IMAGE SOURCE: HTTP://JOHNHOWELAW.COM/PEDESTRIAN-ACCIDENTS/

PEDESTRIAN SIGNALS

Pedestrian signals, like vehicle signals, inform pedestrians when it is safe and appropriate to cross the street and when to stop and wait. Pedestrian signals, also called "ped heads", consist of a white "WALK" symbol and a flashing and/or steady "DON'T WALK" symbol or words.

These basic pedestrian signals may be enhanced with pedestrian countdowns and/or accessible pedestrian signals (APS). "Pedestrian countdowns" provide information on the number of seconds remaining in a pedestrian cycle. Accessible pedestrian signals (APS) are "an integrated device that communicates information about the WALK and DON'T WALK intervals at signalized intersections in non-visual formats (i.e., audible tones and vibrotactile surfaces)."[14] Sometimes called "Audible Pedestrian Signals," accessible signals aid pedestrians with visual impairments.

MMUTCD permits pedestrian signals to be fixed (also known as "pre-timed") or actuated. Pre-timed signals provide a pedestrian walk phase for every leg of an intersection during every cycle, regardless of whether pedestrians are present or not. Actuated signals provide a walk phase only when pedestrians are present.

14 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), Advisory R209

USE

- Pedestrian signals should be installed at all signalized intersections with crosswalks.
- In general, fixed-time signals should be used in urban areas to ensure crossings are visible and predictable for all users and that signals regularly provide adequate time to cross. As a rule of thumb, where pedestrians can reasonably be assumed present at 50% or more of signal cycles, pedestrian crossing phases should be automatic (e.g. pre-timed). At less-trafficked intersections, actuated signals (using push buttons or loop detectors) may be appropriate.

DESIGN

- Provision of pedestrian countdown information is generally desired at all intersections with pedestrian signal heads. MMUTCD requires that numbers must be immediately adjacent (below or beside) to the "DON'T WALK" symbol. Countdown displays should be dark at all times except during the pedestrian clearance phase. If the pedestrian crossing width exceeds 90 feet, increase the height of the numerical display to ensure visibility and legibility.
- Pedestrian crossing time must, at a minimum, meet the current MMUTCD standard. Required pedestrian crossing time is dependent on the total distance of pedestrian exposure. This is the distance where a pedestrian is off the

curb and in the vehicle zone. Pedestrian crossing distances, and therefore required pedestrian crossing times, may be reduced through the use of bulb-outs.

- Pedestrian actuated signals should be located adjacent to the landing of the desired crossing with a maximum reach of 18"to the signal push button.

SPECIAL CONSIDERATIONS

- In high pedestrian locations, such as the downtown, near major pedestrian generators, or near schools or senior centers, additional pedestrian time may be needed or desired because of slower walking speeds.
- Use LED or other low energy signal technologies for more energy efficient countdown displays.

MAINTENANCE AND OPERATIONS

- Snow clearance at curb ramps and sidewalks must provide clear access to APS push buttons.
- Adequacy of pedestrian crossing time should be routinely monitored and adjusted, especially when there is a change in land use near the intersection.

REFERENCES

- City of Grand Rapids Street Classification Policy, 1996
  - Section 7. Pedestrian Movement, 7.9
- MMUTCD, 2011
  - Part 4 Highway Traffic Signals: Chapter 4E. Pedestrian Control Features
  - Section 4E.07: Countdown Pedestrian Signals http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart4_2011.pdf
  - Section 4E.08: Pedestrian Detectors http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart4_2011.pdf
- AASHTO: Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004
- Section 4.1.4: Pedestrian-Actuated Signals