

June 27, 2003

Refer to: HOTO-1

Ms. Jennifer Kroening
Traffic Engineering Analyst
City of Scottsdale
Transportation Department
7447 East Indian School Road, Suite 205
Scottsdale, AZ 85251

Dear Ms. Kroening:

Thank you for your May 7 letter requesting experimentation with yellow-green pavement markings for a school crosswalk at Yavapai Elementary School in Scottsdale. You have our approval to begin installing the marking material. This experimentation is approved for a minimum of 1 year.

We have received several inquiries on experimentation with the yellow-green pavement marking materials. We are working with the research staff at the Federal Highway Administration's (FHWA) Turner Fairbank Highway Research Center in developing guidance for an effective evaluation plan and data gathering. The following is a non-exclusive list of data that we recommend be collected for both before and after conditions.

- Vehicle speeds
- Vehicle volumes
- Pedestrian volumes
- Driver behavior (on-set of braking, yielding, etc.)
- Pedestrian behavior (when there is no crossing guard)
- Weather conditions
- Time of day
- Time of year

We believe there is a need to contrast the fluorescent yellow-green markings with white markings. We realize that Arizona uses yellow school crosswalk markings, but this is not in conformance with the national Manual on Uniform Traffic Control Devices (MUTCD). Please add a white stripe immediately parallel to the fluorescent yellow-green stripe as a supplement. The reason for this recommendation is both for daytime visibility, where the fluorescent yellow-green can lose contrast in dirty areas; and nighttime where the fluorescent color would not be as bright as white.

We also recommend including a control site at a comparable elementary school crossing location on the same road or a road with similar characteristics and traffic volumes, in order to validate data collection. This same data would also be collected at that site. If crossing guards are used

at the Yavapai Elementary School crossing, then they should be used at both sites. It is recommended that the normal Arizona yellow crosswalk markings at the control site and the contrasting yellow-green/white markings at the experimentation site be installed at the same time.

Please develop an evaluation plan to include the items mentioned above. As soon as more detailed guidance regarding the required evaluation plan is available, we will send it to you along with a sample data collection form. Please note that it is not critical that your "after" data collection take place this fall. The collection of the "after" data in the spring would be acceptable and may even be preferred since the novelty effect may wear off and it would also allow for some weathering of the material.

For reference purposes, we have assigned your request the following official experimentation number and title: "7-56(E)–Yellow-Green Pavement Markings for School Crosswalk—Scottsdale, AZ." Please refer to this number in future correspondence. To expedite the approval process you may fax your revised evaluation plan to us when ready at 202-366-3225.

If you have any questions, please call Mr. Scott Wainwright at 202-366-0857.

Sincerely yours,

/s/ Vincent P. Pearce

Vincent Pearce
Acting Director, Office of Transportation
Operations