



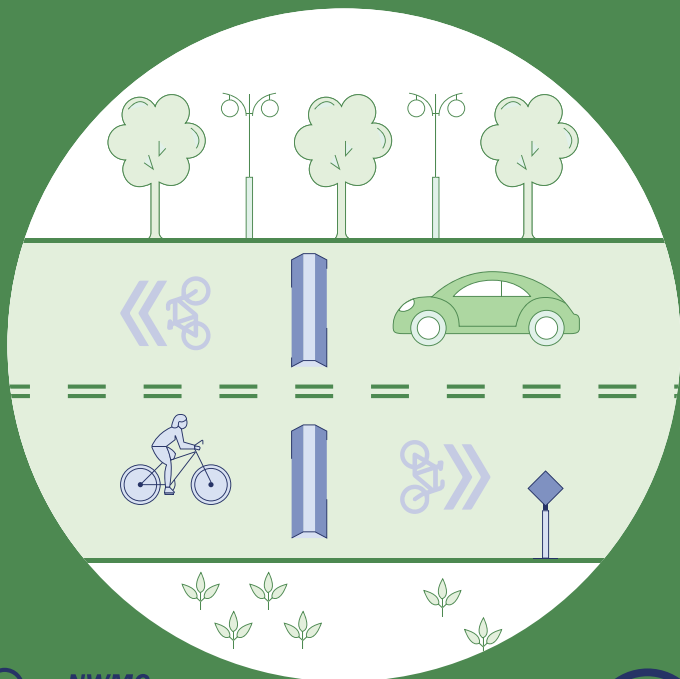
# **NWMMC** Multimodal Toolkit

Improving the physical environment for people walking, biking, and using transit is critical for making all of these modes of transportation safer, more pleasant, and easier to use. To help spread the word about some of these tools, a deck of Multimodal Toolkit cards were created.

The cards highlight just a few examples of how NWMMC communities can improve the environment for people walking, biking, and accessing transit. Some of these tools can be implemented quickly and cheaply while others require more time and investment.

***Take a deck of Multimodal Toolkit cards with you to share with your colleagues!***

# BIKE BOULEVARD



# BIKE BOULEVARD

Bicycle boulevards are low-volume neighborhood streets designated and designed to give bicycle travel priority. Using pavement markings, signage, and speed and volume management measures, bicycle boulevards discourage vehicular through trips creating a safe and comfortable bicycling environment.

## COST:



MEDIUM

## TIMELINE:



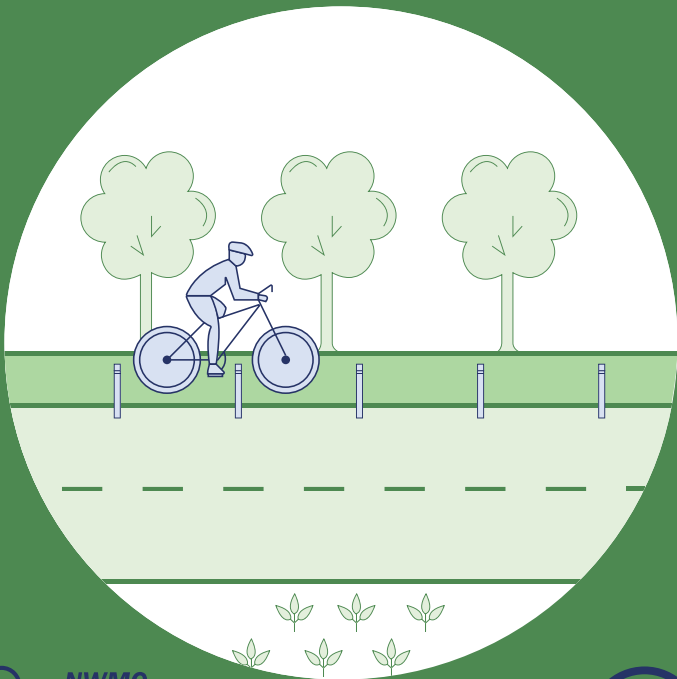
MEDIUM

## LOCATION:



MINOR STREET

# SEPARATED BIKE LANES



## SEPARATED BIKE LANES

A separated bicycle lane, or cycle track, is physically separated from motor traffic using a variety of treatments such as on-street parking, raised curb medians, flexible bollards, landscaping, planters, concrete barriers, and/or distinctive paving.

### COST:



MEDIUM

### TIMELINE:



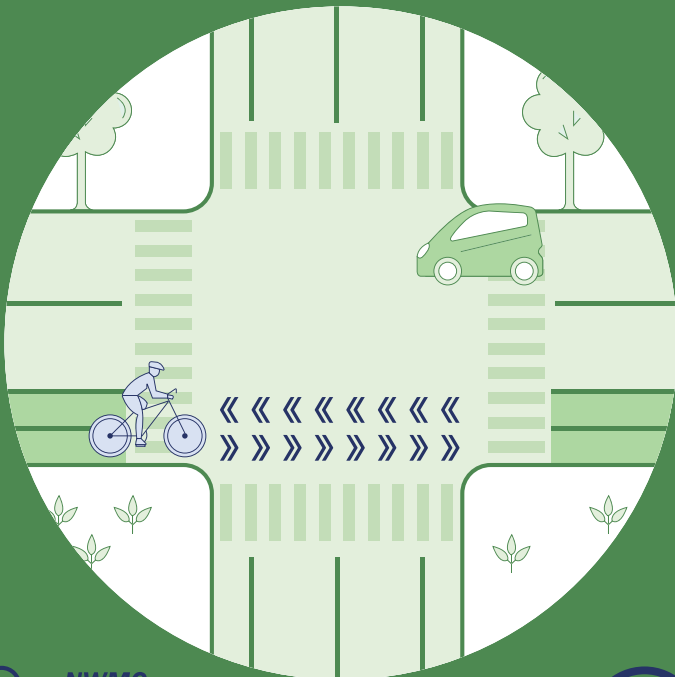
MEDIUM

### LOCATION:



MAJOR STREET

# BICYCLE INTERSECTION STRIPING



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Multimodal  
Transportation  
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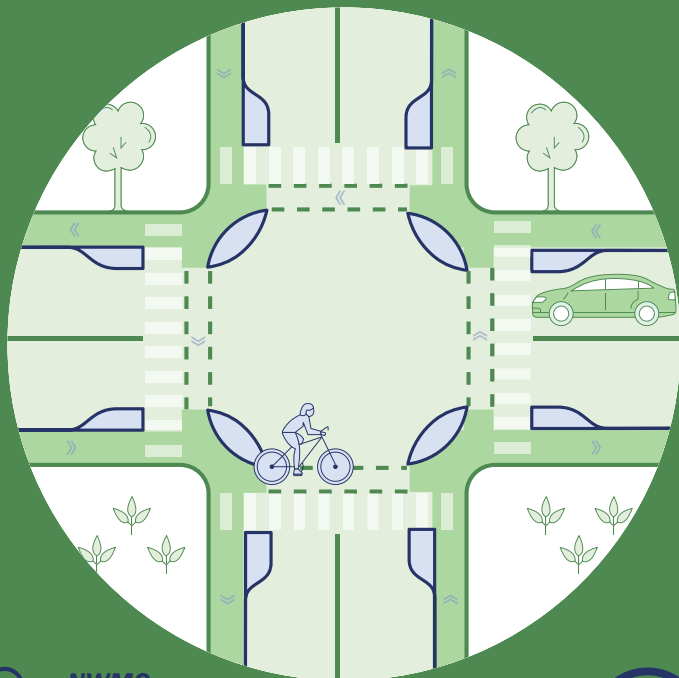


# BICYCLE INTERSECTION STRIPING

Striping through an intersection guides bicyclists through an intended path. White dashed markings are typically used but can be supplemented by green paint to increase visibility and draw attention to potential conflicts.

**COST:***LOW***TIMELINE:***SHORT***LOCATION:***MAJOR/MINOR  
STREET*

# PROTECTED INTERSECTION





## PROTECTED INTERSECTION

Protected intersections use a combination of paint, concrete, bollards, and small design changes to create a dedicated path for people biking through an intersection. By increasing the setback of the bikeway, installing corner islands, and marking the bikeway through the intersection, people biking are clearly given the right of way, made more visible, and drivers are encouraged to turn at slower speeds and in a safer manner. Protected intersections improve safety for people biking and all street users.

### COST:



MEDIUM

### TIMELINE:



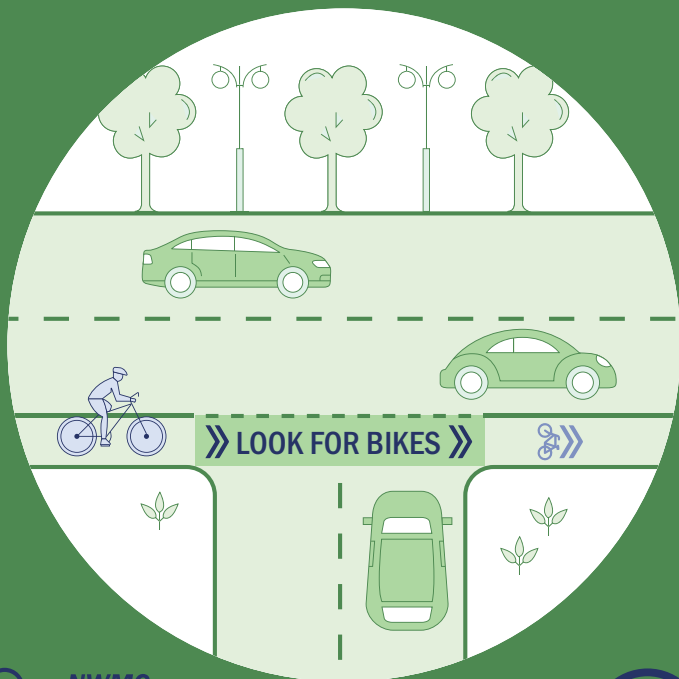
MEDIUM

### LOCATION:



MAJOR STREET

# CONFLICT MARKINGS



## CONFLICT MARKINGS

Conflict markings can be applied at driveways and other curb cuts to indicate bikeways.

Green paint is typically used to draw attention to potential conflicts.

### COST:



LOW

### TIMELINE:



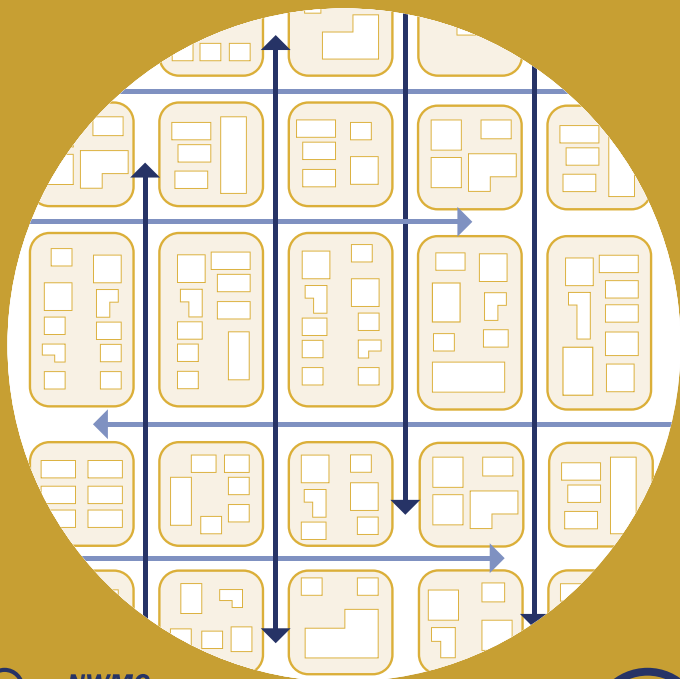
SHORT

### LOCATION:



MAJOR/MINOR  
STREET

# GRID CONNECTIVITY/BLOCK SIZE



## **GRID CONNECTIVITY/BLOCK SIZE**

Grid connectivity and shorter block lengths near transit stops give pedestrians more route choices, opportunities to cross the street, and decrease the distance of trips. Grid connectivity may be supported by a complete sidewalk network and mid-block crossings.

**COST:***MEDIUM - HIGH***TIMELINE:***MEDIUM - LONG***LOCATION:***MAJOR/MINOR  
STREET*

# CURB EXTENSIONS



# CURB EXTENSIONS

A curb extension, or bump-out, is an area of sidewalk that is widened to align with a parking lane to reduce crossing distances, slow turning vehicles, and improve pedestrian visibility.

**COST:**

*LOW - MEDIUM*

**TIMELINE:**

*SHORT - MEDIUM*

**LOCATION:**

*MAJOR/MINOR  
STREET/ TRANSIT  
STATION*

# RAISED CROSSINGS





## RAISED CROSSINGS

Raised crossings create a safe, slow-speed crossing and public space at intersections or midblock crossings with low to moderate traffic volumes. Like speed humps and other vertical speed control elements, they reinforce slow speeds and encourage motorists to yield to pedestrians at the crosswalk.

### COST:



LOW

### TIMELINE:



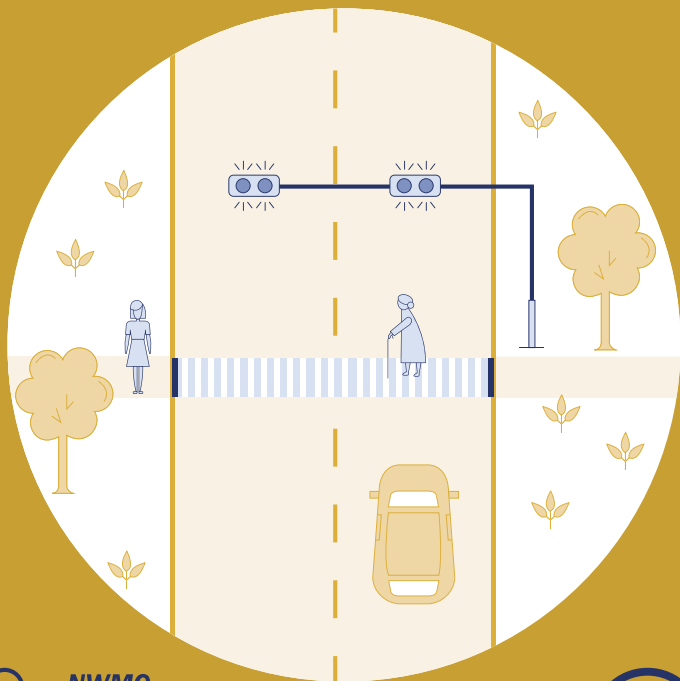
SHORT - MEDIUM

### LOCATION:



MINOR STREET

# PEDESTRIAN HYBRID BEACONS

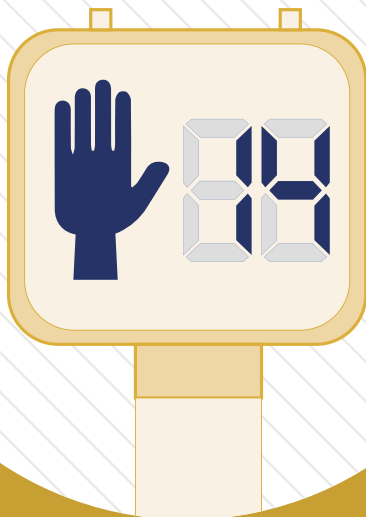


# PEDESTRIAN HYBRID BEACONS

Pedestrian hybrid beacons are pedestrian-activated signals placed at uncontrolled, marked crosswalks that, when activated, stop motor vehicle traffic and allow pedestrians to safely cross the roadway.

**COST:****MEDIUM****TIMELINE:****SHORT - MEDIUM****LOCATION:****MAJOR STREET/  
TRANSIT STATION**

# SIGNAL TIMING/PHASING



## SIGNAL TIMING/PHASING

Signal timing such as leading pedestrian intervals (LPI), lagging left turns, and protected turning phases are used to give pedestrians priority at intersections and temporarily separate pedestrian and vehicles at crossings. Crossing speeds of pedestrians should also be considered when retiming traffic signals.

### COST:



LOW - MEDIUM

### TIMELINE:



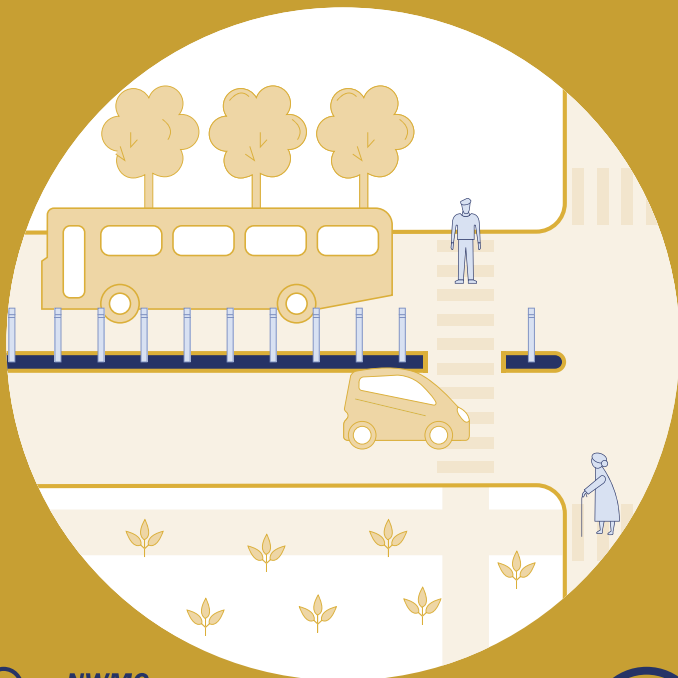
SHORT

### LOCATION:



MAJOR STREET/  
TRANSIT STATION

# HARDENED CENTERLINE



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## HARDENED CENTERLINE

A hardened centerline is an intersection treatment that slows and prevents left-turning traffic from crossing the centerline to make a turn. Hardened centerlines typically use rubber curb or flexible bollards beginning from the crosswalk.

### COST:



LOW

### TIMELINE:



SHORT

### LOCATION:



MAJOR STREET/  
TRANSIT STATION

# BUS BULB





# BUS BULB

Bus bulbs are curb extensions that align the bus stop with parking lane, allowing buses to stop and board passengers without ever leaving the travel lane. Bus bulbs can expedite transit travel times by aligning the bus stop along the travel lane and eliminating the need to pull in and out of traffic to pick up and drop off passengers.

## COST:



*MEDIUM-HIGH*

## TIMELINE:



*MEDIUM*

## LOCATION:



*MAJOR STREET/  
TRANSIT STATION*

ACCESS TO TRANSIT TOOLS

# STATION & PARKING LOT DESIGN



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# STATION & PARKING LOT DESIGN

Pedestrian-minded station and parking lot design should foster safe pedestrian connections between parking, curbside, and the station through a variety of treatments such as sidewalks, crosswalks, pavement markings, and lighting.

## COST:



*LOW - MEDIUM*

## TIMELINE:



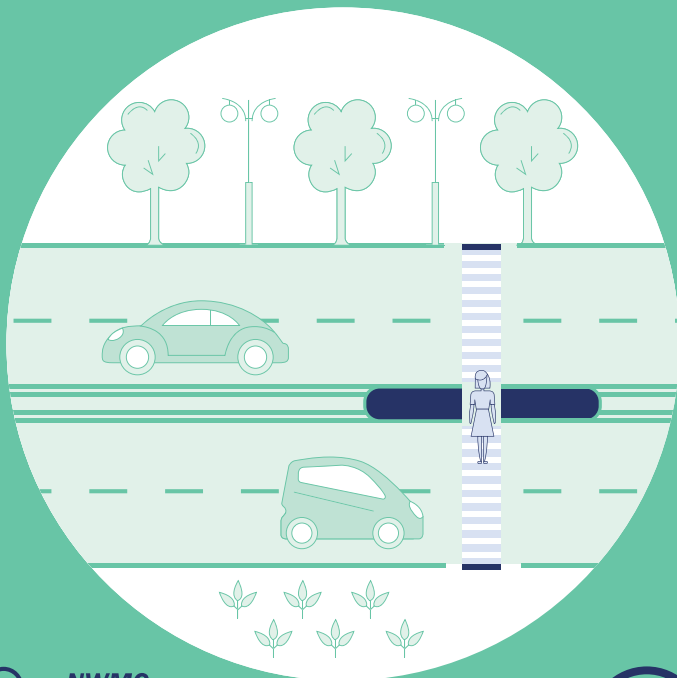
*SHORT - MEDIUM*

## LOCATION:



*TRANSIT STATION*

# MID-BLOCK CROSSING



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## MID-BLOCK CROSSING

Mid-block crossings are often installed in areas with heavy pedestrian traffic not served by a traffic signal to provide more frequent crossing opportunities. They may also be added near pedestrian destinations, such as transit stops, where people might otherwise cross at unmarked locations.

### COST:



LOW - MEDIUM

### TIMELINE:



SHORT - MEDIUM

### LOCATION:



MAJOR STREET/  
TRANSIT STATION

# BUS/BIKE CONFLICTS



# BUS/BIKE CONFLICTS

Bus/bike conflicts can be mitigated through separated or protected bike lanes routed behind a bus stop. Other treatments include raised crosswalks and pavement markings.

## COST:



*MEDIUM - HIGH*

## TIMELINE:



*MEDIUM - LONG*

## LOCATION:



*MAJOR STREET/  
TRANSIT STATION*

# HIGH CAPACITY BIKE RACKS





## HIGH CAPACITY BIKE RACKS

High capacity bike racks accommodate an ample number of secure, easy, and well-lit spaces to park bicycles. Often installed close to transit stations, high capacity bike racks should be covered and protected from the elements.

### COST:



LOW

### TIMELINE:



SHORT

### LOCATION:



TRANSIT STATION