

**TRANSPORTATION POOLED FUND PROGRAM
 QUARTERLY PROGRESS REPORT
 for
 National Road Research Alliance (NRR)**

Lead Agency: Minnesota Department of Transportation

INSTRUCTIONS:

Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # TPF-5(341) http://www.pooledfund.org/Details/Study/590		Report Period: Quarter 1 (January 1 – March 31, 2017)
Project Title: National Road Research Alliance – NRR http://www.dot.state.mn.us/mnroad/nrra/index.html		
Project Manager(s): Glenn Engstrom Robert Orthmeyer	Phone Number: (651) 366-5531 (708) 283-3533	E-Mail glenn.engstrom@state.mn.us Robert.orthmeyer@dot.gov
Lead Agency Project ID: None	Other Project ID (i.e., contract #): None	Project Start Date: April 2016
Original Project End Date: September 30, 2018 (29 months)	Current Project End Date: NA	Number of Extensions: 0

Project schedule status → On schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
\$ 2,600,000 (State SPR Funds) + associate funding (not included here)	\$ 1,5180.15 (SPR) \$ 108,711.50 (MnDOT Donated)	Time* = 41% (12/29 months) SPR Money = less than 1% *May increase the time to 60 months in the future then at 20%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$ 1,5180.15 / ~1% (SPR) \$ 108,711.50 (MnDOT Donated)	\$ 1,5180.15 \$ 108,711.50 (MnDOT Donated)	Dollars Spent = \$ 0

Project Description:

This pooled fund will help direct and compliment the use of the MnROAD test track for local, regional and national research, tech transfer and implementation needs. Road owner agencies will provide input and participate in the decision making needed for future MnROAD construction and research scheduled in 2017. MnDOT will provide \$2.5 million in construction funding to aid in the development of the next round of test sections at MnROAD to support common goals. Industry and academia will also play an important role to provide critical input on long-term future trends in research and barriers to implementation, including working with their customers and members who play a direct role in implementation.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

To date six state agencies and over twenty 28 industries and academic institutions have become NRRRA members to share their expertise and are learning about new tools and methods to improve and expand upon transportation systems nationally.

- NRRRA members/Teams have met every two weeks this winter expecting to back down to once a month starting this summer.
- The teams have identified long term research needs along with tech transfer/short term research that are documented on each of the NRRRA team web pages.
- Construction plans have been submitted for bids from contractors based on the long term research needs that are nearly finalized for additional contracts with consultants and Universities.
- MnDOT hired a “marketing” staff to assist in the NRRRA needs. This person will work on both MnDOT and NRRRA needs staying within the 5% administration budget approved by NRRRA Executive Committee.
- Website updated including team meeting notes.

Anticipated work next quarter:

The following is expected to be completed for next quarter.

- Long Term Research Construction will be finalized related to special provisions so MnDOT can let the construction project being let in April (delayed) for 2017 construction at MnROAD. This effort will be funded by 2.5 million of MnDOT funding for NRRRA members to use.
- Long Term Research Contracts will be formalized so that contracts can be pursued by MnDOT for NRRRA teams as needed. The contracts overall plan will be developed and some consultants/Universities will be contracted with.
- Short Term Research will be done if time allows – focus is expected on construction and long term research development.
- Technology Transfer Contractor(s) will be hired to work on the top two areas from each team.
- NRRRA Team Meetings will take place each month and as needed to accomplish its tasks.
- Planning will be done for the May 2017 NRRRA pavement conference and workshop for May 23-24, 2017
- Overall update will be developed for FHWA St Paul office to be updated. This may include extending the pooled fund to 5 years to allow for the long term research to be completed. More thought will be put into this area.

Significant Results:

NRRA is up to 6 state members and over 28 associate members. NRRA Agencies and Associates members make up the 5 teams that play an important technical role in setting both the technology transfer and long term research needs. Each team has been active this summer meeting every two weeks to develop and prioritize ideas that fall into each of these categories above to meet both local, state, regional and national research needs. The teams report directly to the NRRA executive committee.

The initial push by each of the NRRA technical teams is to develop long term research needs and the MnROAD test sections that will be used to support these initiatives. MnDOT is providing \$2.5 million of construction funding to support NRRA long term research needs to be built at MnROAD in the summer of 2017. Each team is working to get the final designs and special provisions to MnDOT so the plans can be developed and a formal construction project can be let in March 2017. Long term research includes researching HMA overlays of PCC, enhancing HMA compaction, fiber reinforced concrete, effects of diamond grinding on questionable aggregates, PCC early opening to strength, optimizing PCC cement content, compacted concrete pavements for city streets, cold central plant recycling, recycled aggregate bases, large stone subbases, maintaining HMA and PCC roadways, and PCC partial depth repair. Each topic/test section will provide a resource for future research contracts that are under development by each team.

Other important team activities include the formation of technology transfer topics. The NRRA technology transfer team has been approved by the executive committee to fund 2 technology transfer topics from each of the four technical teams. Each topic's goal is to pull together the existing state and national state of practice so that a common practice or specification can be developed by the members. Prioritized topics include longitudinal joint construction performance, tack coats, design and performance of concrete unbonded overlays, repair of concrete joint related distress, large unbound subbase materials, subgrade design, surface characteristics of diamond ground PCC, and pavement preservation approaches to lightly surfaced roadways. Currently the teams are updating the problem statements so that a MnDOT hired contractor can be hired to complete the work.

More information on these efforts including the long term research and technology transfer topics can be found under each of the [team member's webpage](#).

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems)

None

Potential Implementation:

See the NRRA team pages for implementation topics that are being developed. Expect many areas of implementation by next June 2017 when the first round of short term/tech transfer topics are completed.