

**Project Information Form**

Project Title:	Freight Efficiency Strategies: Operational Modernization at Distribution Nodes
University:	California State University, Long Beach
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Funding Source(s) and Amounts Provided (by each agency or organization):	California Department of Transportation (Caltrans) - \$30,552.05
Total Project Cost:	\$30,552.05
Agency ID or Contract Number:	USC-CT-TO-021 Caltrans 65A0527 Task Order 021
Start and End Dates:	November 18, 2015 – May 1, 2016
Brief Description of Research Project:	<p>Relevant California state agencies and departments are working together to develop the California Sustainable Freight Strategy (CSFS) for a sustainable freight transport system that relies on zero and near-zero emission equipment powered by renewable energy sources. This equipment also meets multiple goals, including: enhancing the economic competitiveness and efficiency of California's logistics system, creating jobs, and increasing the safety and livability of freight corridors. As part of this effort, researchers from the National Center for Sustainable Transportation worked with representatives from state agencies, industry, non-governmental agencies, and academia to develop a series of five white papers that examined broad-based approaches to increase the efficiency of the freight system.</p> <p>This white paper identifies a range of technological and process-driven opportunities that hold the potential for modernizing distribution nodes to promote freight efficiency while also improving safety and air quality standards. To promote improved truck access at distribution nodes, the research investigates the use of truck platooning, virtual container yards, design-based guidelines, and weigh-in-motion strategies to improve freight efficiency. The research also explores strategies focused on establishing energy independence at marine terminals through the use of energy microgrids.</p>
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	<p>The white papers are referenced and included in the California Sustainable Freight Action Plan.</p> <p><a href="http://www.casustainablefreight.org/">http://www.casustainablefreight.org/</a></p>



# National Center for Sustainable Transportation

Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	<a href="https://ncst.ucdavis.edu/white-paper/freight-efficiency-strategies-operational-moderization-distribution-nodes/">https://ncst.ucdavis.edu/white-paper/freight-efficiency-strategies-operational-moderization-distribution-nodes/</a>