



**Safety BPAC Subcommittee Meeting  
with Design and Infrastructure Subcommittee  
February 27, 2017 10:00 AM – 12:00 PM  
Rutgers University  
33 Livingston Avenue, New Brunswick, NJ**

**Attendees:** Catherine Bull, Leigh Ann Von Hagen, Alan Huff, Sean Meehan, Joseph Milanese, Angela Quevedo, James Sinclair, Mike Viscardi

**Call-ins:** Andy Anderson, Cassidy Boulan, Betsy Mastaglio, Ruchi Shirvastava, Reed Sibley

Introductions @ 10:10 am

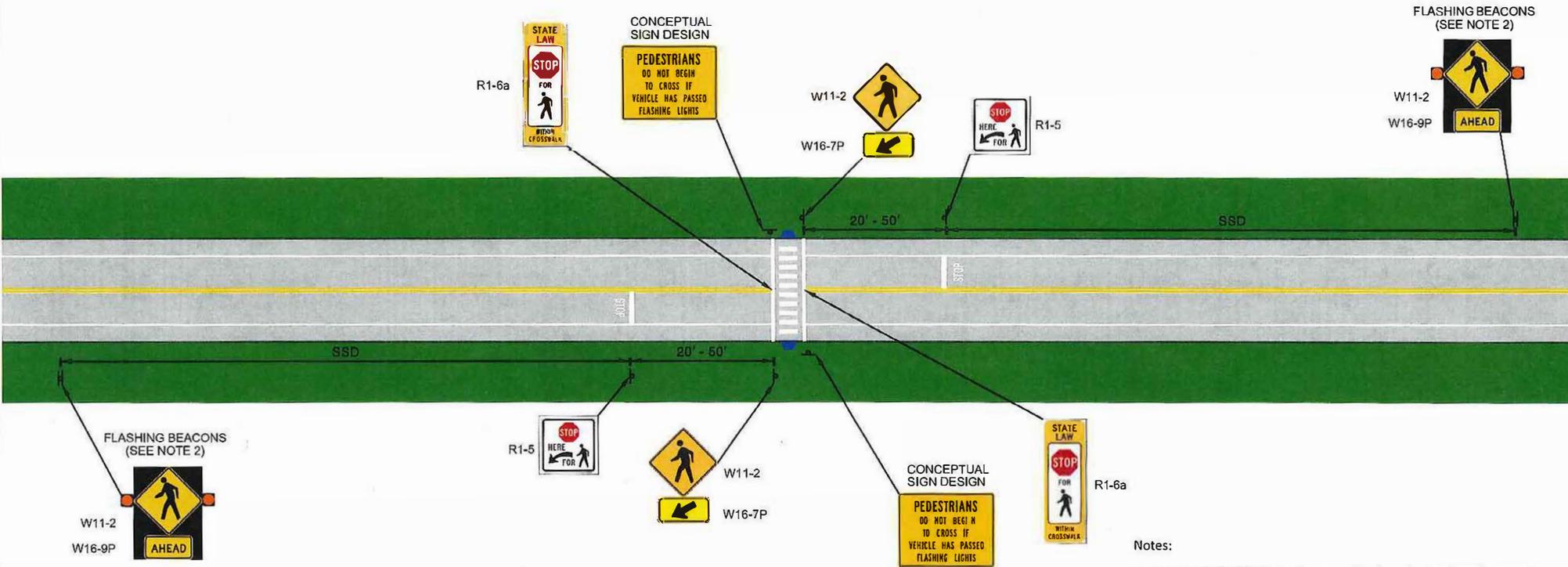
**1. Join Safety/Design Meeting on Pedestrian Crosswalk Improvements**

- Met jointly with the Design and Infrastructure Subcommittee to review draft proposal
- Draft Proposal: “Rural Midblock Crosswalk” – reference to attached pdf
  - Comments and Issues
    - Words inside of the pedestrian signs are possible confusing & contradictory, “wait until vehicle has come to a stop” or “use caution” instead
      - Improperly worded signs may create a pedestrian liability (blame)
      - Too many words, could be an icon instead
    - Consider an alternative to flashing lights; should they only be aimed at motorists?
      - Flashing lights seem to work in school zones, albeit during limited time-frames
      - Do/should buttons activate the flashing lights (vs 24/7 flashing)
      - From the driver’s perspective, do flashing lights signal the presence of a pedestrian or of another car?
  - Goals: Identify the required stopping space? provide visual cues for both drivers and pedestrians, balance impressions of fairness?
  - Questions
    - Is the concept of pedestrian “emboldening” valid?
    - Does land-use/context alone justify a crossing regardless of incidents?
  - Thoughts and Ideas
    - Hawk Crossings: warrant required for red signaling
      - minimum threshold of traffic and/or incidents
    - Identification of speed and design differences (faster vs. slower roads; rural, suburban and shore-town streets) – see “typology of crossings”
    - Placement of a permanent “trigger” box, pedestrian steps in → car stops
      - Roads have 2-edges: sidewalk/curb, and parked cars
      - Many roads lacking shoulders, but NJ roads are wide overall
      - 1-2 foot bulb-out, flexible bollard/curb-extension, lane-narrowing
      - Striping: advantage - workable into current municipal striping plans
      - Data/Example: S. Orange has seen reduced incident rates
    - Consider a Typology of Crossings: based on density, location

- Different design/mock-ups based on context
- Examples: shore crossings (with parking, semi-urban), vs. trail crossings (rural and high speed)
- Urban/Shore-crossings are separate conversation, current focus is on the rural and low-density design context
- Opinion (Andy): engineering and design should not rely too heavily on enforcement and education to make up for design-shortcomings
- Zig-Zag: alternative treatment idea – passive crossing approach warning
  - See “Greater Washington Zig-Zag” – Virginia and Maryland
  - Experimentation, shown to be effective in reducing speeds by “visually changing drivers’ expectations”
  - What are the barriers to trying this in New Jersey?
  - Alan: to send article to everyone for review
- Action Items
  - Betsy/Cassidy: spend ½ of next meeting time to share thoughts with the infrastructure and design committee
  - Literature: what is the effectiveness of flashing beacons? RFBs vs Hawkeyes
  - Call for more sketch-up ideas and examples of treatments, more data
  - Any final thoughts on solar/bike-pavement illumination

## 2. Other Safety Subcommittee Business

- Pedestrian Near-Miss Roundtable
  - Issue: gathering missing data on near-misses → road performance measure
    - Ongoing research to identify hotspots and problem areas occasionally contradicts local law-enforcement, on-the-ground knowledge
    - Daily near-misses go un-reported, but are observed by crossing-guards
    - Funding justification is usually linked with data and performance
  - Idea: Invitation/Thoughts on Forming a Near-Miss Roundtable
    - Want to include discussions on technology, best-practices, next-steps
    - Request for invitation recommendations, but the group should be kept relatively small for the sake of discussion
  - Need for More Data: Data-Driven Approach
    - Currently no statewide collection/data-set for designated school crossings
    - Planning and safety interventions are largely reactive despite anecdotal near-miss and hotspot knowledge → how to be proactive?
    - Data is factional by school district and/or police agency
    - Example: NYC does not write summons for “failure to cross” which means there is no data. However, law-enforcement will act if there is a sense that policy action will be taken.
    - Currently, there exists an agency manual facilitating some prediction of problem areas
    - Currently: Self-assigned goal of 20% of HSIP funding for bike/ped initiatives
  - Moving Forward, Questions & Thoughts
    - Identify data sources (especially digitized), GIS layers
    - Does police-work with crossing guards constitute legitimate data? How can it be combined with other metrics, weighting, qualitative data?
    - Consider a framework for developing a score/metric (ex. walk score)
- Best Practices in Lighting Design
  - Conversation with DOT concerning best practices, especially around transit centers
  - Thoughts: How can DOT go beyond the old standards? Are currently standards only based on federal guidelines? Vehicle-focused?
  - Action Item: Call for new literature review (Old VTC report from 2007)
    - Updates: LED lights and new colors...?
    - Alan: send an email to Mark



- Notes:
1. Stopping sight distance values provided are for level roadways only. For stopping sight distances on grades, see AASHTO Table 3-2.
  2. Install 2 sets of flashing beacons in each location to face crosswalk and oncoming vehicle traffic.

$$SSD = 1.47Vt + 1.075 \frac{V^2}{a}$$

where:  
 SSD = stopping sight distance, ft  
 V = design speed, mph  
 t = brake reaction time, 2.5 s  
 a = deceleration rate, ft/s<sup>2</sup>

Design Speed (MPH)	Design Stopping Sight Distance (FT)
25	155
30	200
35	250
40	305
45	360
50	425
55	495

**NJ BICYCLE & PEDESTRIAN ADVISORY COUNCIL**

Advance Pedestrian Warning Treatment  
for Rural Midblock Crosswalks

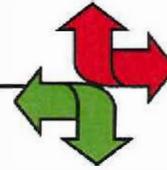
Conceptual Sketch



February 2017
Not to Scale

Sources:  
 A Policy on Geometric Design of Highways and Streets, AASHTO, 2011  
 Manual on Uniform Traffic Control Devices, FHWA, 2009

# Manual on Uniform Traffic Control Devices (MUTCD)



## [Knowledge](#)

# Experimentations

If you have an idea for a new traffic control device or a different application of an existing device that will improve road user safety or operation, but the device or application is not compliant with or not included in the MUTCD, it is possible to experiment with the device or its use.

A successful experiment is one where the research results show that the public understands the new device or application, the device or application generally performs as intended, and the device does not cause adverse conditions. The "experimenter" must evaluate conditions both before and after installation of the experimental device and describe the measurements of effectiveness (MOEs) of the safety and operational benefits (e.g., better visibility, reduced congestion).

All requests for experimentation should originate with the State/local highway agency or toll operator responsible for managing the roadway or controlled setting where experiment will take place. That organization forwards the request to the FHWA - with a courtesy copy to the FHWA Division Office. The FHWA must approve the experiment before it begins. Requests may also be forwarded directly to the FHWA Division Office, and the Division Office can submit the request to the FHWA Headquarters Office.

Requests for experimentation approval should be on agency letterhead and should be sent electronically as an attachment (PDF or Word Document) to an e-mail to: [MUTCDofficialrequest@dot.gov](mailto:MUTCDofficialrequest@dot.gov). [Note: if e-mail is not possible, the letter may be sent via postal mail or delivery service to FHWA at 1200 New Jersey Avenue, S.E., HOTO-1, Washington, DC 20590.]

As described in Paragraph 11 of Section 1A.10, all requests should include:

1. A statement of the nature of the problem, including data that justifies the need for a new device or application.
2. A description of the proposed change, how it was developed, and how it deviates from the current MUTCD.
3. Any illustration(s) that enhances understanding of the device or its use.
4. Supporting data that explains how the experimental device was developed, if it has been tried, the adequacy of its performance, and the process by which the device was chosen or applied.
5. A legally binding statement certifying that the concept of the traffic control device is not protected by a patent or copyright (see [MUTCD Section 1A.10](#) for additional details.)
6. The proposed time period and location(s) of the experiment.
7. A detailed research or evaluation plan providing for close monitoring of the experimentation, especially in the early stages of field implementation. The evaluation plan should include before and after studies as well as quantitative data enabling a scientifically sound evaluation of the performance of the device.
8. An agreement to restore the experimental site to a condition that complies with the provisions of the MUTCD within 3 months following completion of the experiment. The agreement must also provide that the sponsoring agency will terminate the experiment at any time if it determines that the experiment directly or indirectly causes significant safety hazards. If the experiment demonstrates an improvement, the device or application may remain in place until an official rulemaking action occurs.
9. An agreement to provide semi-annual progress reports for the duration of the experimentation and a copy of the final results to the FHWA's Office of Transportation Operations within three months of the conclusion of the experiment.

## Experimentation Process Flow Chart

- [Flow Chart of the Experimentation Process \(PDF, 98KB\)](#)