Project Title: Database Development and Model Re-Calibration for Quantification of Impacts of Freeway Incidents

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Abstract:
Evaluation of the impact of highway incidents is an essential component in the planning and analysis of incident management strategies [1, 2]. A recently completed project, “Development of an Analysis Tool for Evaluation of Marginal Impacts of Freeway Incidents in the Las Vegas Area using FAST’s Dashboard Freeway Data“, conducted at UNLV and funded by NDOT and UTC, calibrated a set of statistical models for quantification of freeway incidents. Models were calibrated using historical incident and traffic data from the I-15 freeway in Las Vegas. This data was acquired from FAST’s Dashboard. However, currently this traffic data stored in the Dashboard is at 15-minute intervals, which is too “coarse” and use of this data results in models that do not produce very accurate estimates. Furthermore, FAST has recently upgraded the incident data they are storing by capturing and storing snapshots of the incidents at intervals of 30 seconds. This allows for extracting significantly higher levels of incident details that was not available when the previous study was being conducted. The main goals of this project then are to acquire more refined traffic data (at intervals of 1 minute) and use it with the new incident detailed data to re-calibrate the models for more accurate estimation of incident impacts.