

U.S. Department of Transportation  
Federal Highway Administration  
400 Seventh St SW  
Washington, DC 20590

Refer to: HOTO-1

May 22, 2000

Mr. Richard Patterson  
Chief of Police  
City of Birmingham  
151 Martin Street  
Birmingham, MI 48012

Dear Chief Patterson:

We have reviewed your April 18 letter regarding your request for approval to experiment with in-roadway warning lights at crosswalks and offer the following comments. As stated in Section 1A-6 of the Manual on Uniform Traffic Control Devices (MUTCD), please address the following in your evaluation plan:

1. Provide a detailed description of the proposed changes including the name of the intersection, an illustration of the proposed location including the placement of the in-roadway warning lights, the signing used for this crosswalk, and the location of the angled parking. We believe that a minimum of five (5) lights should be used as follows: Edge of travel way; center of lane; centerline; center of lane; edge of travel way.
2. Please clarify how the field observation data will be collected, e.g., by observers, using video, etc.
3. Please include a statement agreeing to restore the experiment site to a state complying with the provisions of the MUTCD within 3 months following the end of the time period of the experiment. Only if, as a result of the experimentation, a request is made by the City of Birmingham that the Manual be changed to include the device, the device may remain in place until an official rulemaking action has occurred.
4. Please include an agreement that the City of Birmingham will remove these in-roadway warning lights if in the future it is decided to install traffic signals at this intersection.
5. Please indicate what and how much subjective data will be collected. The additional information we need is described below.

- As a minimum, collect before and after spot speed data for 100 free-flowing vehicles both at the crosswalk and either 50 feet, 100 feet, or 200 feet before the crosswalk, according to the methodology in the ITE Traffic Engineering Handbook. This should be collected both during the daytime and at nighttime. It is best to record speeds for single vehicles rather than platoons.
  - As a minimum, collect before and after volume data for pedestrians and vehicles three to four times a year. This should be an hourly count.
  - As a minimum, observe the behavior of 100 pedestrians in the crosswalk. Note how the pedestrian behaves in the crosswalk. Preferably, also record their approximate age range and whether they are male or female. (See enclosed sample pedestrian behavior form.)
  - As a minimum, collect before and after motorist behavior data for 100 vehicles. Did the motorists yield to the pedestrian in the crosswalk, slow down 50-100 feet before the crosswalk, or did they disregard the pedestrian? The main thing we are looking for is the percentage of vehicles that yielded to pedestrians in the crosswalk before and after the devices was installed. (See enclosed sample motorist behavior form.)
  - It is best to collect the speed, volume and pedestrian behavior data at the same time, although all three studies will not end at the same time.
6. Please specify when the field data will be collected, e.g., day, night, peak, off-peak, week, weekend, etc., and reasons for selecting those times (example largest pedestrian/vehicle volume).
  7. We also request that you include some safety assessment such as near misses, traffic conflicts, accidents, etc. Please specify (see sample data collection forms).
  8. Please indicate the proposed beginning date of your experimentation.

In addition to the requirements found in Section 1A.6 of the MUTCD, we offer the following comment:

- Your experimentation with in-roadway warning lights at crosswalks should include the installation of amber raised pavement markers at a separate crossing for comparison purposes.

Your request to experiment with the in-roadway flashing warning lights for crosswalks will be approved, contingent on receipt and review of a more detailed evaluation plan including the items requested above.

For future reference purposes, we have assigned the following official experimentation number and title to your request: "In-Roadway Warning Lights At Crosswalks - IV-184(Ex)." Please

refer to this number in future correspondence.

If we can be of further assistance, please contact Ms. Louisa M. Ward on 202-366-4372.

Sincerely yours,

Shelley J. Row, P.E.  
Director, Office of Transportation  
Operations