



DEPARTMENT OF TRANSPORTATION

November 29, 2005

Ms. Regina S. McElroy, Director
Office of Transportation Operations (HOTO)
Federal Highway Administration
400 Seventh Street SW
Room 3408
Washington, DC 20590

RE: Pedestrian Enhanced Delineation System (PEDS) Request for Experimentation

Dear Ms. McElroy:

The City of Pasadena is requesting the Federal Highway Administration approval to implement an experiment with a **Pedestrian Enhanced Delineation System (PEDS)** for crosswalks at the signalized intersection of Arroyo Parkway and Fillmore Street.

Background

The City of Pasadena is currently involved in the design development of the City's Arroyo Parkway Streetscape Enhancement Project. The goal of the project is to improve mobility, enhance the streetscape of Arroyo Parkway, and enhance the delineation of the pedestrian crosswalk lines through the application of technology to increase pedestrian compliance and increase the visibility of the crosswalks to pedestrians.

The intersection of Arroyo Parkway and Fillmore Street is located midway along the City's project and is controlled with a traffic signal and pedestrian crosswalks. The Gold Line Light Rail Transit (LRT) Fillmore Station is located on the west side of the street and the crosswalks are used by pedestrians from the area's residential land uses on the east side of the street to access the light rail station for trips to Los Angeles or other areas.

Need for Crosswalk Enhancement

The Gold Line LRT started operation in Pasadena in July 2003. The intersection of Arroyo Parkway and Fillmore Street was signalized in advance of the Gold Line opening to provide a safe crossing for pedestrians using the intersection to access the Gold Line LRT station. While the traffic signal provides standard safety features for pedestrians, the City's goal is to provide additional enhancements to the crosswalks to promote the use of the crosswalks, increase the visibility of the crosswalk lines to pedestrians especially during night time hours, and increase the pedestrians' compliance with the pedestrian signal indications.

Relation to MUTCD

The 2003 Manual on Uniform Traffic Control Devices (MUTCD) Chapter 4L provides Support, Standard and Guidance for application of "In-Roadway Lights." While this chapter references the applicability of these devices to warn "road users", the intent of the chapter appears to focus on warning "motorists" using the roadway. This chapter does not specifically address how and if the "In-Roadway Lights" may be used to warn "pedestrians" of specific conditions.

Scope of the Experimentation

This experiment will install in-pavement lights outside the borders of crosswalk lines at the signalized intersection of Arroyo Parkway and Fillmore Street leading to one of the City's Gold Line LRT stations. Attachments 1 and 2 illustrate the location and concept for the in pavement lights at the subject intersection.

This experiment is focused only on "enhancing pedestrian markings" and as such, the in-pavement lights will be installed in such a way to only be directed along the crosswalk lines towards pedestrians, not towards the approaching traffic.

The in-pavement lights will be connected to and synchronized with the pedestrian signal indications at the intersection, and will be operated in the following fashion:

During the pedestrian **WALK** interval, the in pavement lights will be turned on to **SOLID WHITE**

- During the pedestrian **FLASHING DON'T WALK** interval, the in-pavement lights will be turned on to **FLASHING YELLOW**

During the pedestrian **DON'T WALK** interval, two options may be available:

- a) The in pavement lights will be turned on to **SOLID YELLOW**
- b) The in pavement lights will be turned **OFF** or remain **DARK**, until the next possible pedestrian actuation

The City of Pasadena proposes to experiment with both options, and include an evaluation of the relative effectiveness of the two displays as part of the Evaluation Procedure described below.

Duration of Experiment

The City of Pasadena requests a 3-year demonstration for this experiment. The project may be terminated according to the FHWA's Guidelines for Experimentation with Traffic Control Devices.

Evaluation Procedure

The City of Pasadena will conduct BEFORE and AFTER studies to measure the effectiveness of the proposed experiment. The studies will include pedestrian counts, pedestrian compliance during the WALK and FLASHING DON'T WALK intervals, pedestrian violations during the DON'T WALK interval, as well as the motorists' compliance or violation of pedestrians' right of way during the WALK and FLASHING DON'T WALK intervals. The studies will also include an overall qualitative statement about the effectiveness of the proposed Pedestrian Enhanced Delineation System. Both options regarding the use of SOLID YELLEOW and DARK display as described above, will be included as part of the experimentation. In addition, similar field data will be collected at one additional "control" site having similar characteristics where no in-pavement lights are installed and the results will be compared with data obtained at the test location.

Site Restoration

The City of Pasadena agrees to restore the experiment site to a state complying with the provisions of the MUTCD:

- within three months following the end of the time period of the experiment, or
- at any time that the participating agency determines that significant safety concerns are directly or indirectly attributable to the experimentation, or if requested to do so by the Office of Traffic Operations.

If, as a result of experimentation, a request is made that the Manual be changed to include "In-pavement Roadway Lights" to be used to warn pedestrians of specific conditions, then the experimental device may remain in place until an official rulemaking action has occurred.

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Reporting

City of Pasadena will provide semi-annual progress reports until the experiment is completed. A copy of the final results will be sent to FHWA, HHS-10, within three months following completion of experimentation. All reports will be submitted to:

Ms. Regina S. McElroy, Director
Office of Transportation Operations
HOTO Room 3401
400 7th Street, S.W.
Washington, D.C. 20590

Project Administration

City of Pasadena will be responsible for administering this experiment under the direction of Bahman Janka, Transportation Administrator.

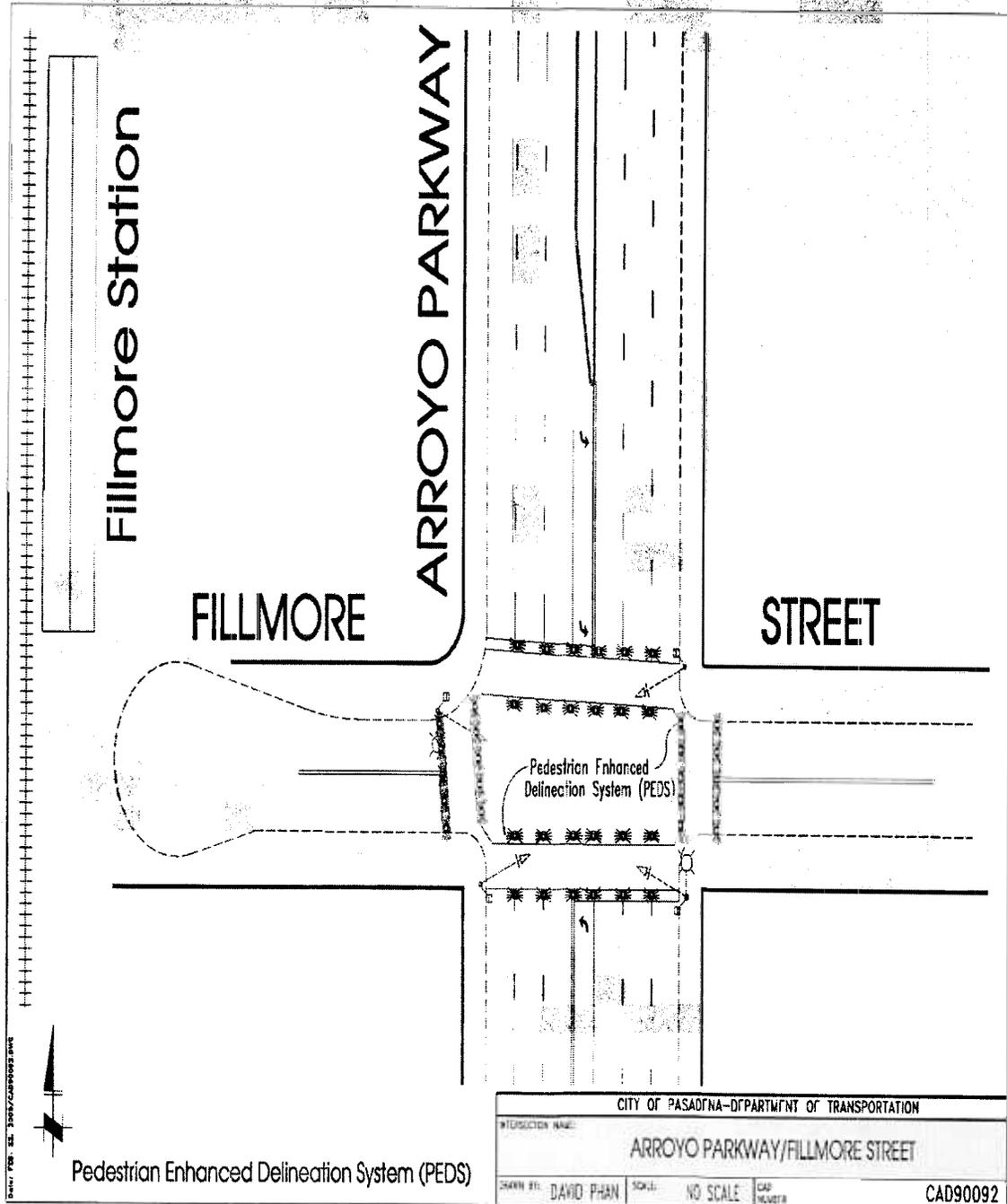
We appreciate your consideration of our request and look forward to receiving the FHWA's permission to experiment with this operation, thereby improving the visibility and effectiveness of the painted crosswalks at this important link to the City's Gold Line Light Rail station.

Please feel free to contact me if you have any questions regarding our request.

Respectfully,

A handwritten signature in blue ink that reads "Bahman Janka". The signature is written in a cursive style with a large, looping initial "B".

Bahman Janka, P.E.
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ATTACHMENT 1

