

Projects First-Round Winner
Innovations Challenge

April 2016

Prepared by Transportation Planning
Missouri Department of Transportation

Crash Reduction Prioritization

Safety Priorities:

*** This site is intended for planning purposes only. Special consideration should be given before sharing with external agencies. ***

The purpose of this site is to provide a centralized location for housing safety prioritization lists. These lists were developed with the hope of maximizing the impact of any safety related project funding.

 Horizontal Curve Analysis	 Shoulder Analysis	 Expressway Intersection Analysis	 Unrestrained Analysis
 High Severity Analysis	 Wet Crash Analysis	 Alcohol Analysis (Newly Added - VIP)	 Combined Safety Analysis Map

Important Notes
These lists have been created using PL/SQL (Programming Language / Structured Query Language) in order that they may be easily updated once year-end crash data has been finalized.
This is an automated process which may be kicked off using the "SAFETY_PRIORITIZE_ALL_DISTRICTS" procedure in TMS020 and will generally take a few hours to complete.
Be sure to check the "Last Updated" section of this page to determine when these documents were last modified.

Description

By using TMS, SharePoint, Excel, and ArcMap, an automated process has been developed to identify and prioritize locations across the state for crash reduction countermeasures. This innovation consists of four phases: data gathering and analysis, Excel utilization, SharePoint site deployment, and map creation. A programming language called 'PL/SQL' is used to identify and prioritize roadways across the state. This uses the roadway data stored in TMS in conjunction with the crash data compiled by the highway patrol. From these databases, multiple lists are developed to prioritize locations for horizontal curve improvements, shoulder improvements, expressway intersection improvements, wet crash countermeasures, and seatbelt usage enforcement/education. Once the data processing has been completed, Excel macros (Visual Basic for Applications) are utilized to compile and sort lists for each district. Once created, these spreadsheets are uploaded to a new 'Safety Priorities' SharePoint site (part of the Traffic and Highway Safety SharePoint site) where they are made available to MoDOT personnel. Finally, a 'Combined Safety Map' is developed to provide a visual aid based on these lists. Not only is the ArcMap file available at the previously mentioned SharePoint site, but PDF exports of this map are also available for each district and even each county.

Benefit

This innovation provides MoDOT personnel with accurate and timely information which maximizes the effectiveness and placement of safety projects. Not only does this innovation save our staff time and money, but it also helps keep our customers safe. Mapping locations for possible safety improvements has proven to be an invaluable asset when speaking with management or external groups. This innovation will allow MoDOT personnel to maximize the use of their Highway Safety Improvement Program (HSIP) funds.

Materials and Labor

Materials: No cost

Labor: 120 hours with no reoccurring costs.

For More Information Contact:

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Additional photos can be seen by accessing the Innovations Challenge SharePoint page at: <http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx>.