



UTC Project Information	
Project Title	Optimal Design of Sustainable Asphalt Mixtures with RAP
University	University of Rhode Island
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$ 124,749.48 URI: \$ 125,419.95
Total Project Cost	\$250,169.43
Agency ID or Contract Number	69A3551847101
Start and End Dates	7/1/18 to 6/30/2021
Brief Description of Research Project	<p>Current proposal seeks to derive guiding approaches for extracting, through the literature, the promising opportunities for designing asphalt pavements with enhanced levels of reclamation and for capitalizing on such opportunities. To this end, the study proposes a framework for gauging and comparing, within the state-of-the-art and the state-of-the-science literatures on RAP, the overall cost benefit ratios, with environmental costs reflected, afforded by varied asphalt mixtures at varied levels of reclamation. Challenges to the task will exist given the multiple units, the often-arbitrary life cycle durations, the presumed maintenance schedules, and a wealth of other issues inherent to RAP life cycle analysis (LCA) studies meant to capture environmental impacts within the literature. Selected asphalt mixtures with RAP will be tested with state-of-the-art tools, such as AMPT to predict their performances. The outcomes can be the basis for a perpetual pavement, e.g., composite pavement etc.</p>
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The project is in the process and research outcomes have not been implemented yet.
Impacts/Benefits of Implementation (actual, not anticipated)	This project is in its initial research phase. Impacts and benefits of the research will be reported after the implementation phase.
Web Links <ul style="list-style-type: none"> • Reports • Project website 	https://www.tidc-utc.org/kb/project-3-6-optimal-design-of-asphalt-mixture-with-rap-based-on-sustainability-trade-offs/