

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): _____ FHWA _____

INSTRUCTIONS:

Lead Agency contacts should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> <p style="text-align: center;">TPF-05(317)</p>	Transportation Pooled Fund Program - Report Period: <input checked="" type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)	
TPF Study Number and Title: TPF-05(317) The Evaluation of Low Cost Safety Improvements Pooled Fund Study (ELCSI-PFS)		
Lead Agency Contact: Woon Kim, FHWA	Lead Agency Phone Number: (202) 493-3383	Lead Agency E-Mail: Woon.Kim@dot.gov
Lead Agency Project ID: TPF-05(317)	Other Project ID (i.e., contract #): N/A	Project Start Date: 08/2022
Original Project Start Date: 05/2005	Original Project End Date: 05/2010	If Extension has been requested, updated project End Date: N/A continuing effort

Project schedule status:

On schedule
 On revised schedule
 Ahead of schedule
 Behind schedule

Overall Project Statistics:

Total Project Budget	Total Funds Expended This Quarter	Percentage of Work Completed to Date
Ongoing project (N/A)	Ongoing project (N/A)	Ongoing project (N/A)

Project Description:

The primary goal of the Evaluation of Low-Cost Safety Improvement Pool Fund Study (ELCSI-PFS) was to save lives and reduce traffic crash injuries by identifying effective safety strategies for national implementation. The ELCSI-PFS conducted research to quantify the safety effectiveness of selected strategies — so-called crash modification factors (CMFs) — that may address priority safety concerns but had not been proven. This study also provided benefit-cost (B/C) ratios to estimate the resulting relationship between the relative monetary value of benefits and costs of a selected strategy. Transportation agencies utilized estimated CMFs and B/C ratios to select, plan, fund, and install a specific safety strategy on a targeted site to improve its outstanding safety issue. The secondary goal of this study is to improve and advance the statistical tools to conduct more reliable, rigorous research. For this effort, this study collaborated with the American Statistical Association (ASA) and identified new statistical methodologies to advance the current practices

used in the development of CMFs. This study initiated in 2005 but continued adding years for additional studies. Currently this study is running Phase XIII (so-called 5 CMFs) to evaluate the safety effectiveness of the following countermeasures:

- Rectangular Rapid Flashing Beacons (RRFBs)
- Left-Turn Lanes Improvements (LTL)
- Curve Enhanced Delineation (CED)
- Alternative Rumble Strips (ARS)
- Fixed Object Delineation (FOD)

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

ELCSI-PFS PHASE XIII: 5 CMFS

RRFB

- Continued gathering geometric data (e.g., number of legs, number of lanes, posted speed limit, etc.) for the identified treated sites in five states: California, North Carolina, Oregon, Pennsylvania, and Texas
- Began the process to obtain crash data for those states
- Continued finding control sites (marked pedestrian crossings that do not have RRFBs) that are similar in site characteristics as the treated sites
- Held the panel meeting and gathered directions from the pooled fund study members
- Revised gap analysis and needs document based on the comments from the panel meeting

LTL

- Searched for candidate dual LTL study sites and comparison sites in Kansas, North Carolina, Pennsylvania, South Dakota, Virginia, Texas, and California
- Conducted gap analysis panel meeting

CED

- Identified additional installation sites for curve enhanced delineation treatments
- Collected data to describe identified installation sites
- Began review of Texas DOT crash data sources

ARS

- Identified potential treatment sites with ARS
- Held meetings with four high priority states (i.e., South Dakota, Montana, Arkansas, Michigan) and gathered more detailed information regarding their use of ARS, the ARS design patterns, treatment types, and site types to be evaluated
- Began obtaining and looking at the data from those four states

FOD

- Worked with Pennsylvania DOT for the data acquisition
- Reached out to Kansas as a backup plan
- Looked into utility companies that may have similar treatments that may be acquired

ELCSI-PFS PHASE XII: SAFETY EVALUATIONS OF INNOVATIVE INTERSECTION DESIGNS FOR PEDESTRIAN AND BICYCLISTS

- Revised the final report for publication
- Prepared a poster for presentation at the Institute of Transportation Engineers Annual Meeting in Portland

PUBLICATIONS

[TechBrief](#) for Phase XII was published with this recommended citation: Federal Highway Administration, *Safety Evaluation Innovative Intersection Designs for Pedestrians and Bicyclists* (Washington, DC: 2023) <https://doi.org/10.21949/1521976>

Publications for Phase XI are in progress regarding the following topics:

- Mini-roundabouts
- Bike lane configuration at intersections
- Wrong way driving low cost safety improvements

Anticipated work next quarter:

- Continue gathering information to identify treated and control sites for LTL and FOD
- Continue obtaining data for CED
- Continue assessing obtained data and building working database of treated and control sites for RRFB and ARS
- Continue working on publication for the final report from Phase XII

Significant Results:

- Made progress on identifying treated and control sites for RRFB, CED, and ARS and began obtaining related data
- Published TechBrief for Phase XII

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

Identification of candidate data continues to be a challenge for FOD. The research team will broaden the search for data and reach out to utility companies and then anticipate prospects of successful evaluations.

Potential Implementation:

N/A