

UTC Project Information	
Project Title	Incident Response System to Assist Active Traffic Management in D.C.
University	George Mason University
Principal Investigator	Shanjiang Zhu, Ph.D.
PI Contact Information	George Mason University Civil, Environmental, and Infrastructure Engineering 1408 Nguyen Engineering Building Phone: (703) 993-1797; Fax: (703) 993-9790 Email: szhu3@gmu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	TransInfo UTC: \$110,436; Matching funds from Volgenau School of Engineering, George Mason University faculty academic year efforts: \$55,218
Total Project Cost	\$165,655
Agency ID or Contract Number	N/A
Start and End Dates	1/1/14 - 12/31/15
Brief Description of Research Project	<p>This project aims at improving incident response strategies by exploring historical incident and traffic data in Northern Virginia, an area that suffers from severe traffic congestion due to high travel demand and frequent traffic incidents. This study would furthermore, take this area as an example to evaluate the efficiency of an adaptive incident response system. Research tasks include:</p> <ul style="list-style-type: none"> • Exploring historical traffic and incident data in Northern Virginia area to capture prevailing traffic/incident patterns during different time of day, and potentially, under different weather conditions. This effort would also help to inform VDOT what a “typical” traffic pattern looks like in the area. • Developing a model to estimate/predict incident patterns (or lack of patterns) during different time of day and under different traffic conditions. Outputs from this model would inform the development of incident response strategies and allow potential pre-actively deployment of resources. • Developing an optimized pre-positioning/dispatching incident response system using data collected from the Northern Virginia area. The research team will select the corridor/area for a case study in consultation with VDOT regional district office. • Task 4: Developing an optimized patrolling strategy using the data collected from the Northern Virginia area. • Comparing the performance of different response strategies and exploring the possibility to develop a flexible and adaptive response system. • Exploring the possibility and methodology to consider real-time traffic

	information and behavioral changes under incident conditions.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none"> • Reports • Project website 	http://www.buffalo.edu/transinfo/Research/IncidentResponsesystem.html