UTC Project Information	
Project Title	MPC-403 – Web-Based Decision Support Tool for Traffic Management and Work Zone Analysis
University	University of Utah
Principal Investigator	Milan Zlatkovic
PI Contact Information	Research Assistant Professor Civil and Environmental Engineering University of Utah Phone: (801) 819-5925 Email: milan@trafficlab.utah.edu
Funding Agencies	USDOT, Research and Innovative Technology Administration
Agency ID or Contract Number	DTRT12-G-UTC08
Project Cost	$100,000
Start and End Dates	January 1, 2012 – June 30, 2014
Project Duration	2.5 Years
Brief Description of Research Project	Traffic congestion mitigation is one of the key challenges transportation planners and operations engineers face when planning for construction and maintenance activities. Several tools are available for analyzing work zone impacts, including CA4PRS, QuickZone, and VISUM. However, these analysis tools may not fully capture the dynamic nature of drivers' responses to traffic management techniques and significant changes in the transportation network. In this case, performing analyses with a Dynamic Traffic Assignment (DTA) engine, or a similar traffic estimation method, may meet this need while providing additional analysis details (e.g. network, path, OD, and link analyses) for local engineers to justify their decisions/actions. At the same time, technical expertise, data management, and software licensing often become significant barriers to entry for incorporating this type of analysis into every-day operations. To address these issues, this research will develop a simple, open source Google Maps/Google Earth interface for scenario-based traffic simulation analysis, primarily focused toward traffic management and work zone analysis. Engineers may use the simplified interface to prepare different scenarios without interacting with the calibrated model input data, which will be prepared in this project by the local MPO. Input data will be hosted remotely, and the simulation engine is offered as a web-application/service to simplify data preparation and improve computational efficiency. This work is an important step toward implementing online DTA for Advanced Travel Demand Management in daily practice. First, providing the traffic estimation tool as a backend computational engine can significantly shorten analysis time. Offering a simple user interface

	in a familiar software package like Google Maps or Google Earth makes it easier to perform this type of analysis, and their built-in visualization tools may be extremely useful for interpreting analysis results and preparing presentations/reports for decision-makers and stakeholders. Additionally, storing the planning and traffic sensor data sets at a remote host reduces the time and effort spent preparing input data and requires less training for engineers using the software.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The implementation of the research is underway. The researchers held multiple meetings with the Utah Department of Transportation to showcase the research and the tools, and are currently working to select an actual project to implement it. The prototype of the tool has been developed and tested on a theoretical work zone project on I-15 in Salt Lake County, UT.
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • Reports • Project Website	http://code.google.com/p/nexta/ learning-transportation.org https://www.ugpti.org/resources/reports/details.php?id=864