



# CENTER FOR CONNECTED AND AUTOMATED TRANSPORTATION

Project Title	Modeling Naturalistic Driving Environment with High-Resolution Trajectory Data	
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Most relevant CCAT research thrusts (choose all applicable)	<input checked="" type="checkbox"/> Control & Operations <input checked="" type="checkbox"/> Enabling Technology <input type="checkbox"/> Human Factors <input checked="" type="checkbox"/> Infrastructure Design & Management <input checked="" type="checkbox"/> Modeling & Implementation <input type="checkbox"/> Policy & Planning	
Funding Request	\$ 200,000	
Matching Funds and Source (if any)	\$ 50,000 from American Center for Mobility	
Total Project Cost	\$ 200,000	
Contract Number	69A3551747105	
Project start/end dates	04/01/2022 – 03/31/2023	
Project Abstract	<p>In this project, we will develop a methodological framework for modeling the high-fidelity naturalistic driving environment (NDE) with high-resolution trajectory data. Different from traditional NDE models that mainly match the moments of macroscopic traffic behaviors, the high-fidelity NDE models will match the distributions of microscopic driving behaviors, which are critical for safety-critical applications such as autonomous vehicle testing and training. The large-scale high-resolution data that is being collected by roadside sensors will be leveraged. The developed NDE models will be implemented at the SAFE-TEST toolbox for the safety assessment of autonomous vehicles at the American Center for Mobility, which will significantly expand the toolbox into the complex urban driving environment. Both the high-resolution data collection system and</p>	





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	SAFE-TEST toolbox were developed by the PI research team with previous CCAT and Mcity sponsored projects.
High-level implementation plan	We will implement the proposed system at the American Center for Mobility.
Project Metrics	
Web Links: [leave blank until project approval]	<a href="http://ccat.umtri.umich.edu">ccat.umtri.umich.edu</a>

