

# Overview of NHDOT's Midblock Pedestrian Crossing Program

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# NHDOT Midblock Crossing Reviews

Pavement Resurfacing Projects

Municipal Requests

NHDOT Capital Improvement Projects

Municipally Managed/LPA Projects

Driveway Permits

# Two Primary Criteria



**#1: Would a Motorist Frequently See Pedestrians?**

# Two Primary Criteria



**#2: Is the Location a Safe Place to Cross?**

# Safety concerns considered during evaluation

Vehicular volume >7,000 veh/day (AADT)

Vehicular speeds >35mph

AASHTO Stopping sight distance not met or marginally met

Crossing 3 or more lanes of traffic

Rural areas where pedestrian crossings would not be expected

Right turn conflicts

Drainage conflicts

Crossing leads to street, driveway, or parking space

Nighttime visibility

**If BOTH primary criteria are met:**

- #1: Would a Motorist Frequently See Pedestrians?**
- #2: Is the Location a Safe Place to Cross?**

**Consider (re)approval of  
marked pedestrian crossing**

# Marked Pedestrian Crossing



# What if safety concerns cannot be resolved?





# Unmarked Pedestrian Crossing



## Safety concerns that may be mitigated by relocation

Right turn conflicts

Drainage conflicts

Crossing leads to street, driveway, or parking space

Nighttime visibility

## Safety concerns that may be mitigated by PHBs/RRFBs

Vehicular volume >7,000 veh/day (AADT)

Vehicular speeds >35mph

AASHTO Stopping sight distance marginally met

Crossing 3 or more lanes of traffic

Rural areas where pedestrian crossings would not be expected

# Crossing 3 or More Lanes



# Crossing 3 or More Lanes



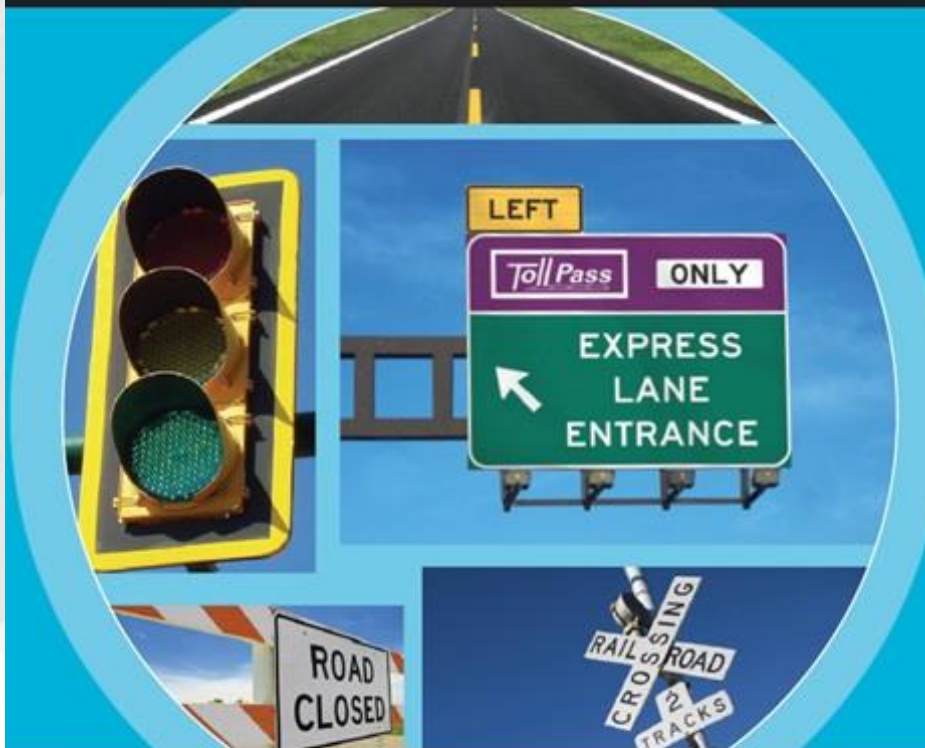
# A Whole Bunch of Nice Ideas

## A Whole Bunch of Nice Ideas

for Streets and Highways

2009 Edition

Including Revision 1 dated May 2012  
and Revision 2 dated May 2012



U.S. Department of Transportation  
Federal Highway Administration

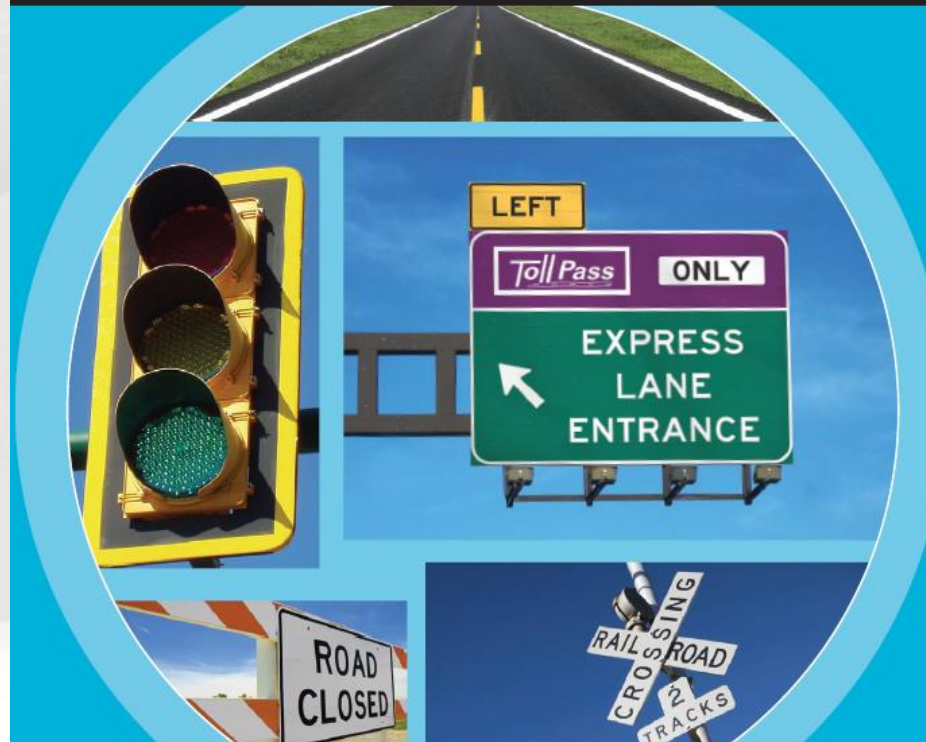
# Manual on Uniform Traffic Control Devices

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U.S. Department of Transportation  
Federal Highway Administration

New Hampshire  
**DOT**  
Department of Transportation

# Manual on **Uniform** Traffic Control Devices

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Support:

03 An example of modifying a device's design would be to modify the Combination Horizontal Alignment/Intersection (W1-10) sign to show intersecting side roads on both sides rather than on just one side of the major road within the curve.

Option:

04 With the exception of symbols and colors, minor modifications in the specific design elements of a device may be made provided the essential appearance characteristics are preserved.

## Section 1A.04 Placement and Operation of Traffic Control Devices

Guidance:

01 Placement of a traffic control device should be within the road user's view so that adequate visibility is provided. To aid in conveying the proper meaning, the traffic control device should be appropriately positioned with respect to the location, object, or situation to which it applies. The location and legibility of the traffic control device should be such that a road user has adequate time to make the proper response in both day and night conditions.

## Section 1A.06 Uniformity of Traffic Control Devices

Support:

01 Uniformity of devices simplifies the task of the road user because it aids in recognition and understanding, thereby reducing perception/reaction time. Uniformity assists road users, law enforcement officers, and traffic courts by giving everyone the same interpretation. Uniformity assists public highway officials through efficiency in manufacture, installation, maintenance, and administration. Uniformity means treating similar situations in a similar way. The use of uniform traffic control devices does not, in itself, constitute uniformity. A standard device used where it is not appropriate is as objectionable as a non-standard device; in fact, this might be worse, because such misuse might result in disrespect at those locations where the device is needed and appropriate.

## Section 1A.07 Responsibility for Traffic Control Devices

Standard:

01 The responsibility for the design, placement, operation, maintenance, and uniformity of traffic control devices shall rest with the public agency or the official having jurisdiction, or, in the case of private roads open to public travel, with the private owner or private official having jurisdiction. 23 CFR 655.603 adopts the MUTCD as the national standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel (see definition in Section 1A.13). When a State or other Federal agency manual or supplement is required, that manual or supplement shall be in substantial conformance with the National MUTCD.

02 23 CFR 655.603 also states that traffic control devices on all streets, highways, bikeways, and private roads open to public travel in each State shall be in substantial conformance with standards issued or endorsed by the Federal Highway Administrator.

Support:

03 The Introduction of this Manual contains information regarding the meaning of substantial conformance and the applicability of the MUTCD to private roads open to public travel.

04 The "Uniform Vehicle Code" (see Section 1A.11) has the following provision in Section 15-104 for the adoption of a uniform manual:

Sect. 1A.03 to 1A.07

December 2009



# Conformance with the MUTCD is the law!

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## Support:

<sup>03</sup> An example of modifying a device's design would be to modify the Combination Horizontal Alignment/Intersection (W1-10) sign to show intersecting side roads on both sides rather than on just one side of the major road within the curve.

## Option:

<sup>04</sup> With the exception of symbols and colors, minor modifications in the specific design elements of a device may be made provided the essential appearance characteristics are preserved.

## Section 1A.04 Placement and Operation of Traffic Control Devices

### Guidance:

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<sup>02</sup> Traffic control devices should be placed and operated in a uniform and consistent manner.

<sup>03</sup> Unnecessary traffic control devices should be removed. The fact that a device is in good physical condition should not be a basis for deferring needed removal or change.

## Section 1A.05 Maintenance of Traffic Control Devices

### Guidance:

<sup>01</sup> Functional maintenance of traffic control devices should be used to determine if certain devices need to be changed to meet current traffic conditions.

<sup>02</sup> Physical maintenance of traffic control devices should be performed to retain the legibility and visibility of the device, and to retain the proper functioning of the device.

## Section 1A.07 Responsibility for Traffic Control Devices

### Standard:

<sup>01</sup> The responsibility for the design, placement, operation, maintenance, and uniformity of traffic control devices shall rest with the public agency or the official having jurisdiction, or, in the case of private roads open to public travel, with the private owner or private official having jurisdiction. **23 CFR 655.603** adopts the MUTCD as the national standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel (see definition in Section 1A.13). When a State or other Federal agency manual or supplement is required, that manual or supplement shall be in substantial conformance with the National MUTCD.

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December 2009

# Consistent Deployment Along a Corridor



# Consistent Deployment Along a Corridor



# Consistent Deployment Along a Corridor



# Consistent Deployment Along a Corridor



# Consistent Deployment Along a Corridor



# Consistent Deployment Along a Corridor



# Inconsistent Deployment Along a Corridor





# Inconsistent Deployment Along a Corridor



# W11-2 vs. S1-1



Areas with non-school related pedestrian activity, that may also include school related pedestrian activity.



Areas where pedestrian activity is predominantly school related (i.e. before & after school hours).

# Advance Signs



W11-2 or S1-1  
as appropriate  
for all  
crossings

For individual crossings  
(note: no plaque)



For pedestrian zones,  
crossings in series &  
commercial villages.

# NHDOT Sign Color



# Street Lighting

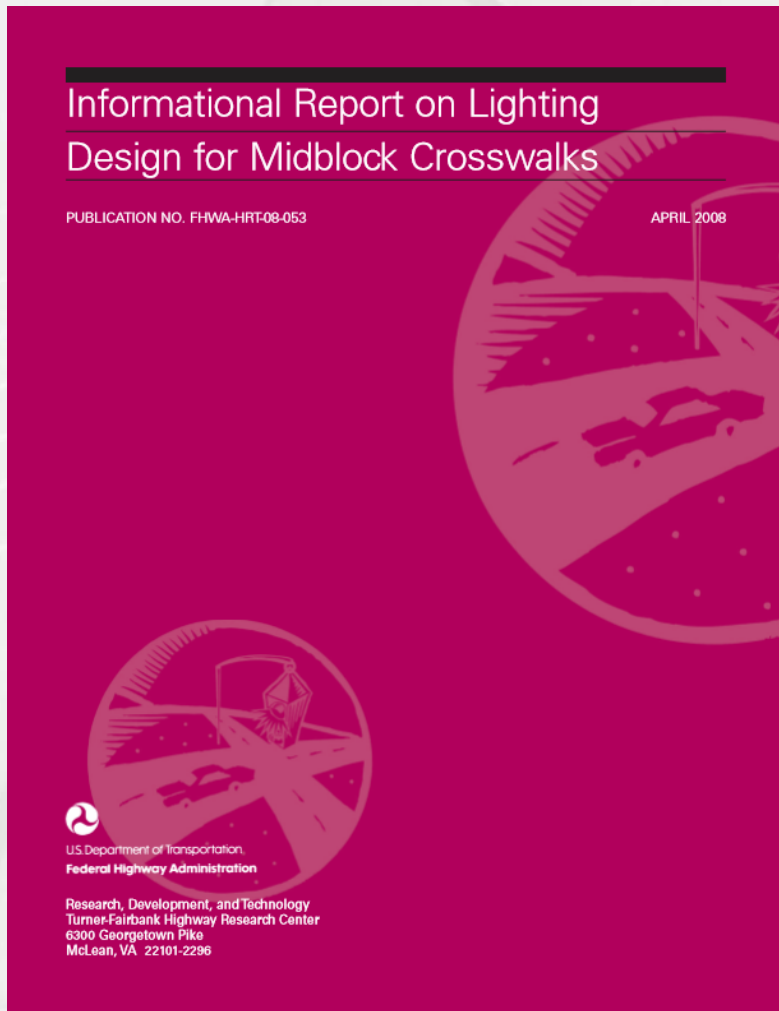


Figure 11. Drawing. Traditional midblock crosswalk lighting layout.

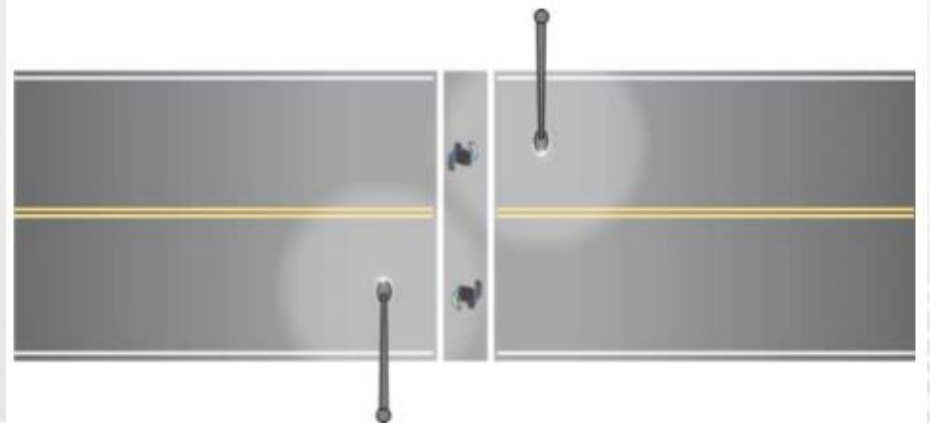


Figure 12. Drawing. New design for midblock crosswalk lighting layout.

# Process Overview

Preliminary Discussion (optional)



Written Request on Municipal Letterhead



Internal Evaluation



Issue Decision



Preparation and Submission of Design



Design Review



Maintenance Agreement/Permitting



Construction



Inspection

# Unmarked Pedestrian Crossing



1. Sidewalk Extension
2. Dome Panels
3. Flanking Signs with Downward Arrow
4. Lighting (both sides)
5. Advance warning signs (not pictured - out of view)

**\*\*Submit an engineered design for review and approval\*\***

# Marked Pedestrian Crossing



1. Sidewalk Extension
2. Dome Panels
3. Flanking Signs with Downward Arrow
4. Lighting (both sides)
5. Crosswalk
6. Advance signs (not pictured - out of view)

**\*\*Submit an engineered design for review and approval\*\***



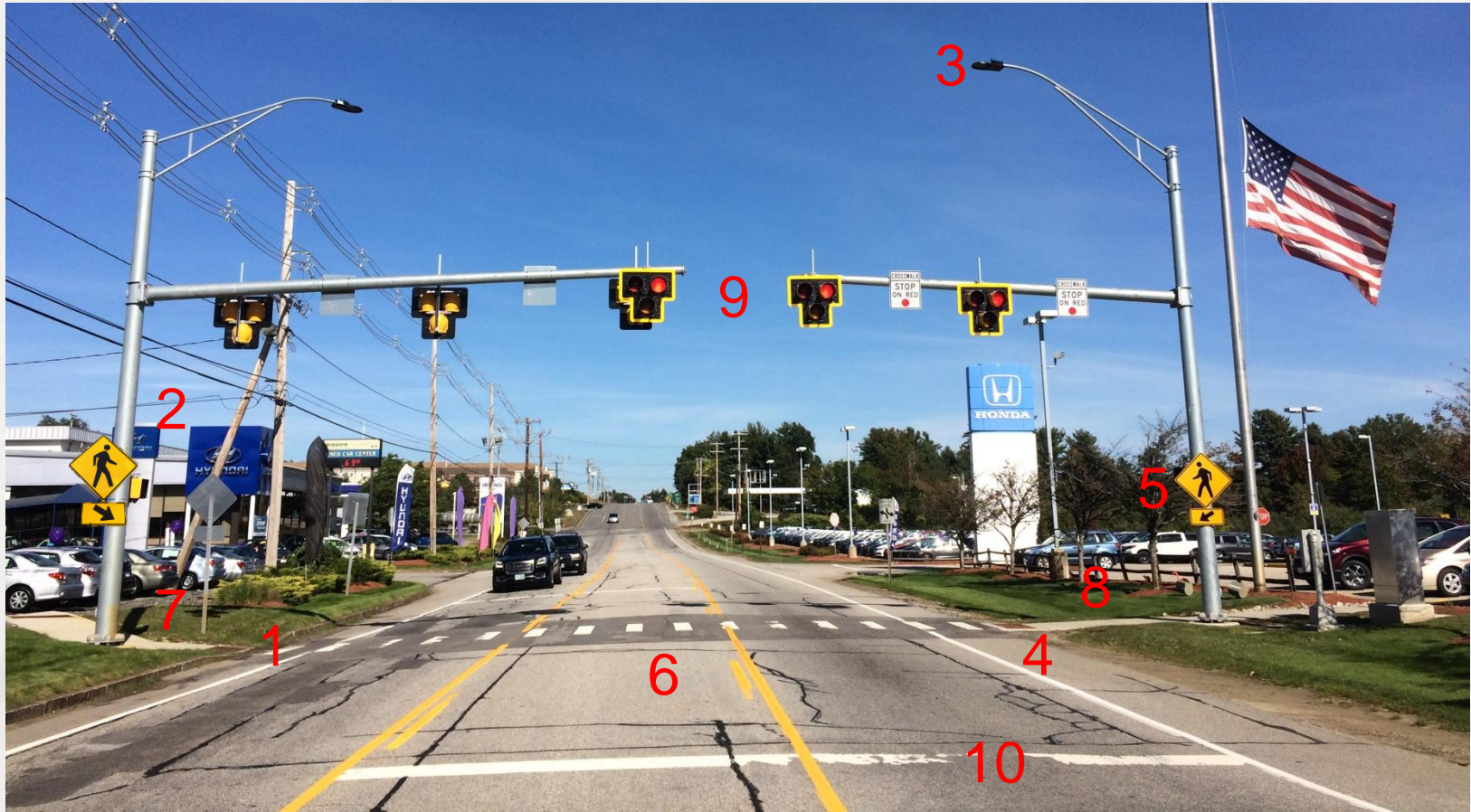
# Typical RRFB Deployment



1. Curb ramps
2. No parking zone within 20'
3. Lighting
4. Dome Panels
5. Flanking Signs with Downward Arrow
6. Crosswalk
7. Pushbuttons
8. Sidewalk Extension
9. Beacons
10. Advance warning signs (not pictured - out of view)

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# Typical PHB Deployment



1. Curb ramps
2. Pedestrian Signal Indication
3. Lighting
4. Dome Panels
5. Flanking Signs with Downward Arrow
6. Crosswalk
7. Pushbuttons
8. Sidewalk Extension
9. Beacons
10. Stop Bar
11. Advance warning signs (not pictured - out of view)

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# Maintenance Responsibilities

Element	Responsible Party
Crosswalk & Stop Bars	Municipality (Except School Crosswalks)
Beacon Assembly & Controls	Municipality
Power Costs	Municipality
Annual Inspections	Municipality
Emergency Response	Municipality
Sidewalks	Municipality
Signs	NHDOT (Unless Mounted to PHB or RRFB)
Lighting	Municipality
Sidewalk Snow Removal	Municipality
Roadway Snow Removal	NHDOT (Typically)

**Maintenance agreements are typically between the Municipality and the State. Separate agreements may be made assigning maintenance responsibilities from the Municipality to another entity (e.g. school district, business). Communication from the State will be to the Municipality.**

# Questions???

