



Project Information Form

Project Title	Framework for Life Cycle Assessment of Complete Streets Projects
University	University of California, Davis
Principal Investigator	Alissa Kendall Co-PI: John Harvey
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Funding Source(s) and Amounts Provided (by each agency or organization)	California Department of Transportation (Caltrans) - \$71,764.36
Total Project Cost	\$71,764.36
Agency ID or Contract Number	Caltrans 65A0527 Task Order 034.3 UCD-CT-TO-034.3
Start and End Dates	January 9, 2017 – March 31, 2018
Brief Description of Research Project	<p>A multitude of goals have been stated for complete streets including non-motorized travel safety, reduced costs and environmental burdens, and creation of more livable communities, or in other words, the creation of livable, sustainable and economically vibrant communities. A number of performance measures have been proposed to address these goals. Environmental life cycle assessment (LCA) quantifies the energy, resource use, and emissions to air, water and land for a product or a system using a systems approach. One gap that has been identified in current LCA impact indicators is lack of socio-economic indicators to complement the existing environmental indicators. To address the gaps in performance metrics, this project developed a framework for LCA of complete streets projects, including the development of socio-economic impact indicators that also consider equity. The environmental impacts of complete streets were evaluated using LCA information for a range of complete street typologies. A parametric sensitivity analysis approach was performed to evaluate the impacts of different levels of mode choice and trip change. Another critical question addressed was what are different social goals (economic, health, safety, etc.) that should be considered and how to consider equity in performance metrics for social goals. This project lays the foundation for the creation of guidelines for social and environmental LCAs for complete streets.</p>
Describe Implementation of Research Outcomes (or why not implemented) (Attach Any Photos)	



National Center for Sustainable Transportation

Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none">• Reports• Project website	https://ncst.ucdavis.edu/project/framework-for-life-cycle-assessment-of-complete-streets-projects/ https://escholarship.org/uc/item/0vw335dp