

PEDESTRIAN STRATEGIES AT INTERSECTIONS

Strategy: Curb Extensions / Bump Outs



STRATEGY PURPOSE:

Extending the sidewalk at intersections to reduce pedestrian crossing distance and make pedestrians more visible to drivers, typically in mixed use and commercial corridors.

PROS:

- Creates a more pedestrian-friendly and safer environment.
- Can be incorporated into improved streetscape aesthetics.

CONS:

- Curb extension requires either the removal of a travel lane or some on-street parking.

PEDESTRIAN STRATEGIES AT INTERSECTIONS

Strategy: Median / Pedestrian Refuge Islands



STRATEGY PURPOSE:

Raised median islands placed at intersections between the two directions of travel to help protect crossing pedestrians from motor vehicles.

PROS:

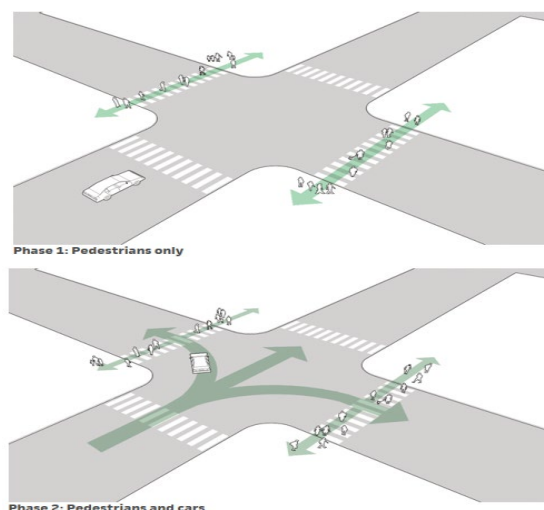
- Allows pedestrians to cross one direction of travel, pause, and then concentrate on crossing the other direction of travel.
- Can provide additional crossing time for pedestrians at wider signalized intersections.

CONS:

- Not all streets have sufficient width to add a median for a refuge island.

PEDESTRIAN STRATEGIES AT INTERSECTIONS

Strategy: Leading Pedestrian Interval



STRATEGY PURPOSE:

A traffic signal configuration that gives pedestrians a 3 to 7 second head start to enter an intersection, prior to vehicles being given the green traffic signal in the same direction of travel.

PROS:

- Provides enhanced pedestrian visibility in the intersection, often reducing pedestrian-vehicle collisions.
- Communicates to vehicles that pedestrians has the right-of-way.

CONS:

- Increases the “all red” phase of the traffic signal providing less “green time” to vehicles.

PEDESTRIAN STRATEGIES

Strategy: Raised Crosswalks and Intersections



STRATEGY PURPOSE:

These are raised speed tables placed at an intersection or mid-block location as a traffic calming measure, aimed at reducing traffic speeds and enhancing the pedestrian crossing environment.

PROS:

- Reduces vehicle speeds.
- Often increases the rate of vehicles yielding to pedestrians.

CONS:

- Should only be used where they can be easily seen by drivers (not implemented near driveways).
- Should be designed to accommodate traffic using corridor such as trucks, emergency vehicles.

PEDESTRIAN STRATEGIES AT MID-BLOCK

Strategy: Actuated Pedestrian Signals



STRATEGY PURPOSE:

A traffic control device that provides active flashing lights when triggered by a pedestrian. Increases motorist awareness of crossing pedestrians at designated mid-block locations.

PROS:

- Significantly increases vehicles yielding to crossing pedestrians.
- Often decreases pedestrian-involved crashes.

CONS:

- Should only be used where they can be easily seen by drivers (not near driveways and cross-street entrances)

ON-STREET BICYCLE STRATEGIES

Strategy: On-Street Shared Lane Markings or Sharrows



STRATEGY PURPOSE:

Street markings used to indicate a shared lane environment for bicycles and automobiles. These markings can supplement directional and wayfinding guidance, and are typically designated on lower-volume, lower-speed streets.

PROS:

- Reinforce legitimacy of bicycle traffic on the street.
- Can provide indication to bicyclists recommended alignment and routes.
- Requires no additional street space.

CONS:

- Not a substitute for dedicated bike lanes or separated facilities.

ON-STREET BICYCLE STRATEGIES

Strategy: Bike Lanes



STRATEGY PURPOSE:

At a minimum, bike lanes are designated by pavement markings for the preferential or exclusive use of bicyclists. Buffered bike lanes include pavement markings to add additional protective space between vehicles and bikes.

PROS:

- Increases cyclist comfort and clearly identifies bicyclists' space on streets.
- Creates separation between bicyclists and automobiles.

CONS:

- Dedicated bike lanes require additional street space, competing with travel lanes and on-street parking.

ON-STREET BICYCLE STRATEGIES

Strategy: Cycle Tracks



STRATEGY PURPOSE:

Cycle tracks are separated bicycle facilities designated by pavement markings and physical barriers for the exclusive use of bicyclists. Cycle tracks are typically used for two-way bicycle traffic, but can be one-way facilities.

PROS:

- Increases cyclist comfort and clearly identifies bicyclists' space.
- Creates separation between bicyclists and automobiles.

CONS:

- Cycle tracks require additional street space, competing with travel lanes and on-street parking.

ON-STREET BICYCLE STRATEGIES

Strategy: Bike Boulevard



STRATEGY PURPOSE:

Bicycle boulevards are low volume, minor streets modified to limit “through” traffic using the corridor and giving bicycle travel priority through a range of signage, pavement markings, and traffic calming devices.

PROS:

- Create bicycle priority corridors in locations that are not intended to emphasize vehicular through movements.
- Provides traffic calming to neighborhood streets.

CONS:

- Calming features can be more expensive than just traditional bike lanes.

ON-STREET BICYCLE STRATEGIES

Strategy: Protected (“Dutch”) Intersection



STRATEGY PURPOSE:

A treatment at a major intersection that includes physical barriers and markings for bikeways that increase bicyclist visibility. Can include many potential elements such as pavement markings, curb to delineate dedicated bike paths, and bicycle phases on traffic signals.

PROS:

- Increases the separation and visibility of bicyclists at intersections.
- Reduces bicycle and vehicular conflicts

CONS:

- Can be relatively higher cost than other bicycle facilities.
- Some applications can reduce vehicular throughput at an intersection.

OFF-STREET BICYCLE STRATEGIES

Strategy: Multiuse Paths – Sidepath



STRATEGY PURPOSE:

Provides a dedicated facility for bicyclists and pedestrians that is physically separated from vehicular traffic.

PROS:

- Separation from vehicular traffic can improve the experience for some users.
- A boulevard section can be landscaped to add to aesthetics and user comfort.
- In corridors with limited street right-of-way width, Sidepaths can be constructed at the curb without a boulevard.

CONS:

- Sidepaths add to width requirements for the street.
- Sidepaths along streets with a high number of driveways and side streets can be hazardous.

OFF-STREET BICYCLE STRATEGIES

Strategy: Multiuse Paths – Recreational Trail



STRATEGY PURPOSE:

Provides a dedicated facility for bicyclists and pedestrians that typically does not follow the roadway network like a sidepath. Recreational trails typically follow rivers, cross parks, or are located along other public right-of-way corridors.

PROS:

- Separation from vehicular traffic can improve the experience for users.
- Trails can be landscaped or in natural surroundings to add to aesthetics and user comfort.

CONS:

- Recreational trails often do not provide direct connections for many bike commute trips.

OFF-STREET BICYCLE STRATEGIES

Strategy: Grade Separation



STRATEGY PURPOSE:

A grade separation provides bicyclists and pedestrians a dedicated facility that is used to cross walking and biking barriers, including high-volume roadways, water features, and railroads.

PROS:

- Separation from vehicular traffic can provide a more direct and safer connection between two points.
- Provides connections across barriers that cannot otherwise be crossed.

CONS:

- Grade Separations are expensive.