

Research Need Statement 618

I. Need Statement Champions and Information

I.A. Need Statement Champion Information

I.A.1. First and Last Name of Research Champion: **Brad Larson**

I.A.2. Research Champion's Office: **MnDOT Metro District, MnPASS Policy & Planning Program Director**

I.A.3. Research Champion's Phone Number: I.A.4. Research Champion's Email:
Brad.Larson@state.mn.us

I.B. Research Co-Champion

I.A.1. First and Last Name of Research Co-Champion: **Jon Solberg**

I.A.2. Research Co-Champion's Office: **MnDOT Metro District, Director-Metro Planning, Program Management and Transit**

I.A.3. Research Co-Champion's Phone Number: 651/234-7796

I.A.4. Research Co-Champion's Email: Jon.Solberg@state.mn.us

I.C. Research Needs Title (115 Characters):

Enhancing Managed Lane Equity Analysis

I.D. Project Sponsor: MnDOT Research Program

II. Research Need Background and Description

II.A. Research Need Background

II.A.1. Describe the problem or opportunity.

Recent planning and environmental studies that involve a comparison of managed lane alternatives to a general purpose lane alternative have had difficulty determining how to effectively evaluate the alternatives from an equity perspective. This research project will not only help the State and transportation partners develop better, more consistent methods for evaluating managed lane alternatives, it will help determine if there is any significant difference between the demographics (e.g. income levels) of MnPASS lane users and the overall users in corridors where MnPASS lanes are located.

II.A.2. If applicable, describe how this project will build on previous research.

II.A.3. If applicable, include the title/s or previous research.

II.A.4. What is the **objective** of the proposed research?

This research project will evaluate methods for improving equity and environmental justice analysis during planning and environmental studies that involve managed lane alternatives. It will also compare the demographics of MnPASS lane users to the overall demographics of those using corridors where MnPASS lanes are located.

III. Strategic Priorities, Benefits, and Expected Outcomes

Section III. is for MnDOT sponsored and co-sponsored projects only; all LRRB projects proceed to section IV.

III.A. MnDOT Strategic Priorities

Instructions: Briefly describe how the project aligns with the following MnDOT Research Strategic Priorities. Complete all that apply.

III.A.1. Innovation & Future Needs:

III.A.2. Advancing Equity:

The research project will evaluate methods for improving equity and environmental justice analysis during planning and environmental studies.

III.A.3. Asset Management:

III.A.4. Safety:

III.A.5 Climate Change & Environment:

III.B. Expected Outcomes

Instructions: Check all expected direct outcomes of this research.

- New or improved technical standard, plan, or specification
- New or improved manual, handbook, guidelines, or training
- New or improved policy, rules, or regulations
- New or improved business practices, procedure, or process
- New or improved tool or equipment
- New or improved decision support tool, simulation, or model/algorithm (software)
- Evaluation of a new commercial product
- New or improved technical standard, plan, or specification
- Other. Please specify below:

III.C. Expected Benefits

Instructions: Select all expected benefits that may be realized if the findings and recommendations from this research is adopted or implemented

III.C.1. Construction Savings Choose an item.

III.C.2. Decrease Engineering/Administrative Costs **Reduced planning/design costs
Improved equity and environmental justice analysis during planning and environmental
studies that involve managed lane alternatives**

III.C.3. Environmental Aspects Choose an item.

III.C.4. MnDOT Policy Choose an item.

III.C.5. Lifecycle Choose an item.

III.C.6. Operations and Maintenance Savings Choose an item.

III.C.7. Reduce Risk Choose an item.

III.C.8. Reduce Road User Cost Choose an item.

III.C.9. Safety Choose an item.

III.C.10. Technology Choose an item.

III.C.11. Other, please describe below:

IV. Technical Advisory Panel

Instructions: Please list the name and affiliation of individuals to consider for the Technical Advisory Panel.

Your assigned Project Advisor is available to answer questions and provide guidance (assigned by the Office of Research & Innovation).

Your Project Advisor is: Brent Rusco, brent.rusco@state.mn.us