Ohio's Research Initiative for Locals

Peer Exchange Report
March 8-9, 2017

In Collaboration with the Ohio Department of Transportation
Office of Statewide Planning and Research
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March 8-9, 2017

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On March 8-9, 2017, the Ohio Department of Transportation (ODOT) hosted a peer exchange on behalf of the Ohio's Research Initiative for Locals (ORIL) program. Peer exchanges provide an opportunity to foster best practices and evaluate processes with colleagues from other states and national organizations. This exchange focused on transportation research programs designed to address issues specific to local public agencies (LPAs), e.g.: counties, townships and municipalities. Two specific topics were discussed during the exchange: (1) solicitation of research ideas and (2) implementation of research results.

Common Themes

During the exchange, common themes among the participants emerged on the two topics.

Idea Solicitation

- The process for soliciting ideas needs to be as easy and as simple as possible.
- Engagement with potential idea submitters is essential. Utilizing focus groups, conferences and meetings to encourage and assist with idea generation will help increase the amount and quality of submissions.
- Including academia in the discussion phase for idea generation can be useful.
- Enhancing partnerships with the Local Technical Assistance Program (LTAP) Center and the DOT can produce positive results.
- When LPAs have a financial stake in the program, involvement tends to be greater as it allows them to view the program more as their own.
- Allowing for year-round submission of ideas and not limiting the audience that is permitted to submit ideas can increase the quantity of ideas received.

Implementation

- Communication is key not only to growing the program, but in gaining acceptance and ultimate use of research products.
- Results of research projects should be marketed aggressively. Utilize multiple different communication channels (e.g.: newsletters, emails, conferences, YouTube channels, etc.) to share information.
- Project champions that are identified during the research should be utilized during the implementation and marketing phases.
- When attempting to determine a return on investment, be realistic.
- Return on investment should be focused at the program level as opposed to the project level.

Summaries of the key discussion items that occurred for each exchange participant on the two topics are provided in the following pages. Also included are key takeaways for the participants as well as specific recommendations for ORIL to consider as the program continues to grow and refine.

Future Actions for ORIL

At the May 2017 Board meeting, the ORIL Board assessed the information and recommendations from the peer exchange. In an effort to encourage more idea submissions and attempt to improve the quality of those submissions, the Board decided to modify the following processes:

1. Idea solicitation will be left open year round; however, the program will continue to issue an official call for ideas once a year per the current program calendar.
2. An Idea Discussion Board will be incorporated into the ORIL website. The concept is to allow anyone to submit an idea/topic for research and have others comment on that

idea/topic. The goal is to encourage discussion on topics that could be turned into research projects. It will be clarified that submitting topics to the Idea Discussion Board does not constitute an official submission to the ORIL Board for funding consideration. While anyone can participate in the Idea Discussion Board, only representatives of LPAs will be permitted to officially submit ideas for funding consideration. Since the rules regulating the website usage of State of Ohio agencies do not permit real-time posting to a public website, the site will be updated the first and third Friday of each month.

3. A more concerted effort will be made to incorporate presentations on the ORIL program and/or specific projects at various conference and standing organizational meetings focused on LPAs (e.g.: County Engineers Association of Ohio [CEAO], Ohio Township Association [OTA], Ohio Municipal League [OML], American Society of Civil Engineers [ASCE], American Public Works Association [APWA] of Ohio , Metropolitan Planning Organizations [MPOs]). It is recommended to utilize these types of events for idea generation and vetting. While ODOT staff are available to assist with these activities, Board members will be more aggressive in promoting the program. Generic PowerPoints and flyers are already available on the Board Extranet Site for marketing purposes. Executive summaries and fact sheets can be used to promote individual projects. Additional materials will be developed to help Board members promote the program.

The ORIL Board will continue to evaluate information and recommendations related to implementation. Additional efforts are expected to be made to assist in the use and tracking of research results as the program continues to grow.

Iowa Highway Research Board (IHRB)
Iowa DOT

Summary of Key Discussion Items

Idea Solicitation

- IHRB hosts a webpage that allows for the online submission of research ideas at any time throughout the year. Anyone is allowed to submit an idea; they do not have to be a representative of a LPA.
- IHRB conducts focus group sessions with locals to encourage idea generation and development.
- Researchers are invited to participate in focus group sessions. This encourages real collaboration between locals and academia.
- IHRB coordinates with the Iowa LTAP program for assistance with focus groups and the development of request for proposals.
- IHRB posts requests for proposals two separate times per year. A portion of their budget is reserved for the second posting.
- Researchers who propose on projects provide a 15 minute presentation on their proposal to the IHRB prior to selection.

Implementation

- IHRB began to emphasize efforts on implementation of research findings within the last four years. Recent efforts have been focused towards demonstration projects, which have shown to be effective.

- Researchers provide a presentation to IHRB on final reports before reports are approved for publication.
- It is important to have the project champion participate in discussions and reviews of implementation activities.
- IHRB utilizes the county engineers association to help disseminate information on research projects and findings.
- Final reports from projects are expected to include a business plan or section addressing technology transfer and implementation of the findings, but not a completed plan for implementation. All final reports for IHRB projects are included on the Iowa DOT research website.
- The use of executive summaries for completed projects has proven to be beneficial. Executive summaries are typically no longer than four pages and include contact information to learn more about the project.
- IHRB utilizes an agreement with the Institute for Transportation (InTrans) at Iowa State University to assist in implementation and technology transfer efforts. The Iowa LTAP provides assistance in the dissemination of information on research projects.

Summary of Participant Takeaways

IHRB applauds the work that has been accomplished by ORIL and recognizes the commitment of its board members. The system established in Iowa alleviates concerns of year to year or project by project justification because program funding is consistent. This allows for a more holistic evaluation of the program and how it is benefiting all groups (e.g.: counties, cities, and the state). Ultimately, the services that are being provided through state and local transportation research programs are similar and are all funded with tax dollars. This peer exchange has reminded the IHRB to not take their program for granted and opportunities to continuously improve the programs should be identified. Idea solicitation and implementation go hand in hand. Identifying ideas from the source where they will be implemented will ultimately result in valuable findings.

As ORIL continues to refine and expand their program, the IHRB recommends the following items for consideration:

- Don't exclude research ideas from the Ohio DOT. Actively exchanging and comparing research ideas between ORIL and the Ohio DOT may provide opportunities to partner on projects.
- There is a disparity of funding in Ohio for local transportation research. While funding resources for the various groups participating in ORIL differ greatly, the goal to maintain and operate the transportation system is shared by all. As a result, activities that would be beneficial to one can actually be beneficial to all - regardless of the source for the idea or the funding. This concept has been accepted among the locals in Iowa. Work towards fostering this attitude in Ohio.
- Put forth more effort to "get the word out" about the ORIL program. Request to be included on meeting agendas for your various organizations to provide quick updates (e.g.: 20 minutes) about what is going on in the program and the projects. This will allow you to introduce the program to new people and keep others interested and engaged.

Local Roads Research Board (LRRB)
Minnesota DOT

Summary of Key Discussion Items

Idea Solicitation

- LRRB utilizes their relationships with locals to solicit research ideas.
- LRRB conducts annual focus group meetings with locals to generate research ideas.
- Academia is included in the idea submission process. Ideas submitted by academia go through the same process as all other submissions and, if selected for RFP, are competitively advertised.
- LRRB hosts a focus group with researchers every four years to encourage participation in knowledge building activities.
- LRRB utilizes online discussion boards, referred to as IdeaScale, for developing and commenting on research ideas.
- As appropriate, the LRRB co-shares and co-funds research projects with the Minnesota DOT.
- The Minnesota LTAP Center is very active with LRRB and provides assistance in writing RFPs.

Implementation

- LRRB has three subcommittees, two of which are focused on implementation and communication: Research Implementation Committee (RIC) and the Outreach Committee.
- LRRB allocates funding for implementation in their budget. These funds are overseen by the RIC. From these funds, the RIC contracts with a consultant to provide assistance in implementation of research findings. This contract is for 3 to 4 years and typically initiates five to eight implementations each year.
- LRRB hosts booths at various state conferences such as APWA and LTAP. Preloaded flash drives containing research findings are handed out at these events. Numerous presentations are also given at these local conferences as well as Transportation Research Board subcommittees. Efforts are made to keep conference presentations interactive by utilizing trivia games and other audience participation activities.
- LRRB hosts their own YouTube channel. This has become a main method for outreach. In addition to the short videos, LRRB develops one-page summaries of projects and guidebooks for related topics.
- To share information about their projects, LRRB uses fact sheets and an annual "At-A-Glance" report that summarizes all reports for a given year. Email notifications are distributed through a listserv to let people know projects are completed and reports available.
- LRRB publishes a newsletter in February and August providing updates on the program and individual projects. In addition, articles are submitted for other publications such as DOT newsletters, LTAP newsletters, and national publications.
- LRRB neither expects nor requires full-blown implementation plans in research reports. Researchers are provided with opportunities to transition findings to practice as appropriate. There is not an approval process for releasing project information.
- LRRB does not have a formalized process for determining or tracking ROI activities on their research projects.

Summary of Participant Takeaways

This exchange has provided the LRRB with more appreciation for the maturity of the program and the established structure in which it operates. Ensuring that the program continues to meet needs in the arena of safety and system management is important. It should also be remembered that research and development go hand-in-hand; often the development portion of R&D is forgotten. As all programs struggle with the notion of demonstrating a numerical return on investment, it is important to keep in mind that strategic plans, which are the basis for project development, tend to speak to outcomes as opposed to numerical return-on-investment calculations. LRRB intends to share information on ORIL's study "*Evaluation and Design of a TL-3 Bridge Guardrail System Mounted to Steel Fascia Beams*" with its membership and the DOT. The one-page fact sheet utilized by ORIL and ODOT will be shared with the LRRB's Outreach Committee as a potential marketing tool. In addition, the implementation summary and plan documents that the Ohio DOT utilized in the past are interesting and worth consideration. There is an opportunity for all three programs (LRRB, IHRB, and ORIL) to work together. While the environments and political arenas of the three states differ, the overall needs and concerns of LPAs as it relates to transportation are similar and relatable. Establishing a connection between the three programs to share problem statements and research ideas could be very beneficial. The respective LTAP programs could serve as conduits for this exchange of information.

As ORIL continues to refine and expand their program, the LRRB recommends the following items for consideration:

- Don't become discouraged. The longer the ORIL program is in existence, the easier it will become to demonstrate its benefit. Sustaining momentum when funding is a constant concern is difficult.
- As ORIL does not have a designated, guaranteed funding source, focus on the immediate future. Since the political climate may not be conducive for a discussion on funding at this time, identify what ORIL can do in the meantime to better position the program. Use the next two years to mature the program. By doing so, there will be more involvement and engagement in the program when the climate is more conducive to a discussion on funding. This creates momentum for the program and may shift the discussion from maintaining funding to increasing funding.
- Based on past experience, politicians tend to understand private business language better than government language. Keep this in mind as you promote the program, and attempt to secure funding. Counties, cities, townships and the state are investors in the program looking for research to come up with ways to make their jobs easier.
- Partnership with LTAP is important. Continue to pursue and grow this relationship.

American Association of State Highway and Transportation Officials (AASHTO)

Summary of Key Discussion Items

Idea Solicitation

- AASHTO's Innovation Initiative (http://aii.transportation.org/Pages/default.aspx) could be used as an example for idea solicitation.
- AASHTO encourages incorporating a vetting process of ideas through activities such as literature searches before the ideas are submitted to the Board for consideration. There is a lot of value that can be gained by identifying efforts that are currently

underway or related projects that are completed. Identifying something that addresses 70% of your idea will help refine your project.
- AASTHO encourages local research programs to look for opportunities to collaborate with their DOTs. In addition, AASTHO also encourages these projects to reach beyond their respective localities and states to become involved in national endeavors, such as the Transportation Research Board.
- During the selection of ideas, emphasis should be placed on determining the benefit of the proposed project.

Implementation

- It is important to understand that every project is not going to be a "winner". It is possible that the successful implementation of one project every five years may be enough to justify the cost of the entire program.
- AASTHO's TRAC and RIDES program is an educational outreach program designed to encourage careers in civil engineering among school-aged children. (http://trac.transportation.org/Pages/default.aspx)
- When determining the structure of research reports, be cautious of trying to accomplish too many items with one report. Traditionally, research reports detail everything that was done during the study. This is good for other researchers who are interested in doing additional work on the subject matter. However, the needs of the sponsoring agencies and practitioners are different. Sponsoring agencies had an issue that they wanted evaluated while practitioners want directions for solving the problem. While it is good to have this technical documentation, many state DOTs are moving towards managing programs as opposed to performing engineering duties. Awareness of this trend should be considered when determining how to document research.
- One-page summaries may be a good promotional tool for senior/executive leadership to highlight the program. However, for practitioners, be careful that they realize additional information is available elsewhere. Potential misuse of the results could occur if one-pagers are relied on for all pertinent information.
- Communication is critical for the acceptance/implementation of projects and the survival of programs. Taking efforts to not only share the findings from research, but communicate the importance of those findings is key. Be aware that not everyone will like the results.
- There is not much value in attempting to determine a return-on-investment for individual research projects. In general, the criteria for quantifying value are ambiguous and argumentative. There is, however, immense value in evaluating the overall program. It is suggested that a program level evaluation occur every five years to show what the program has done, highlight success and show a programmatic savings/contribution.
- A politician's cycle for return on investment is not realistic. For example, it took the automobile industry 15 years to fully implement airbags.

Summary of Participant Takeaways

- It is important to realize that everyone is not going to become engaged in a program. Program managers should make an effort to engage those who are not involved, not to change their mind, but to determine why they don't participate.
- Keep in mind that knowing not to use or do something has value.

As ORIL continues to refine and expand their program, AASHTO recommends the following items for consideration:

- ORIL's process is a good; however, there is room for growth. The solicitation process needs to be easier. Locals may not have the time to do the necessary legwork to submit an idea and a couple of paragraphs may be too much. Establishing a connection with LTAP, or another entity, to help with this process would be beneficial. The focus group meetings hosted by LRRB and IHRB are great models that ORIL can use to encourage and assist in the generation and refinement of ideas.
- Take every opportunity to tout and aggressively market the program. Get the research products out there so people know what you are doing. Sharing information through emails is good, but it is important to physically get in front of people and get their attention. After some time has passed, follow up to see who is using the products and capture their experiences and any benefits.
- The best people to "sell" the program are the locals (e.g.: counties). Peer to peer conversations will generate more interest and potential buy-in. Utilize testimonials from locals who have used a research product. Those individuals become advocates for the program. Start with your board members and expand from there.

Ohio's Research Initiative for Locals (ORIL)
Ohio DOT

Summary of Key Discussion Items

Idea Solicitation

- The program is still fairly new. Once more locals participate in the program and can be developed into champions, more ideas should be submitted.
- The program is currently funded by the Ohio DOT. While locals make in-kind contributions to the program through time and participation, there are no financial contributions. It is reasonable to expect that a financial contribution on the part of locals will result in increased submissions.

Implementation

- Considering the program's relatively new status, a formal presentation on implementation was not provided as substantial results have not been available.
- One research project, *Storm Water Best Management Practices for Local Roadways*, has resulted in a follow-up, pilot project to further test and refine the research product.
- All research proposals are required to include a preliminary discussion on what implementation could potentially look like for the study.
- All research final reports are required to include recommendations from the researcher on how to implement the findings.

Summary of Participant Takeaways

- The processes utilized by the IHRB and LRRB to generate research ideas are more engaging than ORIL's current process, which, in comparison, is too formal and rigid. The use of focus groups and meetings targeted towards idea generation provides an opportunity to vet potential projects for interest and refine goals. Likewise, it is common for committee/board members of these programs to propose ideas. As a

result, the ideas that are submitted for consideration seem to be more developed. Having board members be more participative in the idea generation process is an activity that should be considered.

- Return-on-investment and implementation is a hot button for all government programs. While this is a difficult task to do, it is important. ORIL should continue to evaluate its processes to identify opportunities.
- It is important to recognize that not every project will produce a quantifiable return-on-investment. As projects produce results, effort should be made to identify the projects that may produce a quantifiable return and focus efforts towards those projects as opposed to every project.
- It is critical for ORIL to share successes; however, this needs to be done in a meaningful way. ORIL should evaluate and pursue various avenues for marketing the program and research products as appropriate.
- ORIL should continue efforts towards identifying a mechanism for secure and consistent funding.
- The Ohio LTAP Center has been a strong partner of Ohio's Research Initiative for Locals since the program's inception. Ohio LTAP has played a major role in coordinating with CEAO, OTA and OML to facilitate appointment of local agency personnel to the ORIL Board; distributing ORIL program announcements to local agencies statewide through the extensive LTAP email list; marketing the ORIL program through the LTAP newsletter; and production of several promotional videos for ORIL. Continuing this partnership with Ohio LTAP is recommended.

APPENDIX A
Peer Exchange Participants

AASHTO

Keith Platte, Associate Program Director Project Delivery	

IHRB/Iowa DOT

Danny Waid, Secondary Roads Research Engineer *Iowa County Engineers Association Service Bureau*	Wade Weiss, Engineer *Green County*

LRRB/Minnesota DOT

Mitch Rasmussen, State Aid Engineer *Minnesota DOT*	

ORIL/Ohio DOT

Steven Bergstresser, Assistant City Manager *City of Kettering*	Greg Butcher, Engineer *Violet Township*
Matt Chaney, Engineer *ODOT District 4*	Debbie Cox, Administrative Professional *ODOT - Statewide Planning & Research*
Doug Davis, Engineer *Muskingum County*	Mark Eicher, Engineer *Nobel County*
Jennifer Elston, Engineer *ODOT District 8*	Mike Fitch, Program Manager *ODOT – Ohio LTAP Center*
Vicky Fout, Project Manager *ODOT – Statewide Planning & Research*	Anna Kuzmich, Statewide Shale Coordinator *ODOT – District 11*
Rui Liu, Assistant Professor Kent State University	Michelle Lucas, Contract Manager *ODOT – Statewide Planning & Research*
Steve Luebbe, Engineer *Fayette County*	Brian Olson, Area Maintenance Engineer ODOT District 4
Warren Schlatter, Engineer *Defiance County*	Paul Schmelzer, Safety Service Director *City of Findlay*
Bill Schneider, Professor *University of Akron*	Carol Schubert, Facilitator *ODOT – LEAN*
Leo Shanayda, *City of Springfield*	Eric Steinberg, Professor *Ohio University*
Chase Wells, Engineer *ODOT – Construction Management*	James Young, City Engineer *City of Columbus*

Exchange Report-Out Guests

Victoria Beale, Director *ODOT – Ohio LTAP Center*	Heidi Fought, Director Government Affairs *Ohio Township Association*
Tim Keller, Administrator *ODOT – Structural Engineering*	Tim McDonald, Administrator *ODOT - Program Management*
Scott Phinney, Administrator *ODOT – Statewide Planning & Research*	John Puente, Administrator *ODOT – Asset Inventory & Systems Integration*
Michele Risko, CSTP/LBR Program Manager *County Engineers Association of Ohio*	

APPENDIX B
Agenda

AGENDA
March 8 to 9, 2017
Ohio Department of Transportation
1980 West Broad St. Columbus OH 43223

Wednesday, March 8

7:35 a.m.	*Meet in hotel lobby for ride to ODOT (unless driving separate)*
8:00 to 8:30 a.m.	*Breakfast and networking*
8:30 to 9:00 a.m.	**Welcome by ODOT** **Introductions and Agenda Overview**
9:00 to 9:15 a.m.	**ORIL Research Program Overview and Peer Exchange Goals** • Vicky Fout, ODOT Statewide Planning and Research • Michelle Lucas, ODOT Statewide Planning and Research
9:15 to 9:45 a.m.	**State Presentations – Topic # 1: Solicitation of Research Ideas (15-20 min. presentations).** • Michelle Lucas, ODOT Statewide Planning and Research • Mitch Rasmussen, Minnesota DOT
9:45 – 10:00 a.m.	*Break*
10:00 a.m. to 11:45 p.m.	**State Presentations Continued from Topic #1. Followed by discussion questions.** • Dan Waid, Iowa County Engineers Association • Wade Weiss, Iowa Highway Research Board
11:45 to 12:45 p.m.	*Lunch on site*
12:45 to 2:45 p.m.	**State Presentations - Topic #2: Implementation of Research Results (30 minute presentations). Followed by discussion questions.** • Mitch Rasmussen, Minnesota DOT • Dan Waid, Iowa County Engineers Association • Wade Weiss, Iowa Highway Research Board
2:45 to 3:00 p.m.	*Break*
3:00 to 4:30 p.m.	**Continue with discussion questions for Topic #2.**
4:30 p.m.	*Dinner outing for those who would like to participate*

Thursday, March 9

7:35a.m.	*Meet in hotel lobby for ride to ODOT (unless driving separate)*
8:00 to 8:30 a.m.	*Breakfast and networking*
8:30 to 9:30 a.m.	**Wrap-up and takeaways**
9:30 to 10:30 a.m.	**Report Out**
10:30 a.m.	*Depart*

APPENDIX C
Preliminary Discussion Questions

Peer Exchange Topics and Discussion Questions

Topic #1: Solicitation of Research Ideas (15-20 minute presentation)

- Encouraging the submission of research ideas
- Asking the right questions to get the best information to develop good projects

Discussion Questions:

1. What is your process for soliciting research ideas for your local research program? Please include a timeline for your process indicating when steps occur and the length of time allotted to that step. Include any pertinent steps leading up to the actual solicitation (e.g.: development of focus areas, a strategic plan, etc.).

2. Who is permitted to submit research ideas for consideration (e.g.: local public agencies, DOT staff, researchers, industry, associations, etc.)?

3. How do you notify people that ideas are being accepted? Explain your process and methods used to encourage submissions? How frequently do you send notifications/reminders?

4. What information is requested from submitters for research ideas? Please provide a copy of your idea submission form and be prepared to explain what is asked and why.

5. In general, how good are the ideas received? Are the ideas clear and easy to understand?

6. Do you allow the idea submitters to explain/defend their idea to the selection committee before the selection/prioritization is made? If so, how does this process work? Has it been beneficial and resulted in better projects?

Topic #2: Implementation of Research Results (30 minute presentation)

- Planning for implementation
- Identifying results for implementation
- Tracking, monitoring and reporting on implementation of research results
- Developing a return on investment – Promoting the program through quantifiable means (e.g.: showing your worth)

Discussion Questions:

1. How do you disseminate and communicate the findings of your research projects to raise the visibility of your program? Your response should take into consideration projects that produce findings that only enhance knowledge/understanding (e.g.: best practices, synthesis studies, findings that say current processes are good keep doing things the way you are, findings that say don't do "this", etc.).

2. What is your current process for implementing research findings from your local program? Provide an overview of your entire process, please be sure to include information on the following items:
   a. When in your process is implementation a true consideration (e.g.: during idea development, during project execution, at the conclusion of the study, etc.) and how is consideration given?
   b. How do you determine which research projects have findings that should have extra effort expended on implementation?

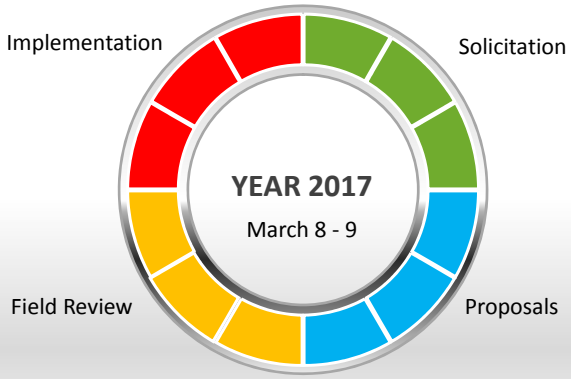
c. How do you track the implementation of research findings amongst local public agencies statewide?
d. How to you determine if the implementation effort was a success? Do you apply a performance metric to implementation? If yes, please describe the metric and its' application.
e. How do you fund implementation efforts within your local program? Are these efforts competing for funds with new research projects?
f. What involvement (if any) do the following entities have in the implementation of local research results: local research board; researchers; state DOT; associations for county engineers, townships, municipalities, public works, etc.; and LTAP Center? Please include additional entities not named above that that play an important role in implementation.

3. How do you determine a return-on-investment for the research projects you conduct? How do you communicate that value to stakeholders?

4. How do you determine a return-on-investment for your local research program (as a whole)? How do you communicate that value to stakeholders?

APPENDIX D
IHRB/Iowa DOT Idea Solicitation Presentation

OHIO Peer Exchange Workshop

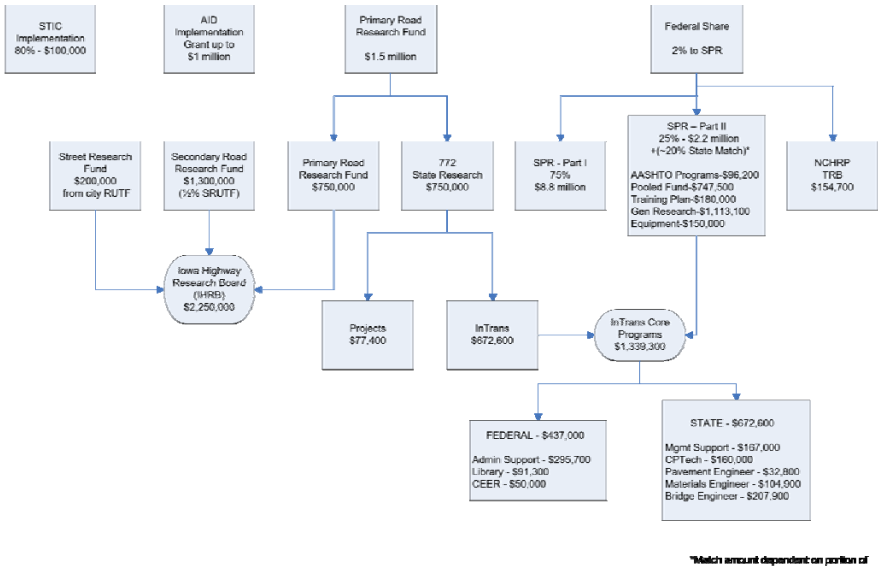


Iowa's Year Round Research Process

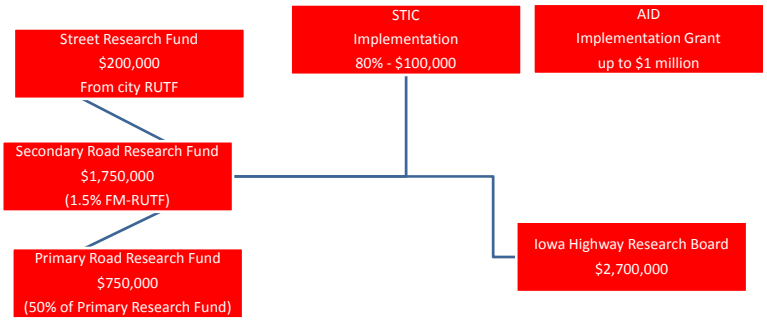
Wade Weiss, P.E.
Greene County Engineer
2017 President ICEA

Danny Waid, P.E.
ICEA Service Bureau
Secondary Roads Research Engineer

Research Funds



IHRB Annual Funding



Year around Research – IHRB Timeline

January:
- Yearly Calendar is updated
- TRB – IHRB, Research Staff, Researchers
- New Board members start

IHRB Overview

- 1949 – Legislation established the Secondary Road Research Fund
  - Iowa DOT has Oversight of the funds
  - Highway Commission allocated funding for Primary Road Research
- 1st meeting of the Board in 1950
- 1980 – County Engineers endorsed a Secondary Roads Research Position
- 2016 – IDOT/ICEASB agreement made the SRRE position an employee of the Service Bureau
- IHRB has 15 members
  - 7 County Engineers
    - 6 from Districts
    - 1 Permanent
  - 4 Iowa DOT Staff
  - 2 City Engineers
  - 2 University Representatives
  - Each w/ an Alternate

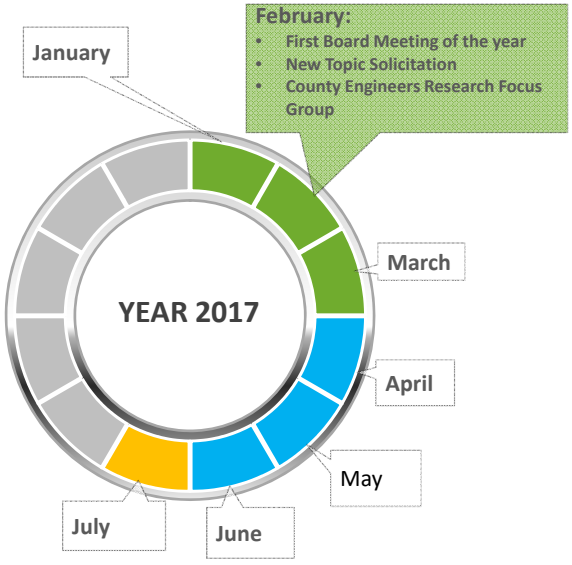
2017 IOWA HIGHWAY RESEARCH BOARD **January 1, 2017**

Member	Term Expires	Alternate
Ahmad Abu-Hawash, Chair Chief Structural Engineer, Iowa DOT 800 Lincoln Way Ames, IA 50010 (515) 239-1393 Ahmad.Abu-hawash@iowadot.us	12/31/2018	Dave Claman Preliminary Bridge Engineer, Iowa DOT 800 Lincoln Way Ames, IA 50010 (515) 239-1487 David.Claman@iowadot.us
Kevin Jones Materials Testing Engineer, Iowa DOT 800 Lincoln Way Ames, IA 50010 (515) 239-1237 Kevin.Jones@iowadot.us	12/31/2018	Chris Brakke Pavement Management Engineer 800 Lincoln Way Ames, IA 50010 (515) 239-1882 Chris.Brakke@iowadot.us
Chris Poole Safety Programs Engineer, Iowa DOT 800 Lincoln Way Ames, IA 50010 (515) 239-1267 Chris.Poole@iowadot.us	12/31/2019	Khyle Clute Methods Transportation Engineer 800 Lincoln Way Ames, IA 50010 (515) 239-1862 Khyle.Clute@iowadot.us
Tammy Nicholson Director, Office Location & Environment, Iowa DOT 800 Lincoln Way Ames, IA 50010 (515) 239-1052 Tamara.Nicholson@iowadot.us	12/31/2017	Dan Sprengeler Work Zone Traffic Control Engineer, Iowa DOT 800 Lincoln Way Ames, IA 50010 (515) 239-1823 Dan.Sprengeler@iowadot.us
Sarah Okerlund, Civil Engineer II, City of Ankeny 220 W 1st St Ankeny, IA 50023-1751 (515) 963-3526 sokerlund@ankenyiowa.gov	12/31/2017	Matt Cox City Engineer, City of Council Bluffs 209 Pearl Street Council Bluffs, IA 51503-0826 (712) 328-4635 mcox@councilbluffs-ia.gov
Ronald Knoche Director of Public Works, Iowa City 410 E. Washington Street Iowa City, IA 52240-1825 (319) 356-5138 Ron-Knoche@iowa-city.org	12/31/2018	Bruce Braun Street Maintenance Administrator, Des Moines 216 SE 5th Street Des Moines, IA 50309 (515) 237-1371 BABraun@dmgov.org
Paul Hanley The University of Iowa – Dept. of CEE 4105 Seamans Center Iowa City, IA 52242 (319) 335-8137 paul-hanley@uiowa.edu	----------	
Terry Wipf Iowa State University, Dept. of CCEE 420 Town Engineering Bldg. Ames, IA 50011 (515) 294-6979 TJWipf@iastate.edu	----------	

2017 IOWA HIGHWAY RESEARCH BOARD **January 1, 2017**

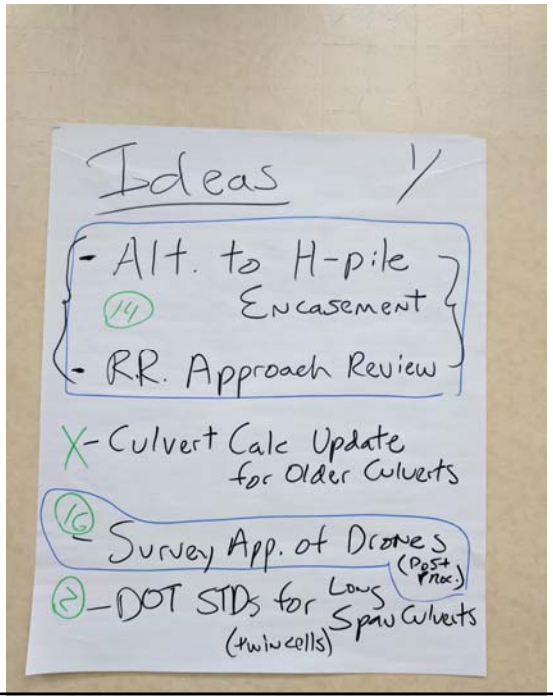
Wade Weiss Greene County Engineer 114 N. Chestnut Street Jefferson, IA 50129 (515) 386-5650 wweiss@co.greene.ia.us	---------- TRB Rep	
Russ Stutt Jasper Co Secondary Road Department 910 N. 11th Ave. E. Newton, IA, 50208 (641) 792-5862 rstutt@co.jasper.ia.us	12/31/2017 District 1	Paul Geilenfeldt III Marshall Co Engineers Office 101 East Church Street Marshalltown IA, 50158-4915 (641)-754-6343 pgeilenfeldt@co.marshall.ia.us
Lee Bjerke Winneshiek County Engineers Office 201 W Main St Decorah, IA, 52101-1713 (563) 382-2951 lbjerke@co.winneshiek.ia.us	12/31/2019 District 2	Joel D. Fantz Fayette County Engineers Office 114 N. Vine Street West Union, IA 52175 (563) 422-3552 jfantz@co.fayette.ia.us
Scott Rinehart Clay County Engineers Office 300 W 4th St #5 Spencer, Ia 51301-3806 (712) 262-2825 srinehart@co.clay.ia.us	12/31/2018 District 3	Paul Assman Crawford County Engineer 1202 Broadway, PO Box 458 Denison , IA 51442 (712) 263-2449 passman@crawfordcounty.org
Kevin Mayberry Mills County Engineers Office 403 Railroad Avenue Glenwood, IA, 51534 (712) 527-4873 kmayberry@millscoia.us	12/31/2017 District 4	Brad Skinner Montgomery County Engineers Office 406 West 4th Street Red Oak IA, 51566-0095 (712) 623-5197 bskinner@montgomerycoia.us
Jacob Thorius Washington County Engineers Office 210 W Main St., Ste. 2 Washington, IA, 52353-1723 (319) 653-7731 thorius@co.washington.ia.us	12/31/2019 District 5	Andrew McGuire Keokuk County Engineer 101 S. Main Sigourney, Iowa 52591 (641) 622-2610 engineer@keokukcountyia.com
Myron Parizek Benton County Engineer 1707 W 1st St | PO Box 759 Vinton, IA 52349 (319) 472-2211 mparizek@co.benton.ia.us	12/31/2018 District 6	Todd Kinney Clinton County Engineer 1900 N 3rd Street Clinton IA, 52733-2957 (563) 244-0564 tkinney@clintoncounty-ia.gov

Year around Research – IHRB Timeline



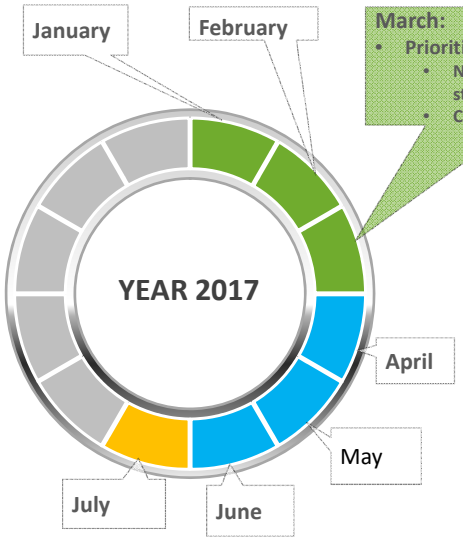
IHRB – Annual Meeting Schedule

- All meetings are held the last Friday of the Month
- Except for the December Meeting – Held the afternoon of the last day of the ICEA Annual Conference
- No meetings the Months of January, August, & November
- The May meeting could be adjusted for Memorial Day, requiring two June meetings
- The ICEA Members of the IHRB hold a Pre-Meeting the day before the IHRB Meeting to resolve any questions about the agenda items for the meeting



Problem Statement Submittal

Year around Research – IHRB Timeline

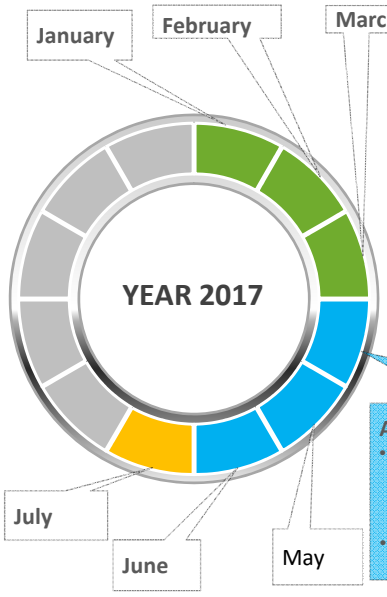


IHRB – Project Solicitation

(Green Area)

- New topics are solicited at various Stakeholder meetings including:
  - IDOT Department Staff
  - InTrans Staff
  - PC Tech Center
  - Bridge Engineering Center
  - Iowa CERFG (7th Annual)
- Continuation Projects are submitted by Staff, ISU and U of I Researchers, and other stakeholders like Industry Representatives and others
- IHRB Prioritizes New Topics for Requests for Proposals and Continuation projects are prioritized.

Year around Research – IHRB Timeline

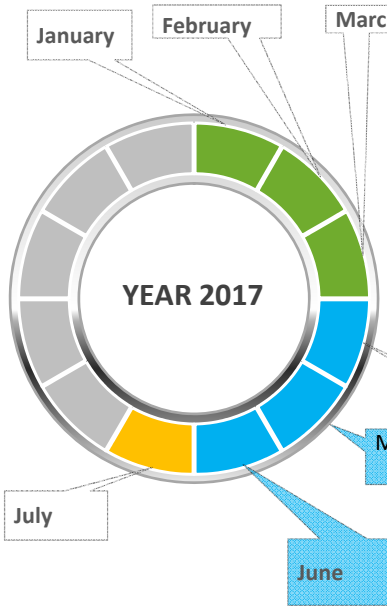


Solicitation Process

- Identifying Projects
  - Through annual prioritized program
  - Continuation of Previous projects
  - Emergency or Projects of merit not in prioritized program
  - Novel Idea projects or time critical
  - Outside or Joint funding sources for projects

April:
- **RFP's – Requests for Proposals go out on new research topics – (about 50% go out the initial round)**
  - **Posted on IDOT Research website**
  - **Distributed to potential research PI's**
- **Proposals are submitted for High Prioritized Continuation Projects**

Year around Research – IHRB Timeline



IHRB – Project Submittals and Approvals

- Standing Agenda Items – Board Approval
  - Final Reports - Presentations from PI's about research results
  - Proposals – 15 min. overview of proposed continuation or new research projects – competitive
  - RFP – To be sent out for research community response

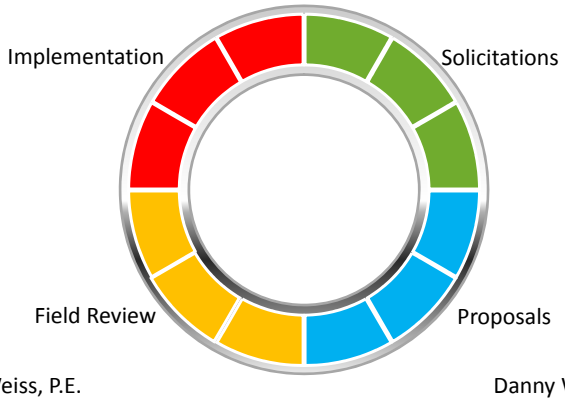
May/June: Finalizing first round of RFP's, approving proposals, new research projects are beginning

Overview of Idea Solicitation Process

- **Request for Ideas – January**
  - Emails, Websites, and focus groups
  - Each Focus Group selects top priority topics
  - Ideas are presented to IHRB for ranking and approval of RFP
- **Requests for Proposals** are sent out (twice per year) from IHRB through the Iowa Transportation Research Collaboration Agreement between IDOT, 3 State Universities, and InTrans
  - Each RFP has a DOT advocate or lead contact assigned
  - Budgets are fixed and Quarterly progress reports are required
- **Research Proposals are Accepted -**
  - Proposals must include Implementation and Tech Transfer Components
  - Universities find a researcher advocate in the work area to work out proposal details w/ IDOT reconciling allowable budget amount and Scope of Work
  - Proposals are reviewed for approval (or denied) by IHRB

Questions

Iowa's Year Round Research Process



Wade Weiss, P.E.
Greene County Engineer
2017 President ICEA
wweiss@co.greene.ia.us
515-386-5650

Danny Waid, P.E.
ICEA Service Bureau
Secondary Roads Research Engineer
danny.waid@iceasb.org
515-835-7960

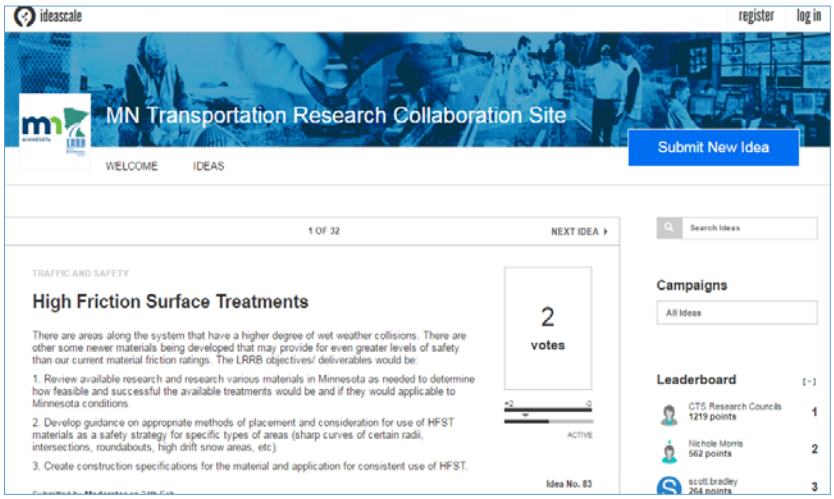
THANK YOU!

APPENDIX E
LRRB/Minnesota DOT Idea Solicitation Presentation


LRRB
LOCAL
ROAD RESEARCH
BOARD
MN Local Road Research Board
Research Solicitation
Mitch Rasmussen, MnDOT State Aid Director
Ohio Peer Exchange
March 8, 2017
SLOW


LRRB
How Do We Solicit Ideas?
• Relationships/Outreach
• IdeaScale website
• LRRB focus group
• UMN 'knowledge-building'

IdeaScale Website

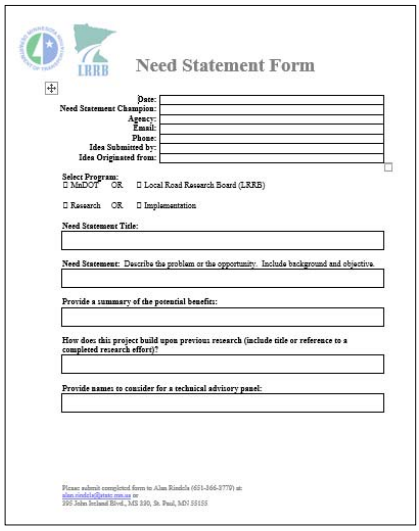


mndot-lrrb.ideascale.com

LRRB Annual Focus Group

- Half-day, each spring
- Location rotates between Metro and outstate
- Local practitioners, state aid reps, CTS
- Largest source of ideas
- Strategic Plan identifies focus areas

Need Statement Form



Need Statement Form

Date:
Need Statement Champion:
Agency:
Email:
Phone:
Idea Submitted by:
Idea Originated from:

Select Program:
☐ MnDOT OR ☐ Local Road Research Board (LRRB)

☐ Research OR ☐ Implementation

Need Statement Title:

Need Statement: Describe the problem or the opportunity. Include background and objective.

Provide a summary of the potential benefits:

How does this project build upon previous research (include title or reference to a completed research effort)?

Provide names to consider for a technical advisory panel:

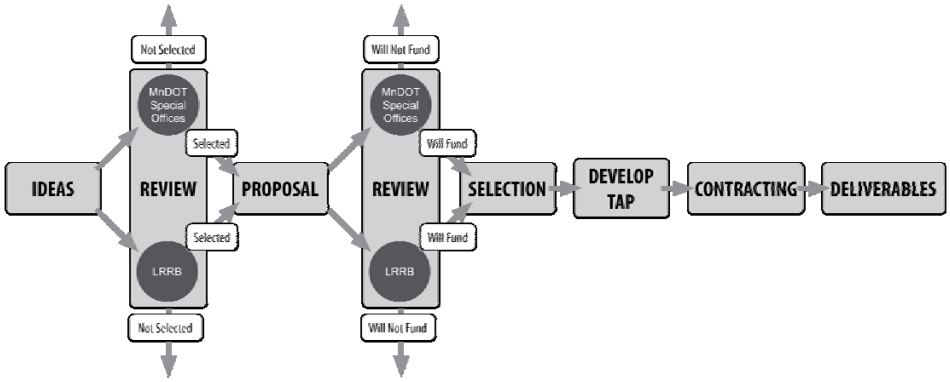
Please submit completed form to Alan Rindels (651-366-3779) at
alan.rindels@state.mn.us or
395 John Ireland Blvd., MS 330, St. Paul, MN 55155

Available at
lrrb.org/contact-us/submit-ideas/

UMN 'Knowledge Building' Activity

- Chance for UMN researchers to put forth their own ideas
- Focus group every four years
- Proposals considered for funding at same time as those submitted through RFP

Research Project Selection Process



Strengths

- Empowers locals
- Leverages funds
- Maintains autonomy
- Implementation Committee has staff consultant

Research Cycle

Next Step: Board Action

Summer board meeting:

- Determine which ideas will move forward – as research, TRS, implementation or outreach projects
- Develop/refine need statements

Request for Proposals

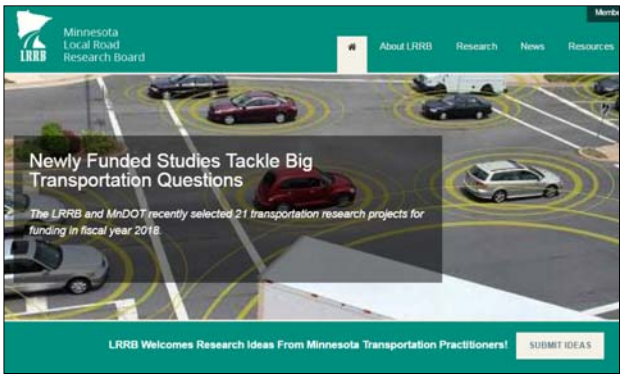
- RFP issued for MnDOT, LRRB research project ideas in August
- University researchers have six weeks to respond
- In October, MnDOT & LRRB boards review proposals

Proposal Review/Selection for Presentation

- Meeting held in October

LRRB FY2018 Research Proposal Voting Summary						
Need Statement #	Project Title	Project Duration (months)	Total Requested Budget	Lyndon Robjent	Kaye Bieniek	
461a	Characterization of Runoff Quality from Paved Low Volume Roads and Optimization of Treatment Methods	36	$202,916	1	1	1
465a	Examining Optimal Sight Distances at Rural Intersections	19	$166,549	1	1	
462d	Is Seal Coating Counterproductive or Not?	24	$136,508		1	
463a	Cost/Benefit Analysis of the Effectiveness of Crack Sealing Techniques	23	$104,504		1	
455a	Experimental and Computational Investigations of High Density Asphalt Mixtures	24	$148,075			1
485	Cloud-Based Dynamic Warning System	17	$78,130	1	1	1

Research Project Awards



- Proposals presented in December
- Boards vote on projects, cost-sharing


Questions?
Mitch Rasmussen, MnDOT State Aid
Mitch.Rasmussen@state.mn.us
(651) 366-4831
LRRB

APPENDIX F
ORIL Idea Solicitation Presentation

Ohio's Research Initiative for Locals (ORIL)

Solicitation of Research Ideas

1

Annual Calendar

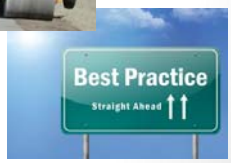
January o TACs work on developing RFPs for posting o Quarterly reports due from researchers on all active ORIL projects	**July** o Fiscal year starts on 1st – new contracts can begin o Quarterly reports due from researchers on all active ORIL projects
February o ORIL Board Meeting – Program Review	**August** o ORIL Board Meeting – Strategy Meeting
March o RFP Posting	**September** o Formal Solicitation for Research Ideas
April o Deadline for Proposal Submission o TACs & Board review proposals o Quarterly reports due from researchers on all active ORIL projects	**October** o Annual Focus Group conducted o Quarterly reports due from researchers on all active ORIL projects o Deadline for Idea Solicitation
May o ORIL Board Meeting - Researcher Selection & Chair Nominations	**November**
June o Negotiations with selected researchers begins o New Chair Confirmation	**December** o ORIL Board Meeting – Idea Prioritization and TAC establishment

2

Strategic Plan

- To ensure the program is meeting transportation needs of Ohio's locals and funds are being utilized in a responsible manner, the Board will establish, review and update a strategic research plan annually with focus areas.

  (Done during August Strategy Meeting)



  - Safety
  - Renewal/Infrastructure
  - Operations & Business Practices

3

Idea Solicitation Process

- September – A formal solicitation for research ideas is issued by the board
  - Announcement on ORIL Webpage
  - Announcement on ODOT Research Webpage
  - Email sent out to ORIL email list
  - Email sent out through the Ohio LTAP Center
- Deadline for idea submission is around 6-8 weeks from posting
- Reminders are sent with 1-2 weeks left in solicitation

4

Example: Call for Research Ideas

ORIL Research Ideas Solicitation

Do you have a problem you need solved? Is there a topic you would like to know more about? Ever wondered how your colleagues are dealing with a particular issue and what the best practices for handling it could be? All of these (and more) could be addressed through research!

Ohio's Research Initiative for Locals (ORIL) is now accepting research ideas for consideration for the upcoming FY2018 program.

If you are a representative for a village, township, city, county, MPO or RPO, you can submit an idea to ORIL. The ORIL Board will review all ideas submitted and select those that propose the biggest benefit for Ohio. Selected ideas will be developed into Requests for Proposals, which will be posted for response from the transportation research community in March 2017. Research projects may begin any time after July 2017.

To Submit An Idea:

- Complete an online application by clicking here.
- Submit by 3:00PM on November 4, 2016.

Requirements for Consideration:

- Ideas must be submitted by a representative of a local public agency.
- Ideas must be related to transportation issues. (See "NOTE" below.)
- Ideas must be responsive to at least one of the research focus areas identified in the ORIL Strategic Research Plan: Safety, Renewal/Infrastructure, and Operations & Business Practices.
- Ideas must be received by the deadline (3:00PM on November 4, 2016).

Check out the ORIL FAQ page for answers to frequently asked questions. Current topics include how ORIL funding works, where the funding comes from, what is required of individuals whose ideas are selected, and more. For more information on the ORIL program, how it works, and details on the criteria used by the ORIL Board to select the ideas, check out the ORIL Guidebook. To learn more about the research currently being funding by ORIL, check out the FY2017 ORIL Program Book.

If you have a question about ORIL or need help submitting an idea, please email: ORIL@dot.ohio.gov contact Vicky Fout (614-387-2710), Michelle Lucas (614-644-8135) or Mike Fitch (614-387-7358).

NOTE: ORIL funding is currently provided through the State Planning & Research Part 2 Program, which carries the following eligibility criteria: According to 23USC505, SP&R2 funds may only be used to support two specific activities:
(5) Research, development, and technology transfer activities necessary in connection with the planning, design, construction, management, and maintenance of highway, public transportation, and intermodal transportation systems.
(6) Study, research, and training on the engineering standards and construction materials for transportation systems described in paragraph (5), including the evaluation and accreditation of inspection and testing and the regulation and taxation of their use.

5

Who Can Submit Ideas?

- Any representative from a Local government organization
  - City
  - Township
  - County
  - Village
  - Metropolitan Planning Organization (MPO)
  - Regional Transportation Planning Organization (RTPO)
- Ideas submitted by non-locals will not be considered

6

Idea Solicitation Encouragement

- Ohio Transportation Engineering Conference (OTEC)
  - Held Annually in October (Columbus Ohio)
- Ohio LTAP Center
  - Email Reminders
  - Notices in LTAP Newsletter
- Rely on Board Representatives to encourage colleagues
  - Ohio Township Association (OTA)
  - County Engineers Association of Ohio (CEAO)
  - Ohio Municipal League (OML)

7

How to Submit an Idea

Ohio's Research Initiative for Locals
Research Idea Form

Please complete this form to have an idea considered as a research project by the ORIL Board. The information you provide on this form will be used by the ORIL Board to determine whether or not a research project should be funded. Therefore, please provide enough information so that the ORIL Board will have an understanding of what your idea is and how funding research on this topic will be beneficial. Ideas must be related to at least one of the research focus areas outlined in the ORIL Strategic Research Plan 2014-2015. For examples of research projects sponsored by ORIL, please review the current ORIL Program Book. For information on ORIL's research idea selection process, please visit the ORIL website.

If you have any questions or need assistance, please contact Vicky Fout at 614-466-3029 or Mike Fitch at 614-387-7358.

SUBMITTER INFORMATION	
Name:	
Agency:	
Email:	
Phone:	
Date:	

Idea Name
Please provide a brief name for your idea (e.g.: Work Zone Traffic Control for Low Volume Roads)

What is your problem/idea?
Please briefly describe the problem you are experiencing or topic for which you need research. To assist the ORIL Board in understanding the overall magnitude of your problem/idea, please feel free to include recommendations on what you think should be done to address this problem/idea (e.g.: a literature review/synthesis study, a laboratory study, a field study, a study including both lab and field work, etc.).

What is the benefit from researching this item?
Please briefly explain what will be gained by doing research on this idea. Explain how this impacts Ohio. Be sure to indicate who will benefit from doing this research (e.g.: cities, townships, counties, traveling public, etc.).

Recommendation for TAC
Please list the names, agency, email addresses, and phone numbers of any individuals who you recommend as a member of a Technical Advisory Committee (TAC*) should this idea be selected for funding. Please invest time in discussing your idea with your colleagues and securing their participation. Research Idea submissions that include an established TAC demonstrate support and need for the research to the ORIL Board. *[* A TAC is a group of individuals who have (1) a vested interested in the research topic, (2) the technical expertise to provide oversight and direction to a researcher conducting the project, and (3) the time and willingness to commit to being involved on a research project . For more information on TAC roles and responsibilities, visit the ORIL Guidebook.]*

Estimated Duration and Funding
Please provide an estimate for how long you think research on this idea should take and an estimate for how much you think research on this topic should cost. This information is used by the ORIL Board to gauge how extensive/involved the research on this idea could be, if it was funded. This is for planning purposes only and is not intended to be a limitation on the idea. For examples of active research projects and their corresponding funding and durations, please see the current ORIL Program Book.

Estimated Duration (in months):		Estimated Funding:	$

8

Number and Quality of Ideas

Number of Ideas

- 2014/2015 – 18 Ideas Received
- 2016 – 6 Ideas Received
- 2017 – 9 Ideas Received
- 2018 – 10 Ideas Received

Quality of Ideas *

** Opinions expressed are those of ODOT staff and not the ORIL Board.*

- Room for improvement
- Concept of research not fully understood
- Purpose/Intent of the idea at times is difficult to determine
- Great ideas mentioned, but not submitted

9

Idea Explanation/Clarifications

- Currently ORIL does not give idea submitters a chance to come into a Board Meeting to explain or clarify their ideas.
- The Board is given ideas in advance of selection meeting
  - If there are questions in advance, ODOT will reach out for clarification from the submitter

10

ORIL

- Website:
  - http://oril.transportation.ohio.gov
  - Guidebook, Strategic Plan, Board Members Information, Research Idea Submission, and more.
- Email:
  - ORIL@dot.ohio.gov
- Phone:
  - 614-387-2710 (Vicky Fout – ODOT Statewide Planning & Research)
  - 614-644-8138 (Michelle Lucas – ODOT Research)
  - 614-387-7358 (Mike Fitch – Ohio LTAP Center)

11

APPENDIX G
IHRB/Iowa DOT Implementation Presentation

Research Implementation

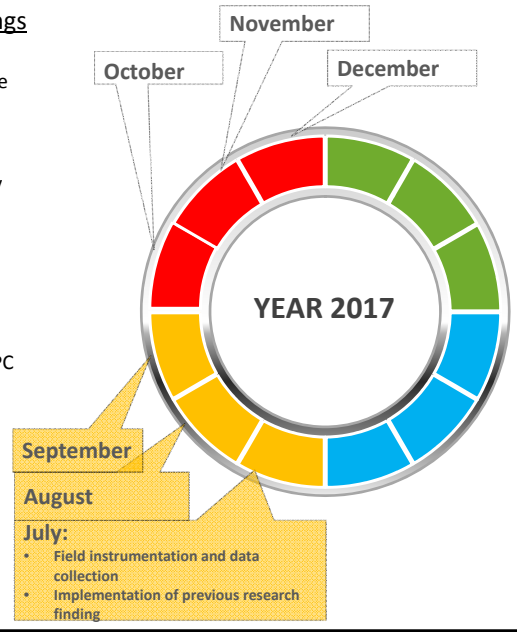
- Send out the report and tell them to use it! (The Good Old Days)
- Implementation needs to be **addressed at the initiation** of the research
- Implementation needs **consideration the entire way** through the process
- Practitioners need to **know the information is available**
- Results need to be **understandable and applicable**
- Need to **monitor on-going results** of implementation
- **Build on the knowledge** gained and the field results
- **Evaluate the benefits** of the research and determine if more information is needed

Year around Research – IHRB Timeline

Implementation of Research Findings

- Important to have a **Champion** to lead the way
- County Bridges
  - Brian Keierleber – Buchanan County
    - UHPC Pre-Cast Deck Panels
    - GRS Abutments
    - Galvanized Steve Components
- County PCC Pavement
  - Derick Snead – Jones County
  - Lyle Brehm – Tama & Poweshiek
    - Fabric Bond Breaker, PC over PC
- County ACC Pavement
  - Todd Kinney – Clinton County
    - Preservation Treatments
  - Jon Burgstrum – Scott County
    - Asphalt Rehabilitation

July, August, and September: Begin second round of RFP's and Continuation Proposals



Historic Research

Evaluation of Experimental Stabilized Soil Base Construction, Webster County, Iowa

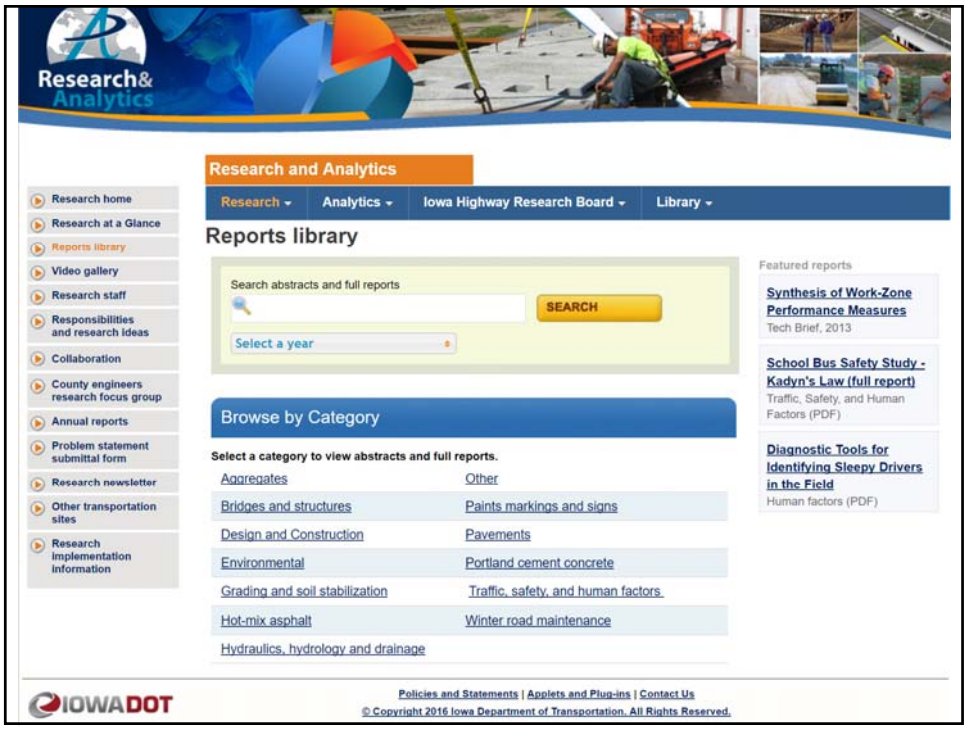
J. M. HOOVER, Assistant Professor of Civil Engineering, Iowa State University

This paper presents a portion of the results of an experimental stabilized soil road base program initiated by the Iowa State Highway Commission and the Webster County Engineer's Office. The 8.058-mi long site chosen is typical of the Clarion-Nicollet-Webster soil association area materials found in hundreds of miles of farm-to-market roads in the north-central third of Iowa. The Webster series, a black, heavy-textured, poorly drained clayey soil, dominates.

Variable thickness base sections were constructed by using the in-place soil materials stabilized with Type I portland cement, lime, lime-fly ash and a combination of lime and portland cement. The surface course was a double bituminous armor coat using ⅞-in. crushed stone chips.

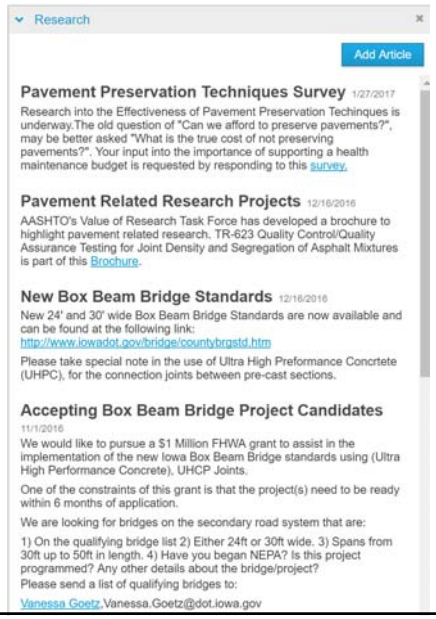
The experimental features of the project were divided into two primary objectives, both directly related: (a) evaluation of conventional construction procedures, existing construction-inspection specifications and techniques, and recommendations for establishment and/or changes to each of the above areas; and (b) evaluation of the constructed material by field and laboratory tests for determination of stability requirements in the development of design criteria for low-cost stabilized soil base roads. This paper deals principally with the area of the first objective.

Presented are an evaluation of the construction techniques, gradation specifications preceding introduction of the stabilizing agent(s); discussion of use of lime as a pretreating agent for reduction of plasticity and increase of friability, comparison of laboratory and field standard Proctor moisture-density relationships, in-place field density determinations using oil density and standard Proctor penetrometer methods, and variation of unconfined compressive strength of 7-day moist-cure specimens with variations in moisture and density.



InTrans

ICEASB Website



Ways to get the word out

Demonstration Projects

Field review – Site visits

Buchanan County Hosts Korean Group

Buchanan County Iowa

BUCHANAN CO.

SECONDARY ROADS

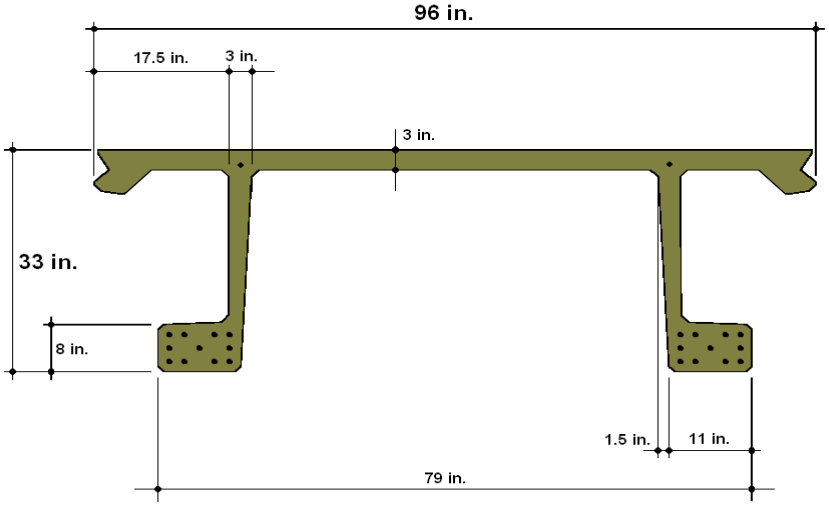
259 Bridges over 20’

3 Pin-connected Trusses constructed 1870-1914

Henry Ford started mass production of the Model T in 1913

2

Testing showed the Initial Designs Failed in Transverse Flexure and Local Stresses



20

The Initial PI beam Design

- Design Guidelines - University of New South Wales, France, and Japan
- Development of PI section by Dr Ulm at MIT
- Testing of UHPC and PI section (Turner-Fairbanks)
- I-Beam Testing by Turner-Fairbanks & Iowa State University
- Experience Wapello Co. project
- Discussions with Dr. Graybeal (FHWA) and Vic Perry (LaFarge North America)

19

Preliminary PI Girder Test Beam

21

Lessons Learned

- Follow the Mixing instructions, Mix the Premix and the Portland prior to the sand
- Always have super plasticizer available to add as needed.
- High density and high viscosity create pressures we are not accustom to. (uplift pulled the screws through the 2x4's
- Post tensioning is easy

ULTRA HIGH PERFORMANCE CONCRETE ACEC August 24,2016

ISU Research on Stabilization and Recycling of Granular-Surfaced Roadways

Session D – Hot Topics: Gravel Road and Shoulder Stabilization Panel

Jeramy Ashlock, Iowa State University; John Rasmussen, Pottawattamie County; Todd Kinney, Clinton County; Jacob Thorius, Washington County

Jeramy C. Ashlock, Ph.D.
Associate Professor
jashlock@iastate.edu

70th Iowa County Engineers Conference
December 6-8, 2016
Scheman Building
Iowa State University
Ames, Iowa

Recent and Ongoing Granular Road Projects

1. TR-644: Low-Cost Rural Surface Alternatives: Demonstration Project (completed 2015)
2. TR-685: Feasibility of Gravel (Granular) Road and Shoulder Recycling
3. TR-704: Performance Based Evaluation of Cost Effective Aggregate Options for Granular Roadways

4

TR-644: Low-Cost Rural Surface Alternatives: Demonstration Project (completed in 2015)

PI: Jeramy Ashlock, **Co-PIs:** David White, Pavana Vennapusa

- **TAC:**
- Vanessa Goetz, Iowa DOT
- Dan Waid, Previous Hamilton County Engineer
- Assistance from:
- Wade Weiss, Greene County Engineer

Download Report and T2 from
http://intrans.iastate.edu → Research → Research Reports

Direct link:
http://www.intrans.iastate.edu/research/projects/detail/?projectID=-1618950266

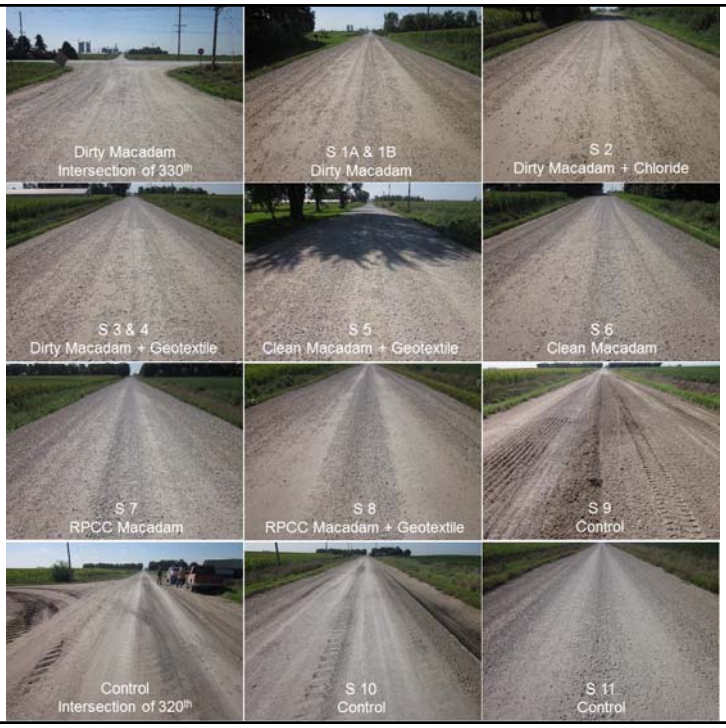
5

Field tests were performed before/after construction, and after two seasonal freeze-thaw cycles

Field testing methods: (a) FWD, (b) MASW, and (c) DCP test

6

Survey Photos (March 11, 2014)

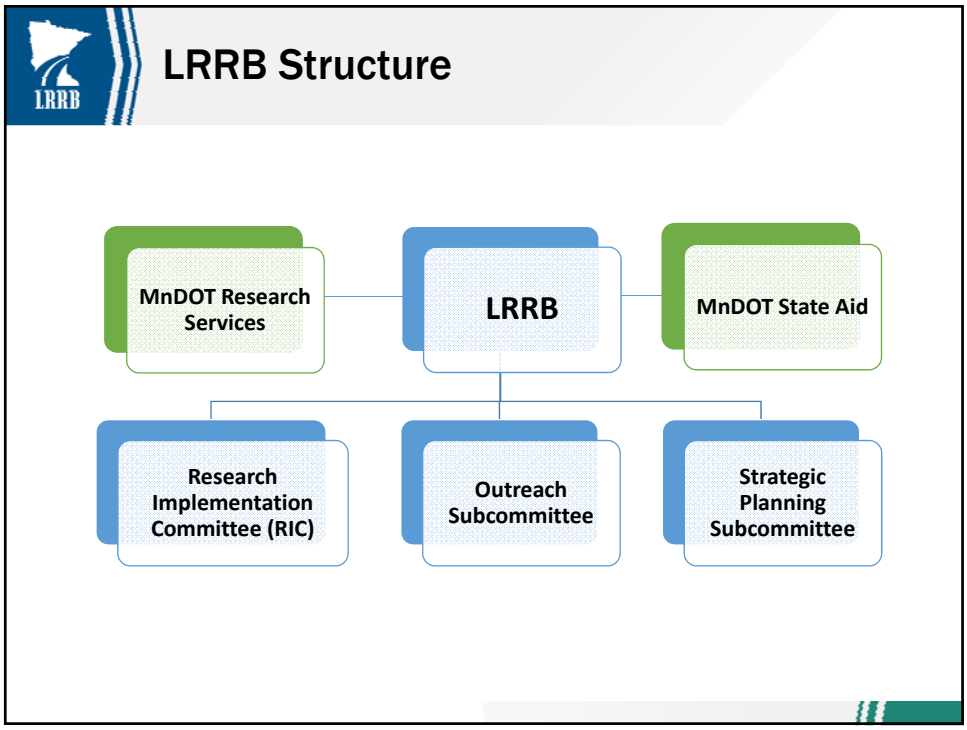


Survey Photos (September 2, 2014)

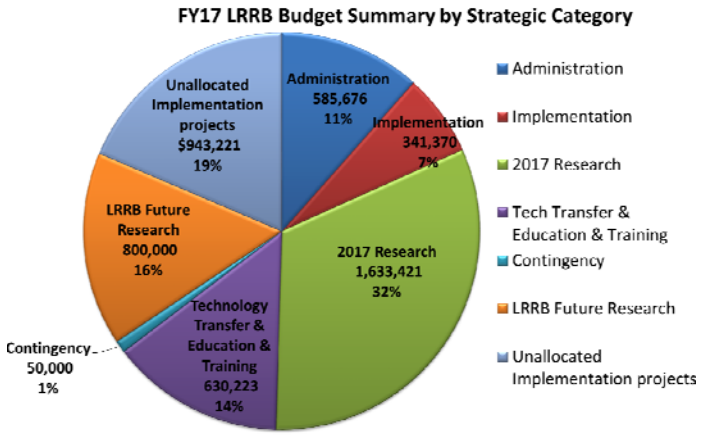
Survey Photos
(September 2, 2014)

APPENDIX H
LRRB/Minnesota DOT Implementation Presentation


LRRB
LOCAL ROAD RESEARCH BOARD
Local Road Research Board
Research Implementation
Ohio Peer Exchange
March 8, 2017
SLOW


LRRB
LRRB Structure
MnDOT Research Services
LRRB
MnDOT State Aid
Research Implementation Committee (RIC)
Outreach Subcommittee
Strategic Planning Subcommittee

Implementation Funding



Total 2017 Funding $5,072,494

Identifying Implementation Projects

- Relationships with city and county staff – asking what they need
- Listening to issues locals discuss
- LRRB reviews completed research projects
- RIC identifies needs
- Annual Focus Group Meetings
- Needs Statements from Locals

Agency Involvement in Implementation

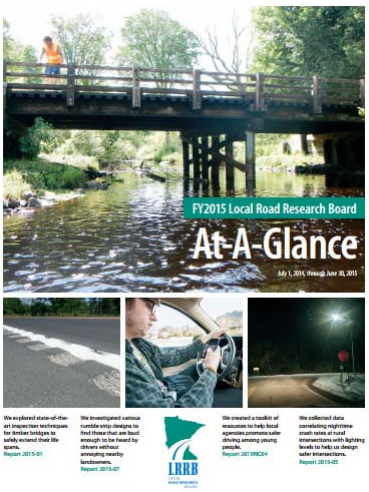
- Local Road Research Board – Suggests projects
- Researchers – Required to identify opportunities in proposals
- LRRB's Research Implementation Committee
  - 2 Research Services (MnDOT)
  - 2 State Aid (MnDOT)
  - 4 County Engineers
  - 2 City Engineers
  - 1 LTAP Center representative
- Technical Advisory Panels
- RIC Consultant – Multi-year contract
- Townships – Minimal

Tracking Implementation Use

- Relationships - Talking to local agencies about what they are using
- Google analytics – product views and downloads
- Product interest at LRRB conference booths
- Product requests
- Presentation requests
  - Conferences (Local and National)
  - Publications

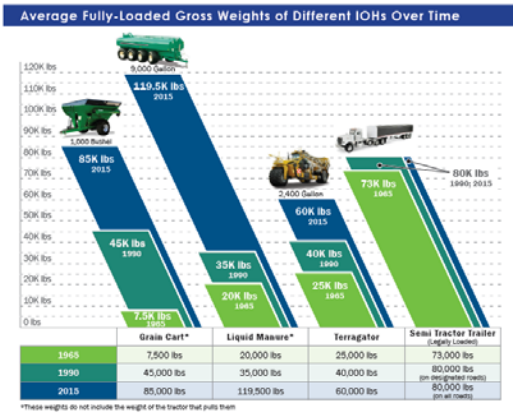
Return on Investment

- Funding Distribution
  - County (75%)
  - City (25%)
- Communications
  - Presentations at annual meetings
  - Emails announcing new products
  - Annual At-A-Glace report



Recently Completed Research Implementation Projects

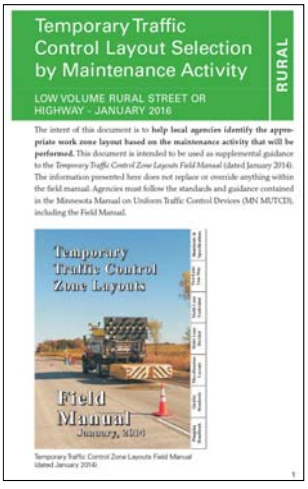
Effects of Implements of Husbandry on Local Roads

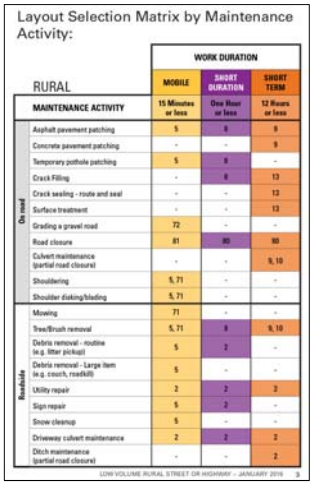


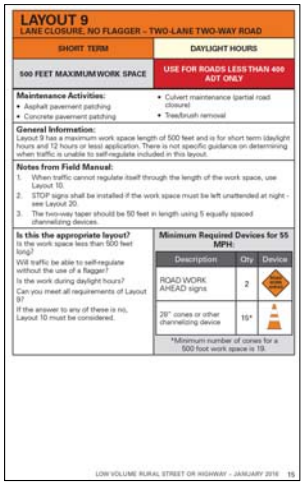
	Grain Cart*	Liquid Manure*	Terragator	Semi Tractor Trailer (Legally Loaded)
1965	7,500 lbs	20,000 lbs	25,000 lbs	73,000 lbs
1990	45,000 lbs	35,000 lbs	40,000 lbs	80,000 lbs (on designated roads)
2015	85,000 lbs	119,500 lbs	60,000 lbs	80,000 lbs (on all roads)

*These weights do not include the weight of the tractor that pulls them

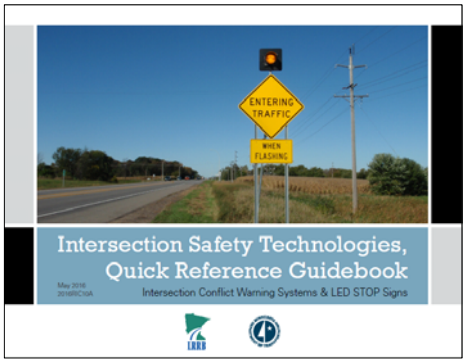
Temporary Traffic Control - Low Volume Roads

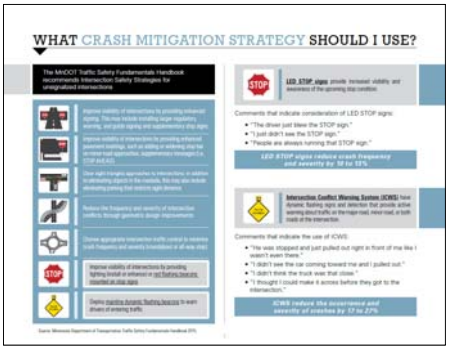






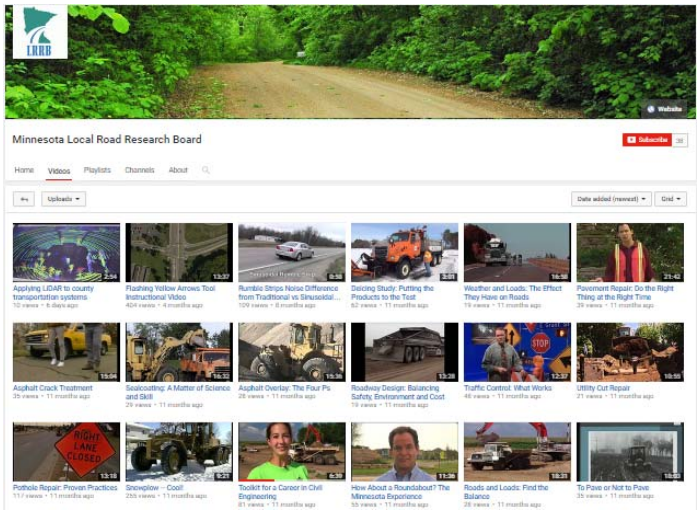
Rural Intersection Safety Technologies





Snow and Ice Control Handbook

LRRB Videos YouTube



https://www.youtube.com/user/lrrbmn

LRRB Videos YouTube

Recently Completed Videos:

- Roundabout Myths (10-myth and 3-myth version)
- Rumble Strips: Saving Lives in Minnesota
- Winter Chemicals for Local Agencies

Communicating Findings of Implementation Projects

LRRB Newsletter

January 2017 www.lrrb.org

update

Making a difference.

News about transportation research and the work of the Minnesota Local Road Research Board

LRRB Joins National Road Research Alliance

NRRA

The LRRB recently partnered with the National Road Research Alliance (NRRA), a new pooled fund focused on solving widespread challenges impacting road owners and users.

Formed by MnDOT, the NRRA will use MnROAD – a pressure outdoor pavement test track and road research facility located near Albertville, Minn. – to facilitate local, regional, and national research. As part of the partnership, the NRRA will help oversee and fund the future construction of new test sections at MnROAD to support common research goals.

While MnDOT (as the lead state) has already committed $2.5 million in construction funding at MnROAD, the LRRB as well as five other state agencies – including the California, Illinois, Michigan, Missouri, and Wisconsin Departments of Transportation – have also joined the NRRA to share their expertise and learn about new tools and techniques to improve our national transportation systems. In addition, more than 20 industries and academic institutions have joined the NRRA to provide critical input on long-term future trends in research and business to implementation, including working with their customers and members who play a direct role in implementation.

Each year, the LRRB has access to cutting-edge road research thanks to its participation in MnROAD and its relationships with research partners including the National Center for Asphalt Technology (an NRRA member and leader in pavement research). Now, the LRRB will be able to leverage its contribution even further thanks to the partnerships with other states at MnROAD.

The NRRA replaces the Transportation Engineering and Road Research Alliance (TERRA), a previously formed group of organizations that shared information. LRRB members currently serving on NRRA committees include Lyndon Rohlfsen (Executive Team), Jim Grothaus (Technology Team), Kaye Biesiek (Rigid Team), and John Brunkhorst (Coordinator Team).

While several states have participated in individual research projects in the past, NRRA committee members expect that this greater level of involvement and collaboration utilizing the MnROAD facility will establish a more robust road research and implementation program from which everyone will benefit.

Additional Contacts, Links, and Events:

- Executive Director: Gina Ingoglia at gina.ingoglia@dot.state.mn.us
- NRRA website: pooled.pavementalliance.org
- NRRA Pavement Conference: May 24, 2017

Member Updates

LRRB Updates

- Kaye Biesiek (Olmsted County) will replace Tim Heidel (Jackson County) as the LRRB/RIC liaison. Kaye will serve on both the LRRB and RIC boards while Tim will serve only on the LRRB board.
- Kevin Western (MnDOT Bridges & Structures) will replace Tom Ryan (MnDOT Construction) on the LRRB board.

RIC Updates

- Ben Worel (MnDOT Materials and Road Research) will replace Jeff Brunner (MnDOT Materials and Road Research) on the RIC board. Worel will also serve as an LRRB liaison technical expert.

Awards

- Congratulations to Lyndon Rohlfsen (Carver County) on receiving the Minnesota Transportation Alliance "Transportation Advocate Award." Each year, the Alliance recognizes the efforts of individuals and organizations that have effectively advocated for a transportation infrastructure improvement within the state of Minnesota. This year, Lyndon was chosen for his strong support and outstanding efforts to improve Minnesota's transportation system.

Lyndon Rohlfsen receives Transportation Advocate Award

LRRB Launching New Website

The LRRB is redesigning its website, which should be live in late January 2017. In addition to a modern interface, the new site will contain project videos and blogs. Be sure to check it out at lrrb.org!

Highlighted LRRB Projects

Sinusoidal Centerline Rumble Strips (September 2016)

Although rumble strips can be effective tools for reducing crashes, MnDOT has received several complaints from landowners about the extensive noise they produce. A previous research project, sponsored by the LRRB and MnDOT, found that sinusoidal (sine-wave-shaped) rumble strips reduced noise outside a vehicle, producing its full sound only when a tire was fully on the rumble strip. The strip tested, however, was narrower than some commercial vehicle tires; this study evaluates several wider sinusoidal centerline rumble strip designs as well as their impacts on bicycles and motorcycles.

While all four tested designs produced similar and satisfactory results, investigators recommended Design 3 (one 14-inch-wide rumble strip, with nutslits 1/16 inch to 1/2 inch deep) as the best option for alerting drivers while minimizing external noise. (It is important to note that motorcyclists found single-rumble designs to be more navigable than those designs with a ridge between two rumbles. Due to scheduling issues, too few bicycle riders were tested to produce conclusive results.)

Using the results of this project and of additional testing to be conducted at MnROAD, a group of state and district traffic engineers, materials engineers, environmental noise experts and State Aid representatives will make a final recommendation. In the meantime, MnDOT has drafted a revised Technical Memorandum to incorporate the recommended rumble strip design. If the draft is approved, the revised memorandum should be published in 2017.

For study documents and related research, visit the project page (lrrb.org/researchdb).

Image and Design Profile of Design 3

Slope Failure Risk Analysis and Stabilization Solutions (Active)

Slope failures (especially after heavy rain events) block roads, pose safety hazards, and incur preventable maintenance costs along local roadways. While no single stabilization method is appropriate for all situations, there are several possible solutions – such as improving drainage, changing the geometry of the slope, and reinforcing the soil. One project will produce a simple guide to help city and county engineers identify at-risk slopes. Another study will develop a GIS-based slope failure risk model that could be used to identify areas of low, medium, and high susceptibility to slope failure in a region. The model will be applied to one or two counties in Minnesota; the results will be presented in a map format illustrating areas where slope failure is likely and showing the expected level of risk. The modeling project final report is expected to be complete in May 2017, and the guide is expected to be complete in fall 2017. For more information, please visit the research project pages (lrrb.org/slopeanalysis and lrrb.org/slopeguide).

Additional Announcements

2017 LRRB At-A-Glance Available Online

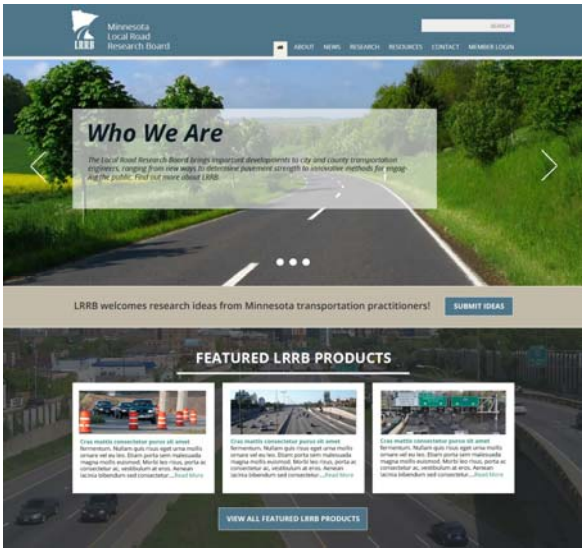
The FY2017 Local Road Research Board At-A-Glance is now available online at mndot.gov/research/annual_reports.html. In addition to serving as a quick reference guide to our research program, this document highlights the latest RIC products and provides a comprehensive list of tools, handbooks, and software the LRRB has produced over the last year. Please contact Sandy McCully for printed copies.

Other Agency Newsletters

LRRB Website

New, improved features:

- Blog stories on LRRB products & research
- Photos & videos
- Easier navigation
- Combined search engine with both LRRB & MnDOT projects



Conference Presentations

LRRB Program Overview Presentations:

- City Engineers Annual Conference
- County Engineers Annual Conference

Project Specific Presentations:

- APWA Conference
- National LTAP Conference
- Toward Zero Deaths Conference
- ATSSA How-To Conference
- MN Transportation Conference
- CTS Research Conference
- TRB Annual Conference

Conference Exhibits

National Magazine Article