

# Research Need Statement 657

## I. Need Statement Champions and Information

### I.A. Need Statement Champion Information

- I.A.1. First and Last Name of Research Champion: Jessica Oh
- I.A.2. Research Champion's Office: Sustainability and Public Health Division
- I.A.3. Research Champion's Phone Number: 651-366-4939
- I.A.4. Research Champion's Email: jessica.oh@state.mn.us

### I.B. Research Co-Champion

- I.A.1. First and Last Name of Research Co-Champion: Lisa Austin
- I.A.2. Research Co-Champion's Office: Metro District
- I.A.3. Research Co-Champion's Phone Number: 651-234-7863
- I.A.4. Research Co-Champion's Email: lisa.austin@state.mn.us

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

Title: Utilizing Arts and Culture to Mitigate the Negative Impacts of Transportation Infrastructure on Communities

### 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.

Major transportation facilities such as highways, bridges and major arterials often have negative impacts on communities. How can arts, culture and creative placemaking mitigate the negative impacts of (non-transit) transportation facilities on communities, specifically traditionally underserved communities? Can working with artists and creative approaches create new models of community engagement, and aesthetic choices that elevate community voices within transportation projects? The research study will aid MnDOT in understanding case studies that explore the opportunities and barriers to integrating arts and culture into transportation projects. An analysis that is grounded in federal and state transportation policies is desired to evaluate new arts and culture approaches that intersect with NEPA, Visual Quality Assessment, Complete Streets and Context Sensitive Solutions. The proposed research project will help answer these questions:

- How can arts, culture and placemaking mitigate the negative impacts in land use under, over and around major transportation facilities?

- What are some case study examples with qualitative and or quantitative data to illustrate the benefits of creative approaches?
- How can collaborating with artists in the process of planning, engagement, project development, construction, operations, and maintenance offer creative approaches to promote healing, restoration and other creative placemaking approaches?
- What policies and processes will support transportation infrastructure that reflects the assets and distinct character of communities while supporting economic vitality across the state?
- Can public-private partnerships with artists and arts organizations can support healing, and collaboration with community-based organizations working on climate action and racial justice?
- How are art, artistic aesthetic treatments and working with artists funded in non-transit transportation projects?
- From significant artistic design choices to enhancements in as-built transportation environments, such as murals or other temporary art installations, how are art and artistic treatments above “baseline treatments” funded and implemented?
- What are new and emerging models of community engagement that utilize art and placemaking to center diverse community voices in the aesthetic decision-making process?
- How can arts and culture be used as safety interventions on transportation infrastructure, including both traffic safety and personal, psychological safety?
- Can arts and artistic interventions be used to lower VMT to encourage walking and biking, influence travel behavior or calm traffic by reducing speeds?
- Can public art and artistic activations improve the feeling of personal safety, community empowerment and healing? Does public art deter crime or graffiti?
- Does the inclusion of placemaking, art and enhanced green infrastructure result increases in biking and walking?

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

Research on placemaking and public art in transportation has typically been focused on transit infrastructure. This research project will expand MnDOT’s knowledge of a range of arts and culture approaches that can enhance both aesthetic outcomes, while also elevating the values of the community. This project seeks to build on the creative placemaking approaches described in *Transportation for America’s Arts, Culture and Transportation: A Creative Placemaking Field Scan (2017)*, offering promising approaches on how arts and culture contribute to transportation processes and outcomes by:

- generating creative solutions for entrenched transportation problems
- creative ideas for engaging multiple stakeholders
- healing wounds and divisions in communities impacted by transportation infrastructure.

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

**Title:** Arts, Culture and Transportation: A Creative Placemaking Field Scan.

**Authors:** Stone Ben; Nezam Mallory

**Citation:** September 2017. Smart Growth America / ArtPlace America, LLC.

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

The proposed research will aid MnDOT in applying cutting edge approaches in community engagement, creative placemaking and equitable transportation planning by applying creative, interdisciplinary approaches. MnDOT seeks to understand case studies and examples of transportation projects that have benefited from the engagement of artists, arts, and culture to improve project outcomes.

The research will focus on non-transit case studies and best practices that look at successful transportation + arts/culture projects that have creatively addressed community needs and elevated diverse community voices. It will be critical to define barriers to creative placemaking approaches in transportation projects, including policies, processes and procedures in public agencies that may inhibit creative approaches. A research approach that surveys the state of practice in creative placemaking and transportation that elevates the social and cultural values of a community within a transportation project and centers BIPOC and community voices in planning is desired.

- describe arts and culture initiative (was it part of a construction project, a modification to existing infrastructure, or a stand-alone effort).
- describe project's impact on the community. Document unintended consequences or benefits not anticipated.
- define role of partners within the process, identifying successful collaboration models.
- identify partners, stakeholders, and champions who supported the success of the project.
- describe agreements and process with artist and government entities and private partners.
- include analysis of project timelines for arts and artist engagement in projects.
- identify costs and funding sources including public, private, community and philanthropic.
- identify policies or statutes that authorized or impacted the project (including federal, state, and local laws) that either supported or created challenges to implementation.
- Identify within projects interdisciplinary approaches and addressing concerns around trauma, displacement, and gentrification.
- any other information the is relevant to the success of including arts and culture in transportation facilities.

### 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: Research will identify innovative approaches for understanding the role of arts, culture, and creative placemaking in transportation projects. This research project will address growing future needs to address these topics in projects in underserved communities and populations.

III.A.2. Advancing Equity: Transportation investments have long been a part of historic inequality and systemic racism within the intersection of geography, land use, race, and low-income communities. Across the US, the Interstate highway system constructed major highways through low-income and communities of color, leaving lasting impacts on wealth, health, and opportunity. This research project will seek to document arts/transportation case studies with a strong equity focus, that center BIPOC voices in project planning and seek new models of collaborating with citizens through artists, arts, and culture to improve the outcome of transportation projects the research will seek to understand new ways of working with underserved communities that have experienced trauma, displacement, and gentrification as a result of transportation projects.

III.A.3. Asset Management:

III.A.4. Safety: Study will explore safety implications of artistic interventions and public art integration into transportation projects.

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 Choose an item.

III.C.3. Environmental Aspects Other environmental impact. Please describe below.  
This project may offer additional models of reduced social impacts and new visual quality mitigation methods for transportation projects. New opportunities to addressing social impacts through Context Sensitive Solutions approaches in arts and culture in addition to green infrastructure will be explored.

III.C.4. MnDOT Policy Changed or inform a policy  
This project will offer additional strategies to address priorities in the following policies: Equity, Public Engagement, Complete Streets, Context Sensitive Solutions, Art on the Highway, and Right of Way Manual Alternative Uses of Right of Way.

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 Other safety benefit. Please describe below.  
Arts, culture, and safety improvements may reduce crime and increase the safety of users.

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.

1. Hally Turner, MnDOT OTSM.
2. Hannah Rank, MnDOT, Rethinking I-94
3. Lisa Austin, MNDOT, Center for Community Connections.
4. Cyrus Knutson, MnDOT, Center for Community Connections.
5. Carol Zoff, MnDOT, OES.
6. Melissa Shultz, MnDOT Bridge.
7. Adrien Carretera, MnDOT Tribal Affairs.
8. Angi Forsythe, MnDOT Chief Counsel.

External to MnDOT (if allowed)

Mary Altman, City of Minneapolis, Public Arts Administrator.  
Russell Habermann, Senior Planner ARDC Planning.  
Emily Kurash Casey. Rural Coordinator, RETHOS.

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 (651)366-3767 [brent.rusco@state.mn.us](mailto:brent.rusco@state.mn.us)