

Given the set of conditions in a cell,

\# Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.

● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.

○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

**How will you manage conflicts at intersections along the corridor?**

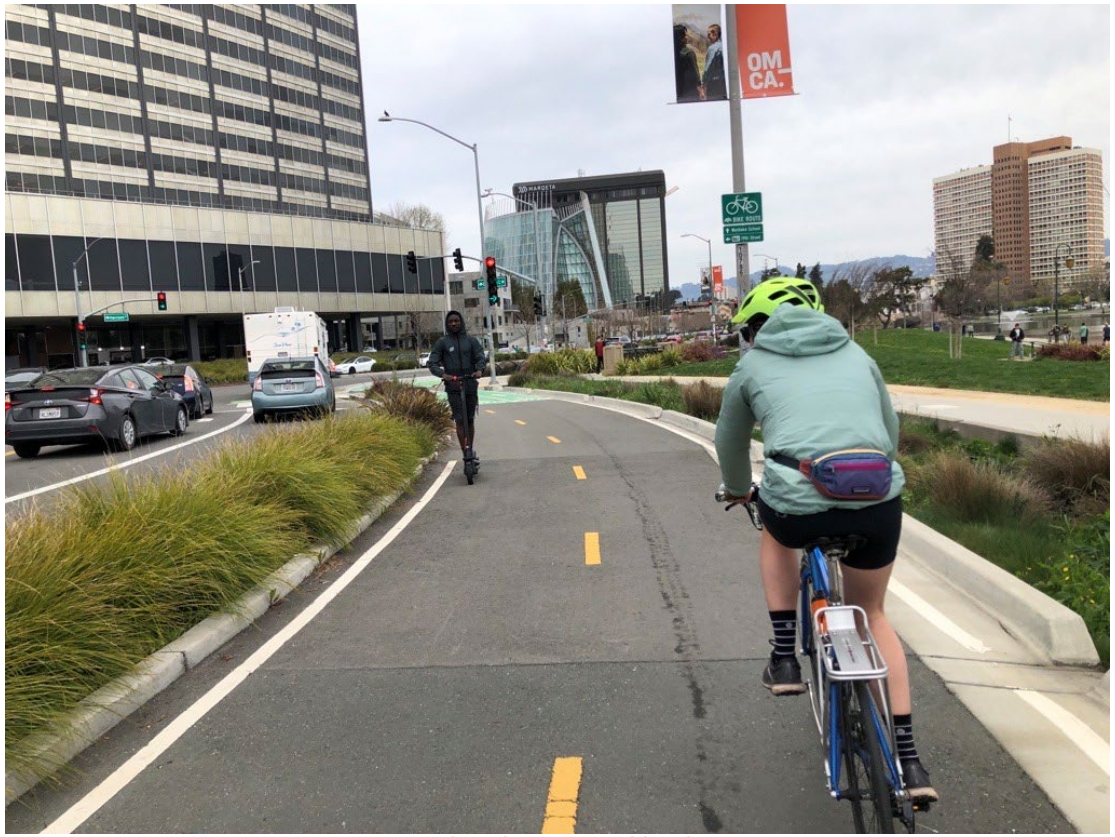
Traffic calming and conflict management strategies at minor intersections

FHWA STEP Guide as a resource for evaluating uncontrolled crossing treatment at arterial crossings

Source: USDOT & FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

# Use Durable Materials

Countywide Bikeways Facilities are expected to deploy durable materials appropriate to the funding source.



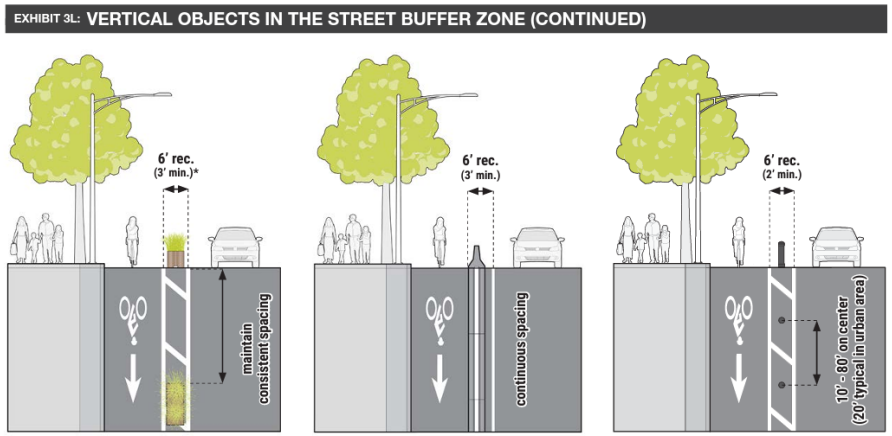

Lakeside Drive, Oakland

# Durable Materials

- MassDOT Separated Bikeway Design Guide Chapter 2
- FHWA Separated Bike Lane Guide
- Forthcoming White Paper

## Guides, Standards, and Resources


*Portland, OR (Source: Oregon Transportation Research and Education Consortium)*




Sources: FHWA, MassDOT

AAA Toolbox

# Durable Materials

# Key Design Differences

## Materials Considerations

Telegraph Avenue, Oakland

Rosemead Boulevard, Temple City, CA

**What materials are appropriate for your project scope and funding?**

- Potential for encroachment
- Ability to maintain and follow up with permanent
- Relationship between visibility and protection
- Pavement and gutter quality

- Drainage and Roadway Design
- Quality and width of buffer from moving traffic
- Landscaping, street trees, green infrastructure

AAA Toolbox

# Durable Materials

# Practical Considerations

## Materials Considerations


Christie Avenue, Emeryville

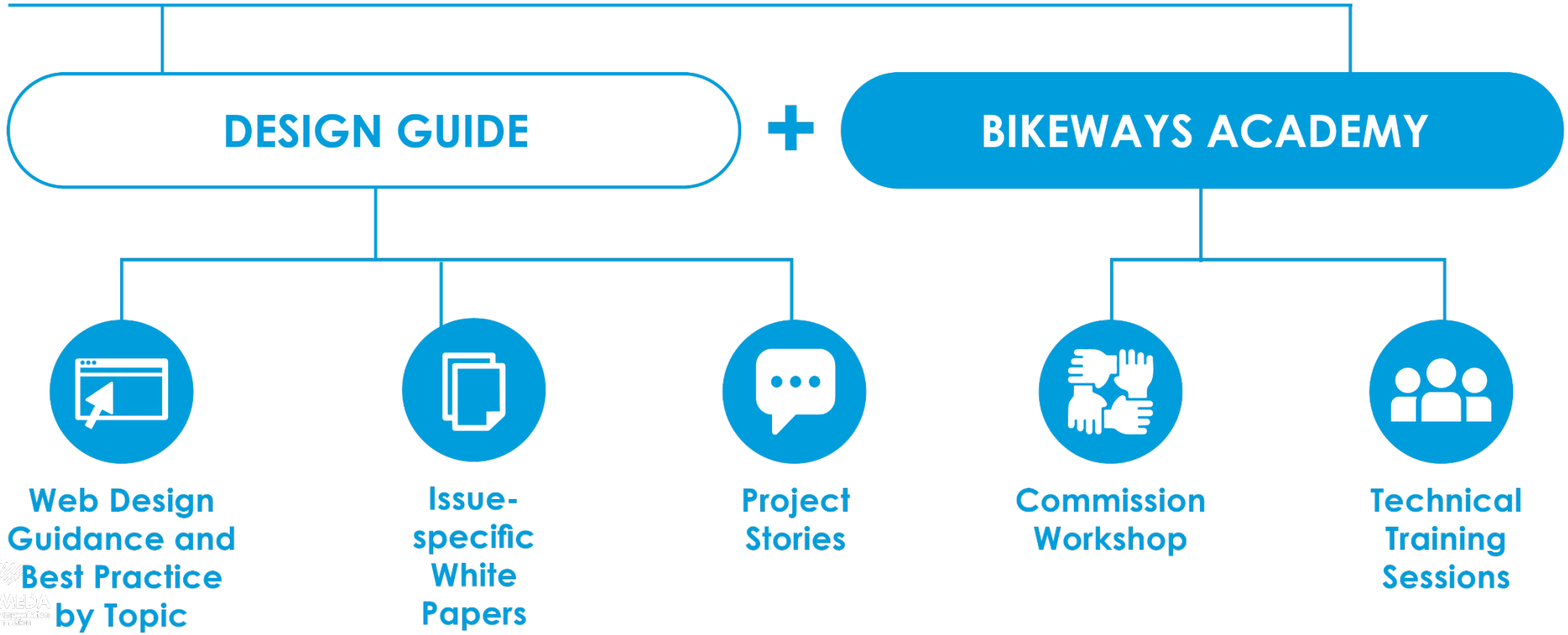

Shoreline Drive, Alameda


Market Street, San Francisco


Montgomery County, Maryland

# Next Steps

- **White Paper:** Project Phasing & Implementation
- **Bikeways Academy:** Project Phasing Panel Discussion

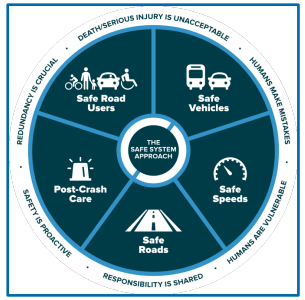


# Discussion

**What questions do you have about the Countywide Bikeways Network Design Expectations?**

All Ages and Abilities Bikeways

Separate Modes




Address the HIN

Prioritize Transit

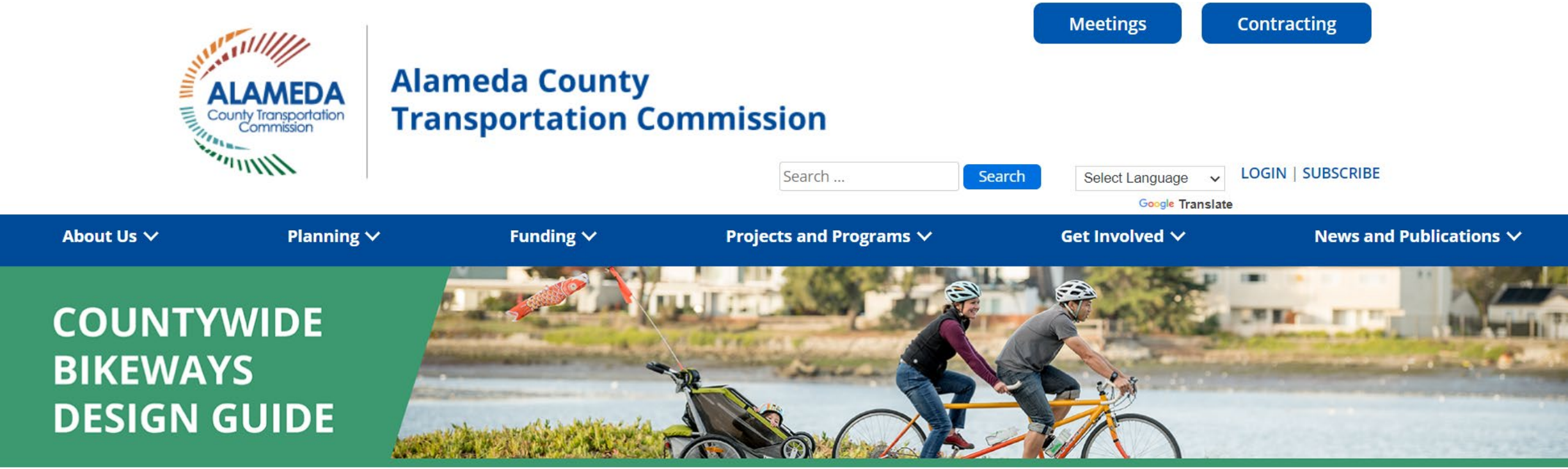
Be Accessible

Continue Through Intersections

Use Durable Materials

# Visit the design resource:

## alamedactc.org/countywide-bikeways-network



# Thank You!

**Project Contacts**

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