



RESEARCH NEED STATEMENT

Call for Projects 2015

Project Research Title: Assessing Regional Impacts of Transportation Demand Management Strategies

TDOT Sponsor Director: Tanisha Hall

List TDOT Research Team Lead: Casey Langford

List TDOT Research Team Members: Alan Jones, Linda Tidwell, Jack Qualls, Nick Weander, Kwabena Aboagye, Matthew Long

1. Define the problem or research requested. What is the goal/objective of the research?

Implementation of Transportation Demand Management (TDM) strategies that encourage alternatives to single-occupant vehicle (SOV) trips are one solution to mitigate growing congestion and transportation-related air quality concerns. The objective of this research is to evaluate a variety of TDM strategies and their potential for alleviating congestion and improving air quality; the potential for employer and user adoption and participation; and possible economic development impacts, such as attracting and retaining business and assisting in employee recruitment and retention. This research will provide a framework or tool for assessing these impacts at a regional level.

The evaluation of possible strategies to reduce single-occupant vehicle trips should include, but not be limited to 1) identifying effective programs or actions that promote trip reduction and use of alternative transportation modes; 2) marketing and outreach of those programs or actions to employers and commuters; 3) best practices for effective vanpool programs and ideas for developing or enhancing regional vanpool programs to encourage reduction of SOV travel; and 4) assessing the effectiveness of various employee incentives to encourage alternative transportation modes.

2. Is this research a continuation of a past or present project?

No Yes

If yes, provide current research project title, RES # and reason for the project continuation.

n/a

3. Describe anticipated benefits/expected deliverables.

The deliverable will be a framework that can be implemented to assess TDM strategies in various regions of Tennessee.

4. What is your timeline for completion of the research?

1 year

5. List the anticipated tasks for this research.

- Literature review and collection of TDM best practices and case studies.
- Development of framework to assess different strategies for a given region based on population, employers, and other factors.

6. Describe how the project results will be implemented?

The framework provides a method to evaluate regional TDM practices and to plan further efforts to reduce SOV trips.

7. Will this study produce software, web page or other technology that will involve the Information Technology Division?

No Yes, please describe:

n/a

8. Will training be provided to employees as a result of this research?

No Yes, please describe:

n/a

9. Will this research involve equipment or materials purchase?

No Yes, please describe:

n/a

10. Research must support the Long Range Transportation Plan Policy Recommendations **and/or** TDOT Operational Goals and/or Strategic Initiative. *(See attachments for additional information)*

Please indicate which categories the research will support:

Transportation Long Range Plan Policy Recommendations

- (A) Accessibility
- (B) Safety, Security, and Transportation Resilience
- (C) Coordination, Cooperation, and Consultation

(D) Demographic and Employment Changes and Trends

(E) Freight Logistics and Planning

(F) Financial

(G) Mobility

(H) Travel Trends and System Performance

TDOT Operational Goals and/or Strategic Initiative

(A) Deliver transportation projects on schedule and within budget

(B) Maintain the state transportation system to protect the long term investment in our infrastructure assets

(C) Operate and manage Tennessee's transportation system to provide a high level of safety and service to our customers and workers

(D) Expanding mobility choices to maximize access

(E) Dramatically change the paradigm for delivery of transportation products and service to improve the efficiency and effectiveness of Tennessee's transportation network

11. Please explain how the research supports the Long Range Transportation Plan Policy Recommendations **and/or** TDOT Operational Goals and/or Strategic Initiative selected above:

TDM strategies can utilize demographic and employment information to encourage commuters to use alternative transportation modes. Reducing SOV trips can reduce strain on the transportation system as trips shift to other transportation options.

For additional information, please contact:

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