



CHICAGO DEPARTMENT OF TRANSPORTATION
CITY OF CHICAGO

January 2013

Dear Alderman,

Chicago's *Pedestrian Plan* aims to make streets safer and more connected, the city more livable and its citizens healthier. Its goal is to eliminate pedestrian fatalities in ten years, and reduce serious injury crashes by 50 percent in five years.

The first chapter of the *Pedestrian Plan*, "Tools for Safer Streets," lists sixteen roadway improvements that can make intersections, corridors, and neighborhood streets safer. The Chicago Department of Transportation has prepared maps, attached, showing example "Tools for Safer Streets" roadway improvements in north, central/west, and south sections of the city. Aldermen and citizens can use these maps to tour neighborhoods and see the tools installed and in use.

The maps are for demonstration and not comprehensive: many more neighborhoods, streets and wards have these safety installations than are shown on the maps. The maps show examples, clustered together where possible. Each safety tool is listed with a sample location, sample photo, and page reference to the *Pedestrian Plan*.

Many of these tools are in the Aldermanic Neighborhood Infrastructure Menu Program, allowing aldermen to request improvements where needs are identified in your wards. Please use these maps together with the *Pedestrian Plan* to discover ways to make streets safer in your neighborhoods.

Sincerely,

Gabe Klein
Commissioner

Chicago Pedestrian Plan

Tools for Safer Streets - Tour Guide (Central/West)



City of Chicago - Rahm Emanuel, Mayor
Department of Transportation - Gabe Klein, Commissioner



1 - People Spot (p. 88)
N Lincoln and W Wellington



2 - In-road Stop for Pedestrian Sign (p. 20)



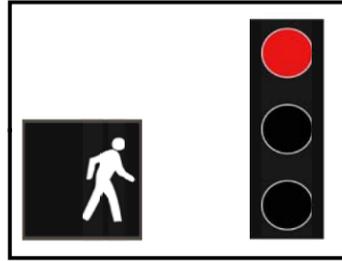
3 - Pedestrian Refuge Island (p. 21)
121 LaSalle, North Ave and Orchard
Humboldt Dr and W Division



4 - Rapid Flash Beacon (p. 22)
2231 N Central Ave



5 - Accessible Pedestrian Signal (p. 24)
1850 W Roosevelt Rd



7 - Leading Pedestrian Interval (p. 26)
S Clark and W Jackson
Dearborn and Madison



9 - Road Diet (p. 28)
N Humboldt Drive in Humboldt Park



12 - Chicanes (p. 30)
2445 N Albany Ave



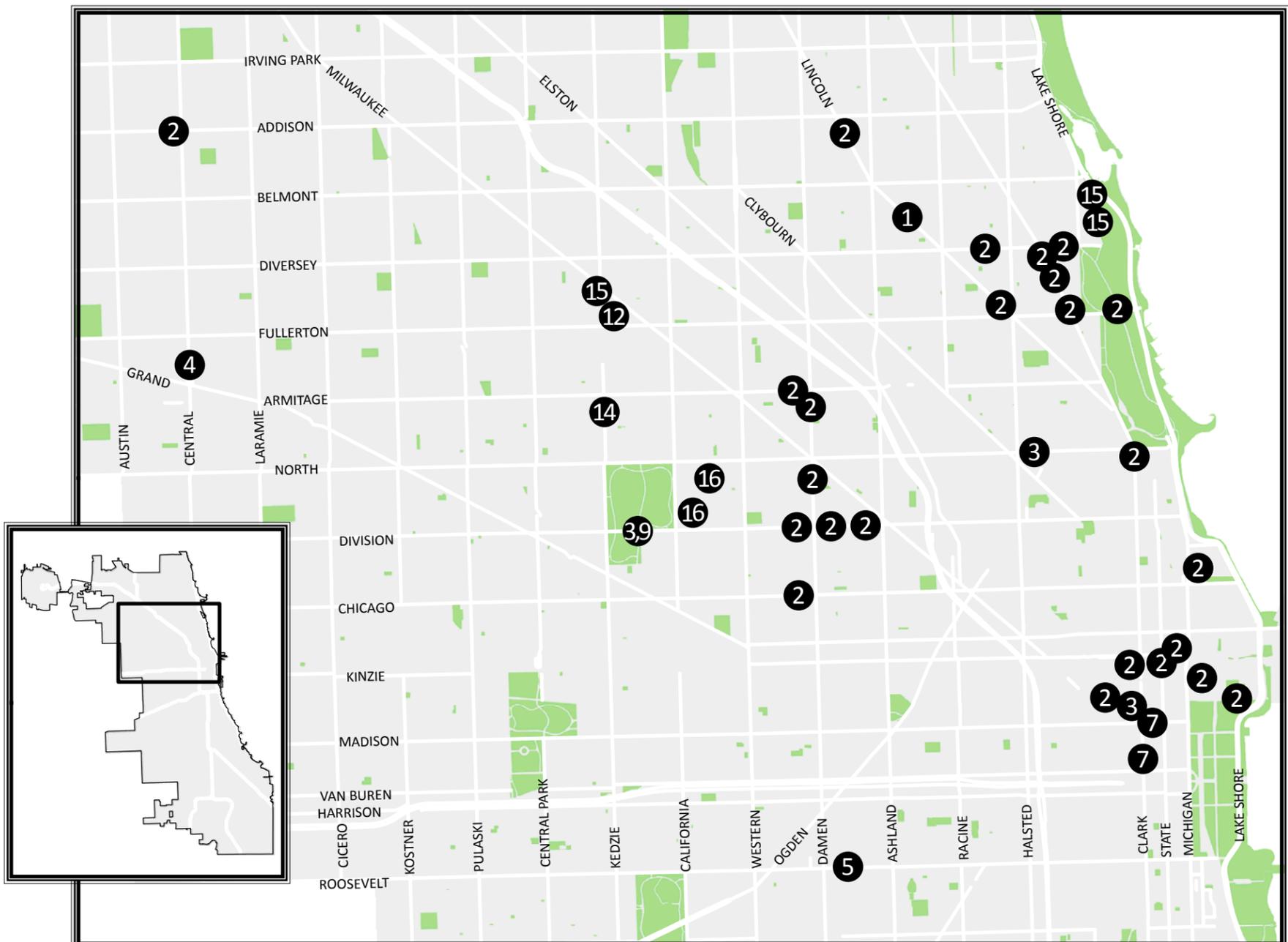
14 - Skinny Streets (p. 33)
W Cortland St near N Kedzie Ave



15 - Bump Outs (p. 34)
3000 & 3100 N Lake Shore Dr
2600 N Kedzie Ave



16 - Neighborhood Traffic Circle (p. 35)
N Rockwell and W LeMoyne
N Washtenaw and W Potomac



Tools for Safer Streets maps are for demonstration and not comprehensive: more neighborhoods, streets and wards have safety installations than shown here. Each tool is listed with a sample location, sample photo, and Pedestrian Plan reference. Please use together with the Pedestrian Plan to discover ways to make streets safer in your neighborhoods.

Chicago Pedestrian Plan

Tools for Safer Streets - Tour Guide (South)



City of Chicago - Rahm Emanuel, Mayor
Department of Transportation - Gabe Klein, Commissioner



1 - People Spots (p. 88)
47th & Champlain
47th & Greenwood



2 - In-road Stop for Pedestrian Sign (p. 20)



3 - Pedestrian Refuge Island (p. 21)
S Chicago Ave & S Ingleside Ave



4 - Rapid Flash Beacon (p. 22)
Kilpatrick and 67th St



5 - Accessible Pedestrian Signal (p. 24)
33rd St & State St
55th St & Lake Park Ave



9 - Road Diet (p. 28)
55th St & Lake Park Ave to Kimbark



10 - Speed Feedback Sign (p. 29)
W 63rd St & Western Ave



13 - Vertical Traffic Calming (p. 32)
East Side of
Museum of Science & Industry



14 - Skinny Streets (p. 33)
E 80th St, S Anthony Ave
to Woodlawn



15 - Bump Outs & Cul-de-Sacs (p. 34)
8100 S Constance Ave



16 - Neighborhood Traffic Circle (p. 35)
E 72nd St & S University Ave
E 72nd St & S Dobson Ave



Tools for Safer Streets maps are for demonstration and not comprehensive: more neighborhoods, streets and wards have safety installations than shown here. Each tool is listed with a sample location, sample photo, and Pedestrian Plan reference. Please use together with the Pedestrian Plan to discover ways to make streets safer in your neighborhoods.

Chicago Pedestrian Plan

Tools for Safer Streets - Tour Guide (North)



1 - People Spot (p. 88)
N Clark and W Olive



2 - In-road Stop for Pedestrian Sign (p. 20)



3 - Pedestrian Refuge Island (p. 21)
N Clark and W Thome



12 - Chicanes (p. 30)
1500 W Elmdale



13 - Vertical Traffic Calming (p. 32)
4700 & 4731 N Lincoln (Giddens Plaza)



14 - Skinny Streets (p. 33)
Glenlake Ave east of Clark St



15 - Bump Outs (p. 34)
2350 W Berwyn



16 - Neighborhood Traffic Circle (p. 35)
N Wayne and W Catalpa



tools for safer streets

Tools for Safer Streets describes the variety of pedestrian safety tools that will make Chicago's streets safe for its youngest and oldest pedestrians. Accomplishing this will require creativity and innovation to develop unique solutions throughout Chicago.

Each pedestrian safety tool has been grouped in terms of where it might be best utilized. The first group includes tools appropriate for intersections and corridors and the second group includes tools for neighborhood streets.

Each description includes a brief introduction (WHAT), suggestions for the types of situations where the tool should be implemented (WHERE), and details on the methodology for implementation (HOW). Information on the safety benefits of each tool is provided under **ADDITIONAL RESOURCES**.

INTERSECTIONS AND CORRIDORS

- 1. Marked crosswalks**
- 2. In-road State Law Stop for Pedestrians signs**
- 3. Pedestrian refuge islands**
- 4. Signals and beacons**
- 5. Accessible pedestrian signals**
- 6. Pedestrian countdown timers**
- 7. Leading pedestrian intervals**
- 8. Lagging left turns**
- 9. Road diets**
- 10. Speed feedback signs**
- 11. Roundabouts**

NEIGHBORHOOD STREETS

- 12. Chicanes**
- 13. Vertical traffic calming**
- 14. Skinny streets**
- 15. Bump-outs**
- 16. Neighborhood traffic circles**

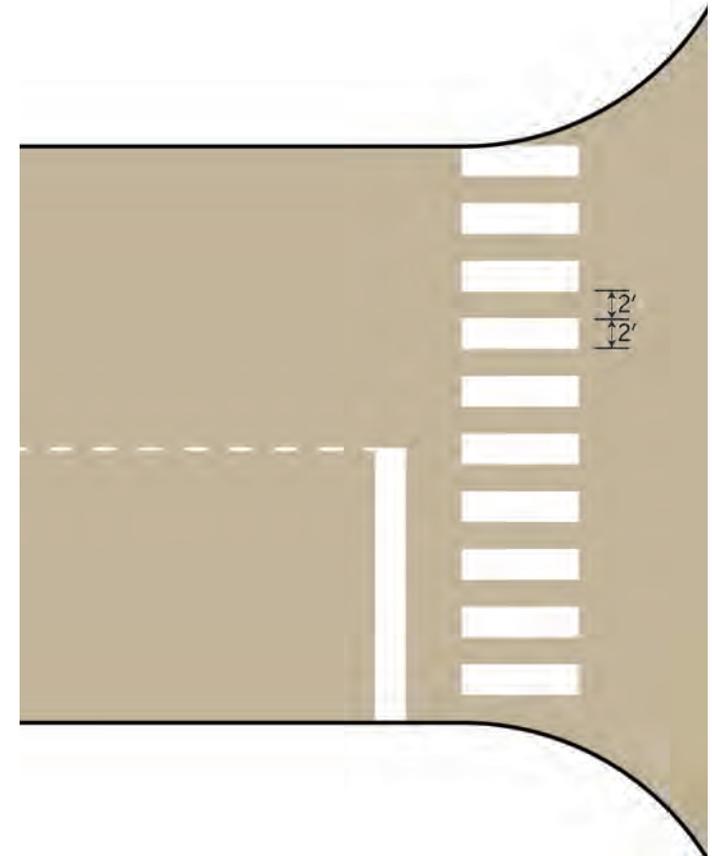
1 Marked Crosswalks

What: Marked crosswalks indicate where pedestrians may cross the street and where drivers should expect them to cross.

Where: Marked crosswalks should be installed at all legs of signalized and stop-controlled intersections. At uncontrolled or midblock locations, consideration should be given to installing crosswalks with additional pedestrian safety tools, such as signage, refuge islands and bumpouts.

How: To ensure high visibility among all roadway users, the default style for marked crosswalks will be the continental style, as shown in the example to the right. Other crosswalks, such as brick or other decorative treatments, can be installed at appropriate locations.

This is a **LOW cost** pedestrian safety tool.



**STANDARD CONTINENTAL
CROSSWALK**

ADDITIONAL RESOURCES

Federal Highway Administration. *Crosswalk Marking Field Visibility Study*. Washington, D.C., 2010.

2 In-road State Law Stop for Pedestrians signs

What: State and City law requires that vehicles must stop for pedestrians who are in a crosswalk. In-road “State Law Stop for Pedestrians” signs are a supplemental feature to remind drivers of this law.

Where: In-road “State Law Stop for Pedestrians” signs can be considered at crosswalks at uncontrolled intersections and midblock locations where it is difficult for pedestrians to cross.

How: In-road “State Law Stop for Pedestrians” should be installed at the crosswalk location in the centerline, median, refuge island, or lane line.

This is a **LOW cost** pedestrian safety tool.

At this time, these signs may be installed on non-residential streets with one lane of traffic in each direction only.



ADDITIONAL RESOURCES

Van Houten, R., S. Huybers, R. Malenfant, and J. E. Louis. "Reducing Conflicts Between Motor Vehicles and Pedestrians: The Separate and Combined Effects of Pavement Markings and a Sign Prompt." *Journal of Applied Behavior Analysis*, 2004: 37, 445-456.

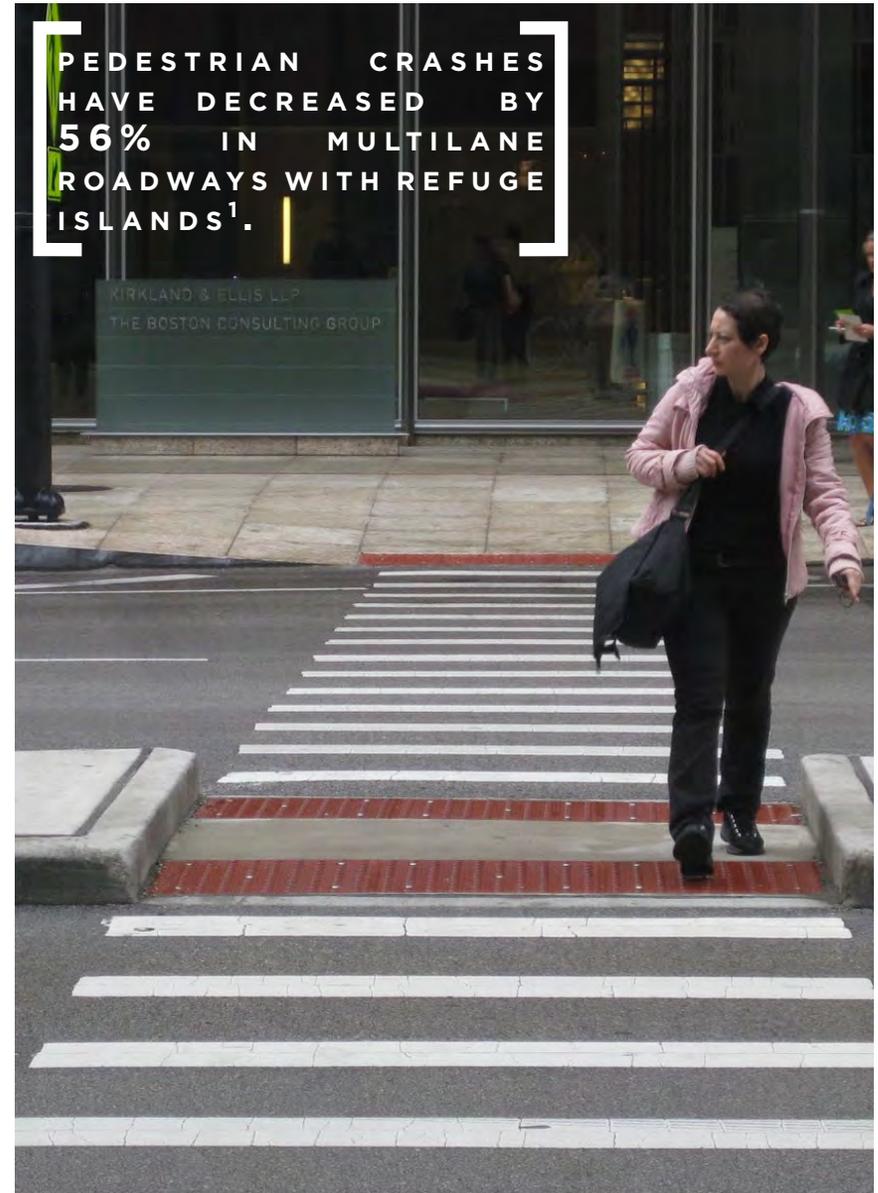
3 Pedestrian refuge islands

What: A pedestrian refuge island is a protected area that allows pedestrians to cross one direction of traffic at a time. This makes finding gaps in traffic easier on two-way streets. Refuge islands differ from medians in that they are not continuous, but are only provided at the crossing location.

Where: Pedestrian refuge islands should be considered when pedestrians are required to cross multiple lanes in each direction or where insufficient gaps in traffic make pedestrian crossings difficult. They can be installed at midblock crossings or at intersections if there is adequate room.

How: Pedestrian refuge islands should be at least 6 feet wide and 40 feet long to provide proper protection for pedestrians. Crosswalks and accessible ramps or cut-through areas must be provided at the refuge islands. Truncated dome detectable warning surface areas must also be installed to allow pedestrians who are blind to detect the refuge island. Pedestrian refuge islands can be designed with an angled path through the island so pedestrians are able to see oncoming traffic prior to crossing.

This is a **MEDIUM cost** pedestrian safety tool.



ADDITIONAL RESOURCES

Federal Highway Administration. *Desktop Reference for Crash Reduction Factors*. 2007.

4 Signals and beacons

TRAFFIC SIGNALS



PEDESTRIAN HYBRID BEACONS



RECTANGULAR RAPID FLASH BEACONS



WHAT

A traffic signal is a protected crossing that has pedestrian signal heads to inform pedestrians when to cross the street. Traffic signals are warranted by either high traffic volumes or high pedestrian volumes.

A pedestrian hybrid beacon (PHB) is a device that stops traffic to allow pedestrians to cross. The beacon flashes yellow, then is steady yellow, then a steady red, then flashes red to make drivers aware to stop. PHBs are a potential solution where traffic signals are not warranted.

A rectangular rapid flash beacon (RRFB) can be used as a warning device at uncontrolled or midblock crossings. Pedestrians push a button to activate rapid flashing yellow LED lights to alert drivers to stop. RRFBs are a potential solution if a traffic signal or a PHB is not warranted.

WHERE

Traffic signals can be installed for a pedestrian crossing if there are high pedestrian volumes, such as at a transit station or a school, or a history of pedestrian crashes. Push buttons should only be included where pedestrians do not get a WALK phase during each traffic signal cycle, usually at locations with very low pedestrian volumes.

PHBs can be installed for a pedestrian crossing if there are high pedestrian volumes, a history of pedestrian crashes, or not enough gaps in traffic for pedestrians to safely cross the street.

RRFBs can be installed for a pedestrian crossing if there are high pedestrian volumes, a history of pedestrian crashes, not enough gaps in traffic to cross the street, or the roadway width makes it difficult for pedestrians to safely cross.

HOW

Traffic signals should be considered where an engineering study (based on criteria from the Manual of Uniform Traffic Control Devices (MUTCD)) has determined that pedestrians require a protected crossing at an intersection. All push buttons should be installed with an LED indicator light that demonstrates to the pedestrian that the button was pushed.

PHBs should be considered where an engineering study has determined that pedestrians require a protected crossing at an uncontrolled location and a traffic signal is not warranted, based on criteria in the MUTCD.

RRFBs can be installed at uncontrolled pedestrian crossings. They are usually solar powered signs and have push buttons. The flashing beacons should be activated for the duration of the pedestrian crossing time.

This is a **HIGH cost** pedestrian safety tool.

This is a **HIGH cost** pedestrian safety tool.

This is a **MEDIUM cost** pedestrian safety tool.

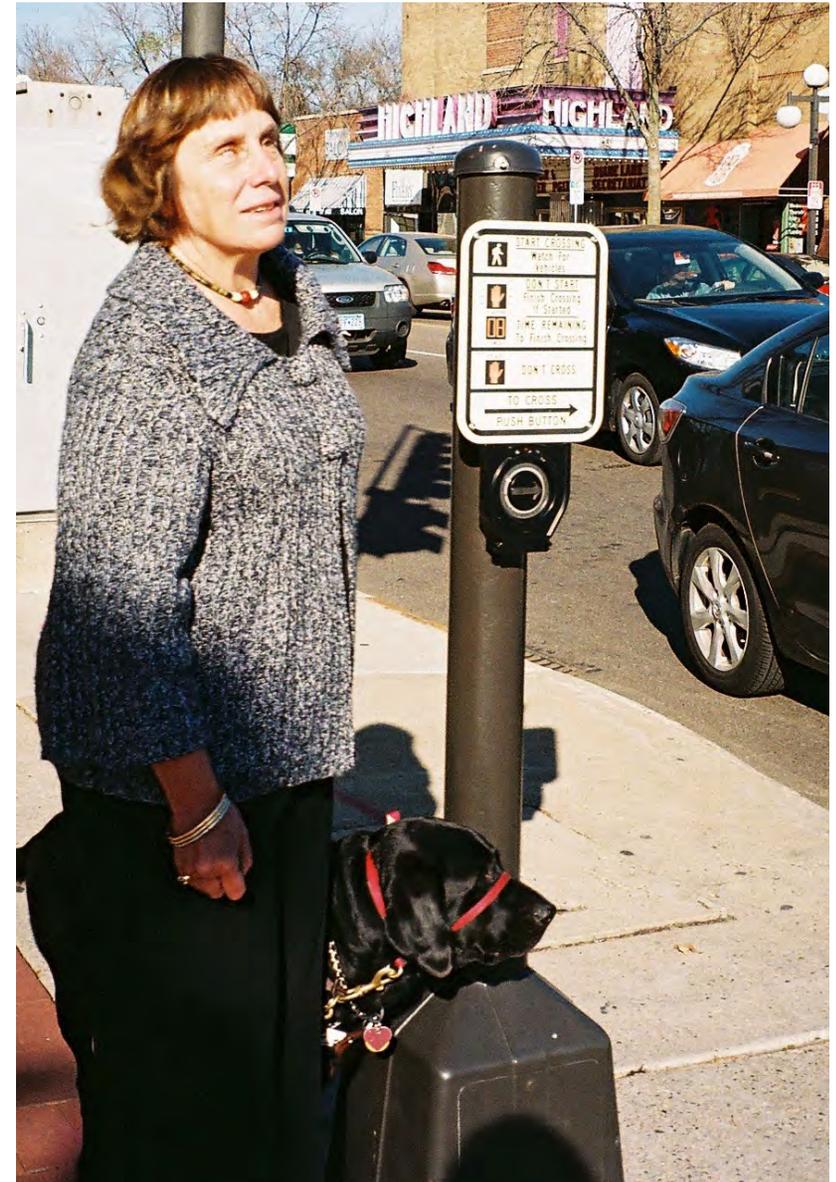
5 Accessible pedestrian signals

What: An accessible pedestrian signal (APS) is a traffic signal that provides auditory and/or vibrotactile information to pedestrians who are blind or have low vision.

Where: An APS should be installed where there is a need to provide additional crossing information. An APS should be considered at signalized crossings when requested by one or more individuals or where the geometry or signal phasing makes pedestrian crossing locations difficult to identify for pedestrians who are blind or have low vision.

How: An APS requires push buttons and speakers to provide auditory feedback. The Manual on Uniform Traffic Control Devices (MUTCD) provides guidance on the appropriate location of the devices. These are installed with the traffic signal infrastructure.

This is a **MEDIUM cost** pedestrian safety tool.



ADDITIONAL RESOURCES

Harkey, David L., Daniel L. Carter, Janet M. Barlow, and Billie Louise Bentzen. *Accessible Pedestrian Signals: A Guide to Best Practices*. National Cooperative Highway Research Program. 2007.

6 Pedestrian countdown timers

What: Pedestrian countdown timers provide information on the amount of time remaining to cross the street at signalized intersections.

Where: All new and modernized traffic signals include countdown timers. Retrofitting existing traffic signals with pedestrian countdown timers will be prioritized based on safety considerations, including the presence of children, seniors, and people with disabilities.

How: The pedestrian countdown timer begins in conjunction with the flashing “DON’T WALK” interval. All countdown timers should be programmed to allow pedestrians to cross the street at a maximum walking speed of 3.5 feet per second. Walking speeds slower than 3.5 feet per second should be considered at all locations, particularly at crossings near children, seniors, and people with disabilities.

This is a **LOW cost** pedestrian safety tool.



ADDITIONAL RESOURCES

Transportation Research Board. "Evaluation of Pedestrian Countdown Signals in Montgomery County, Maryland." *Journal of the Transportation Research Board*. Volume 1878/2004.

7 Leading pedestrian intervals

What: A leading pedestrian interval (LPI) gives pedestrians a head start into an intersection before vehicles. The WALK signal is turned on approximately three seconds before vehicles are given a green signal.

Where: Leading pedestrian intervals are most beneficial and should be prioritized at the following locations:

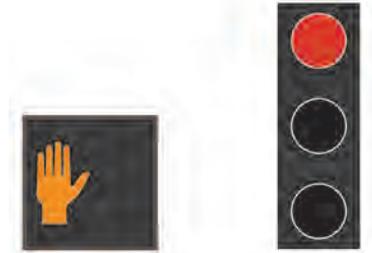
- » Intersections with more than three pedestrian crashes in three years that involve turning vehicles.
- » Intersections within 200 feet of a school or park.
- » Intersections with high numbers of conflicts between pedestrians and vehicles turning right.
- » T-intersections.

How: Leading pedestrian intervals are installed by re-timing a traffic signal. Right turns on red should be prohibited wherever leading pedestrian intervals are installed, with exceptions only in cases when there would be adverse pedestrian safety or traffic impacts. Accessible pedestrian signals should be considered at locations with LPIs to provide information to pedestrians who are blind or have low vision.

This is a **LOW to MEDIUM cost** pedestrian safety tool.

HOW A LEADING PEDESTRIAN INTERVAL WORKS

1. BOTH VEHICLES AND PEDESTRIANS ARE STOPPED.



2. PEDESTRIANS CAN BEGIN TO CROSS THE INTERSECTION, BUT VEHICLES ARE STILL STOPPED.



3. BOTH PEDESTRIANS AND VEHICLES CAN ENTER THE INTERSECTION AND TURNING VEHICLES MUST YIELD TO PEDESTRIANS.



ADDITIONAL RESOURCES

Van Houten, R., R.A. Retting, C.M. Farmer, J. Van Houten, and J.E.L. Malenfant. Field Evaluation of a Leading Pedestrian Interval Signal Phase at Three Urban Intersections. Transportation Research Record No. 1734, 2000.

8 Lagging left turns

What: A lagging left turn is a signal timing in which the left-turn arrow is given after vehicles travelling straight have passed through the intersection. By allowing pedestrians to cross the intersection at the beginning of a signal cycle, conflicts between pedestrians and vehicles turning left are reduced and vehicular operations can improve.

Where: Lagging left turns should be considered at intersections where any of the following exists:

- » Protected left turn phase with high pedestrian volumes.
- » Three or more crashes in three years between left turn vehicles and pedestrians.
- » Pedestrians cross during the left turn phase.
- » Leading pedestrian intervals.

How: A traffic signal will need to be re-timed so that the protected left-turn phase occurs after the permitted phase for through traffic. An analysis must be conducted to ensure that changing a left-turn phase to lagging will not negatively affect the operations of the intersection.

This is a **LOW cost** pedestrian safety tool.

LAGGING LEFT TURNS CASE STUDY

At Huron Street and Fairbanks Court in Streeterville, vehicles were unable to turn left because pedestrians were crossing during the entire green phase. After a lagging left-turn phase was installed, pedestrians crossed safely with their signal and the issues with vehicles queueing disappeared.



ADDITIONAL RESOURCES

Harkey, David L., Daniel L. Carter, Janet M. Barlow, and Billie Louise Bentzen. *Accessible Pedestrian Signals: A Guide to Best Practices*. National Cooperative Highway Research Program. 2007.

9 Road diets

What: A road diet reduces the amount of space for motor vehicles, either through eliminating lanes or shrinking the width of lanes. The reclaimed space from a road diet is then re-allocated for other uses, such as turn lanes, bus lanes, pedestrian refuge islands, bike lanes, or more sidewalk space. Road diets typically involve converting a four- or five-lane roadway into a three-lane street. There are a number of different situations where a road diet is appropriate. Road diets also provide consistent and reliable travel times and speeds on a corridor.

Where: A road diet can be considered on all streets with four or more lanes and less than 23,000 vehicles traveling on it daily. In some circumstances, a road diet may be possible on streets with average daily traffic as high as 30,000 vehicles per day. The width of travel lanes should be routinely considered as part of all future roadway projects.

How: Vehicular capacity analyses and simulation will be necessary to understand the effect of road diets on not only the focus street, but also the adjacent roadways. The additional space gained from a road diet can be used for a variety of other uses, such as sidewalks, refuge islands, bus shelters, bike lanes, or landscaping.

This is a **MEDIUM to HIGH cost** pedestrian safety tool.

LAWRENCE AVENUE ROAD DIET: BEFORE



LAWRENCE AVENUE ROAD DIET: AFTER

ADDITIONAL RESOURCES

Burden, Dan, and Peter Lagerwey. "Road Diets: Fixing the Big Roads." *Walkable Communities, Inc.* March 1999: 1-15.

10 Speed feedback signs

What: Speed feedback signs display passing vehicle speeds. These signs have been shown to increase driver compliance with the speed limit.

Where: Speed feedback signs should be installed at locations where speeding occurs frequently and in locations with high populations of vulnerable users, such as around schools, parks, or community centers.

How: Speed feedback signs can be installed on a temporary or permanent basis, with or without other pedestrian safety tools.

This is a **MEDIUM cost** pedestrian safety tool.



ADDITIONAL RESOURCES

Cambridge, S., W. Osmers, and T. Francis. *Evaluation of the Speed Trailer as a Community Road Resource in Christchurch*. Sydney New South Wales Australia: Road Safety Research Policing and Education Conference, 2003.

11 Roundabouts

What: Roundabouts are circular intersections where vehicles travel in a counter-clockwise direction and entering vehicles must yield to circulating vehicles. This treatment forces vehicles to slow down when going through an intersection. Roundabouts require that pedestrians take a circuitous path across or around the intersection and can be particularly difficult crossings for pedestrians who are blind or have low vision.

Where: Roundabouts should only be considered in Chicago where the benefit in reducing vehicle speeds through an intersection outweighs the impacts to pedestrian accessibility and connectivity. This will typically be in the city's parks or at intersections with high vehicle speeds with very low pedestrian volumes.

How: Roundabouts should be designed for low vehicle speeds and to ensure that is safe for all pedestrians to cross through them. This may include installing signage, raised crosswalks, pedestrian hybrid beacons or rapid flash beacons.

This is a **HIGH cost** pedestrian safety tool.

ADDITIONAL RESOURCES

Federal Highway Administration. *Roundabouts: An Informational Guide*. Washington, D.C. 2010.

Pedestrian Access to Modern Roundabouts: Design and Operational Issues for Pedestrians Who Are Blind. <http://www.access-board.gov/research/roundabouts/bulletin.htm> (accessed 2011).

12 Chicanes

What: Chicanes are created by installing a series of staggered midblock bump-outs on alternating sides of the street. On two-way streets, chicanes can either deflect both lanes or narrow the roadway to one lane used by both directions. Chicanes may be more desirable to residents than vertical traffic calming tools, such as speed humps, because there is less noise from vehicles scraping the street and from speeding up and slowing down.

Where: Chicanes should be considered on residential streets to reduce speeds and to reduce cut through traffic. They should not be installed on streets with more than one lane of travel in one direction (e.g. two-lane, one-way streets).

How: Chicanes are simplest to install on one-way streets. On two-way streets, there should be sufficient width for both directions to pass, or one direction should be instructed to yield to oncoming traffic. Chicanes may require some parking to be removed. Advance warning signs and reflectors can be used to increase visibility to motorists. The design should accommodate emergency vehicles, snow plows, and street sweepers.

This is a **HIGH cost** pedestrian safety tool.

THE CITY OF SEATTLE FOUND AN 18-35% REDUCTION IN TRAVEL SPEEDS AND A 32-45% DECREASE IN AVERAGE DAILY TRAFFIC (ADT) VOLUMES AT LOCATIONS WITH CHICANES².



ADDITIONAL RESOURCES

City of San Diego. "Pedestrian Design Guide." *Design Guide*, San Diego.

Streetfilms.org. Chicanes.

Department for Transport. *Traffic Advisory Leaflet 12/97. Chicane Schemes. Leaflet*, Surrey, UK. Department for Transport. 1997.

13 Vertical traffic calming

Vertical traffic calming devices, such as speed bumps, speed humps, and speed tables, are devices that are placed in the middle of the road bed and require vehicles to slow down to cross over them.

SPEED BUMPS



A speed bump is less than a foot in length and generally used in spot locations to reduce speeds.

Speed bumps can be considered at locations outside of residential areas with very low traffic volumes, such as alleys or parking areas.

Speed bumps are only effective at consistently reducing vehicle speeds when used in succession. Signage should be considered at all locations with speed bumps.

This is a **LOW cost** pedestrian safety tool.

SPEED HUMPS



A speed hump is generally 6 to 12 feet in length and used on residential streets.

Speed humps can be used to reduce traffic speeds on residential streets.

Speed humps are only effective at consistently reducing vehicle speeds when used in succession. Signage should be considered at all locations with speed humps.

This is a **MEDIUM cost** pedestrian safety tool.

SPEED TABLES and RAISED INTERSECTIONS



A speed table and a raised intersection are essentially longer speed humps used to raise the crosswalk or intersection and reduce vehicle speeds.

Speed tables or raised intersections can be used on low volume streets or at crossings with high volumes of pedestrians.

Speed tables or raised intersections can be used to create a raised pedestrian crossing. Signage should be considered at all locations with speed tables and raised intersections.

This is a **MEDIUM cost** pedestrian safety tool.

ADDITIONAL RESOURCES

Portland Bureau of Transportation. *Driver Response to Speed Bumps Graphs.*

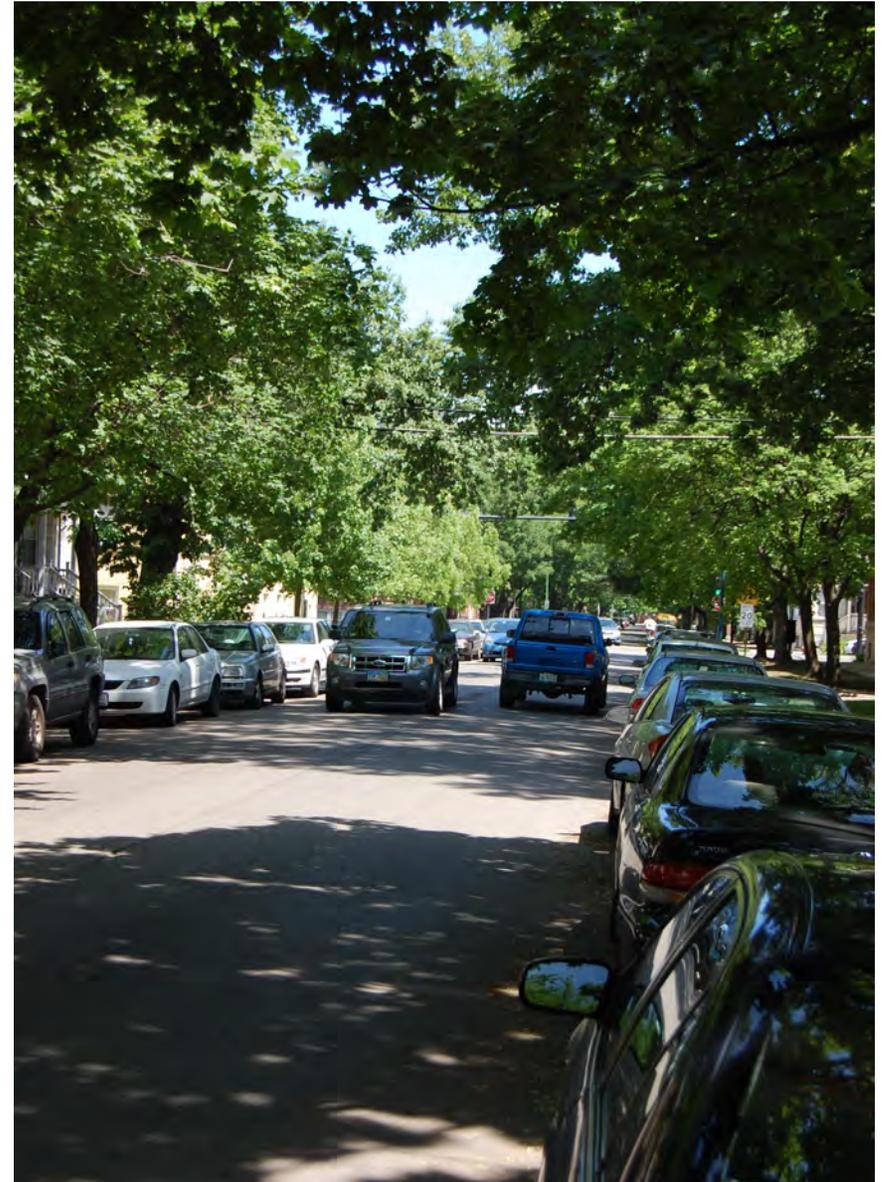
14 Skinny streets

What: After the severe winters of 1978 and 1979, many of Chicago’s streets were converted from two-way to one-way to improve mobility during the winter and to allow plows to go through. However, two-way streets have many advantages over one-way streets. These “skinny streets” reduce vehicle speeds and can also increase connectivity for all users by providing more ways to traverse the city’s grid.

Where: Skinny streets should be considered on all one-way streets that are wider than 30 feet.

How: Converting a one-way street to a two-way street requires changes to striping and signage and possibly changes to traffic signals.

This is a **LOW to HIGH cost** pedestrian safety tool.



ADDITIONAL RESOURCES

City of Portland. "Neighborhood Street Design Guidelines. An Oregon Guide for Reducing Street Widths." Design Guide. Portland, 2000.

15 Bump-outs

What: Bump-outs (also known as curb extensions or bulb-outs) extend the sidewalk into a parking or non-moving lane. Bump-outs can reduce the turning speed for vehicles, reduce the distance that pedestrians must cross, improve visibility between motorists and pedestrians, create more space for riders waiting for the bus, and eliminate illegal parking in the corner clearance zone. They also reduce turning radii which reduces vehicle turning speeds.

Where: Bump-outs are appropriate on wide streets and areas with large populations of children and seniors. Bump-outs should also be considered in areas with large volumes of pedestrians or in areas with narrow sidewalks. Bump-outs cannot be considered on corridors with rush-hour parking restrictions.

How: Extending the sidewalk into the roadway for a bump-out creates a seamless transition, but can be costly due to changes to the curbs and drainage. "Floating" bump-outs can be constructed by creating a pedestrian refuge area between the sidewalk and travel lane. These bump-outs do not affect the existing drainage and need to be wide enough to provide safe refuge for pedestrians. Bump-outs can also be created using a combination of striping, bollards, and planters. These are much less expensive, but do not provide as much protection for pedestrians.

This is a **LOW to HIGH cost** pedestrian safety tool.



ADDITIONAL RESOURCES

Johnson, Randall S. *Pedestrian Safety Impacts of Curb Extensions: A Case Study. Salem, OR. Oregon Department of Transportation and Federal Highway Administration. 2005.*

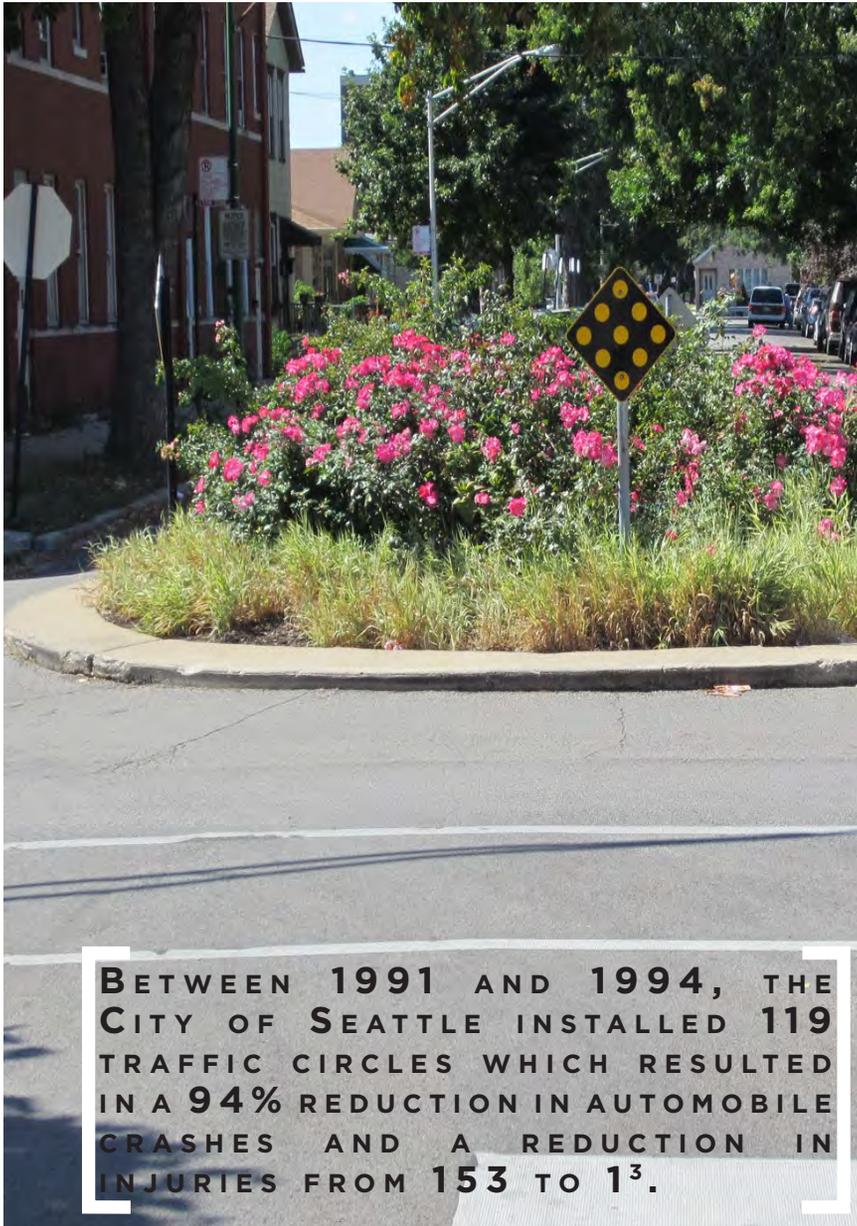
16 Neighborhood traffic circles

What: Traffic circles are circular islands, typically found at the intersection of two residential streets, used to reduce vehicular speeds through the intersection. Traffic circles are not intended to be a stop control device and are different from roundabouts.

Where: Traffic circles should be considered at residential intersections that are wide enough for vehicles to travel in a circular direction and where speeding is a persistent problem.

How: The center of a traffic circle can be used for landscaping or other uses, as long as it does not limit vehicular sight distance. If the circle is landscaped, a maintenance agreement must be provided by an outside organization or agency. Many neighborhood traffic circles have stop signs at the intersection approaches.

This is a **LOW to MEDIUM cost** pedestrian safety tool.



ADDITIONAL RESOURCES

Mundell, P.E., James M. *Neighborhood Traffic Calming: Seattle's Traffic Circle Program.* Institute for Transportation Engineers. 1997.