

Culver CITY

Complete Streets Design Standards

Mobility & Traffic Engineering Division

Public Works Department

January 16, 2025

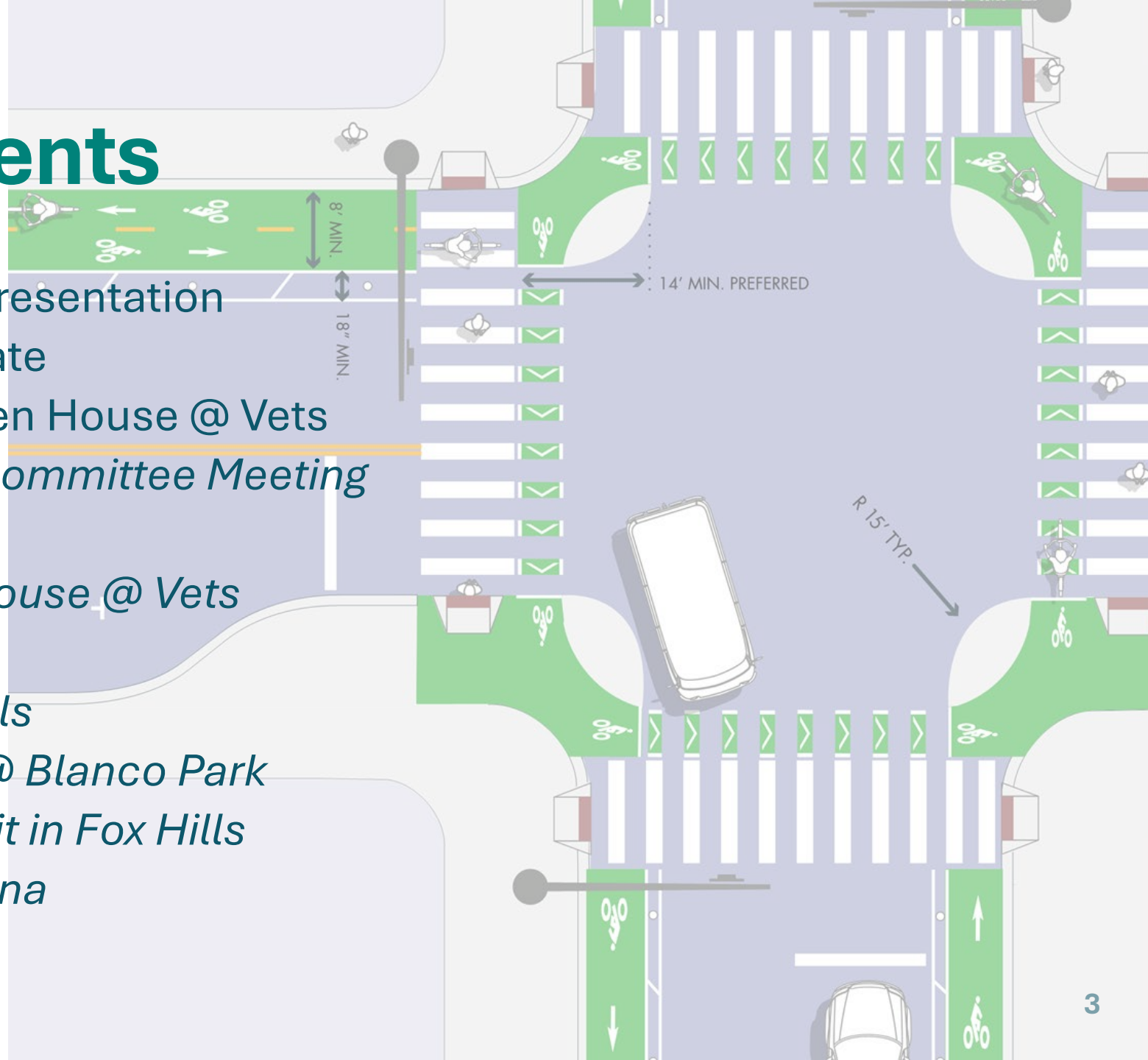


01

Public Engagement & Community Feedback

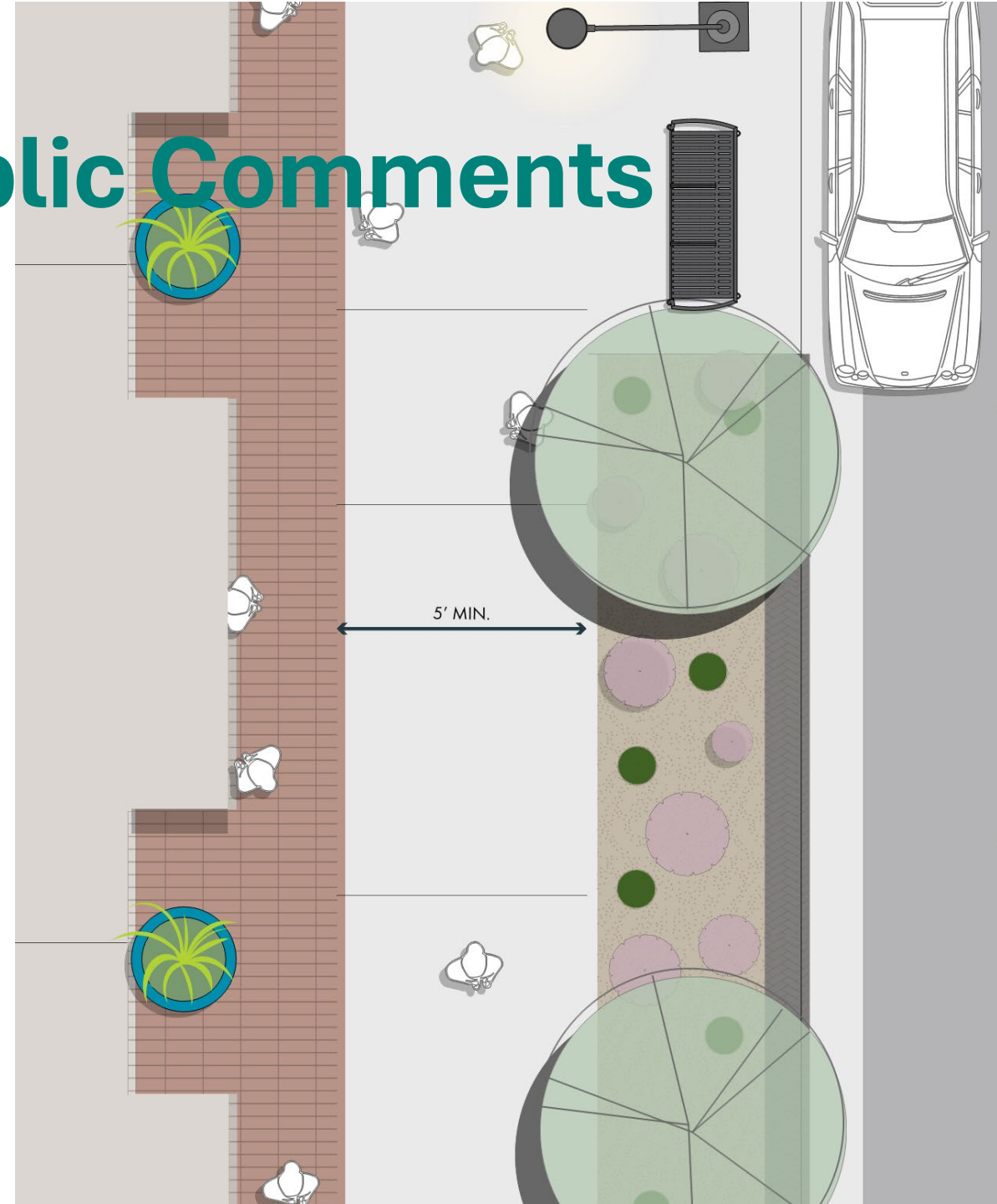
Engagement Events

- September 21, **2023**: BPAC Presentation
- January 18, **2024**: BPAC Update
- February 28: Community Open House @ Vets
- *April 10: Disability Advisory Committee Meeting*
- April 21: CicLAvia—Venice
- *April 22: Community Open House @ Vets*
- *April 27: Walk Audit @ Vets*
- *April 28: Walk Audit in Fox Hills*
- *May 1: Community Meeting @ Blanco Park*
- *May 2: Community Walk Audit in Fox Hills*
- *August 23-25: Fiesta La Ballona*



Draft Standards & Public Comments

- September 20, 2024: Draft Released
- October 20: Public Comment Period
- November 29: Public Comment Period Extended
- 50 Comments Received



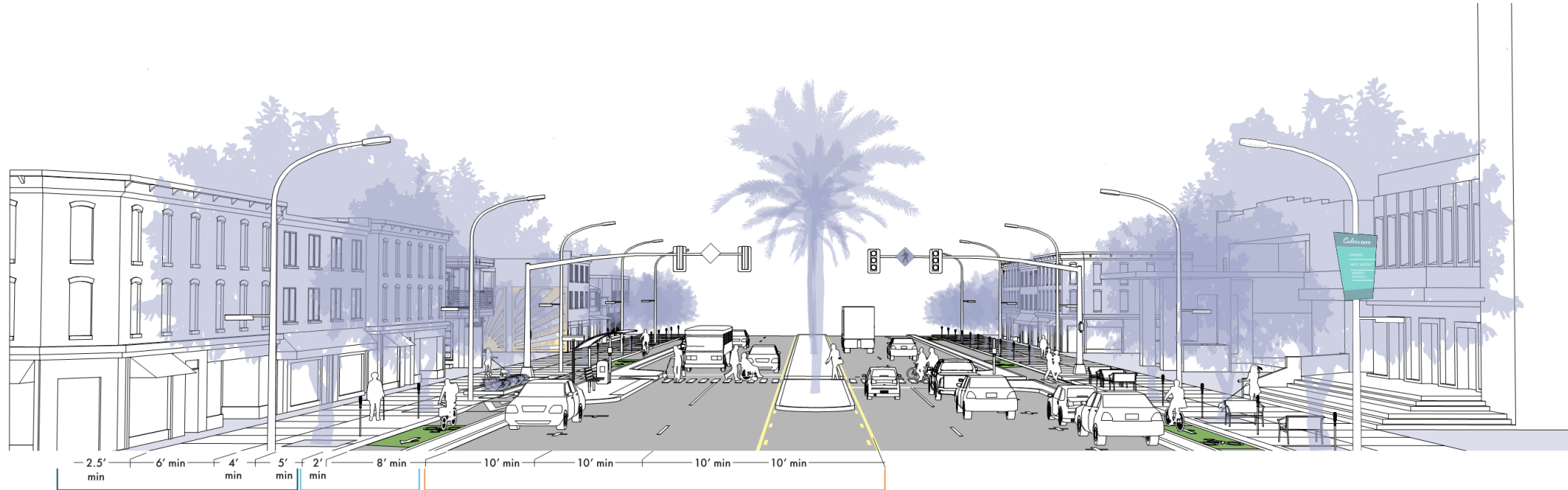
02

Responding to Community Feedback

“Why is this design element optional?”

- “Optional” was intended to be the classification given to any design element that could not be made universally Required or Recommended on every block of every street in the City.
- Intended to ensure design elements are context-sensitive and promote a unique Sense of Place on our streets
- “Optional” has been renamed to “Context Dependent”

Primary Arterial | Overview



SIDEWALK & AMENITY ZONE

The sidewalk and amenity zone lies immediately behind the curb. The sidewalk and amenity zone can create an inviting public space while potentially providing amenities for all roadway users. The sidewalk and amenity zone can be further divided into the frontage zone, through zone, and furnishing zone. Depending on the street context, the sidewalk and amenity zone may need to be wider on Primary Arterial streets to account for denser development. The sidewalk frontage may need to account for outdoor dining and retail space, while the furnishing zone may need to include parking meters, street furniture, bike parking, lighting, transit stops, street trees, and other design amenities. Higher pedestrian traffic may also require a wide sidewalk through zone. Per the BPAP, the City prefers a 6-8 ft sidewalk through zone where feasible on Arterial roadways.

CURB ZONE

The curb zone includes both the area adjacent to the curb at street grade and to the area of the sidewalk that transitions into the roadway. Primary Arterials are typically the widest streets in the City, but constraints may limit the available pavement width. Reallocating this available width for Complete Streets elements like bicycle facilities requires regional traffic coordination, but provides benefits to the community by allowing people to access destinations without a motor vehicle.

MOVEMENT ZONE

The movement zone refers to travel lanes for all vehicles, as well as pedestrian infrastructure for those crossing the street. Primary Arterials may have between 8-12 total vehicle lanes that are typically between 11-12 ft wide, but can be as narrow as 10 ft. Primary Arterials may require freight and truck access but may also be spaces for Active Transportation Corridors or Transit Priority Corridors. Most Primary Arterials are highly signalized and should include safe crossing infrastructure that makes pedestrians and bicyclists visible to motor vehicles.

OVERVIEW OF PRIMARY ARTERIAL DESIGN ELEMENTS

Primary Arterials may require a variety of design elements to accommodate all road users including pedestrians, bicyclists, transit riders, and drivers.

In the sidewalk and amenity zone, street trees, public art, and other landscaping can beautify the zone while pedestrian scale lighting and wide sidewalks can provide a more comfortable walking experience.

In the curb zone on Primary Arterials, separated bikeways or shared-use paths provide the most comfortable bicycle facility option, though bike lanes

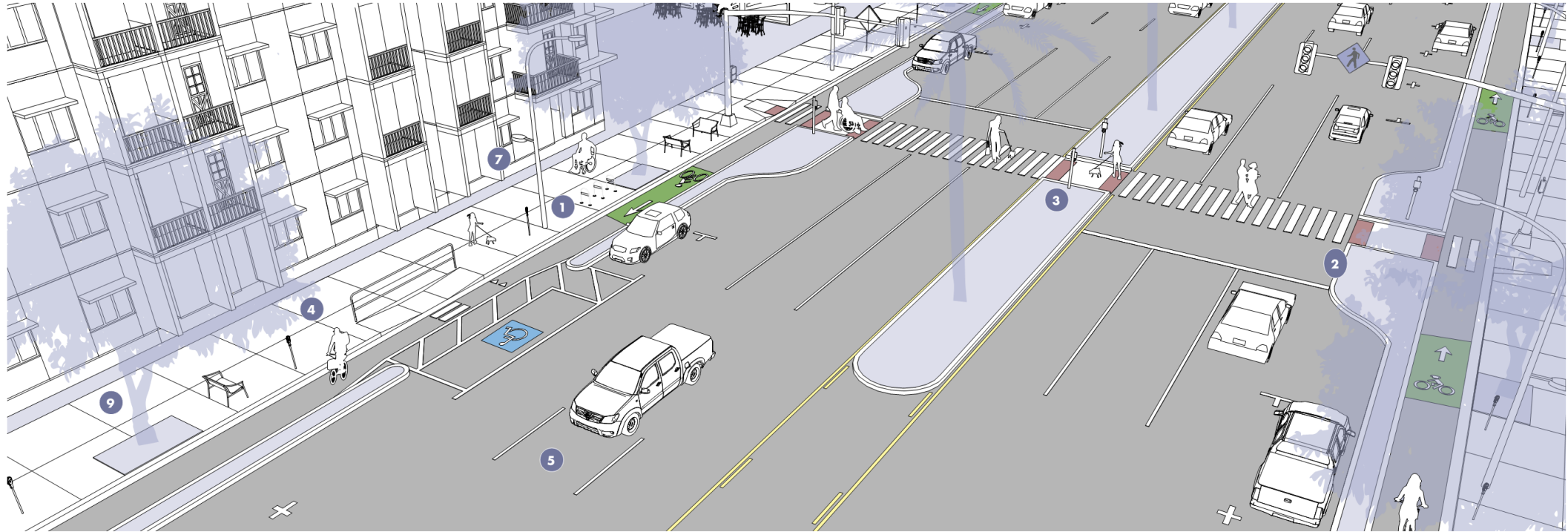
may be used where roadway pavement width is constrained. Bikeway facilities are only required on streets identified in the City BPAP, and the facility chosen for each street will be based on engineering judgment.

On-street parking supports storefront businesses and serves residents and visitors for short-term parking needs. On-street parking visually narrows the street and slows vehicular traffic while also providing a buffer between the sidewalk, bikeway, and moving vehicles. Access aisles connect pedestrians from an on-street parking space to the pedestrian route via a crosswalk and curb ramp. Access aisles should not encroach on the vehicle lane.

In the movement zone on Primary Arterials vertical traffic calming elements are not recommended for most contexts, but horizontal elements may be used at intersections. Bus bulbs and curb extensions are horizontal traffic calming elements that shorten the crossing distance for pedestrians while also improving transit efficiency and providing space for transit stop amenities.

Medians in the center of the right-of-way increase safety and enhance roadway operations by reducing vehicular movement conflicts and limiting turning movements. Medians also provide a location for landscaping and stormwater management as well as an area for pedestrians to wait while crossing.

Primary Arterial | Required and Recommended Standards



REQUIRED

1 Bike Parking

Bike parking provides a secure location for cyclists to secure their bikes. Conveniently placed bike parking encourages bicycle use as a viable mode of transportation, reduces vehicle dependency, and supports multi-modal connectivity. Bicycle parking may be provided for both short-term and long-term use in denser areas, like on Primary Arterials.

2 Curb Ramps

Curb ramps provide essential accessibility for pedestrians, ensuring safe and convenient transitions between sidewalks and street crossings,

particularly for individuals with mobility impairments. Curb ramps shall be designed to ensure proper placement and alignment with crosswalks, smooth transitions, and safe navigation for all users.

3 Pedestrian Push Buttons

Pedestrian push buttons are required at crosswalks controlled by a traffic signal or pedestrian hybrid beacon. They shall be implemented as Accessible Pedestrian Signals (APS) to meet ADA standards. APS devices provide audible, tactile, and visual feedback, ensuring safe and equitable access for all users, including individuals with visual or mobility impairments.

4 Sidewalks

Sidewalks are the paved portion of the right-of-way intended to accommodate pedestrian through travel. Wider sidewalks shall be installed in areas where higher concentrations of pedestrians exist, potentially including on Primary Arterials.

5 Vehicle Lanes

Vehicle lanes accommodate the throughput of all motorized vehicles. On Primary Arterials, vehicle lanes are typically between 11-12 feet.

6 Wayfinding and Signage

Wayfinding and signs provide clear, accessible information to help road users reach their destination.

RECOMMENDED

7 Pedestrian-Scale Lighting

Pedestrian-scale lighting enhances safety, visibility, and comfort for people walking, especially during nighttime or low-light conditions. Existing street lighting can be modified to add pedestrian-scale lighting.

8 Stormwater Management through Green Design

Stormwater treatments are design features which collect roadway surface runoff. These features include bioswales, pervious strips, flow-through planters, and permeable pavements. Stormwater management shall align with existing policies in the Urban Forest Master Plan and Residential Parkway Guidelines.

9 Street Trees and Landscaping

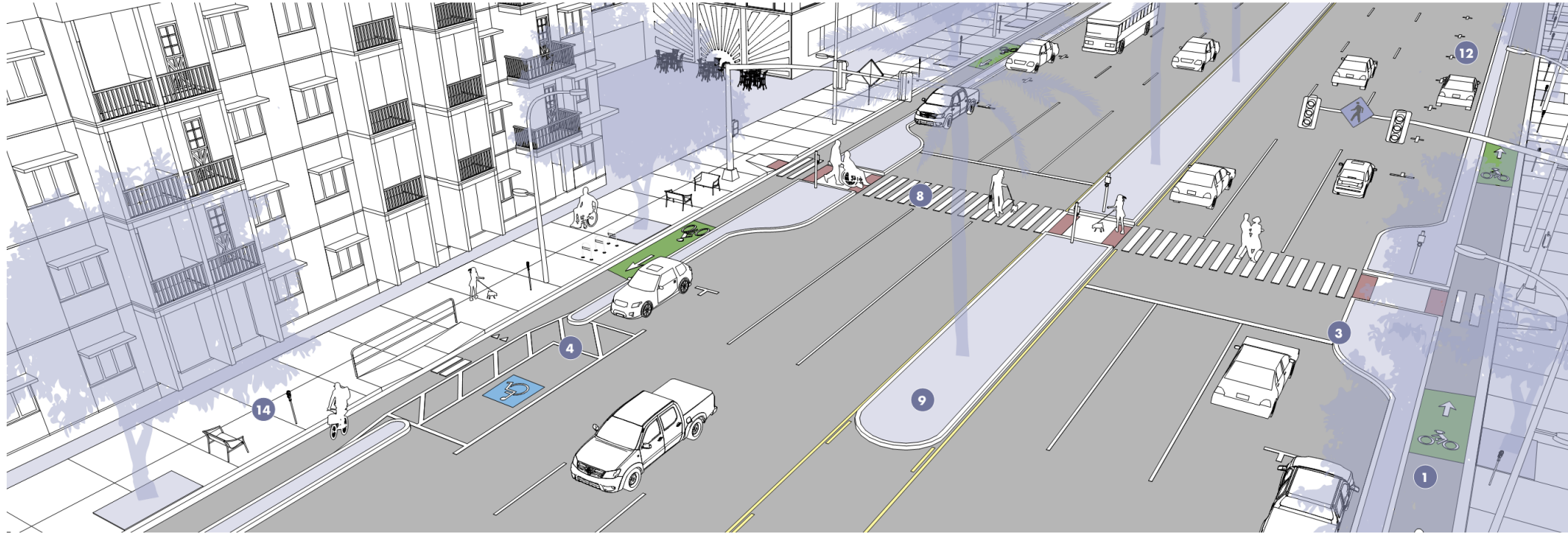
Street trees and landscaping create a welcoming urban environment by providing shade, improving air quality, and creating visual interest. Follow the Culver City Urban Forest Master Plan when determining the location, removal, and planting and replacement of new trees.

10 Turn Lanes

Turn lanes are dedicated spaces for motorists to queue before turning.

(X) Outline dot items are not shown on diagram

Primary Arterial | Context-Dependent Standards



CONTEXT-DEPENDENT

1 Bicycle Facilities

Shared-use paths, bike lanes, or separated bikeways may be appropriate for Primary Arterials. Bicycle facilities are only required on streets identified in the BPAP.

2 Bus Bulb

Bus bulbs are a type of curb extension to provide extra space for bus shelters, signage, and other transit-related amenities.

3 Curb Extensions

Curb extensions shorten crossing distances for pedestrians.

4 Curbside Management (parking and loading zones)

Curbside zones, such as ADA accessible parking, provides space for mobility device users to safely access the sidewalk from the parking space.

5 Driveways

Driveways provide access to spaces from the roadway, serving residences, buildings, and parking. Driveways may be more frequent on Primary Arterials compared to other street classifications.

6 Freight Management

On truck routes, freight management strategies may require larger vehicle

lanes and larger commercial loading zones. Most truck routes in the City are on primary or Secondary Arterials.

7 Horizontal Deflection

Horizontal deflection may include curb extensions, chicanes, pinch-points, or neck-downs. On Primary Arterials, these types of treatments are typically implemented at intersections.

8 Marked Crosswalks

Crosswalks extend the sidewalk across an intersection or mid-block for people walking, biking, and rolling. On Primary Arterials, where crosswalks are marked, they must be controlled by a traffic signal or pedestrian hybrid beacon.

9 Medians

Generally located in the center of the right-of-way, medians increase safety and enhance roadway operations by reducing vehicular movement conflicts and limiting turning movements. Pedestrian refuge islands in medians provide a space for pedestrians to wait while crossing wide streets.

10 Micromobility

Micromobility can refer to bicycles, e-bikes, e-skateboards, scooters, e-scooters and other devices that are distinct from motor vehicles. Parking corrals for micromobility can prevent overcrowding on the sidewalk.

11 Mobility Hubs

Mobility hubs vary in size and can include facilities like transit shelters, seating, bike racks, rideshare pick-up, shared micromobility, and wi-fi.

12 On-Street Parking

On-street parking supports storefront retail and serves residents and visitors for short-term parking needs. Parking demand may dictate where other Complete Streets elements can be prioritized.

13 Outdoor Dining

Using a permit issued by the City, outdoor dining areas allow for restaurants and cafes to extend their business service area into the public right-of-way.

14 Parking Meters and Pay Stations

Parking meters and stations allow the City to collect revenue and to encourage parking turnover at commercial, retail, and dining locations, such as those along Primary Arterials.

15 Parklets

Parklets are outdoor spaces provided in the roadway adjacent to the curb. Parklets may be used for outdoor dining, and should be designed using the City Parklet Design Guidelines.

X Outline dot items are not shown on diagram

“Reclassify my street to a...”

- Street classifications are from the General Plan
- They are not proposed to be modified as part of this project



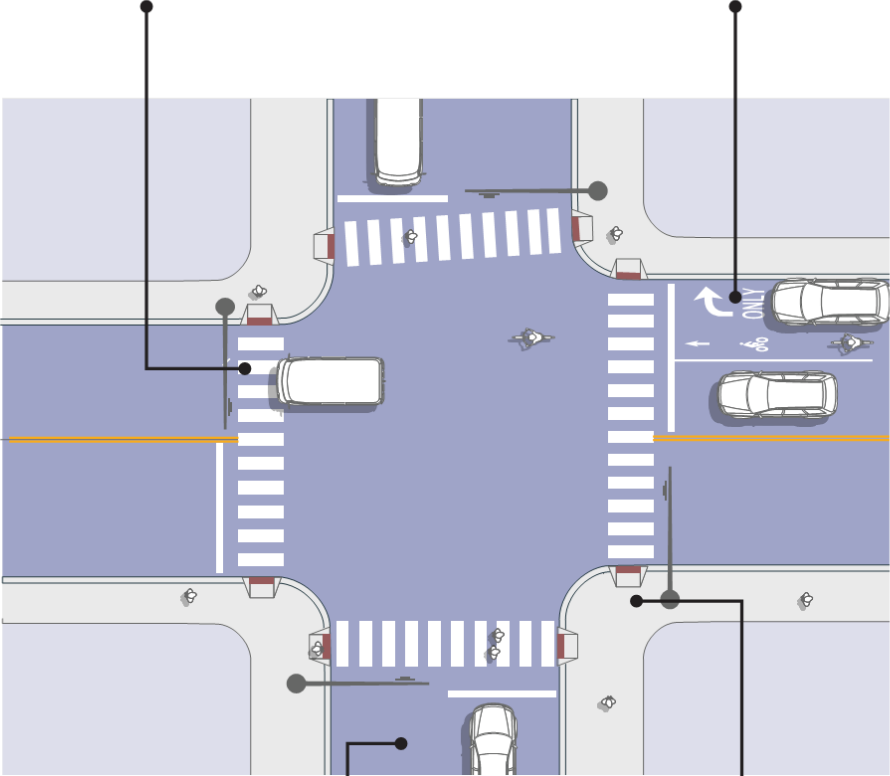
“Intersections should have a dedicated section”

- They do now.

General Intersection | Standards

Crosswalks shall connect directly from one curb ramp to another. High-visibility crosswalks are preferred at all crossing locations. Locations where crosswalks should be marked are defined in the BPAP. On all approaches to a crosswalk, provide pedestrian-scale lighting 10-15 ft upstream of the crosswalk on both sides of the street.

Turn lanes are dedicated spaces for motorists to queue before turning. Combined bike/turn lanes can allow bicyclists to continue straight through an intersection without needing to shift to the adjacent through lane, but should only be used if available pavement width is inadequate for a dedicated bike lane outside the right turn lane.

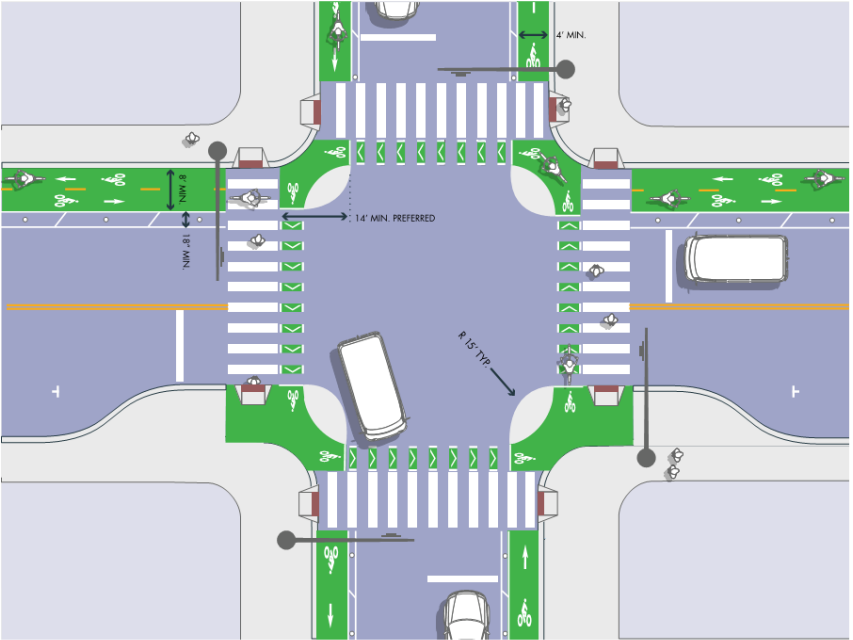


Vehicle lanes accommodate the throughput of motorized vehicles (automobiles, buses, trucks). Vehicle lane widths are typically 10-12 ft, with wider widths to accommodate trucks, buses and emergency vehicles.

Culver City curb ramps must comply with federal and state accessibility standards. Directional curb ramps that point pedestrians perpendicularly across the street are preferred over diagonal curb ramps.

Intersection Types

PROTECTED INTERSECTION



INTERSECTION STANDARDS

Different intersection types will require Complete Streets design elements that meet the needs of the pedestrians, bicyclists, motorists, and transit riders that need to cross the intersection.

PROTECTED INTERSECTION

Protected intersections feature a combination of design elements that physically protect pedestrians and bicyclists waiting to cross the intersection. Protected intersections are appropriate at major intersections with bicycle facilities and sidewalk on all or most approaches.

Read more about protected intersection standards on page 144.

CONVENTIONAL INTERSECTIONS WITH BIKEWAYS AT MAJOR STREET

At major Collector and Arterial streets with bikeways and sidewalks, design elements should be implemented that create safe opportunities for pedestrians and bicyclists to cross the street. These intersections may feature design elements like bicycle crossings, bicycle signals, bike boxes, and two-stage turn boxes.

Read more about bicycle intersection treatments on page 118.

CONVENTIONAL INTERSECTIONS WITH BIKEWAYS AT MINOR STREET

At Minor Collector and Local Street intersections active transportation facilities may be less robust and crossings may feel more comfortable

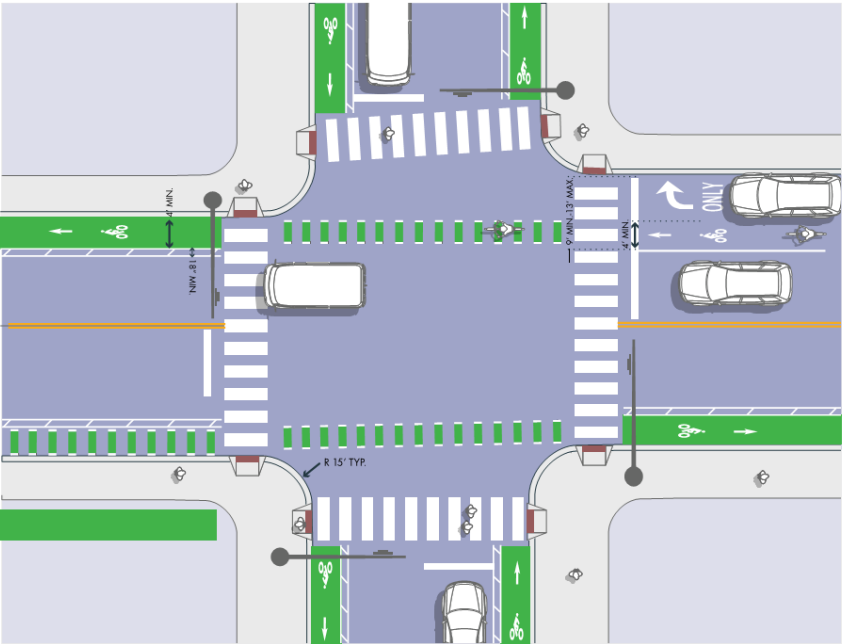
lower traffic speeds or traffic volumes. When minor streets intersect with larger streets with fewer pedestrian or bicyclist facilities, design elements like crosswalks and bicycle crossing should lead pedestrians and bicyclists to continue their path of travel on the minor street.

REFERENCES

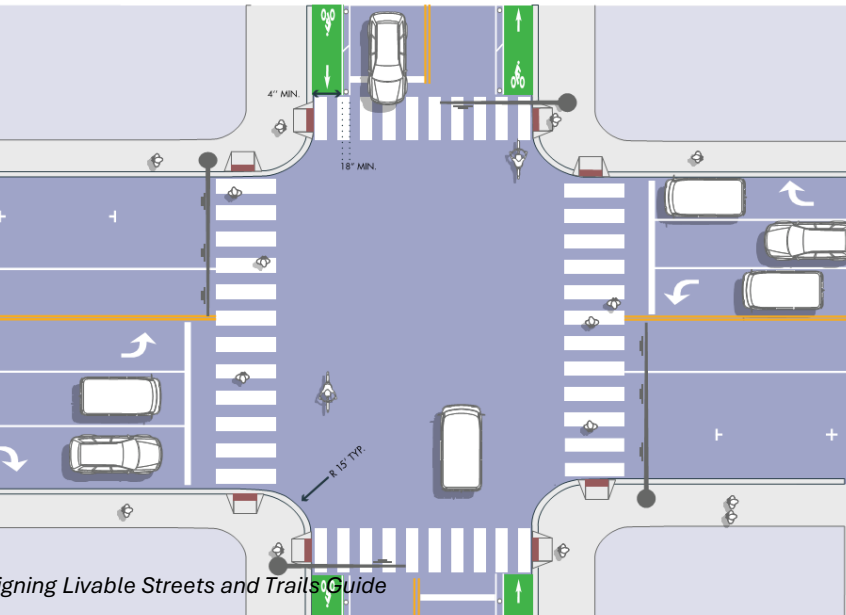
To understand the complexities of intersections and the variety of context-dependent configurations refer to:

- FHWA's *Improving Intersections for Pedestrians and Bicyclists Informational Guide*
- NACTO's *Don't Give Up at the Intersection*
- PROWAG

INTERSECTION WITH CONVENTIONAL BIKEWAY TREATMENTS AT MAJOR STREET



INTERSECTION WITH CONVENTIONAL BIKEWAY TREATMENTS AT MINOR STREET

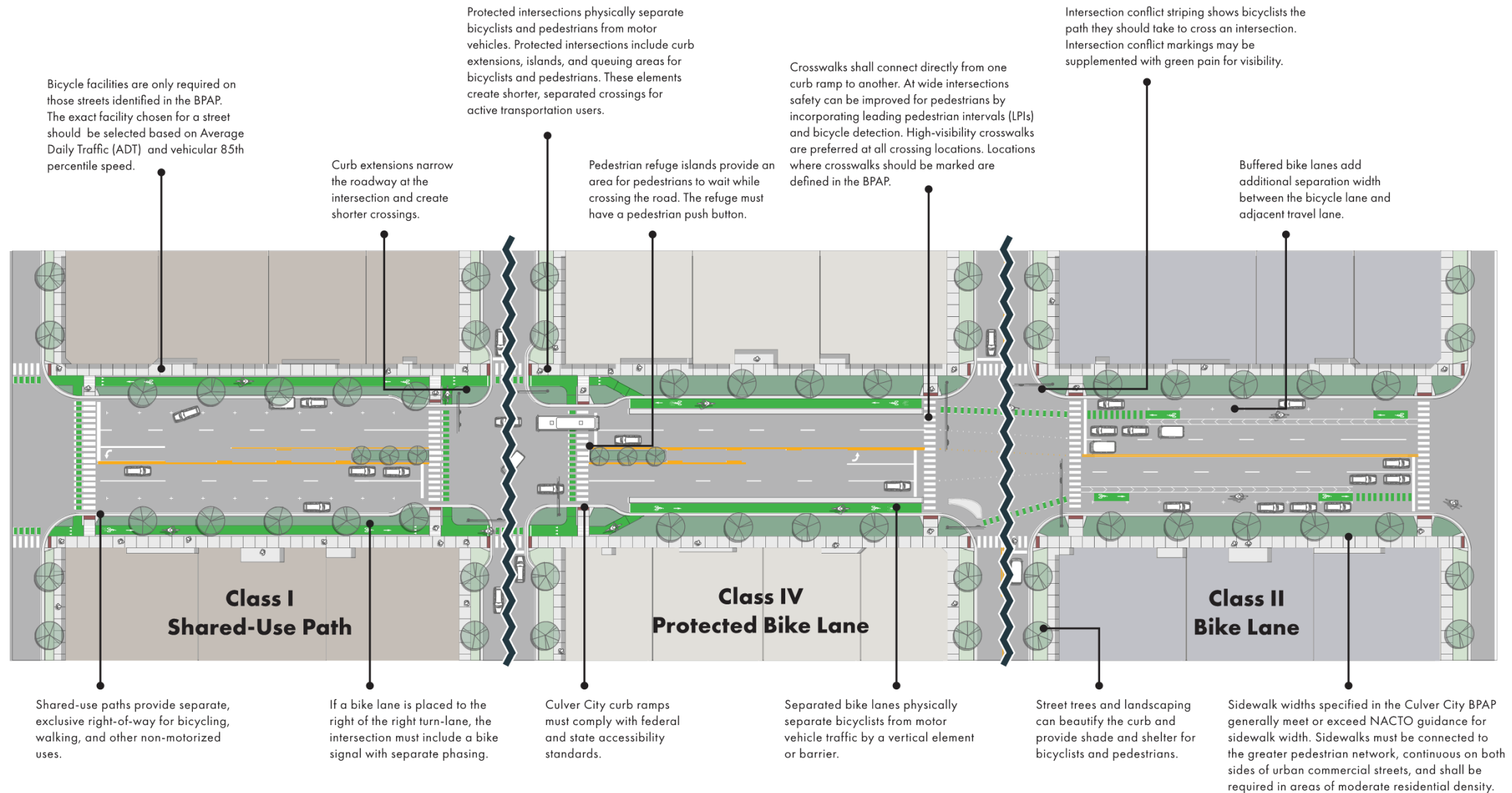


“More efficient modes should be given priority.”

- Sections have been added dedicated to Transit Priority Corridors and Active Transportation Corridors
- Emphasize modal priorities on these corridors
- Consistent with General Plan

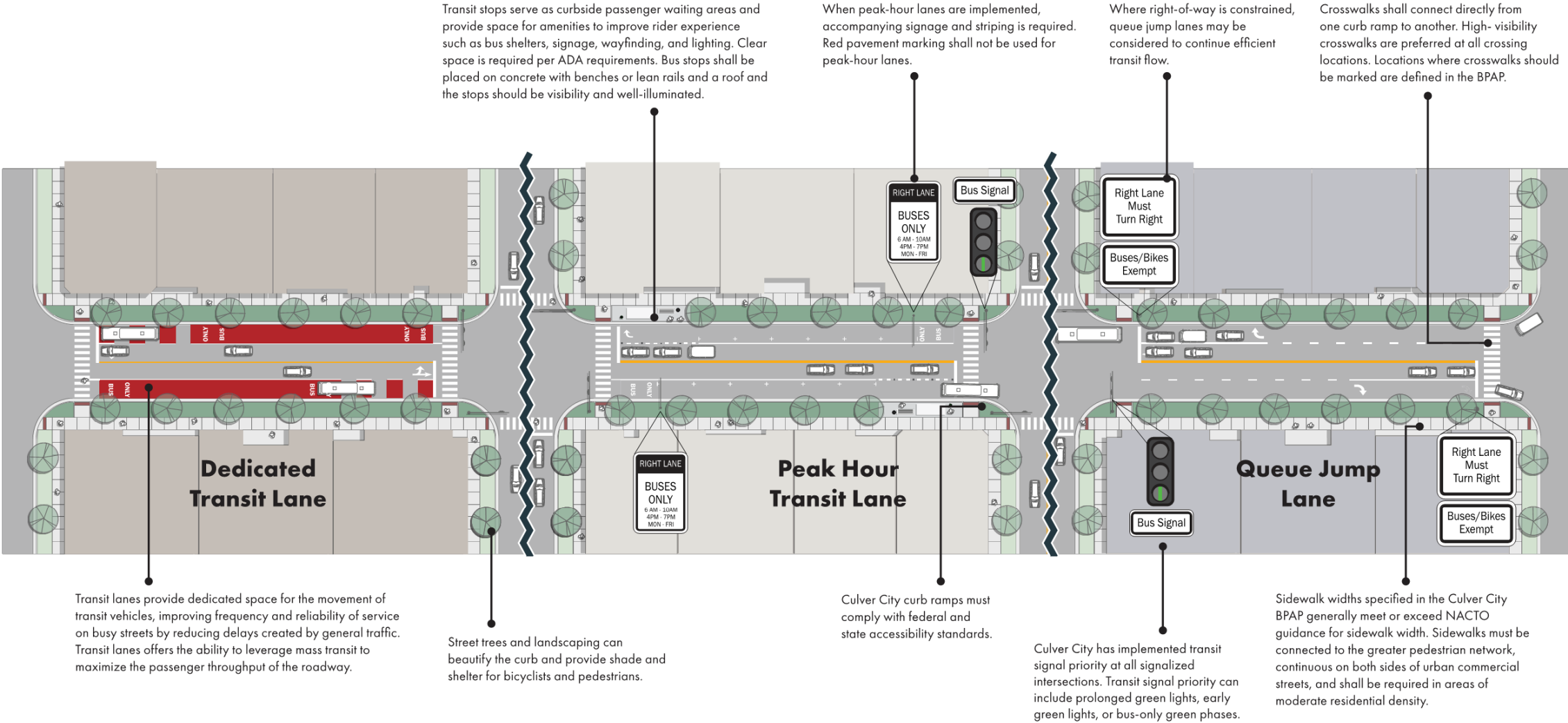
Active Transportation Corridor | Design Element Options

This corridor graphic is intended to show a comparison of design elements, not actual street design.



Transit Priority Corridor | Design Element Options

This corridor graphic is intended to show a comparison of design elements, not actual street design.



“The document lacks mention of Vision Zero and fails to address matters related to speeding.”

- Vision Zero is embedded throughout the document
- Design elements effectuate safe streets and further the City’s Vision Zero goal
- Safety as a Guiding Principle
- Specific reference to Vision Zero will be added
- Speeds are driven by design.
- Design elements will directly affect speeds.
- Lowering speed limits absent design changes and/or constant enforcement is ineffective and may lead to a false sense of security for vulnerable roadway users.

STANDARDS

REQUIRED

- Review drainage infrastructure when designing curb extensions. Drainage infrastructure may be costly to relocate.
- Stop signs or signals may need to be relocated closer to travel lanes to maintain visibility to drivers and pedestrians.
- Pedestrian push buttons may need to be relocated to be ADA-compliant and remain adjacent to the curb ramp.

RECOMMENDED

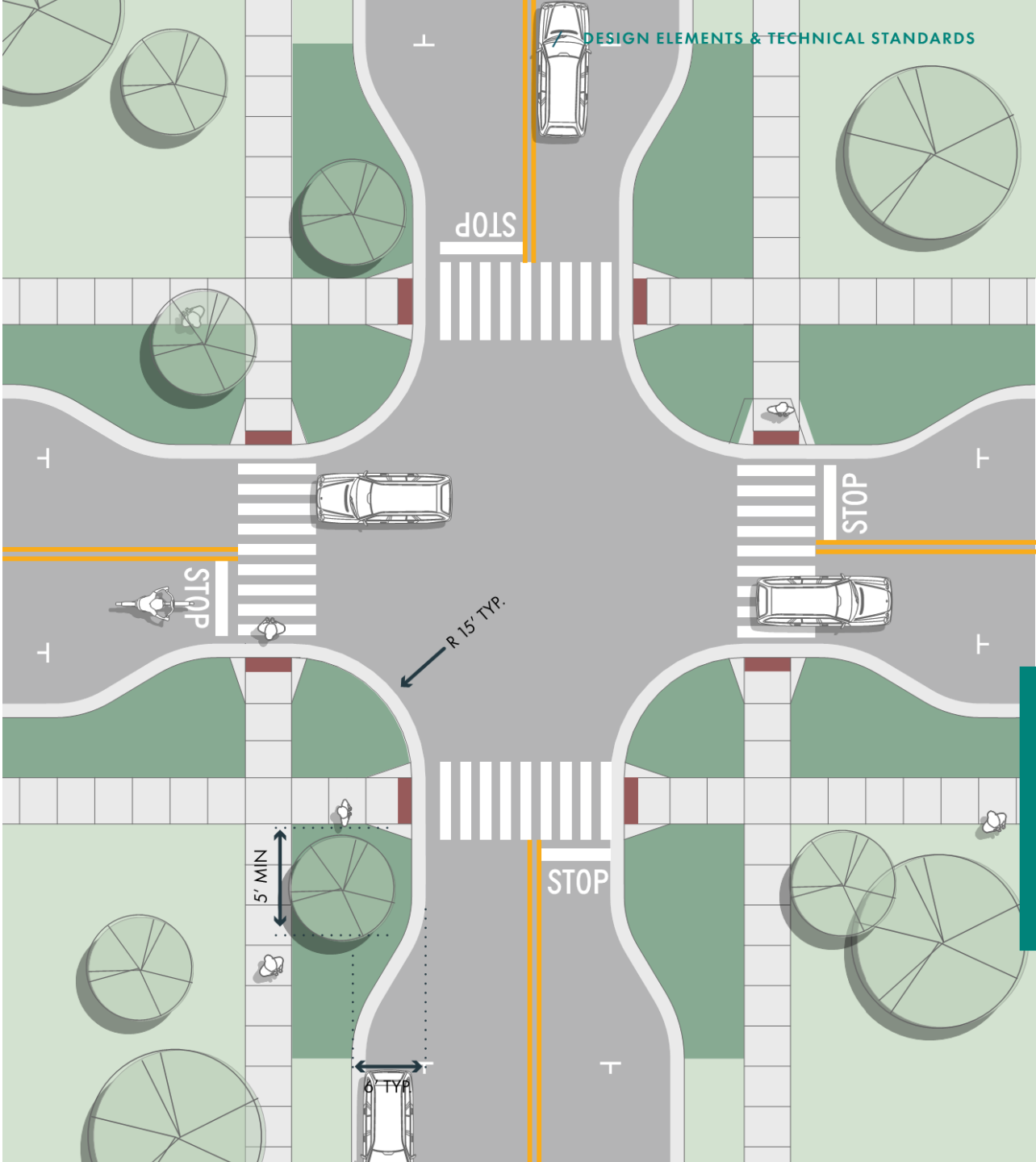
- The 10–15 ft curb radii per the BPAP currently only applies to TOD Districts/ Areas. Consider reducing the curb radius to 15 ft or less on most streets (except for transit and truck routes where those vehicles are expected to turn).
- Curb extensions are recommended at all crosswalks, particularly at uncontrolled pedestrian crossings where parking lanes exist and bicycle lanes are not present or planned.
- Curb extensions should be approximately the depth of the parking lane.

Curb Zone

Curb Extensions

Curb extensions are treatments to physically narrow the roadway at intersections or mid-block crossings. They are used to create safer, shorter crossings, increase pedestrian visibility, slow traffic speeds, and may accommodate street furniture or landscaping. If curb extensions reduce the curb radius it will slow vehicular turns, improving pedestrian safety in the adjacent crosswalk. Existing on-street parking may need to be removed to accommodate curb extensions.

Before designing curb extensions, a design vehicle must be established. A design vehicle typically represents the most common user of the facility. The design vehicle should be able to complete their turning movements without diverting from their lanes. Emergency service vehicles and large trucks should still be able to complete their turning movement, but may do so by diverting from their lane (e.g., taking a wider turn).



STANDARDS

REQUIRED

- Bicycle boulevards should include traffic calming strategies, including speed management.
- To keep vehicular speeds low on a bicycle boulevard, deploy traffic calming measures where 85th percentile speeds exceed 25 mph. 20 mph is the preferred vehicular speed on a bike boulevard if ADT is greater than 1,500.

RECOMMENDED

- Devices such as diverters or strategic roadway closures and modal filters can reduce cut-through traffic on bike boulevards.
- Gateway treatments and curb extension elements are encouraged within the TOD Visioning Zone defined between Venice, Overland, La Cienega, and Jefferson.
- Learn more about bicycle boulevards on page 110.

Traffic Calming Measures

Traffic calming measures are roadway features or configurations designed to manage traffic speeds and volumes. Treatments may include vertical elements like speed humps or horizontal elements like chicanes or roadway narrowing. Traffic calming may also include roadway reconfigurations or elimination of travel lanes. Traffic calming measures are encouraged on Class IIIB bicycle boulevards to encourage slower speeds and reduce cut-through traffic.

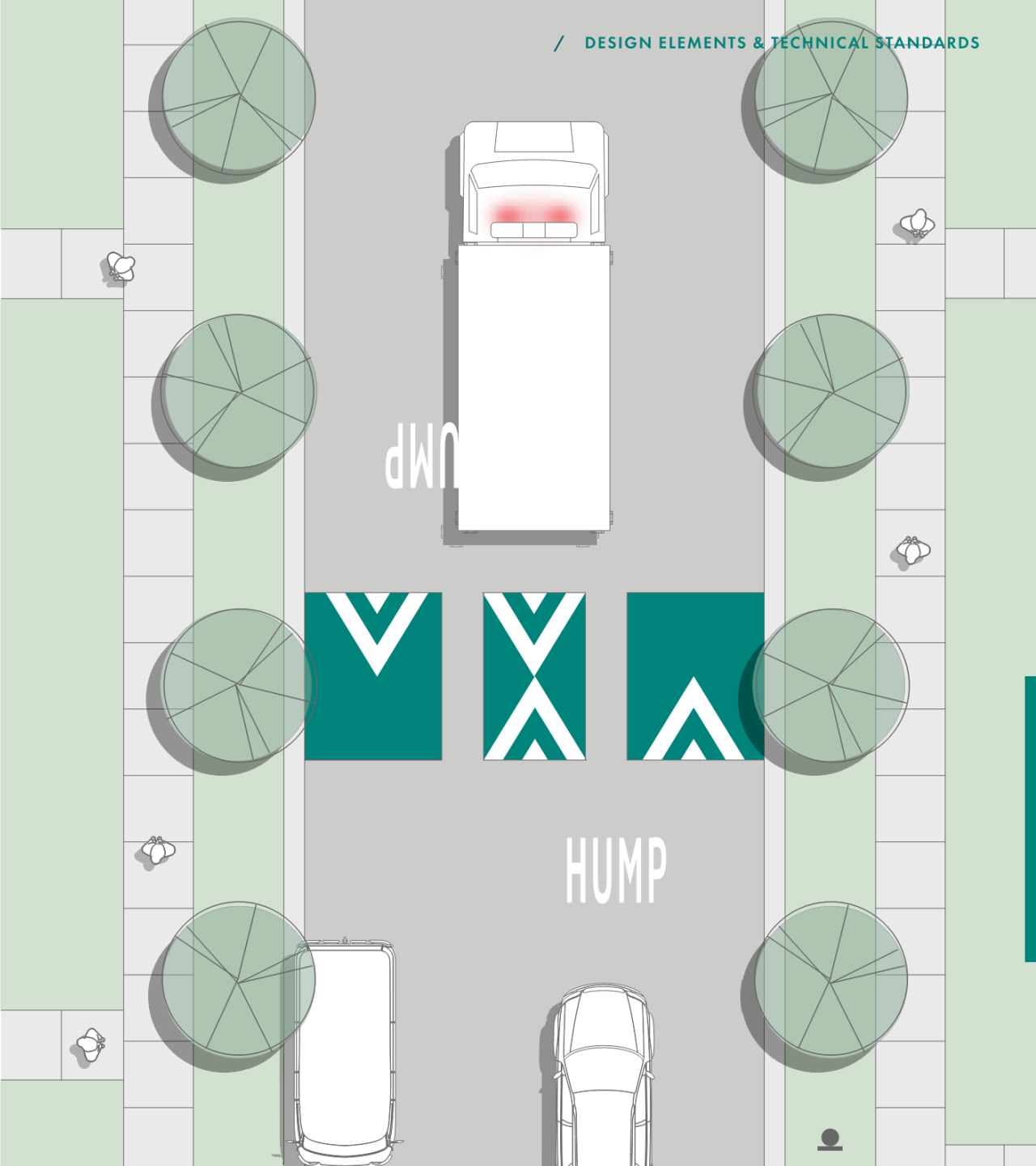
FHWA guidance states that roads with 4-lane cross sections may be appropriate for a reconfiguration to 2 lanes with a center turning lane when total ADT volumes are below 20,000 vehicles. Reconfigurations have been successfully implemented up to 25,000 ADT. Lane reconfigurations permit the inclusion of new bicycle or transit infrastructure and are a proven safety countermeasure.

On arterial streets with speeds up to 35 mph, traffic calming measures may reduce 85th-percentile observed vehicle speeds. Posted speeds can be further reduced by defining Safety Corridors, Bicycle/Pedestrian Generators, and Business Activity Districts that are eligible for posted speed limit reductions through AB43 or AB1938.

Traffic calming measures must be implemented with consideration for emergency vehicle access.

REFERENCES FOR REVIEW

- City design guidance on bike boulevard treatments are generally in line with NACTO best practice to reduce vehicle volumes.
- Refer to the ITE Traffic Calming fact sheets for an overview of traffic calming options.



STANDARDS

REQUIRED

- Crosswalk markings within school zones must be yellow.

RECOMMENDED

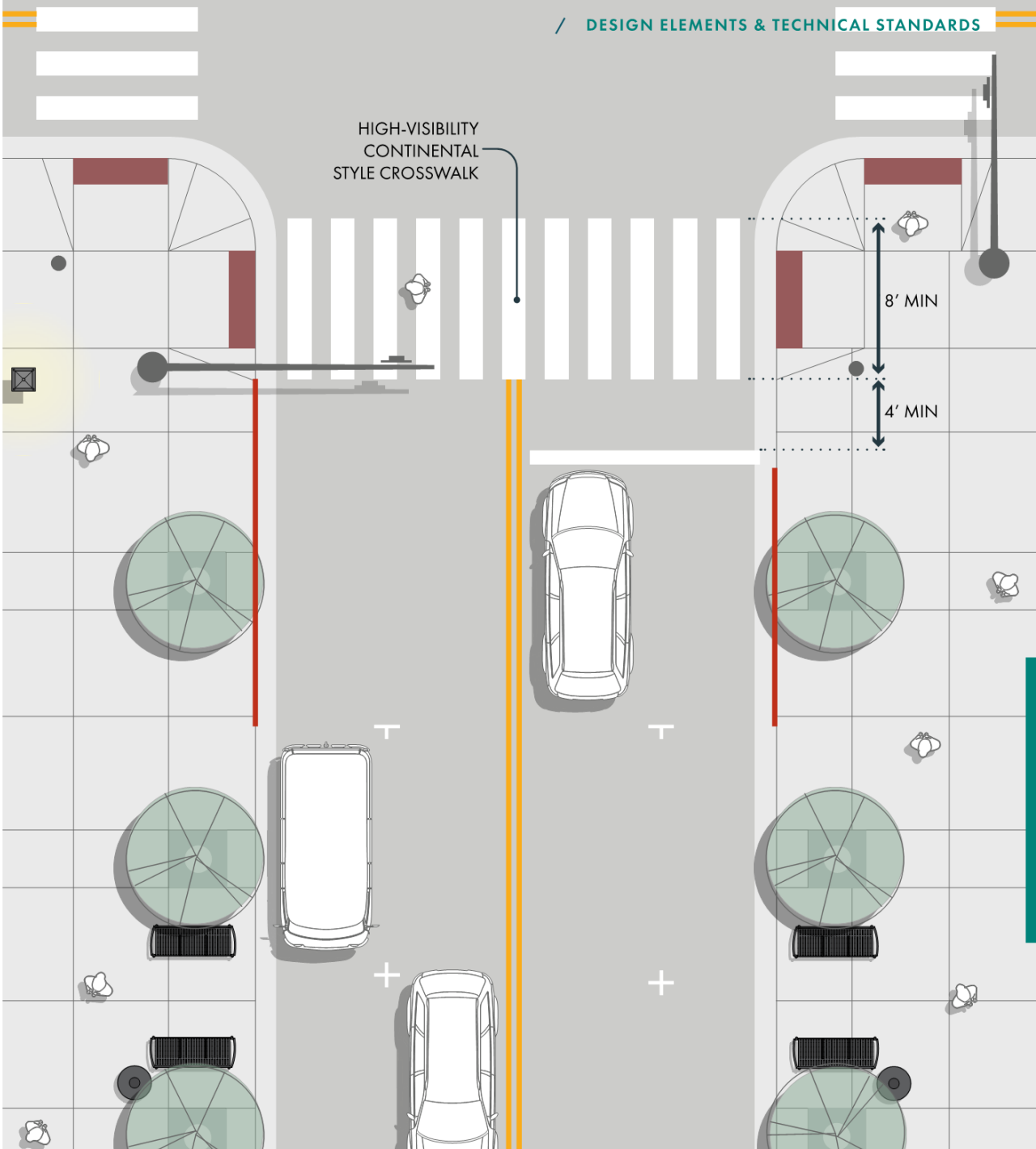
- High-visibility ladder or continental crosswalk markings are preferred.
- Because the effectiveness of marked crossings depends on their visibility, maintaining marked crossings should be a high priority. Thermoplastic markings offer increased durability than conventional paint.

Crosswalk Striping

High-visibility crosswalk striping and materials, such as continental or ladder crosswalk striping, improves visibility of crossing pedestrians. Parallel crosswalk striping helps to delineate the pedestrian path across a street or intersection, but is not preferred as a minimum condition.

REFERENCES FOR REVIEW

- Reference the CA MUTCD and the BPAP for striping width and pattern information.
- Refer to the latest FHWA guidelines for acceptable artistic or decorative crosswalk design.



STANDARDS

REQUIRED

- Pedestrian crosswalks shall be further set back from intersections to accommodate the bicycle crossing and other geometric requirements.
- Where a dedicated right turn lane is provided, a protected intersection must include a bike signal and separate phasing.

RECOMMENDED

- Consider that green conflict striping (if used) will generally require more frequent maintenance due to vehicle tire wear.
- Wayfinding and directional signage should be provided to help bicyclists navigate through the intersection.
- Colored pavement may be used within the corner refuge area to indicate space for bicyclists that should not be occupied by pedestrians.

BIKEWAY SETBACK

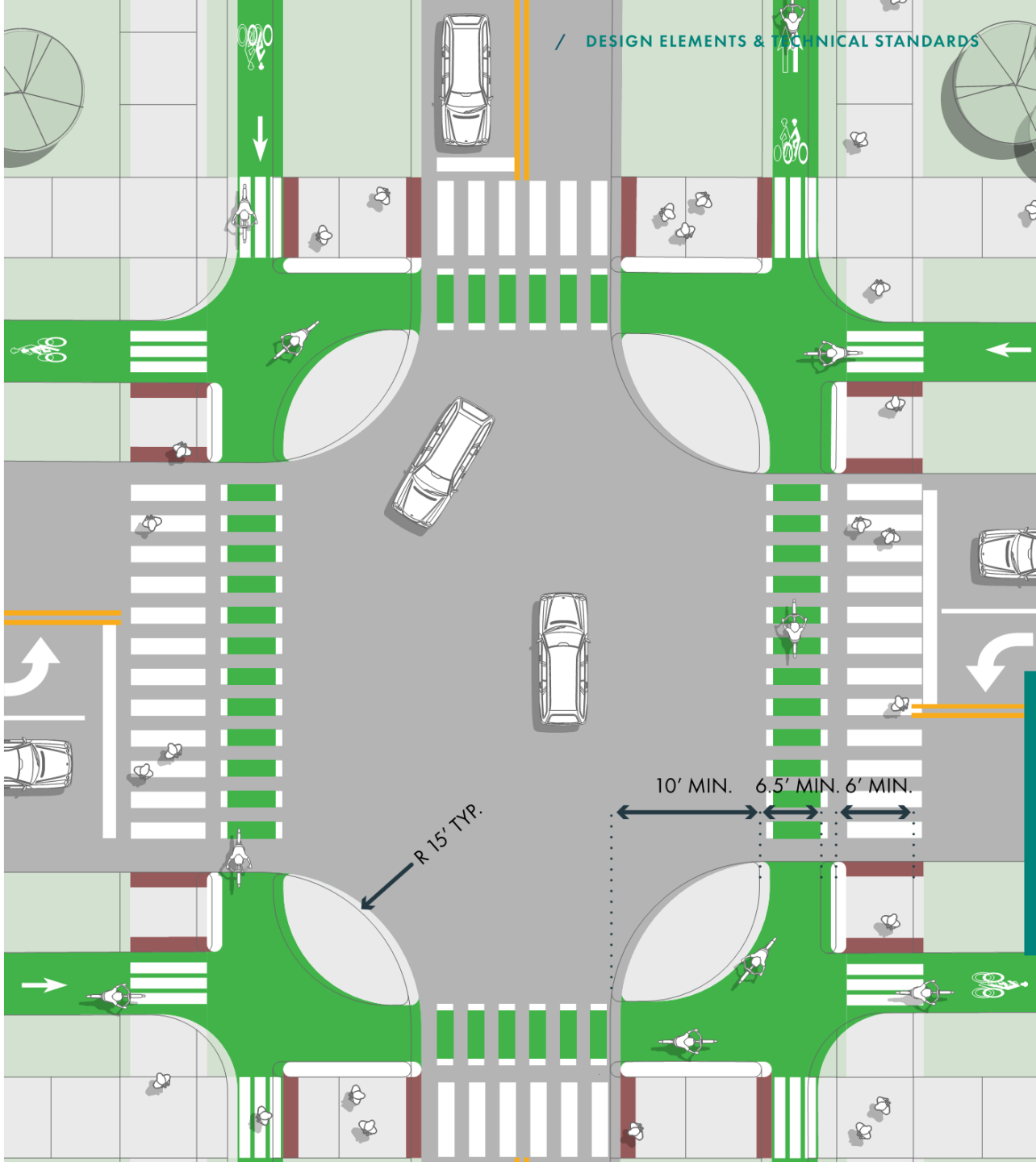
- When practical, a 14-20 ft setback is preferred.
- Setbacks smaller than 12 ft shall be accompanied by longer clear distances, additional signal phasing or speed reduction strategies.
- Setbacks larger than 25 ft shall be treated as a separate intersection.
- 20-30 ft no stopping/standing zone is generally adequate.

Protected Intersections

Protected intersections physically separate bicyclists and pedestrians from motor vehicles. Protected intersections include curb extensions, islands, and queuing areas for bicyclists and pedestrians. These elements create shorter, separated crossings for active transportation users.

REFERENCES FOR REVIEW

- Refer to the BPAP and NACTO Don't Give up at the Intersection for further guidance.



STANDARDS

REQUIRED

- Pedestrian refuge islands should be at least 6 ft wide to be ADA-compliant. Refuge islands should extend at least 40 ft from the intersection where possible.
- For ADA-compliance, the refuge needs a pedestrian push button so pedestrians are not stranded on the refuge.
- Fire access requirements often arise when considering a raised median, and should be considered.

RECOMMENDED

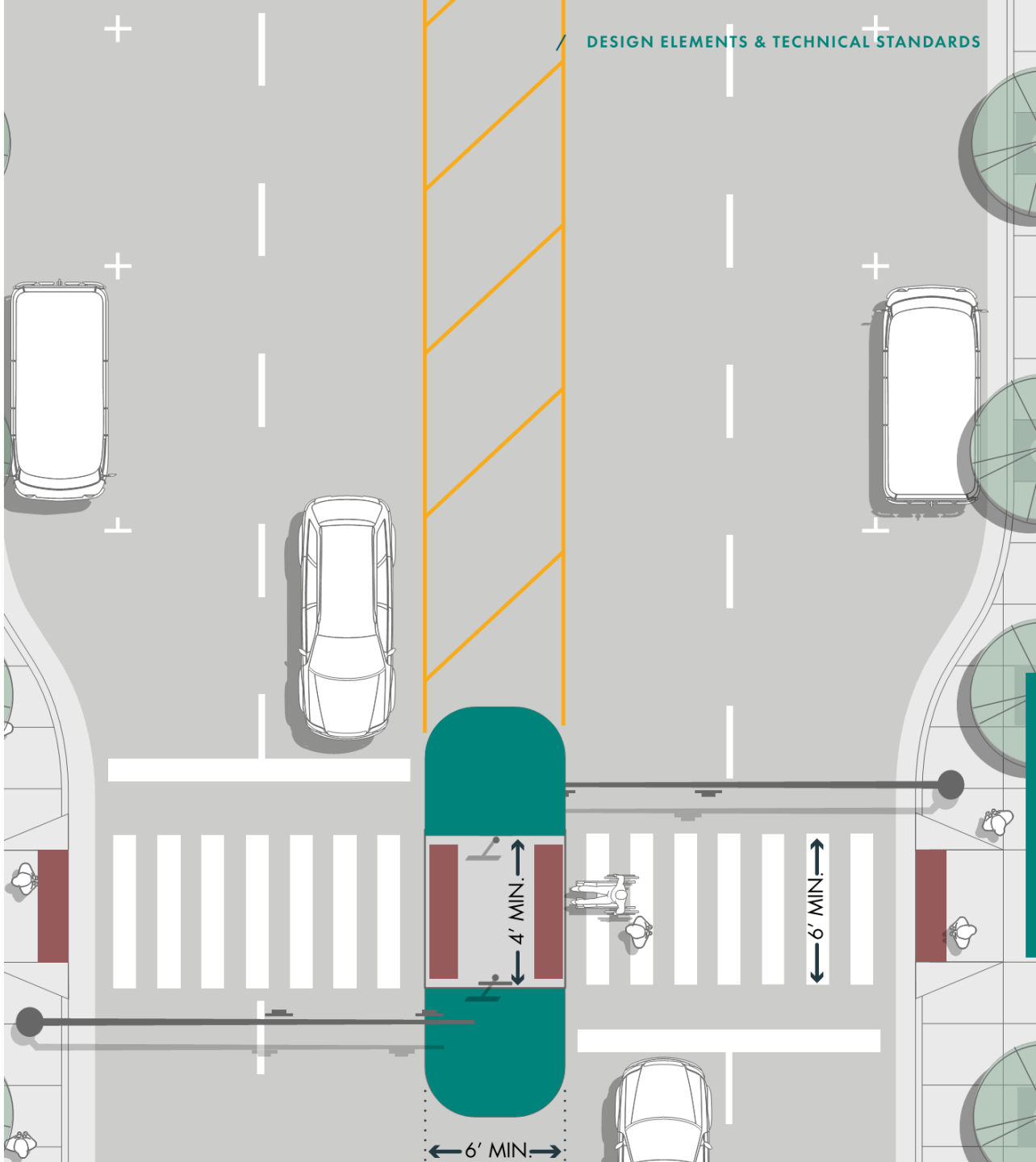
- Consider that median design may need to accommodate left turn opportunities for vehicles and be designed based on queuing needs.
- Curb extensions are recommended at all uncontrolled pedestrian crossings where parking lanes exist. Consider bicycle paths of travel in curb extension design.

CONTEXT-DEPENDENT

- Refuge islands may be placed in the middle of two-way streets with 4 or more lanes and speed limits of 35 mph or greater and/or 9,000 ADT or greater.
- Refuge islands may also be appropriate on wide 2- or 3-lane roads where vehicle speed and volumes are moderate to high.

Medians

Medians, generally located in the center of the right-of-way, increase safety and enhance roadway operations by reducing vehicular movement conflicts and limiting turning movements. Medians may also provide a location for signage, landscaping, and stormwater management. Median refuge islands provide an area for pedestrians to wait if they are unable to cross the entire roadway within the pedestrian phase. Median refuges break the crossing into shorter segments for pedestrians.





Discussion

Culver **CITY**