

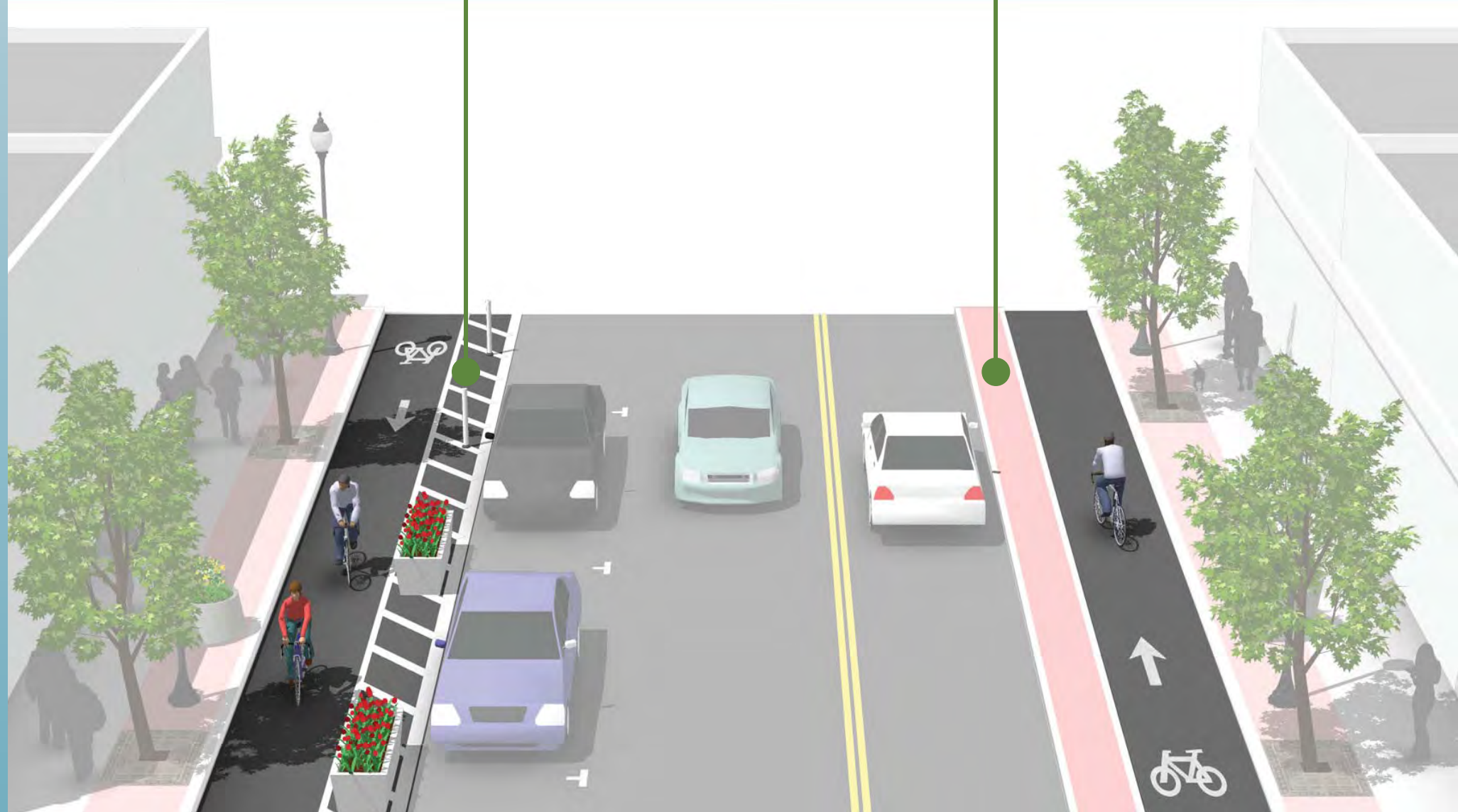
Cycle Track Design Best Practices

Cycle Track Sections

It is along street segments where the separation and protection methods of cycle tracks offer more comfort than conventional bicycle lanes, and are more attractive to a wide spectrum of the public.

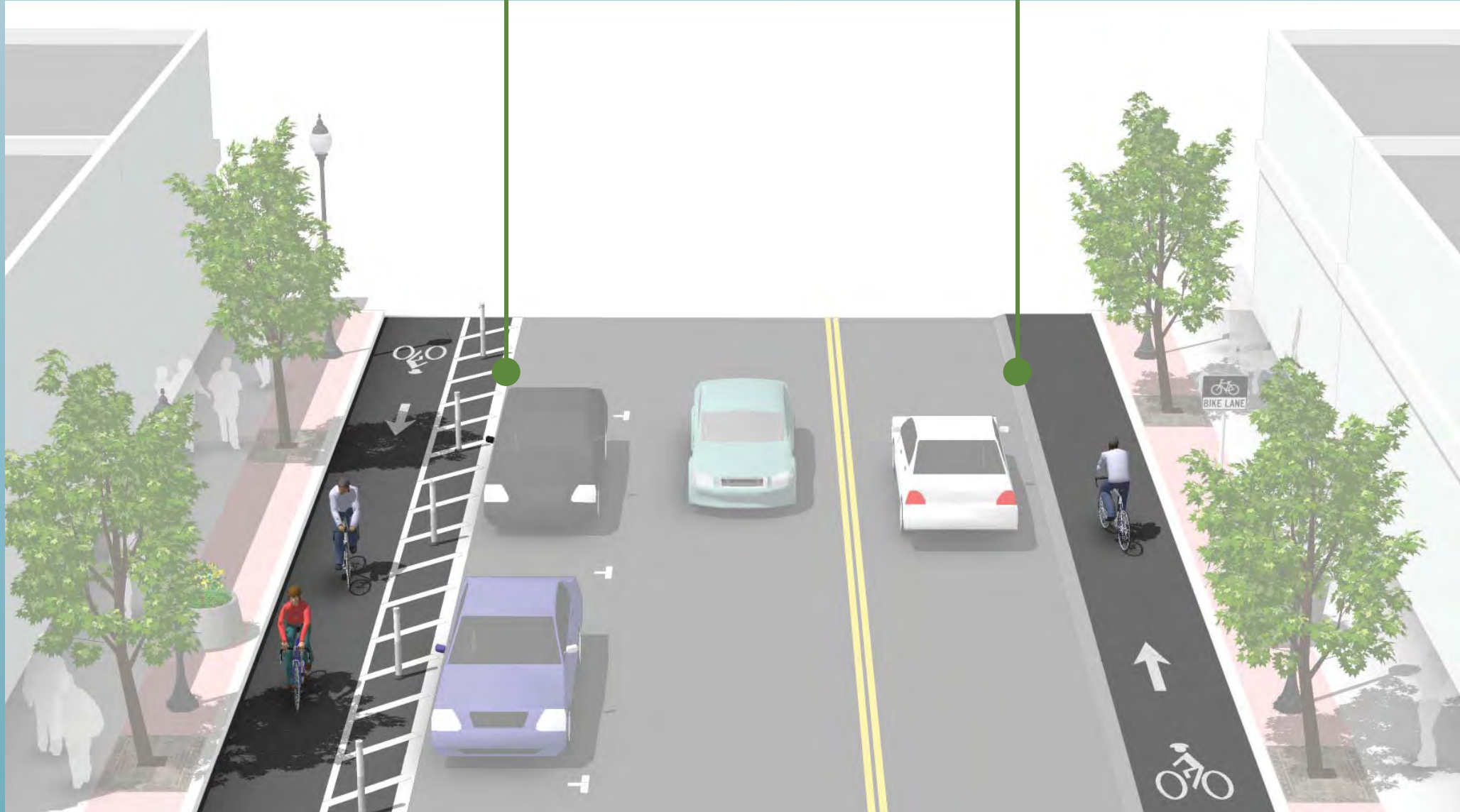
Adjacent to parking, the parking buffer should be at least 1.0 m wide to allow for passenger loading and to prevent door collisions.

Cycle track can be raised or at street level

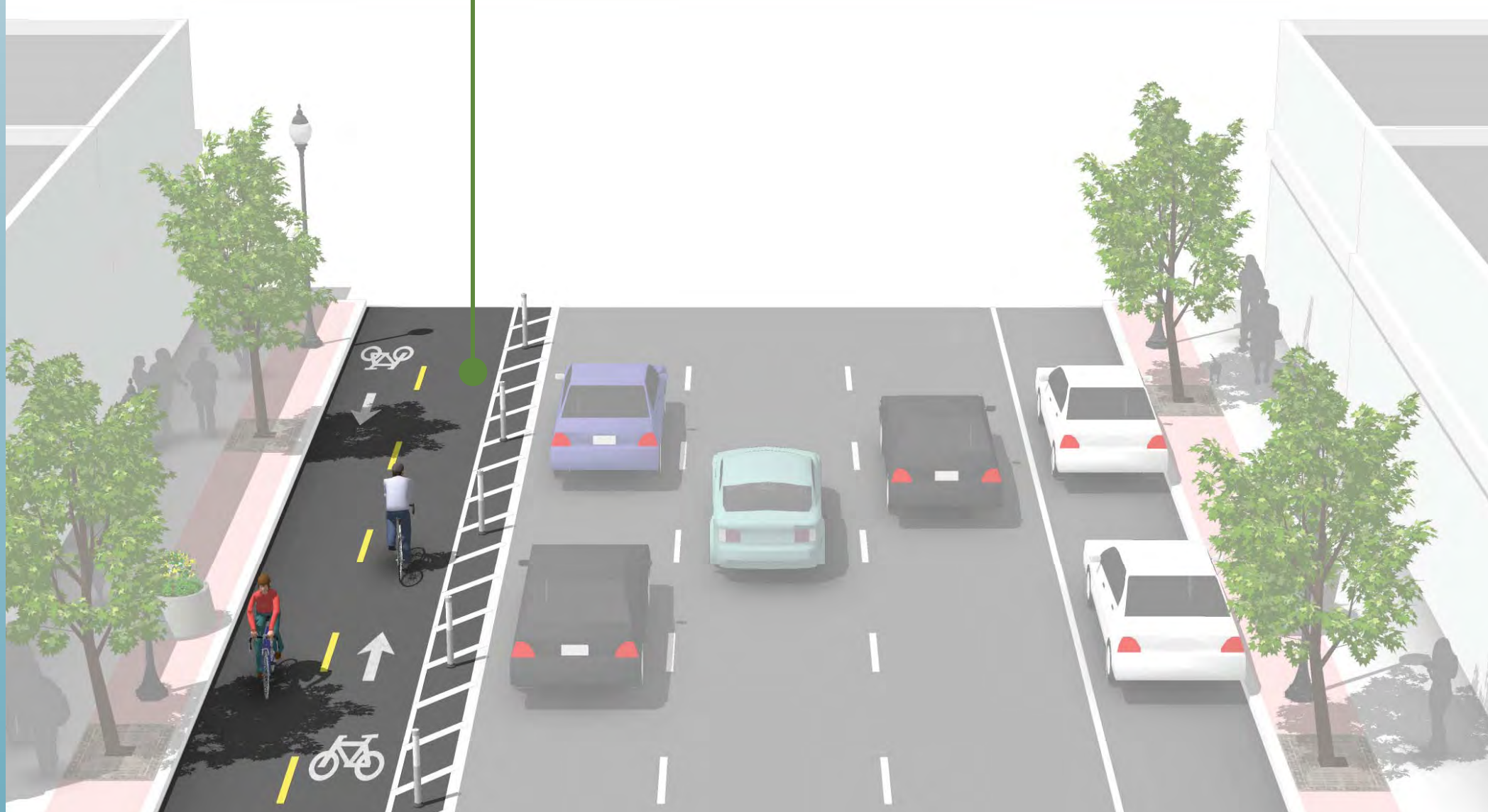


Street level cycle track with parking barrier

Raised cycle track with mountable curb



Two-way cycle tracks work best on one-way streets. Single direction motor vehicle travel minimizes potential conflict with bicyclists.



Separation Methods

Physical barriers can include bollards, parking, a planter strip, an extruded curb, or on-street parking.

One-Way Cycle Tracks

One-way cycle tracks are configured with two separate bikeway trends on each side of the street, traveling in the direction of adjacent general purpose travel lanes.

Two-Way Cycle Tracks

Two-way cycle tracks allow bicycle movement in both directions on one side of the street.



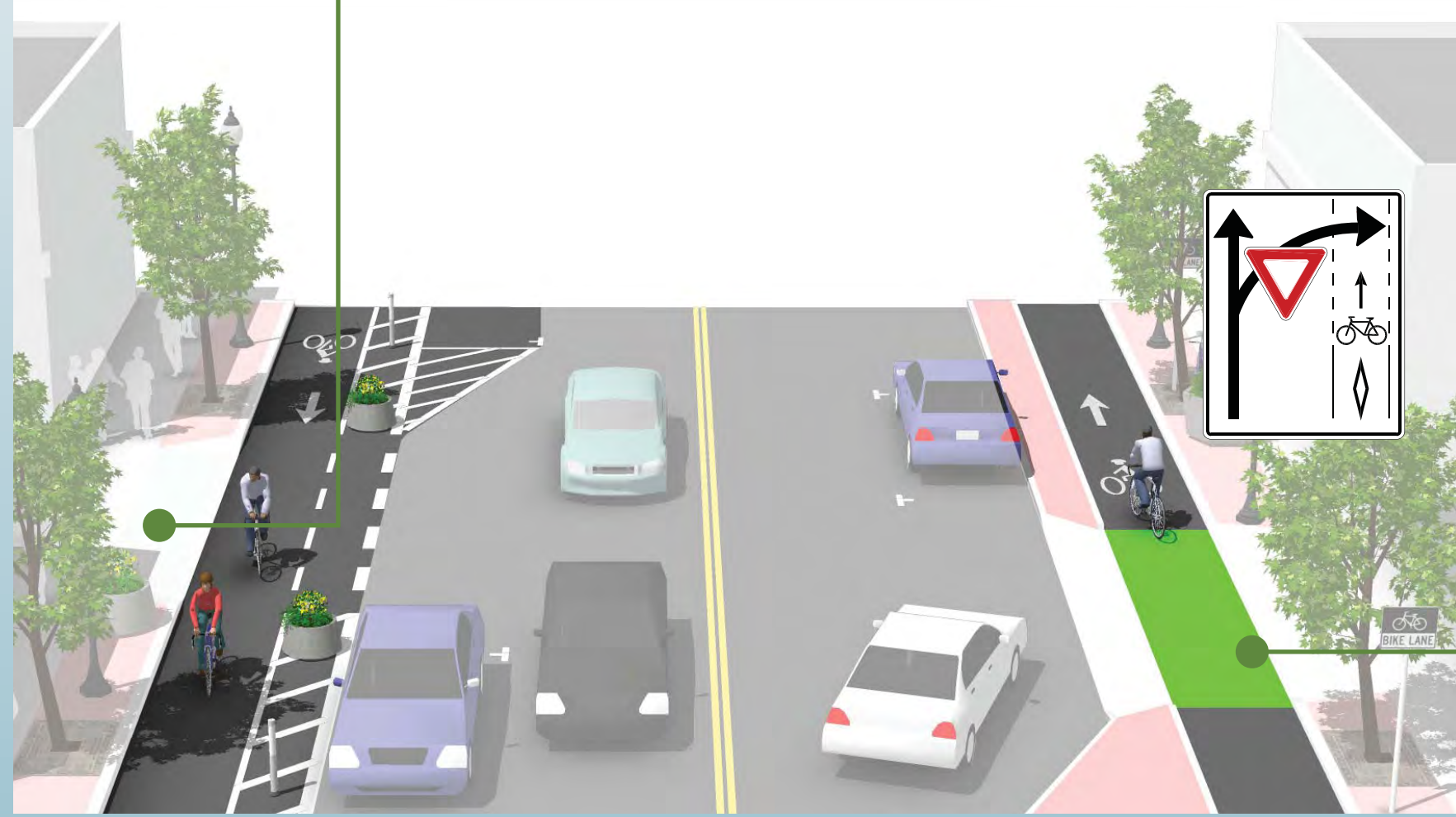
Cycle Track Design Best Practices

Cycle Track Intersections

Designs for intersections with cycle tracks should reduce conflict between bicyclists, pedestrians and motor vehicles by heightening the level of visibility, denoting clear right-of-way and facilitating eye contact and awareness with other modes. Intersection treatments can improve both queuing and merging maneuvers for bicyclists, and are often coordinated with timed or specialized signals.

Furnishings and other features should accommodate clear visibility to and from all driveway crossings

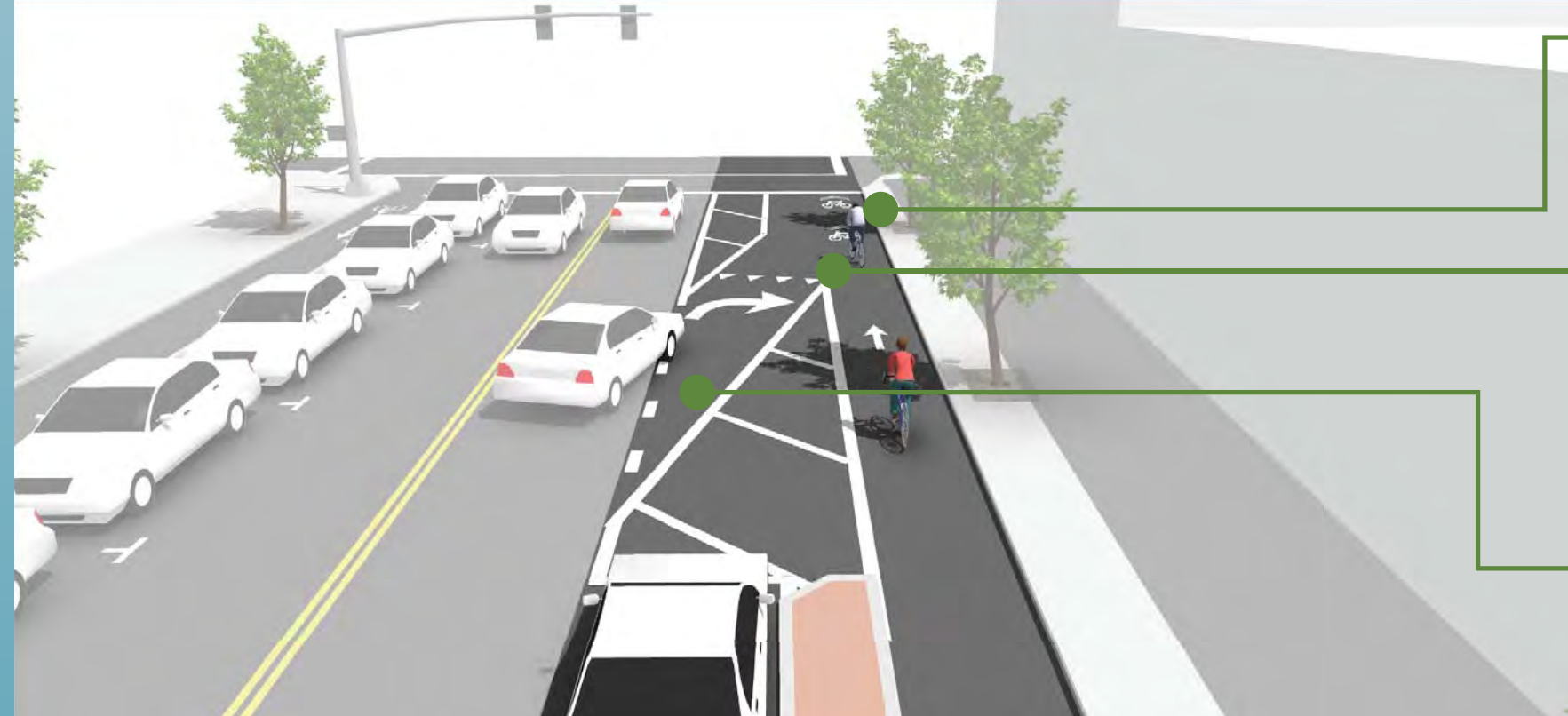
Openings in the barrier or curb are needed at driveways or other access points to allow vehicle crossing



Street level cycle tracks should indicate potential conflict areas with dotted lane lines, colored pavement, and signs

Driveways

At driveways and crossings of minor streets bicyclists in the cycle track have priority over turning vehicles.



Short turn lane lengths encourage slower motor vehicle travel speeds

Yield marking and signage indicates bicyclist priority in the mixing zone

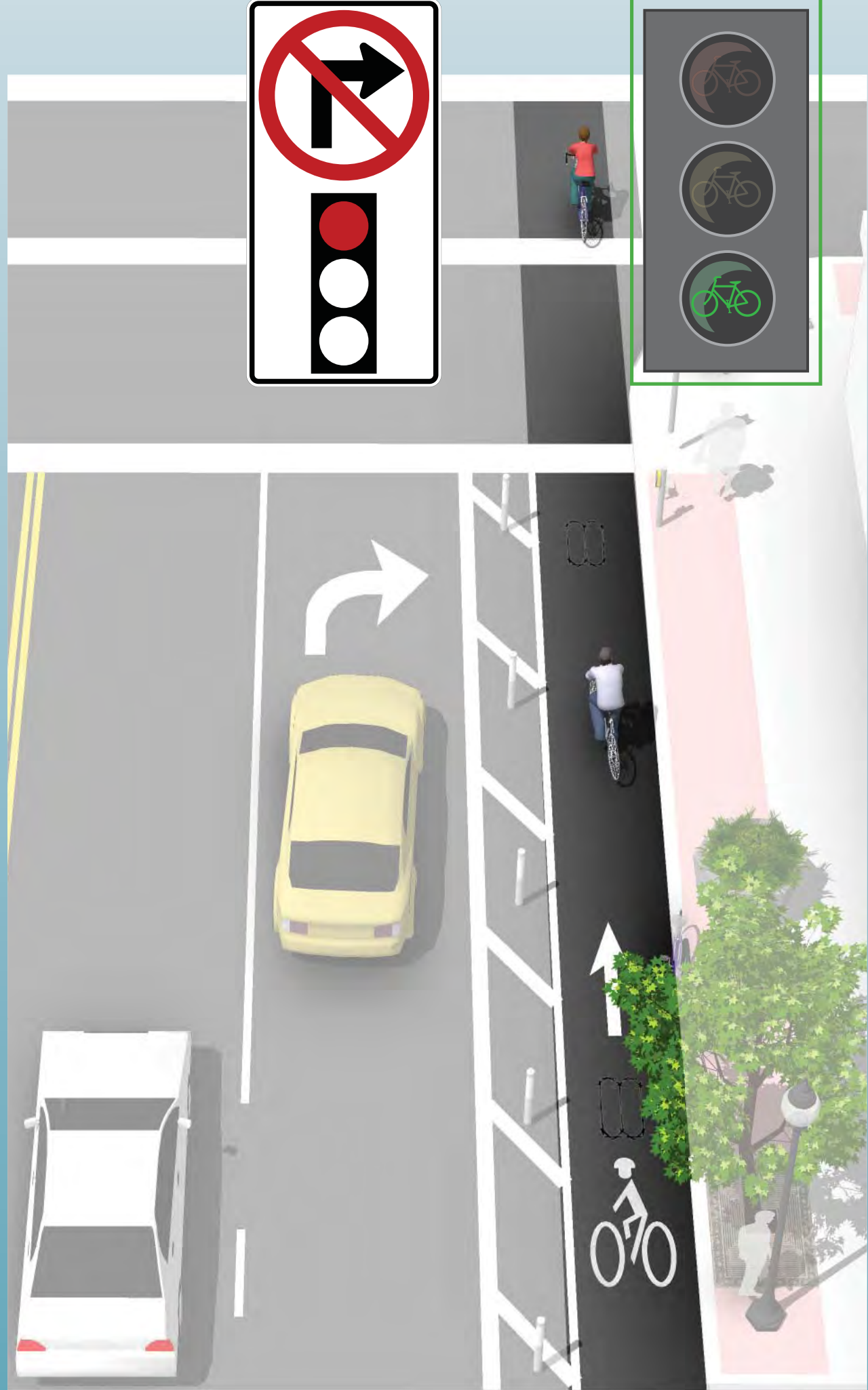
Potential conflicts are negotiated in advance of the intersection

Mixing Zones

A cycle track mixing zone is a shared lane intended for use by bicyclists and turning motor vehicles.



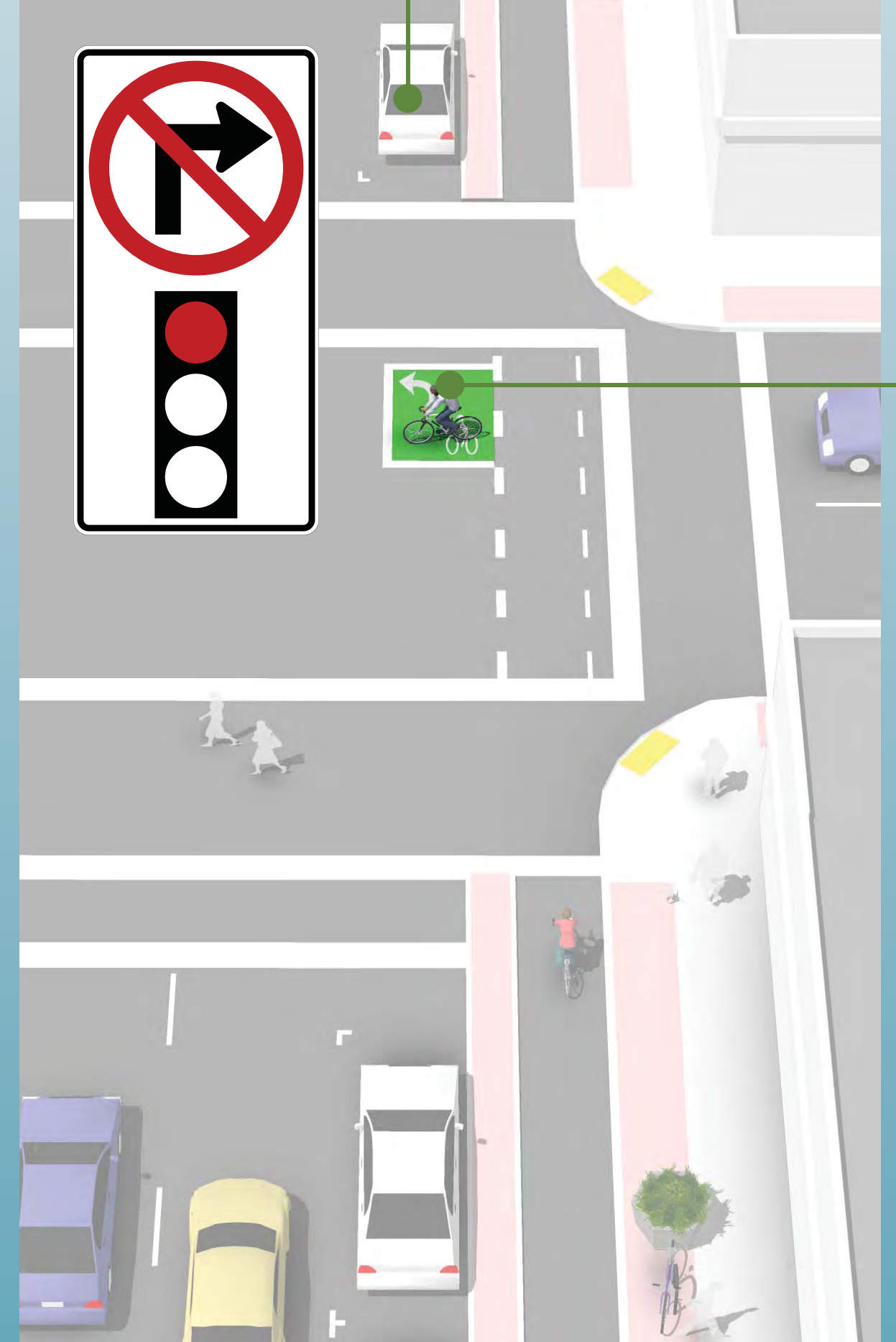
Demand-only bicycle signals can be implemented to reduce vehicle delay and to prevent an empty signal phase from regularly occurring.



Major Street Crossings

Cycle tracks approaching major intersections must minimize and mitigate potential conflicts with turning motor vehicles.

Turns from cycle tracks may be protected by a parking lane or other physical buffer



Consider using colored pavement inside the box to further define the bicycle space

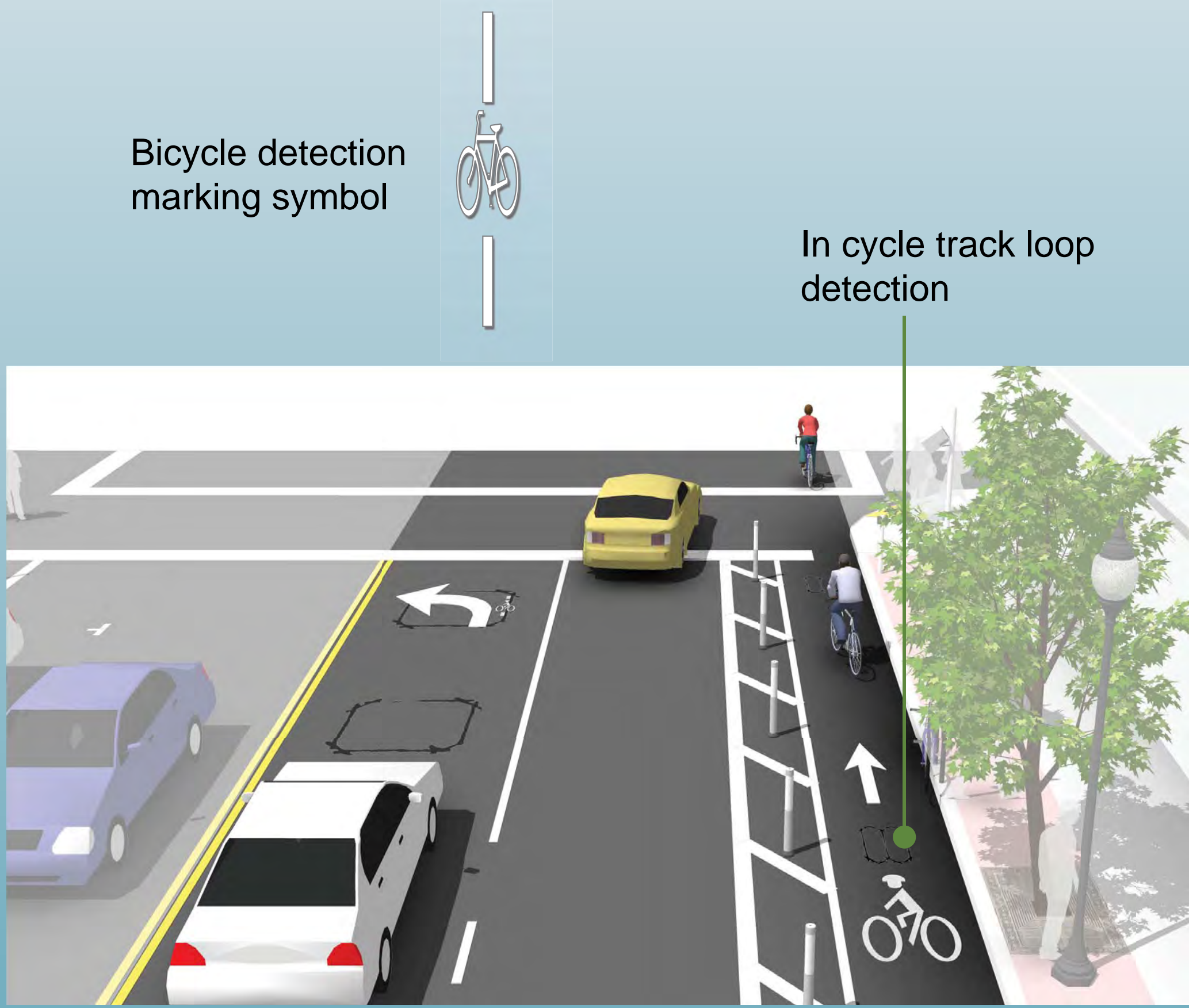
Two Stage Turn Box

Two-stage turn queue boxes offer bicyclists a safe way to make left turns at multi-lane signalized intersections from a right side cycle track.

Cycle Track Design Best Practices

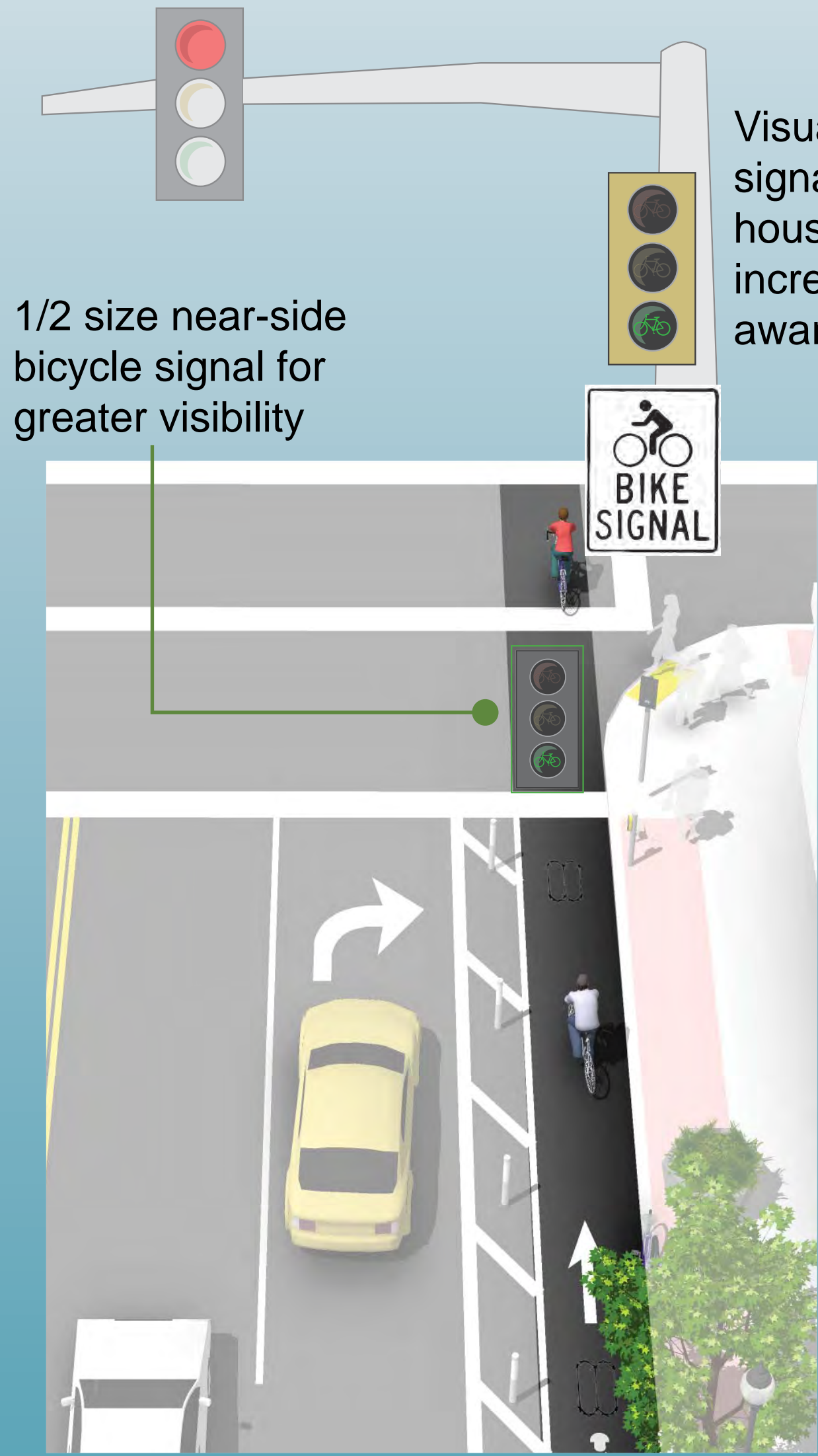
Additional Design Elements

Cycle tracks must be designed to function under diverse contexts with different needs. The following illustrations show common treatments related to intersection approaches, adjacent transit lines, and needs of users on adjacent parking lanes.



Signal Detection

Bicycle detection is used at actuated signals to alert the signal controller of bicycle crossing demand on a particular approach.



Bicycle Signal

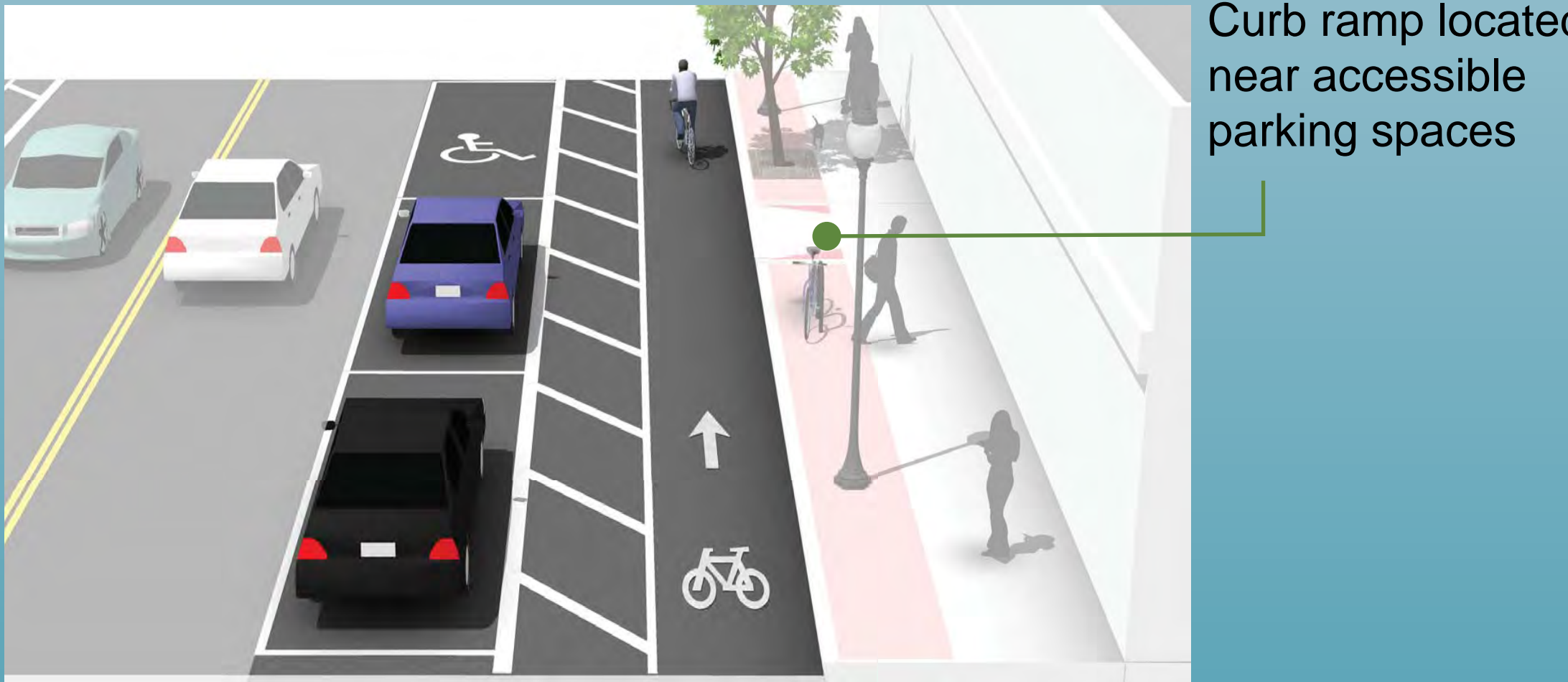
Bicycle signal heads use standard three-lens signal heads in green, yellow, and red, with a bicycle symbol lens cover.

Waiting passengers should be accommodated outside of the cycle track path.



Transit Stops

Designs for cycle tracks at transit stops are meant to prioritize both bicycling and transit efficiency by reducing conflicts in the roadway.



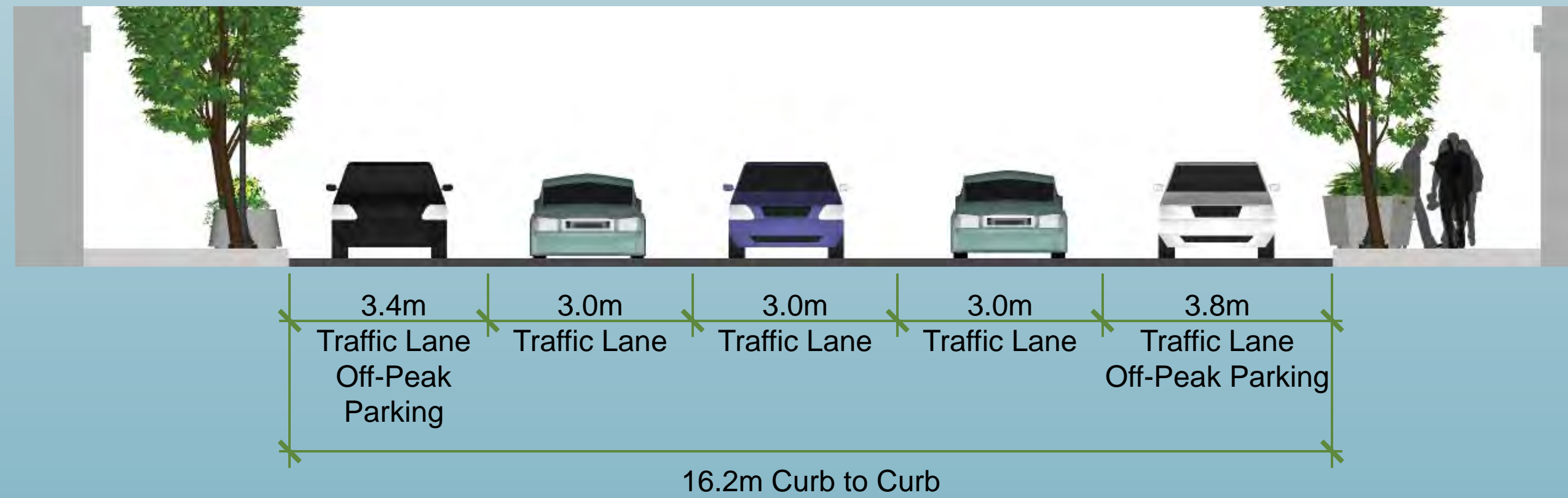
Accessible Parking

Cycle track buffer adjacent to disabled parking spaces must provide for loading and maneuverability of people in wheelchairs or other mobility devices.

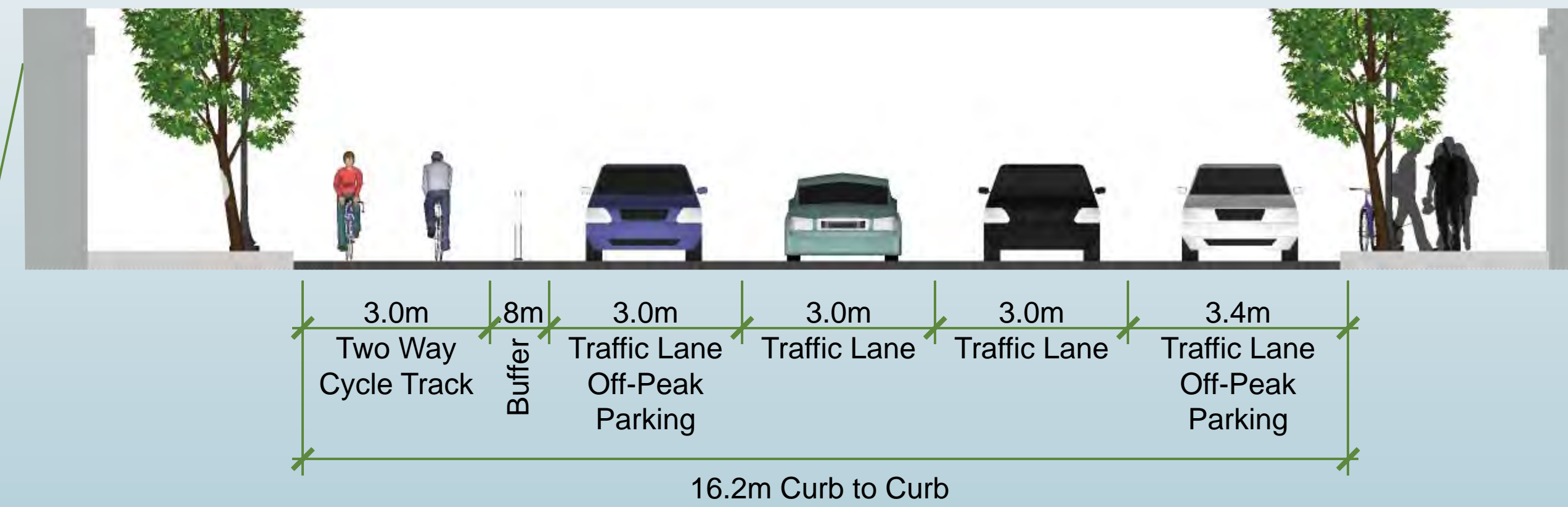


Cycle Track Design

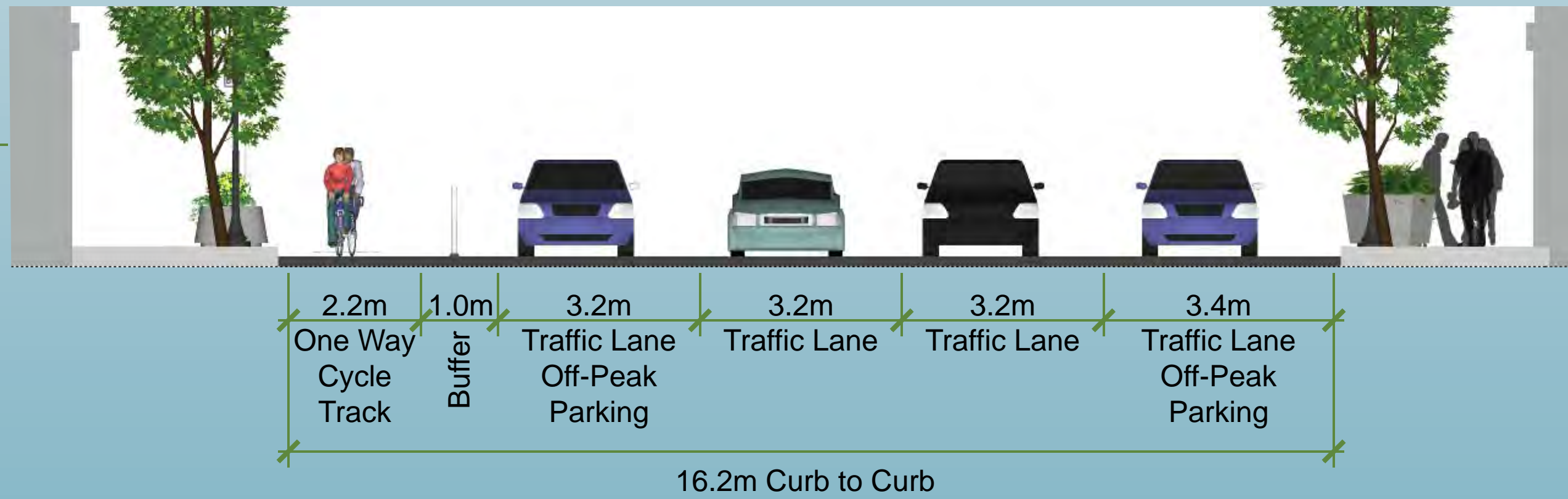
Typical Cross Sections



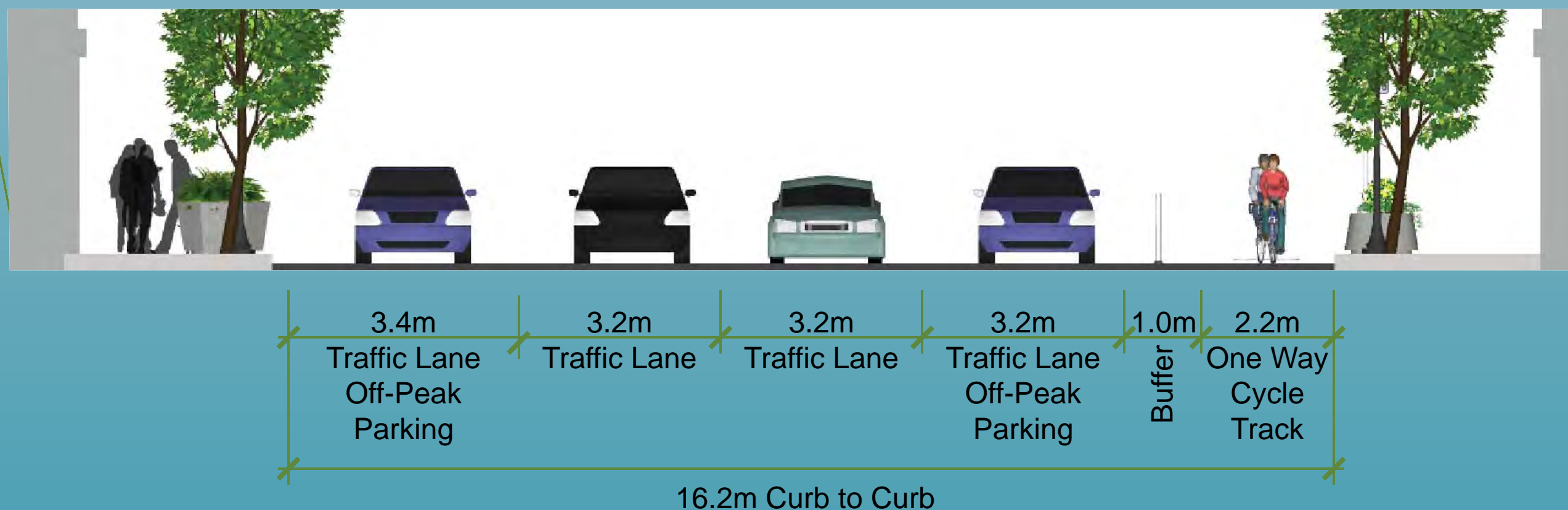
One Way Multi-Lane Arterial



Two Way Cycle Track



One Way Cycle Track, Right Side



One Way Cycle Track, Left Side

Convert one lane of motor vehicle travel to a two way cycle track. This scenario is most beneficial when a high number of destinations are located on a particular road.

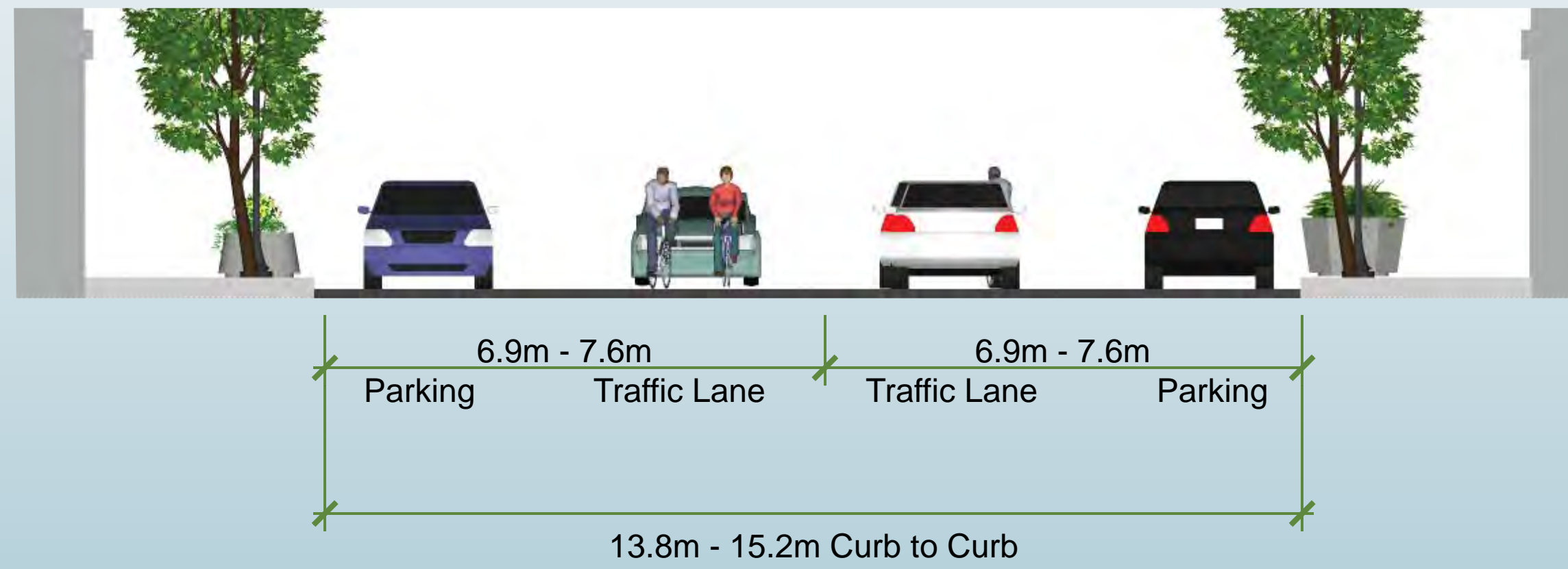
Convert one lane of motor vehicle travel to a one way cycle track on the right side of the road. This should be combined with a one way cycle track on an adjacent street couplet for optimum connectivity. Motorists are accustomed to cyclists being on the right.

Convert one lane of motor vehicle travel to a one way cycle track on the left side of the road. This should be combined with a one way cycle track on an adjacent street couplet for optimum connectivity.

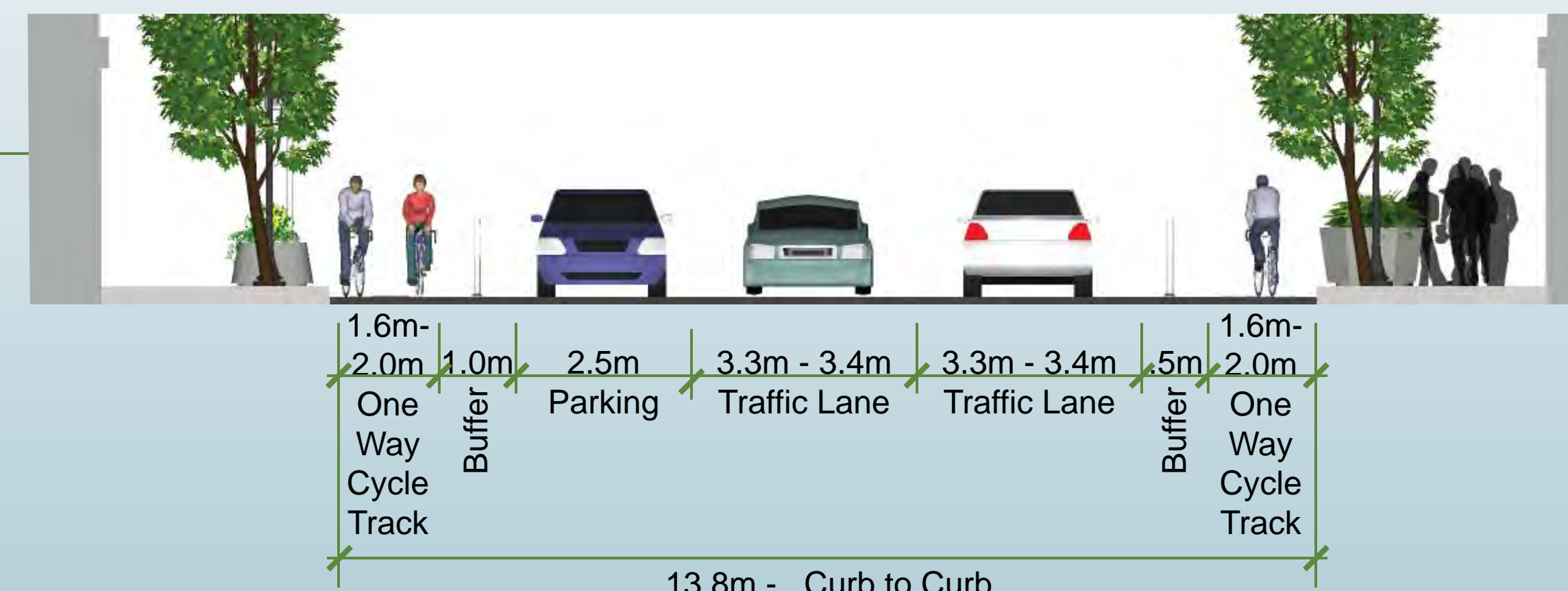


Cycle Track Design

Typical Cross Sections

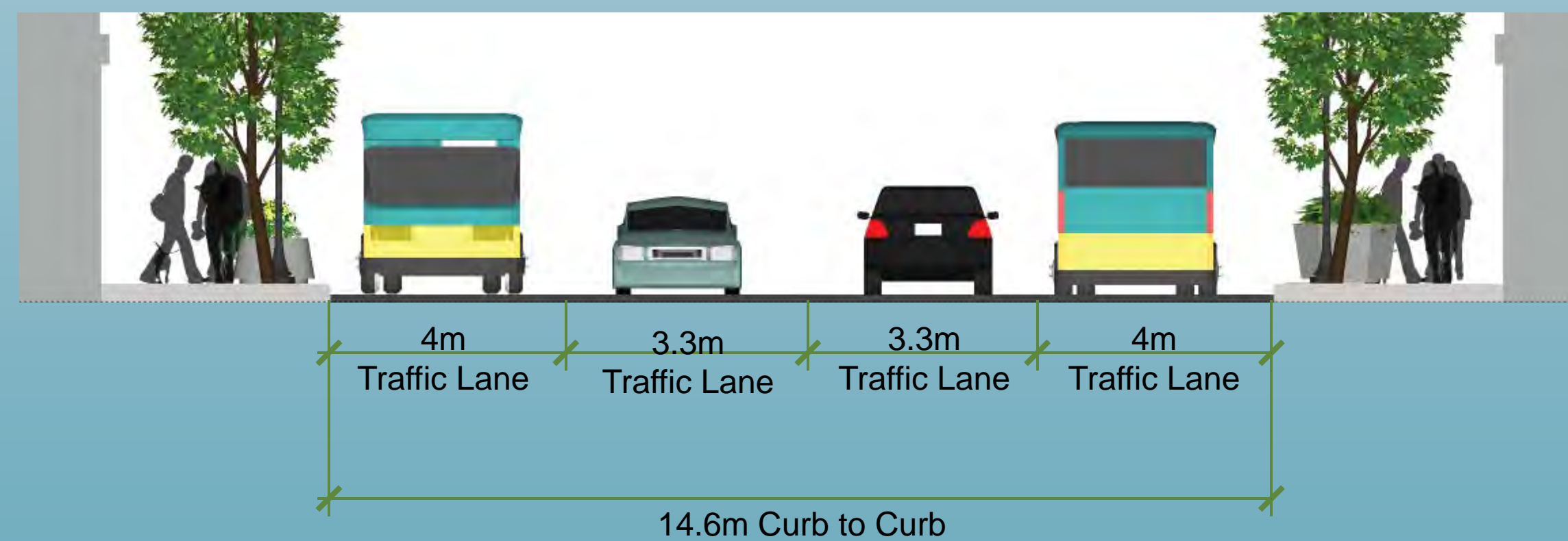


Two Way, Two Lane with Parking

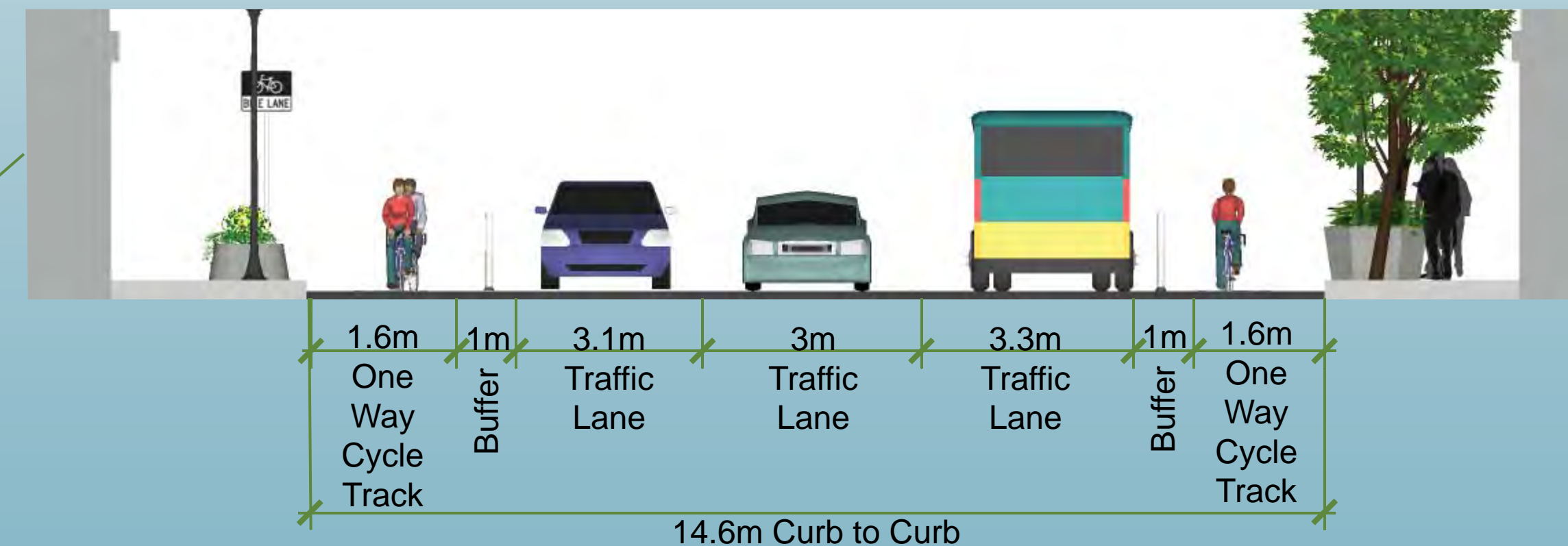


Two, One Way Cycle Tracks

Convert one lane of parking to one way cycle tracks on either side of the road and reduce the width of the traffic lanes. When parking is not adjacent to the cycle track the buffer width can be reduced.

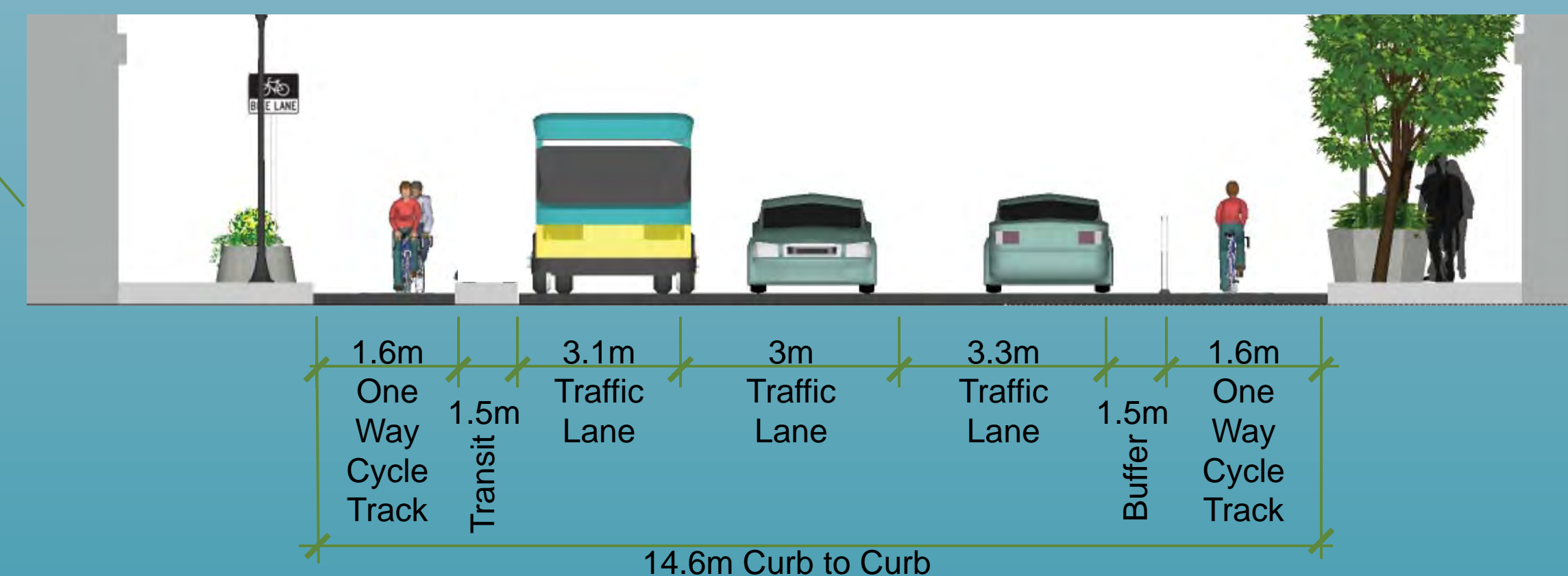


Two Way, Multi-Lane Road



Two, One Way Cycle Tracks

Convert one travel lane to two one-way cycle tracks on either side of the road.



Cycle Track at Transit Stop

At transit stops accommodations for loading and unloading passengers should be made by increasing the buffer width to 1.5m.



Cycle Track Design

Typical Intersections



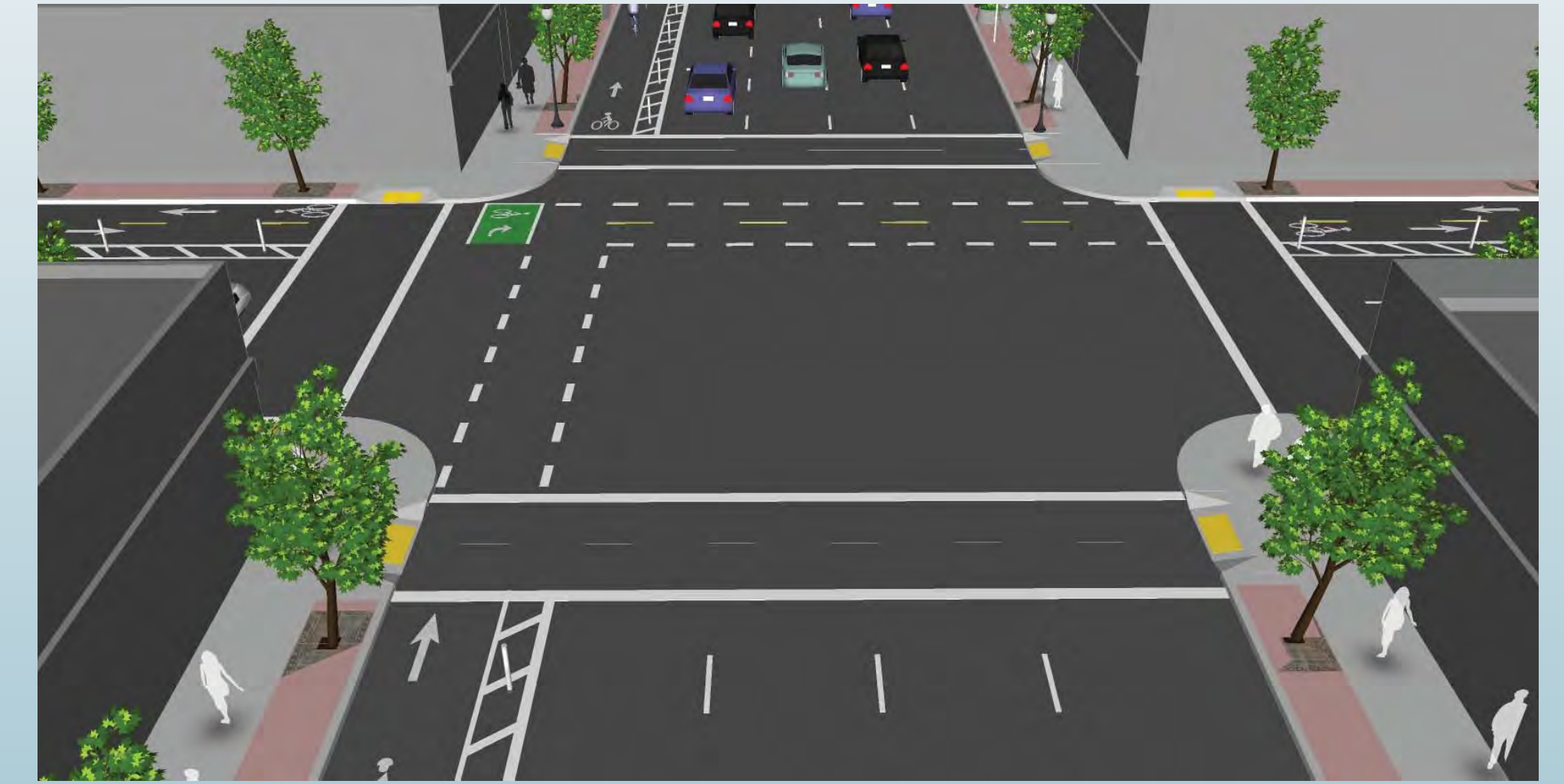
Two Way Cycle Track

At the intersection with another two way cycle track two stage turn boxes are provided at the intersection of the cycle tracks for cyclists turning left.



Right Side Cycle Track

At the intersection with a two way cycle track a two stage turn box is added for cyclists turning from the one way cycle track to the two way cycle track.



Left Side Cycle Track

At the intersection with a two way cycle track a two stage turn box is added for cyclists turning from the two way cycle track to the one way cycle track.



Transit



Cycle Tracks on Two Way Road

At the intersection with a cycle track a two stage turn boxes are added for each left turn movement at the intersection.



Cycle Tracks at Bike Lanes

Two stage turn boxes for left turning cyclists are located in either the shadow of the parking or by shifting the crosswalk way from the intersection.



*NOTE: signalization and night turn accommodations are dependent on traffic volumes