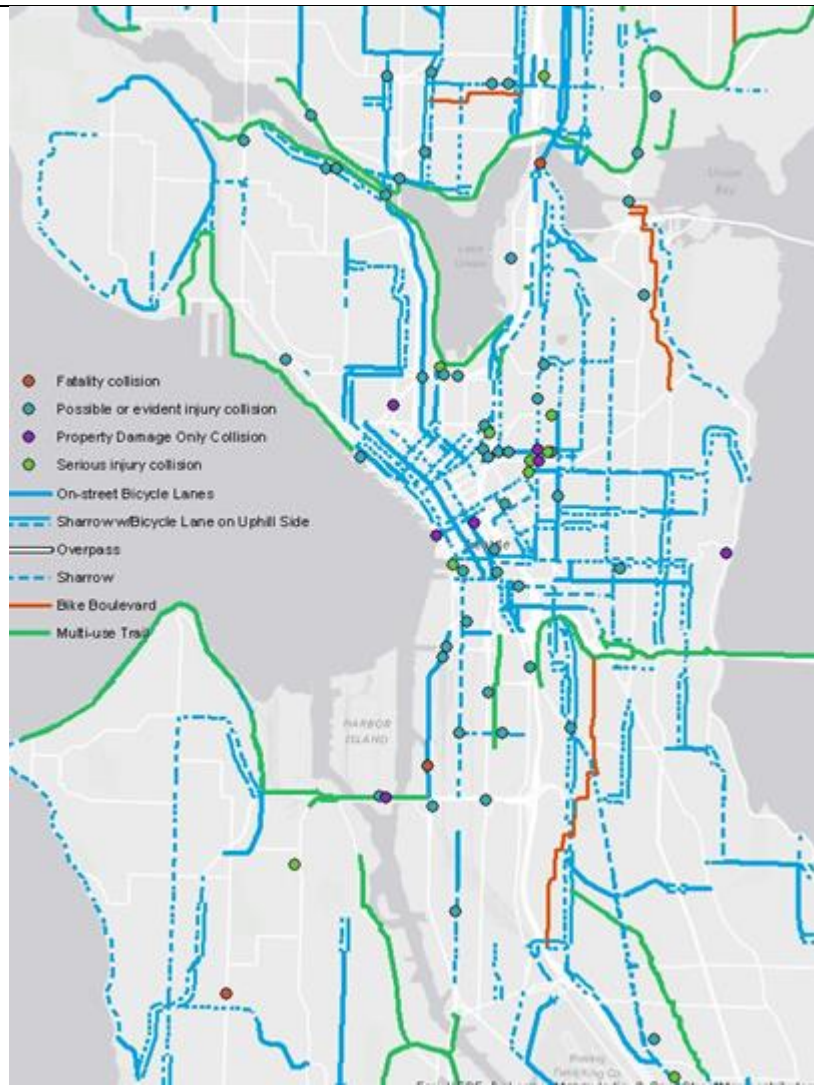
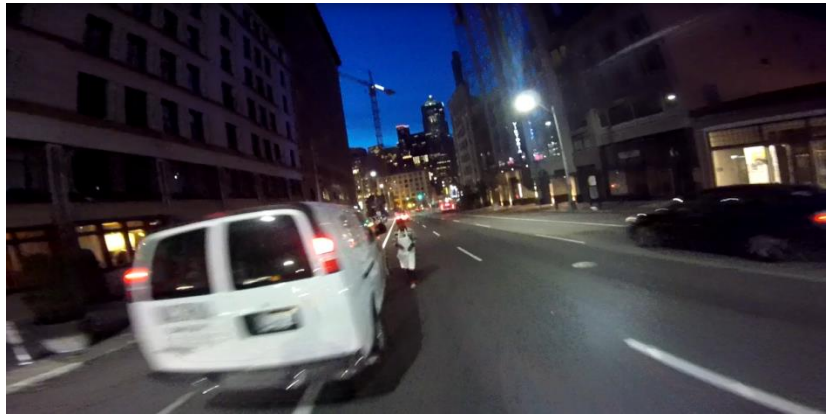
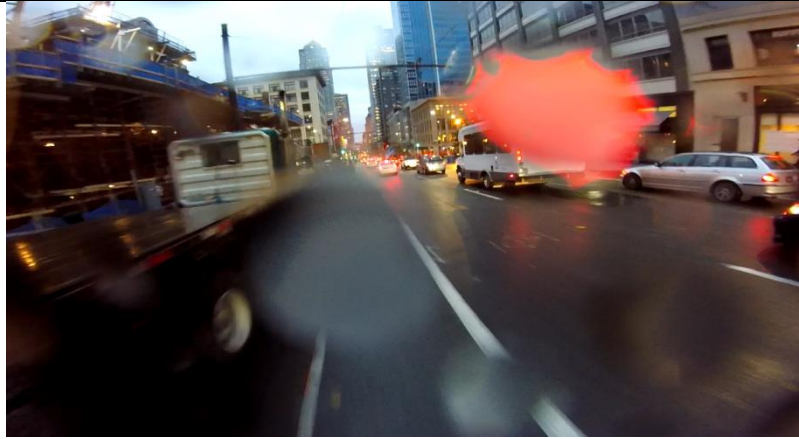


UTC Project Information	
Project Title	An Evaluation of Safety Impacts of Seattle’s Commercial Delivery Parking Pricing Project
University	University of Washington
Principal Investigator	Anne Goodchild
PI Contact Information	annegood@uw.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$58,945 Seattle Department of Transportation \$58,945
Total Project Cost	\$117,890
Agency ID or Contract Number	DTRT13-G-UTC40
Start and End Dates	January 15, 2015– September 16, 2016
Brief Description of Research Project	<p>The City of Seattle both actively promotes increasing bicycle mode share and also supports freight mobility. In relation to both of those goals, the city’s Department of Transportation (SDOT) partnered with the University of Washington to explore bicycle safety in the urban core and, in particular, the interactions between bicycles and trucks. The motivation for this project was that the city was considering changes to policies for commercial vehicle loading zones (CVLZs). By providing truck drivers with access to legal parking, CVLZs potentially reduce instances of trucks parking illegally in the street or blocking bicycle lanes. However, CVLZs may also negatively affect bicycle safety by increasing the frequency with which trucks cross bicycle lanes to enter or exit loading zones. The research explored this topic using the following methods: an analysis of bike-truck incidents within Seattle; interviews with bicyclists who frequently cycle in downtown Seattle; interviews and surveys of truck drivers who work for a produce and grocery wholesale distributor that has an active presence in downtown Seattle; analysis of video recordings made by cyclists riding in downtown, and observations of truck loading/unloading operations in downtown.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>Incident analysis demonstrates that most bicycle involved fatal or injury accidents occur at intersections involving truck right turns or through movements. Obviously the largest number of these occurs on high cyclist volume routes. In contrast, our research shows that from bicyclists' perspectives, double parked trucks and trucks parked next to construction zones posed the most serious concerns. Cyclists did not mention the location of CVLZs as a primary concern. The cyclists did not report any safety concerns related to the location of CVLZs or vehicles parked legally in CVLZs and that their main areas of safety concern did not correlate with CVLZs' locations. Instead, both the cyclist interviews and video data indicated that construction sites are often sites of trucks that blocked cyclist travel lanes. When trucks park in a bike lane, cyclists must maneuver into the stream of traffic, increasing their level of exposure and crash risk. The higher the travel speed of both bicycles and motor vehicles, the higher these concerns. Truck drivers did not report cyclists as a major safety concern.</p> <p>As the research was exploratory in nature it did not results in publications, policy changes, or design recommendations, but it did result in two specific follow-on studies. 1) A bicycle simulation project with OSU, and 2) a study of truck envelopes. These two projects have produced the following publications:</p> <p>MG Abadi, DS Hurwitz, M Sheth, E McCormack, A Goodchild (2019) Factors impacting bicyclist lateral position and velocity in proximity to commercial vehicle loading zones: Application of a bicycling simulator, Accident Analysis & Prevention 125, 29-39</p> <p>E McCormack, A Goodchild, M Sheth, D Hurwitz (2019) Developing design guidelines for commercial vehicle envelopes on urban streets, International Journal of Transport Development and Integration 3 (2), 132-143</p>
---	--





<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	<p>This research launched a new research area; bike/truck interactions. The funding allowed us to explore the topic through several methods; using historical incident data, conducting driver and cyclist interviews, and observing cyclist behavior in the urban environment. Two specific research questions were developed; 1) what is the envelope required around a loading/unloading truck that would allow for safe space for both the driver and others using the space? And 2) how do cyclists behave around parked trucks? Does the presence of a truck reduce safety for cyclists travelling past?</p> <p>Both of these projects were successfully funded, have been completed, and resulted in 2 high quality publications mentioned above, as well as numerous conference presentations.</p> <p>The introduction of the idea of a truck envelope is quite novel. We have produced design recommendations for loading zones.</p>
<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project Website	