



## 2018 LRRB Winter Meeting Minutes

**Date:** December 12-13, 2018

**Location:** University of Minnesota, President's Room – Coffman Memorial Union,  
300 Washington Ave SE, Minneapolis, MN 55455

### LRRB Board Members Present:

Kaye Bieniek, Olmsted County  
Kent Exner, City of Hutchinson  
Jim Foldesi, Saint Louis County  
Laurie McGinnis, U of M (CTS)  
Paul Oehme, City of Chanhassen  
Mitch Rasmussen, MnDOT - State Aid  
Lyndon Robjent, Carver County - (*Chair*)  
Tim Stahl, Jackson County  
Kevin Western, MnDOT – Bridge

### Non-Board Members Present:

Shannon Fiecke, MnDOT - Research Services  
Lisa Jansen, MnDOT - Research Services  
Hafiz Munir, MnDOT - Research Services  
Debbie Sinclair, MnDOT - Research Services  
Thomas Johnson-Kaiser - Research Services  
Beth Klemann, MnDOT - Research Services  
Kristina Nesse, U of M (CTS)  
Ginny Crowson, U of M (CTS)  
Bernard Izevbekhai, MnDOT - OMRR

*Not present:* MnDOT Research Services Director (vacant position)

## Updates / Action Items

### Call to Order

#### **Welcome, Introduction:**

Meeting called to order at 8:30am by Chair Lyndon Robjent.

**Agenda Review:** No new items added to the agenda.

#### **Approval of Summer Meeting Minutes:**

The October 17, 2018 meeting minutes were approved unanimously. **Motion** by Jim Foldesi, Seconded by Kevin Western.

**Pending Action Items:** Hafiz Munir led the discussion and went over the action items from the October 2018 meeting minutes. All but the following action items have been resolved. Below are the specific notes on the outstanding action items:

- **Action Item # 1:** RS to add the pending action items 9 and 11 to the December 2018 LRRB meeting for an update.
  - **Resolved** – Agenda items were forwarded to the Summer 2019 LRRB Meeting.
- **Action Item # 4:** Mitch Rasmussen will send out notice to the RIC Committee to see if there is interest in attending the TRB Conference.
  - **Resolved** – Mitch sent a notice to RIC Committee
- **Action Item # 7:** Debbie Sinclair to check with Ryan Anderson if the performance reviews have been documented in ARTS.
  - **Resolved** – Debbie stated that all the evaluations are in ARTS and the information can be compiled easily.

### Budget and Administration

Debbie Sinclair led the discussion and went over the budget spreadsheet provided in the LRRB board binder. Below is a summary of the discussion under each section.

**Budget Status Report:**

- INV 675-salaries, will be discussed at a later meeting.
- Completed: INV1013 – Comparison of Performances of Structural Fibers and Development of a Specification form using Structural Fibers in Thin Concrete Overlays.
- 1032 – “Personal Warning Sensor for Road Construction Workers” Contract Amendment is being amended to end contract. The company developing the AWARE work zone intrusion system encountered unanticipated problems with its software. Amendment will reflect a revised budget for the work performed to date. Original budget was total of \$112,115 with LRRB funds of \$28,039. After amendment the new budget is total of \$17,290 with LRRB funds of \$4,323.
  - One Task, Initial Memorandum on Research Benefits and Implementation Steps, was already completed and a summary task documenting the conduct of the TAP site visit and lessons learned will be completed.

**Action Item 1:** *A memo of the lessons learned from the Personal Warning Sensor for the project should be created by the PI explaining the reasons for the software problems and a summary of the lesson learned to help reduce risk of third party failure in the future.*

- FY19: available \$2,014,041 to use this fiscal year if anything can begin early. Unused balance will carry forward to FY20.
- FY20: This year’s amount listed as placeholder. Will have final allotment amount in January. Currently approximately \$2.3M obligated in FY20. After deducting set-asides for ongoing programs there is \$2,772,488 available in FY20 (including the carryforward from FY19).

*For full details of the budget, please refer to the summary spreadsheet in the meeting book.*

**RS Staff Salaries:**

- Salary update through PPE 11/27/18.
- Very carefully tracking time spent on LRRB related duties, for Research Management staff down to the individual project level. Overall increase of 27% in hours spent on LRRB related duties from FY18 to FY19. This translates to a 29% increase in cost, about \$33K.
- Hours for Marketing & Outreach holding steady, Research Management up 37%, Admin up 20%.
- Admin’s hours were higher primarily due to time spent implementing new LRRB time accounting codes and reconciling expenses from the summer meeting in Rochester.
- Projecting just under \$400K for the year based on where Research Services was at this time last year. Will probably change once Research Management is fully staffed.

**2019 Conferences and Attendees:**

- Conferences: TRB attendees are listed in binder. Need to move Kent Exner from RIC to LRRB list for TRB. Guy Kolnhofer is going to the International Conference on Low Volume Roads in Rome.
- AAPT (Asphalt Pavement Technologists Conference) – Fort Worth, TX – March 3-6, 2019 – anyone interested let Debbie know.
- Bernard Izevbekhai noted that the International Conference on Low Volume Roads in September is a valuable conference and asked if there should be more allotments. Mitch Rasmussen explained the value/benefits of sending more people and stated that it is up to the board to decide. He did not feel comfortable just adding more trips. He recommended that a request for additional slots should be presented to the LRRB board for approval and the requestor needs to specify the value of attending.
- Mitch also mentioned that if a trip isn’t taken there is a process within MnDOT to substitute an allocated trip for another trip on the list.
- Laurie McGinnis suggested that it is worth looking into the conference allotment as part of the LRRB Strategic Plan Update. She also suggested the request for any additional slots should also provide information why MnDOT can’t pay for additional trips.
- 2019 meeting schedule is in the binder.

**Action Item 2:** *At the March LRRB meeting the board will hear a request from OMRR on conference attendance request. The request should include why MnDOT is not funding the conference.*

**Action Item 3:** *Add agenda item to March LRRB meeting to review development of out of state travel plan for FY20*

**Action Item 4:** *Debbie Sinclair to move Kent Exner's name from the RIC to the LRRB list for attending TRB.*

Resolved

## **Research Proposal Presentations – Day 1**

Eleven presentations were given on Day 1.

- NS531d - Establishing a Repeatable Method for Presenting Non-traditional Traffic Treatments to Maximize Stakeholder Support
- NS529b - Understanding Pedestrian Travel Behavior & Safety in Rural Settings
- NS526b - Evaluation of Environmental Impacts of Potassium Acetate Used as a Road Salt Alternative
- KB03-2 - Wet Pond Maintenance for Phosphorus Retention
- NS542b - Evaluation of Curing Effects on Cold In-Place Recycling (CIR)
- NS556b - Optimizing Asphalt Mixture Designs for Low-Volume Roads of Minnesota
- NS543b - The Impact of Deferred Maintenance in Minnesota
- NS554a - Construction Incentives - Are they working?
- NS535a - Implementation of Lane Boundary Guidance System for Snowplow Operations
- NS542c - Evaluation of Curing Effects on Cold In-Place Recycled (CIR) Materials
- KB01-1 - Development of Superpave 5 asphalt mix designs for Minnesota pavements

## **Discussion on Proposal Selection and Preliminary Funding Decisions**

- NS542b and NS542c
  - Jim Foldesi preferred NS542b as it was a more turnkey proposal.
  - Chair Lyndon Robjant expressed concern about the prediction equation in NS542b.
  - Tim Stahl stated the NS542b addressed the concern of rural counties and why they are going away from CIR. Therefore he prefers NS542b.
  - Laurie McGinnis mentioned that she liked how NS542c included a local partner Hennepin County and undergrad.
  - Hafiz Munir noted that board should keep in mind that NS542b will require a good amount of oversight as the PI has had past projects with a lot of amendments.
  - Kevin Western asked if champion had a preference and Hafiz Munir said the champion recommended both proposals and OMMR recommended NS542c.
  - Bernard Izevbekhai said OMMR would be fine working with either but would prefer NS542b.
- NS543b
  - Chair Lyndon Robjant noted that the proposal was very high level and seemed to be waiting for the TAP to develop the scope.
  - Paul Oehme said it is an important topic but the proposal did not hit the mark. Very general proposal.
  - The need statement needs to be clarified and resubmitted for next cycle.
- NS556b
  - It is important to include low volume and high load in the scope, such as roads in southern Minnesota.
  - Kevin Western and Tim Stahl were concerned that project timeline was not long enough to evaluate environmental factors.
- NS529b

- Mitch Rasmussen and Tim Stahl were concerned that research dollars are not the appropriate resource to solve the problem and that it should be local agencies solving the problems. It is a local issue.
- Laurie McGinnis countered that there was some aspects that are applicable broadly across the state.
- Chair Lyndon Robjent said there is a need for a guide for pedestrian crosswalk issues but not sure if this proposal is the best way. Also noted that there are other areas that are addressing the issue.
- Laurie McGinnis questioned if the need statement was exactly what the board is looking for.
- The need is to establish consistency statewide and there are concerns that the proposal will not provide that.
- Chair Lyndon Robjent recommends retooling the need statement to be more global for all rural settings.
- Mitch Rasmussen suggested the possibility of having phase 2 be a guidance document done by RIC.
- NS531d
  - Tim Stahl said there are R cuts taking place in Jackson County. He thinks it is the role of the DOT to put them in and people will see the value. He likes the proposal but is not sure if it is needed.
  - Mitch Rasmussen stated that Nicole is a great PI and will probably meet or exceed expectations.
  - Kent Exner thinks it would be helpful to have tools for local agencies to get community support.

***Action Item 5: Research Services should work with NS543b proposal champion, Paul Oehme, to rescope and submit a revised need statement for next funding cycle***

## **Research Proposal Presentations – Day 2**

### ***Welcome, Introduction:***

Meeting called to order at 8:30am by Chair Lyndon Robjent.

Eight presentations were given on day 2.

- KB05-2 - Towards implementation of max-pressure signal timing on Minnesotan roads
- KB12-1 - Capacity-building for public representation and engagement on transportation infrastructure and finance issues
- NS556c - Optimizing Mix Designs - Low Volume Roads in Minnesota
- NS555b - Effectiveness of Geotextiles/Geogrids in Roadway Construction; Determine a Granular Equivalent (GE) Factor
- NS557a - Base Stabilization Additives - Effect on GE
- KB03-3 - Re-use of regional waste in sustainably designed soils
- KB03-4 - Dust Control Impacts on Water and Air Quality in Rural Minnesota
- NS536d - Pavement Marking Patterns and Widths - Human Factors Study

## **RIC Update and Funding Request**

Kaye Bieniek provided an update from the November 11, 2018 RIC meeting:

- Mike Flaagan (RIC chair) sent Lyndon the prioritized list of the six proposals. The email is in the binder.
- The RIC ranked the below proposals in order of priority with the top four proposals being grouped together as RIC's top priority.
  1. NS551 - \$129,310
  2. NS552 - \$53,791

3. NS546 - \$59,750
  4. NS550 - \$59,676
  5. NS544 - \$58,972
  6. NS545 - \$63,706
- The six proposals total \$425,205, top four proposals \$302,527.
  - Kaye Bieniek said that the RIC determined the two eliminated proposals were deemed to not meet the need statement. She said that the RIC would like to see the proposals funded before the research proposals.
  - Kevin Western said the process of how LRRB evaluates the RIC proposals should be clarified upfront.
  - Mitch Rasmussen said that the Statute states only the LRRB board can make project funding decisions. Mitch said that the request must come to LRRB for funding and the board decides the projects, not the RIC. They should follow the same process of reviewing proposals and choosing consultants.
  - Laurie McGinnis and Mitch Rasmussen stated that the RIC proposals had the same priority as the research proposals. The RIC proposals should not get higher priority for funding.
  - Mitch Rasmussen pointed out that, in the future, if implementation proposals are required to present, they will probably increase to the \$100,000 range. We can't set up a process that would discourage the consultant to put proposals. RIC can do the solicitation and the funding request must come to the board.
  - Tim Stahl brought up the question of if the LRRB is adequately funding the RIC. Mitch Rasmussen agreed that the RIC funding contributed to these six proposals needing a decision.
  - There has not been a selection of new set of RIC projects since the new needs process. Laurie McGinnis suggested that in the future the needs should guide the RIC projects.
  - Hafiz Munir explained that during the last SRF contract for RIC, Research Services provided a list of completed LRRB projects in the last 2-3 years to the RIC to determine which projects to select for Implementation. RIC selected the projects and funded it through the RIC allotted amount.
    - Mitch Rasmussen said he does not think that process is in line with statute because LRRB board makes funding decisions.
    - In the future the list of RIC selected projects should go to the LRRB first for funding decision or be part of the needs process.
  - A reason for the 2-3 year contract for RIC is to smooth out administrative and contracting costs.
  - A potential option for the future is to have the three year contract for RIC projects but only have the first year of work specified. Over the next two years there would be amendments to specify the work. A concern could be if one contractor would have the capacity and/or ability to handle all of the work.
  - No final decision was made on this matter. The LRRB Strategic Plan will potentially help clarify how the funding for RIC allocation will be determined and how the RIC funding decisions will be made.
  - After discussion, it was decided that the LRRB Board would vote on the current RIC proposals as part of the ballot with the other research proposals. The RIC proposals will be bundled in two groups. The first bundle will include RIC's top four ranked (RIC 1-4) proposals. The second bundle (RIC 4-5) will include RIC's bottom two ranked proposals.

For full details of the proposals, please refer to the 2018 LRRB Fall Meeting (October 17, 2018) Book.

### **LRRB Strategic Plan Update**

Chair Lyndon Robjent provided a brief update on the LRRB Strategic Plan

- TAP meeting to be held in February.
- Vivek Sakhrani is working on draft documents.

Hafiz Munir also provided a brief update on the LRRB Strategic Plan.

- The consensus from the Board Members is that there has to be a process established for the RIC in the Strategic Plan Report. This will provide a better understanding of responsibilities.

## Discussion on Day 2 Proposals

- KB05-5
  - Laurie McGinnis advocates for this project as it is a good example of LRRB being a leader in innovation.
- KB12-1
  - Laurie McGinnis advocates for this project as it is building on previous work and the PI has a good history of success.
  - Mitch Rasmussen said the board should request an update to the proposal to include an instructional video.
- NS556c
  - Bernard Izevbekhai supports NS556b as the request is for significantly less money and he was not convinced that Texas A&M has the ability to address Minnesota specific needs.
- NS555b
  - Bernard Izevbekhai liked that the research team was open to creation of spreadsheet deliverable.
  - Kent Exner agreed that there is momentum for geogrid so the project is a good one.
  - Chair Lyndon Robjent pointed out the high cost of the project.
  - The board wanted to make sure that a spreadsheet deliverable is included in the contract as part of the contracting process.
  - It is highly recommended that working together with the Counties on this project will be beneficial for everyone.
- KB03-3
  - Paul Oehme liked this project, but thought it was a little too regional, but there is some value.
  - Kaye Bieniek and Chair Lyndon Robjent also expressed support for the project because of the current cost of engineered soils.
- KB03-4
  - Jim Foldesi pointed out there is a need, but the approach was too narrow. Potentially put the need back out there requesting for more data points.
  - Potential to ask for the proposal to be expanded and looked at next LRRB meeting.
- NS536d
  - Kaye Bieniek pointed out that the PI did not seem to have the project scoped out completely based off answering to questions.

## Proposal Selection and Funding Decisions

A table summarizing the funding decisions of the board for university proposals can be found at the end of these minutes.

The LRRB Board members completed ranking ballots which were tallied and the results were sorted by rank (highest combined rating to lowest).

Project KB01-1 was not selected for funding despite having a rank of 11 because LRRB decided to focus on local roads with funding NS556b. **Motion** by Mitch Rasmussen, Seconded by Kaye Bieniek.

The funding of all projects ranked above KB03-3 was approved unanimously. **Motion** by Mitch Rasmussen, Seconded by Paul Oehme.

An offer of shared funding of 50% LRRB and 50% TRIG to be made to TRIG for NS531d, MS535a and KB03-2 was approved unanimously. **Motion** by Chair Lyndon Robjent, Seconded by Paul Oehme.

**Action Item 6:** *Jim Foldesi to discuss KB03-4 with Krysten Foster, the project champion, to explain the LRRB board's feedback regarding the proposal needing more testing locations and questioning if the approach in the proposal meets the need statement. After getting Krysten's feedback, Jim will request the PI to submit an updated proposal and present at the March LRRB meeting.*

## **Round Robin**

Laurie McGinnis - reminded board about open house for motion simulator and TRB reception.

Mitch Rasmussen – Kevin Western asked to add the Australian bridge conference on April 1-2 2019 as an international trip. Interested LRRB members should contact Debbie Sinclair immediately.

Hafiz Munir - new LRRB engineer will be starting soon as a replacement for Mitch Bartelt.

### ***Next LRRB Meeting:***

**March 20, 2019 - LRRB Spring Meeting**

*Carver County*

## **Summary of the Action Items**

**Action Item 1:** *A memo of the lessons learned from the Personal Warning Sensor for the project should be created by the PI explaining the reasons for the software problems and a summary of the lesson learned to help reduce risk of third party failure in the future.*

**Action Item 2:** *At the March LRRB meeting the board will hear a request from OMRR on conference attendance request. The request should include why MnDOT is not funding the conference.*

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Research Proposals for FY2020 - LRRB Funding Decisions						
NS #	Project Title	Principal Investigator	University	Total Budget	LRRB Funded	Notes
526b	Evaluation of Environmental Impacts of Potassium Acetate Used as a Road Salt Alternative	John Gulliver	Minnesota	\$214,703	Yes	
529b	Understanding Pedestrian Travel Behavior & Safety in Rural Settings	Greg Lindsey	Minnesota	\$311,434	No	
531d	Establishing a Repeatable Method for Presenting Non-traditional Traffic Treatments to Maximize Stakeholder Support	Nichole Morris	Minnesota	\$236,923	Yes	Offer TRIG to fund 50%
535a	Implementation of Lane Boundary Guidance System for Snowplow Operations	Max Donath	Minnesota	\$245,914	Yes	Offer TRIG to fund 50%
536d	Pavement Marking Patterns and Widths – Human Factors Study	Adam Pike	Texas A&M	\$208,890	No	
542b	Evaluation of Curing Effects on Cold In-Place Recycling (CIR)	Eshan Dave	New Hampshire	\$149,992	Yes	
542c	Evaluation of Curing Effects on Cold In-Place Recycled (CIR) Materials	Mihai Marasteanu	Minnesota	\$129,650	No	
543b	The Impact of Deferred Maintenance in Minnesota	Basak Bektas	Iowa State	\$126,660	No	
554a	Construction Incentives – Are they working?	Mohamed Diab	Mankato State	\$88,620	Yes	
555b	Effectiveness of Geotextiles/Geogrids in Roadway Construction; Determine a Granular Equivalent (GE) Factor	Junxing Zheng	Iowa State	\$197,339	Yes	
556b	Optimizing Asphalt Mixture Designs for Low-Volume Roads of Minnesota	Manik Barman	UM-Duluth	\$161,333	Yes	
556c	Optimizing Mix Designs – Low Volume Roads in Minnesota	Edith Arámbula-Mercado	Texas A&M	\$280,309	No	



557a	Base Stabilization Additives - Effect on GE	Bora Cetin	Iowa State	\$194,388	Yes	
KB01-1	Development of SuperPave 5 asphalt mix designs for Minnesota pavements	Mihai Marasteanu	Minnesota	\$121,564	No	100% TRIG
KB03-2	Wet Pond Maintenance for Phosphorus Retention	John Gulliver	Minnesota	\$222,467	Yes	Offer TRIG to fund 50%
KB03-3	Re-use of regional waste in sustainably designed soils	Marsha Patelke	UM-Duluth	\$197,406	Yes	
KB03-4	Dust Control Impacts on Water and Air Quality in Rural Minnesota	Larry Zanko	UM-Duluth	\$248,966		Asking TL for revisions from PI and present at March meeting
KB05-2	Towards implementation of max-pressure signal timing on Minnesotan roads	Michael Levin	Minnesota	\$177,946	Yes	
KB12-1	Capacity-building for public representation and engagement on transportation infrastructure and finance issues	Kathryn Quick	Minnesota	\$95,780	Yes	
RIC 1-4	NS551 NS552 NS546 NS550	LTAP Stonebrooke Bolton & Menk AET		\$302,527	Yes	
RIC 5-6	NS544 NS545	Pro-West SRF		\$122,677	Yes	