

<b>UTC Project Information</b>	
Project Title	Insights from COMMERCIAL Driver Parking Decisions in a Truck Simulator to Inform Curb Management Decisions
University	University of Washington
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Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$180,000 Oregon State University \$100,000 University of Washington \$80,000
Total Project Cost	\$360,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	March 16, 2021-March 15, 2022
Brief Description of Research Project	<p>As e-commerce and urban deliveries spike, there is an increasing demand for curbside loading/unloading space. However, commercial vehicle drivers face numerous challenges while navigating dense urban road networks. Previous literature on the topic of how commercial vehicle drivers make choices about when and where to park is scarce, and data from those available studies usually comes from field studies where limited situations can be observed, without experimental controls, and an absence of known driver characteristics. Therefore, this study used a heavy vehicle driving simulator to examine the behavior of commercial vehicle drivers in various parking and delivery situations.</p> <p>A heavy vehicle driving simulator experiment examined the behavior of commercial vehicle drivers under various parking and delivery situations. The heavy vehicle experiment was completed by 14 participants. The experiment included 24 scenarios with several independent variables including number of lanes (2 lanes and 4-lane roads), with/without bike lane, available/unavailable passenger vehicle parking space, CVLZs (No CVLZ, Occupied CVLZ, and Unoccupied CVLZ), and delivery time (3-5 mins and 20-60 mins). By collecting speed, eye-movement, and stress data during the experiment, the results support the development of more effective curb management strategies that will maintain efficient delivery operations while balancing the needs of all road users.</p>

Describe Implementation of Research Outcomes (or why not implemented)

Place Any Photos Here

This research was experimental in nature. As such the results have only recently been produced, and have not yet been implemented.



Photo 1 –Development Simulator used to design the experiment

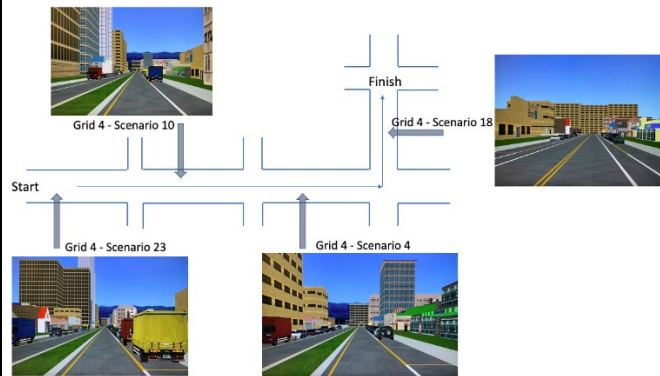


Photo 2 - Example of the design of one experimental drive experienced by a subject



Photo 2 – Heavy Vehicle Driving Simulator running experiment

<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	<p>The anticipated benefits of the project include:</p> <ul style="list-style-type: none"><li>• Implementation of curb management recommendations by municipal agencies around the pacific northwest.</li><li>• Adoption of heavy vehicle driving simulators paired with biometric feedback devices to better study issues related to commercial motor vehicle interactions with the build environment.</li></ul>
<p>Web Links</p> <ul style="list-style-type: none"><li>• Reports</li><li>• Project Website</li></ul>	<p>None.</p>