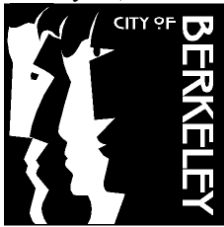


ITEM 02-2 PEDESTRIAN COUNTDOWN SIGNAL HEADS

CTCDC

January 31, 2002



Department of Public Works
Engineering Division

November 30, 2001

Mr. Devinder Singh
Executive Secretary for the CTCDC – MS 36
California Department of Transportation
P.O. Box 94284
Sacramento, CA 94274-0001

PROPOSAL FOR EXPERIMENTAL USE OF A NON-STANDARD TRAFFIC CONTROL DEVICE -- PEDESTRIAN COUNTDOWN SIGNAL

The City of Berkeley requests permission to conduct an experiment using pedestrian countdown signals as a non-standard traffic control device to determine their effectiveness in improving pedestrian crossing safety.

1. PROBLEM STATEMENT

Berkeley has more than two times the rate of pedestrian injury compared with the state of California. In comparison to forty-four cities of a similar size in the State of California in 1999, Berkeley ranks number one in pedestrian and bicyclist injury and death.

California Office of Traffic Safety (OTS) rankings for 1999 indicate:

Ranking Category	Per 1000 Vehicle Miles Traveled (VMT)		Per 1000 Population	
	Statewide	Population Group	Statewide	Population Group
Collisions				
Total Fatal and Injury Collisions	33	1/45	25	2/45
Alcohol-Involved Collisions	70	5/45	58	6/45
Speed-Related Collisions	65	5/45	74	7/45
Victims Killed & Injured				
Pedestrians	25	1/45	9	1/45
Pedestrians<15	156	19/45	160	22/45
Bicyclists	14	1/45	8	1/45
Bicyclists<15	180	12/45	216	21/45
DUI Arrests	# of Arrest	141 0.21 %	% of licensed population	N/A

2. PROPOSED SOLUTION

The City of Berkeley wishes to participate in the experimentation of the Pedestrian Countdown Signals at up to sixteen intersections. 7 out of the sixteen intersections are on Ashby Avenue (SR

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13) or San Pablo Avenue (SR 123). One of the main reasons of seeking CTCDC's permission is to eventually gain Caltrans approval in experimenting the pedestrian countdown signals on State Highways in Berkeley.

3. OBJECTIVE

The objective of the test will be to determine the usage and effectiveness of the pedestrian countdown signals in improving pedestrian safety from the point of view of pedestrians, including the disabled community.

4. EXPERIMENT SCHEDULE

- Pre-Installation Evaluation.....January to March 2002
- Installation.....March to June 2002
- Experimental Period.....March 2002 to June 2003
- Evaluation of Results.....October 2003

Thank you for your kind consideration of this request. The City of Berkeley is looking forward to receiving a positive response from the Committee. Please feel free to call me at (510) 981-6403 if you have questions or comments.

Sincerely,

Reh-Lin N. Chen
Acting Supervising Traffic Engineer

Enclosure

cc: Weldon Rucker, City Manager
Rene Cardinaux, Director of Public Works
Jeffrey L. Egeberg, Manager of Engineering

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**PROPOSAL TO THE CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE FOR
EXPERIMENTATION OF A NEW TRAFFIC CONTROL DEVICE:
PEDESTRIAN COUNTDOWN SIGNALS**

SCOPE

The City of Berkeley proposes to experiment Pedestrian Countdown Signals to improve pedestrian safety.

According to a City of Monterey evaluation report, countdown signals enhance pedestrians' understanding of conventional pedestrian signals and make pedestrian feel more comfortable in crossing wide intersections. In Boulder, Colorado, over eighty percent of pedestrians thought the countdown display was useful. Berkeley is hopeful that countdown signals will be valuable in reducing pedestrian injuries citywide.

According to the March 2000 Berkeley Bicycle and Pedestrian Study (BAPS), sixteen signalized intersections as well as 6 unsignalized intersections were identified as high-collision intersections for both pedestrians and bicyclists. Therefore, Berkeley tentatively selected the following sixteen signalized intersections for the experiment of countdown signals:

- 1) Shattuck/University
- 2) Durant/Telegraph
- 3) Ashby (SR 13)/Sacramento
- 4) Gilman/San Pablo (SR 123)
- 5) Oxford/University
- 6) Allston/Shattuck
- 7) Ashby (SR 13)/Martin Luther King Jr. Way
- 8) San Pablo (SR 123)/University
- 9) Ashby (SR 13)/San Pablo (SR 123)
- 10) Hearst/Oxford
- 11) Milvia/University
- 12) Martin Luther King Jr. Way/University
- 13) Allston/ Martin Luther King Jr. Way
- 14) Ashby (SR 13)/Shattuck
- 15) Ashby (SR 13)/Telegraph
- 16) Euclid/Hearst

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WORK PLAN

Installation

The pedestrian countdown signals will be installed as an integral part of the existing traffic signals. All existing, conventional pedestrian signals at the sixteen intersections will be replaced with pedestrian countdown signals.

Evaluation

Effectiveness and acceptance will be measured in accordance with the time period and evaluation procedures shown below.

Time Period

The schedule for testing is as follows:

- Pre-Installation Evaluation.....January to March 2002
- Installation.....March to June 2002
- Experimental Period.....March 2002 to June 2003
- Evaluation of Results.....October 2003

EVALUATION PROCEDURES

The City of Berkeley requests that the Committee approve the preliminary evaluation plan outlined below. Other criteria and procedures may evolve during the evaluation period. These additional ways of evaluating the use of countdown signals and any changes in procedures added to the assessment criteria will be discussed in the scheduled reports submitted to the project sponsor and the Committee.

- 1) Installation Documentation – to be prepared by the City of Berkeley personnel.
- 2) Maintenance Recording – to be performed throughout the life of the experimentation period. A separate maintenance log sheet will be created for each site. Periodic inspections will be performed and logged by City of Berkeley personnel.
- 3) Accident data will be monitored and analyzed by the City of Berkeley personnel.
- 4) Observations will be conducted to determine the effectiveness of the operation. Videotapes and digitized photographs may be used to help document the operation and for reporting to the Committee, Caltrans, and other interested public agencies.

Measures of effectiveness and acceptance during the before and after the testing period may include, but are not limited to, the following actions:

- Compare the total number of pedestrian accidents or the pedestrian accident rates
- Evaluate pedestrian/vehicle conflicts
- Evaluate pedestrian behaviors at the crossings

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- Compare walking speeds
- Compare the number complying and percentage of people complying with the signal

The City of Berkeley will work with a human factor/highway safety consultant to help assess acceptance and effectiveness. The consultant has considerable experience with the Manual on Uniform Traffic Control Devices (MUTCD) and has served as an alternate member to the National Committee on Uniform Traffic Control Devices.

Given a relatively high number of testing sites, the City staff may only conduct the before and after studies at about 6 intersections to maintain high quality of studies throughout the project.

ADMINISTRATION

Sponsoring Agency: City of Berkeley

Contact Information: Reh-Lin N. Chen
Acting Supervising Traffic Engineer
City of Berkeley
Tel: (510) 981-6403
Fax:(510) 981-6390
E-mail: RChen@ci.berkeley.ca.us

Manufactures: Vendor(s) to be determined by February, 2002

Installations: Traffic Signal Shop, City of Berkeley