

SIGNAL TIMING AND PEDESTRIAN RECALL

Purpose

Slow motor vehicle speeds and reduce pedestrian crossing delay.

Description

Coordinated signal timing can limit motor vehicle speed when sufficient traffic congestion exists for a platoon. Pedestrian pushbuttons, available at either side of a crossing can activate the pedestrian signal.

Estimated Cost



Applicable Locations

- Signal timing can be adjusted at all signalized intersections, with a priority for locations with medium-to-high pedestrian volumes.
- Pushbuttons are not applicable at intersections with pedestrian recall, though all pedestrian signals must be accessible to and usable by people with disabilities whether or not a pushbutton is present.

Applicable Street Types

All street types.

Safety Benefits

- Reduces pedestrian delay to cross.
- Improved convenience of crossing reduces unsafe crossing behavior.
- Coordinated signal timing can manage vehicle speeds in certain circumstances, leading to improved safety for all road users.

Expected Crash Reduction

50 percent for vehicle-pedestrian crashes, depending on specific signal phasing.⁶¹

Accessible Pedestrian Signals



Design Guidance

- Pedestrian pushbutton should be easy to access.
- Install pushbutton on either side of the crossing.
- Pushbutton location must comply with ADA regulations.
- Pushbuttons can be made accessible by providing audible tones or vibrations.

Considerations

- Signal timing operations must account for motor vehicle volumes and turning movement volumes.
- Longer walk intervals and shorter cycle lengths (less than 90 seconds) service pedestrians better.
- Concurrent signal phasing gives pedestrians more frequent crossing opportunities and less delay compared to exclusive signal phasing.
- Passive detection devices may be used in place of pedestrian pushbuttons.
- May impact delay to all travel modes.

Systemic Safety Potential

May be implemented systemically along corridors with:

- Infrequent crossing opportunities.
- Short pedestrian phases.
- High pedestrian or bicyclist volumes.

Additional Information

- Traffic Signal Timing Manual
- Manual on Uniform Traffic Control Devices
- PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System

