



<b>UTC Project Information – National Transportation Center @ Maryland (NTC@Maryland)</b>	
Project Title	Impact of Level of Service (LOS) on the Driver's Behavior on Arterials
University	NC State University, Morgan State University
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PI(s) and Co-PI(s) Photo(s) Image should be 80width x 120height pixels. Allowed file types: <b>png gif jpg jpeg</b> .	
Funding Source(s) and Amounts Provided (by each agency or organization)	MSU: \$27,640 NCSU: \$77,261
Total Project Cost	\$104,901
Agency ID or Contract Number	DTRT13-G-UTC30
Start and End Dates	5/15/16 – 8/15/17
Project Image (for website) Should be 233width x 155height pixels. Allowed file types: <b>png gif jpg jpeg</b> .	
Brief Description of Research Project	Conventional freeway analysis often focuses on mobility improvements. However, improving mobility performance measures not only improves the Level of Service (LOS) but also produces several other types of benefits. This proposed research intends to investigate driving behavior as a function of surrounding traffic conditions in order to evaluate benefits from

	<p>fuel cost and emission savings.</p> <p>By identifying the impacts of traffic conditions on the driver's behavior (shown in the red section), a more comprehensive analysis can be performed, resulting in more accurate planning and operation. Ultimately, these improvements can lead to decreased public expenditures as well as costs to facility users.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>May Place Any Photos Here</p>	<p>This study proposes expanding conventional surface streets analysis to include emissions and fuel cost savings in addition to user delay cost savings. These anticipated cost savings stem not only from the traffic state (i.e., stop and go traffic) but also from driver behavior and operations. In particular, it is hypothesized that as the LOS of a site deteriorates, drivers become more aggressive and that improved LOS can mitigate this issue. Driver behavior and operations, as well as emissions and fuel usage, will be measured via two means: (1) high-resolution trajectory data gathered and collected by i2D devices [1] and (2) a dynamic traffic simulator with motion console. By comparing the results from the i2D devices and the traffic simulator, this study will also add value to the field by providing enhanced insight into the validity of simulated environments.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>Project has not begun yet, so no impacts have been realized.</p>

Web Links

- Reports
- Project website