

Project Information Form

Project Title	Eco-Driving for Transit
University	Georgia Institute of Technology
Principal Investigators	Randall Guensler (PI of Record) Yanzhi Xu (Co-PI) Michael Rodgers (Co-PI)
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Funding Source(s) and Amounts Provided (by each agency or organization)	DOT - \$54,871.35
Total Project Cost	\$54,871.35
Agency ID or Contract Number	DTRT13-G-UTC29
Start and End Dates	November 1, 2013 – June 30, 2015
Brief Description of Research Project	<p>Second-by-second data for school buses, MARTA transit buses, and GRTA express buses, will be analyzed to identify potential emission reductions from eco-driving, including trip segments where driver training or electronic intervention can be applied. Results will be quantified and findings generalized to other routes.</p> <ol style="list-style-type: none"> 1. The team will run the fuel and emissions calculator in a sensitivity analysis across bus technologies (conventional diesel, CNG, hybrid, etc.) to identify the operating modes and mode transitions that yield the highest and lowest fuel consumption and emissions. 2. The team will analyze 2010 CCSD school bus data, 2013 Express Bus data, and 2014 MARTA data to identify drive cycle segments that include extended idle, hard acceleration, and high-speed operations which could be mitigated by drivers or technology to yield emissions reductions and estimate the emission reductions that can be obtained through elimination of these activities. 3. The team will analyze 2013 Express Bus data to identify the potential fuel consumption and emission reduction benefits from inducing supplemental flow smoothing after idle, hard acceleration, and high-speed operations are eliminated and then prepare a report documenting the findings.

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>(Attach Any Photos)</p>	<p>The team will prepare a white paper and manuscript for a peer-reviewed journal outlining the methodologies employed in assessing the potential benefits of idle reduction, hard acceleration reduction, top speed limits, and general flow smoothing for transit routes.</p> <p>Work products are currently under development.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>No impacts to date.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>http://ncst.ucdavis.edu/project/gt-dot-013</p>