ABSTRACT

Highway work zones pose a serious threat to both workers and drivers if improperly planned and administered. Evaluating work zone interventions through a pilot study can be difficult because of amount of data that should be considered and analyzed. Currently researchers only employ standard statistical analysis techniques for data analysis. This research addresses the need for robust decision making frameworks capable of ingesting a vast quantity of data when considering work zone design and evaluates driver response to different work zone sign configurations. In this project, a traffic simulator is used to compare the Manual on Uniform Traffic Control Devices (MUTCD) graphical lane closed configuration with an alternate configuration consisting of a MERGE arrow on one side of the freeway and a LANE CLOSED sign on the other side. Four merge scenarios are considered as part of this scope of work. Statistical analysis and pattern recognition methods were used for data analysis.

Key Word: work zones, traffic simulator studies, statistical analysis, pattern recognition

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