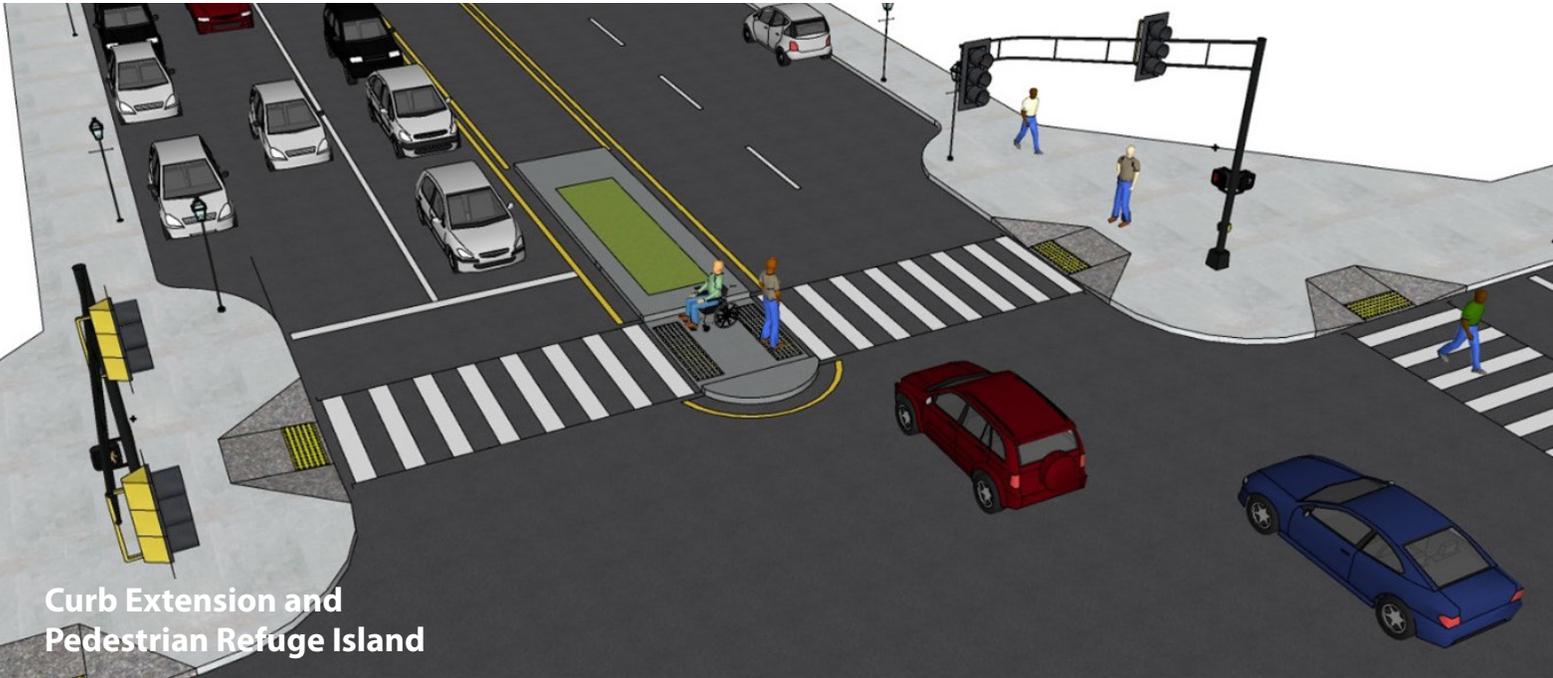


# Speed Management via Signal Timing Strategies



## DESCRIPTION

- Speed management via signal timing strategies can include implementing traffic controller strategies to alter a driver's behavior and therefore improve conditions for pedestrians and bicyclists. Three such treatments include dwelling on red, pedestrian recall, and signal coordination based on safe speeds.
- Dwell-on-Red is a treatment that involves signals reverting to an all-red phase when there is no vehicular traffic demand, thereby reducing nighttime speeding when volumes are typically low.
- Pedestrian Recall is a treatment that involves a pedestrian phase activating every signal cycle regardless of pedestrian presence. This treatment can increase driver expectation of the pedestrian signal phase.
- Signal coordination is typically based on observed 85th percentile vehicle speeds, which may be higher than appropriate safe speeds. Instead, the corridor progression can

be designed for a safe speed (i.e., the posted speed limit) and that speed can be communicated to drivers.

- These signal timing strategies work in concert with physical speed management countermeasures like pedestrian refuge islands, raised crossings, curb extensions, or other pavement markings to influence lower vehicle speeds and improve the conditions for pedestrians and bicyclists. All these strategies work together to reduce pedestrian exposure to vehicles or prompt a psychological response in motorists to choose lower speeds.

## CONTEXT

- Signal timing strategies that can improve speed management are often implemented at intersections with higher volumes of vehicle, pedestrian, and bicyclist traffic.
- Dwell-on-red is often used during late night periods when impairment crashes are more prevalent and there would be a minimal impact on traffic congestion.

## BENEFITS

- ✓ Safer speeds
- ✓ Cost effective



## POLICY AND DESIGN GUIDANCE

- Signal timing should meet the guidelines provided in the Virginia Supplement to the Manual on Uniform Traffic Control Devices.
- For additional strategies related to traffic calming and speed management, refer to:
  - VDOT's Neighborhood Traffic Programs
  - \$200 Speeding Fine Program
  - Cut Through Traffic and Watch for Children Sign Program
  - VDOT's Policy for Speed Display Signs

## RESOURCES

General guidance:

[NCHRP 812](#)

[NCHRP 284](#)

Guidelines are provided for informational purposes only. For detailed design guidance, please refer directly to design manuals and standards.

For more information on **Speed Management via Signal Timing Strategies** and other bicycle and pedestrian treatments, visit [virginiadot.org/programs/bikeped/bicycle\\_and\\_pedestrian\\_treatments.asp](http://virginiadot.org/programs/bikeped/bicycle_and_pedestrian_treatments.asp)

