Research study to encompass safety-effectiveness evaluations of priority strategies from the NCHRP Report 500 Guidebooks

Develop reliable estimates of the safety effectiveness of safety improvements identified as strategies in the NCHRP Report 500 Guidebooks through scientifically rigorous "Before"-"After" (B/A) evaluations of sites within the U.S. where these strategies are being implemented.

WHAT IS THE NEED?

In order to achieve a national goal shared by the US Department of Transportation (USDOT), American Association of State Highway Transportation Officials (AASHTO), and Governor’s Highway Safety Association (GHSA) to reduce the fatality rate and save lives annually, the safety improvement strategies will need to be appropriately implemented.

WHAT ARE WE DOING?

The scope of the Evaluations of Low Cost Safety Improvements Pooled Fund Study (ELCSI–PFS) is to conduct a research project of the priority strategies in the NCHRP Report 500 Guidebooks. Originally, a target of 20 strategies totaling $4.38 million over 5 years was planned for ELCSI–PFS studies in four phases. Currently, this study has outperformed its original goals, and has added many extra goals. To provide much needed reliable measures for effectiveness of various low-cost safety improvements, this study’s performance period has been extended beyond 2017.
WHAT IS OUR GOAL?

The goal of this research is to develop reliable estimates of the effectiveness of the safety improvements that are identified as strategies in the National Cooperative Highway Research Program (NCHRP) Report 500 Guides. These estimates are determined by conducting scientifically rigorous before-and-after evaluations at sites in the United States where these strategies are being implemented.

WHAT IS THE BENEFIT?

The Department can potentially benefit from the outcome of this research by implementing the resulting recommendations and potential solutions from the transportation pooled fund (TPF) study, TPF-5[317].

The public may benefit from the implementation of the results of this research which have the potential to improve the effectiveness in reducing the number and severity of crashes.

WHAT IS THE PROGRESS TO DATE?

July 1, 2021 - September 30, 2021

This pooled fund study has contributed over 800 Crash Modification Factors (CMFs) to the CMF Clearinghouse, and this effort is on-going.

Significant Results for this quarter:

Worked with the Contractor, planned, and organized the 2022 Annual TAC meeting. This meeting will be conducted virtually on May 25-26, 2022.

PUBLICATIONS

Publications are all completed. Please see list of all ELCSI-PFS with links at: https://highways.dot.gov/research/safety/evaluations-low-cost-safety-improvements-pooled-fund-study/publications

ELCSI-PFS, PHASE XIII

The fund (FHWA and ELCSI-PFS) was secured. Submitted PR with the Statement of Work (SOW) and Government Independent Cost Estimate (IGCE) to the FHWA contract office for a new task order to study: 1) Curve Enhanced Delineation (CED), 2) Alternative Rumble Strip (ARS), and 3) Fixed Objects Delineation of (FOD). This task order is expected to be awarded in early June 2022.

ELCSI-PFS, PHASE XII

Innovative Intersection Design for Pedestrian and Bicycle Safety completion Date is October 30, 2022. This phase is active. Extra fund was secured for an in-person training for the result of study. This task order will be modified for training extra cost, and level of effort in May 2022. These are highlights of activities:

• Continued reducing the video data at the three sites in Washington, DC.
• TTI has a better success working with Data From Sky (DFS) operates. TTI has uploaded the video files to DFS and downloaded the trajectory data from DFS. A review of several trajectory data files has shown that DFS algorithms are missing several pedestrians and bicyclists, and TTI will have student technicians review the video.
• TTI developed an aerial video data reduction protocol and is having students test so to refine.