

Research Needs Statement

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Title:	Comprehensive analysis on the conversion of the existing HOV lanes into HOT lanes in Tennessee
Key Words:	HOT lanes, HOV lanes, feasibility Study
Research Problem Statement:	The High Occupancy Vehicle (HOV) lane facilities are known for reducing traffic congestion. Due to the misuse and high violation rate of HOV facilities in Tennessee, TDOT has been working with research partners on several High Occupancy Vehicle (HOV) lane facilities in. These studies have focused on the usage, effectiveness, and operation. However, there is limited work on the understanding of converting current HOV lanes to HOT lanes
Research Objective:	The research project would be to assess what actions would be required and the possibilities to convert the existing HOV lanes in Tennessee on this corridor into HOT lanes. The research will also focus on the technical and public policy issues and the likely impacts on the interstate corridor, its users including commuters and truck drivers, land use patterns, existing transportation modes, and travel behavior. A comprehensive analysis, survey, and models should be developed based on different scenarios.
Related Research/Continuation of Past or Current Project:	RES2016-05, RES2017-01
Expected Deliverables:	This project is expected to provide a comprehensive analysis of the impacts of converting existing HOV lanes to HOT lanes. The project outcomes would provide a better understanding of how the conversion would affect current transportation mode, traffic congestion, individuals' travel behavior, and neighborhood land use patterns along the corridors.
Estimate of Problem Funding & Research Period:	TBD
Urgency and Potential Benefits:	This project is urgent. TDOT had finished some studies on HOV facilities and is currently working on another HOV facilities project. The research efforts would greatly help decision makers explore all the possible options and help TDOT develop the knowledge base of statewide HOV facilities in Tennessee.

Implementation Planning:	This study provides a comprehensive analysis for planners and decision makers regarding existing HOV facilities. The survey and model outcomes improve the understanding of possible impacts of the conversion.
Person(s) Developing the Problem Statement:	TDOT.Research@tn.gov
Submission Date:	35T
Problem Number	To be assigned by Research Office