Western Transportation Research Consortium

Nebraska DOT, Texas DOT, and Wyoming DOT 2025 Research Peer Exchange

FINAL REPORT

State Highways 61 and 92, Near Lake McConaughy, Nebraska
(Source: Nebraska DOT)

State Highway 54, Near Davis Mountains, Texas
(Source: Texas DOT)

Centennial Scenic Byway, U.S. Highway 26, Wyoming
(Source: Wyoming DOT)

Submitted to:
Utah Department of Transportation
Lead State,
Western Transportation Research
Consortium (WTRC)
Transportation Pooled Fund Study
TPF-5(526)

Submitted by:
Kirsten Seeber and Brian Hirt
CTC & Associates LLC

In collaboration with:
Mark Fischer
Nebraska Department of Transportation
Kevin Pete
Texas Department of Transportation
Enid White
Wyoming Department of Transportation

September 2025

TECHNICAL REPORT DOCUMENTATION PAGE

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
WTRC-2025-002	N/A	N/A

4. Title and Subtitle	5. Report Date
Nebraska DOT, Texas DOT, and Wyoming DOT 2025 Research Peer Exchange	September 2025
	6. Performing Organization Code: N/A

7. Author(s)	8. Performing Organization Report No.
Kirsten Seeber, https://orcid.org/0000-0002-4954-088X Brian Hirt, https://orcid.org/0009-0007-5986-0477	N/A

9. Performing Organization Name and Address	10. Work Unit No.
CTC & Associates LLC 2323 Woodscrest Ave. Lincoln, NE 68502	N/A
	11. Contract or Grant No. N/A

12. Sponsoring Agency Name and Address	13. Type of Report and Period
Utah Department of Transportation, lead state for the Western Transportation Research Consortium 4501 South 2700 West P.O. Box 148410 Salt Lake City, UT 84114-8410	Final, May 2025 to September 2025
	14. Sponsoring Agency Code TPF-5(526)

15. Supplementary Notes

Prepared in cooperation with the Utah Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration. All restrictions are set out in the Disclaimer.

16. Abstract

Nebraska Department of Transportation, Texas Department of Transportation and Wyoming Department of Transportation, in collaboration with the Western Transportation Research Consortium (WTRC), hosted a peer exchange on May 20-22, 2025, in Austin, Texas. The publication of this report fulfills the agencies' obligations to conduct a periodic peer exchange as part of the federal State Planning & Research program. The event focused on three themes: measuring research success, pooled fund management and regional research. Participants of the two-and-a-half-day event included the staff from the WTRC members (the state DOTs of Alaska, California, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Washington State and Wyoming), the Iowa DOT and the Federal Highway Administration. Based on presentations and group discussions, participants shared what they saw as the strengths, challenges, and opportunities for the host agencies in the areas discussed, and takeaways for their home agencies.

17. Key Words	18. Distribution Statement
Transportation, research, Nebraska, Texas, Wyoming, measuring research success, pooled fund management, regional research	This document is available to the public through the Western Transportation Research Consortium, https://westerntrc.org/

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	272	N/A

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

DISCLAIMER

The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the views of the Utah Department of Transportation or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation. While trade names may be used in this report, it is not intended as an endorsement of any machine, contractor, process, or product.

TABLE OF CONTENTS

LIST OF FIGURES

PEER EXCHANGE AT-A-GLANCE

Host Agencies: Nebraska Department of Transportation (NDOT), Texas Department of Transportation (TxDOT) and Wyoming Department of Transportation (WYDOT).

Participating Agencies: Alaska Department of Transportation & Public Facilities, California Department of Transportation (Caltrans), Colorado Department of Transportation, Idaho Transportation Department (Idaho TD), Montana Department of Transportation (MDT), Nevada Department of Transportation, New Mexico Department of Transportation, North Dakota Department of Transportation, Oklahoma Department of Transportation, South Dakota Department of Transportation, Utah Department of Transportation (UDOT), Washington State Department of Transportation (WSDOT), Iowa Department of Transportation and the Federal Highway Administration (FHWA).

PEER EXCHANGE THEMES

Measuring Research Success: In this first session, attendees shared useful and meaningful ways to measure the success of a research project, and examples of measurement or calculation frameworks and processes their agency considers.

Pooled Fund Management: Attendees provided examples of successes and best practices for both leading and participating in pooled fund studies, strategies they have used to overcome obstacles, and current program challenges.

Regional Research: In the last session, participants addressed challenges and best practices for working together as part of a research consortium comprised of states in the same geographic region of the United States. This discussion complemented business and planning discussions for the Western Transportation Research Consortium (WTRC).

TOP FINDINGS AND TAKEAWAYS

Measuring Research Success

- Consider a research project to **develop a method for estimating return on investment (ROI)** and **defining value-based success metrics**.
- **Tailor metrics** to different types of research projects.
- Establish **who is responsible** for measuring research success and **when key activities should take place**.
- **Balance quantifiable results with qualitative benefits** and storytelling.
- **Pose one well-defined research question** to staff so they have a clear understanding of a research project's purpose and objective.
- Avoid research fatigue by **outlining a timeline for a project** and helping staff see the finish line.
- **Understand that research success doesn't have to be big** and finding out something doesn't work is a valuable research result.
- **Conduct post-project assessments** through a survey to implementers to track real-world use and impacts.

- **Use a dashboard** to track multiple elements of a research program.

Pooled Fund Management

- Use the Transportation Pooled Fund program to **turn a single state funded problem into a multi-state funded problem**.
- **Allow another state to lead a study** if they have the staff capacity for tracking finances and coordinating travel, or if contracting is easier for their agency.
- **It's easier for other states to participate** in a pooled fund if the yearly contribution is $25,000 or less.
- **Executive-level support** for studies your agency leads or participates in is key to encourage a growth and learning mindset.
- **Internal support from finance and contracts** departments is vital for a lead state.
- **Consider having co-champions or a backup champion** to keep the study on track in the event that someone leaves the agency.
- Assure the right **SMEs represent your agency and stay active** in pooled fund studies by **attending meetings and briefing others** as the pool fund progresses.
- **Assign task groups** to help distribute the workload among study members.
- When leading a pooled fund study**, preschedule regular project meetings for updates. Capture action items** from each meeting **and evaluate their status at the next meeting.**
- **Conduct annual check-ins with technical leads and SMEs** to identify potential research opportunities and determine whether pooled fund participation continues to provide value for the agency.
- **Have SMEs present the value and benefits** to your research oversight board when it is time to select which pooled fund studies the agency should invest in.
- **Distribute study reports and information to internal staff** so they get value from the agency's participation in a study. Consider **a broad audience webinar to communicate** information from a pooled fund.

Regional Research

- **Build a personal network** along with the professional network. Focus on building personal relationships within WTRC to make regional collaboration easier.
- **Be available** to other members **to discuss work or personal problems**. Share cell phone numbers so members can text each other to find time for a discussion.
- **Consider adding therapy sessions** to WTRC meetings.
- **Identify ongoing research and best practices of other member states** that can help states enhance their processes.

MEETING INTRODUCTION AND OVERVIEW

NDOT, TxDOT and WYDOT, in collaboration with WTRC, hosted a peer exchange on May 20-22, 2025 in Austin, Texas. The publication of this report fulfills the agencies' obligations to conduct a periodic peer exchange as part of the federal State Planning & Research (SPR) program. The peer exchange was funded by the WTRC pooled fund.

The peer exchange focused on three themes:

- Measuring Research Success
- Pooled Fund Management
- Regional Research

For each theme, participants shared their own agency's experiences and noted the host agencies' strengths and opportunities for enhancement.

PEER EXCHANGE PARTICIPANTS

The peer exchange included representatives from across and beyond the Western region of the United States in order to represent a variety of interests and perspectives. Participants included NDOT, TxDOT, WYDOT, 12 additional state DOTs representing the other members of WTRC, one guest state DOT from the Midwest region of the United States, and FHWA.

The following individuals participated in one or more of the sessions.

Host State DOTs

Nebraska Department of Transportation
- Mark Fischer, Research Program Manager
- Lieska Halsey, Research Project Manager

Texas Department of Transportation
- Darran Anderson, Director, Strategy and Innovation
- Katelyn Kasberg, Research Project Manager
- Phillip Hempel, Section Director, Research and Technology Implementation
- Wade Odell, Research Project Manager
- Kevin Pete, Division Director, Research and Technology Implementation

Wyoming Department of Transportation
- Enid White, Research Manager

Participating WTRC State DOT Research Programs

Alaska Department of Transportation & Public Facilities
- Cristina DeMattio, Acting Program Manager, Research, Development & Technology Transfer (remote)

California Department of Transportation
- Joe Horton, Chief, Office of Safety Innovation and Cooperative Research
- Sang Le, Cooperative Research Specialist

Colorado Department of Transportation
- Steve Cohn, Director, Office of Applied Research

Idaho Transportation Department
- Amanda Laib, Research Program Manager

Montana Department of Transportation
- Alexandra Nelson, Research Project Manager
- Rebecca Ridenour, Research Supervisor (remote)

Nevada Department of Transportation
- Melissa DeMattei, Research Analyst
- Mitch Ison, Research Coordinator
- Lucy Koury, Assistant Chief, Research

New Mexico Department of Transportation
- Randy Trujillo, Research and Climate Bureau Chief (remote)

North Dakota Department of Transportation
- T.J. Murphy, Research Program Manager

Oklahoma Department of Transportation
- Gary Hook, Engineering Manager

South Dakota, Department of Transportation
- Thad Bauer, Inventory Management & Research Program Manager

Utah Department of Transportation
- Cameron Kergaye, Director of Research and Innovation
- David Stevens, Research Program Manager (remote)

Washington State Department of Transportation
- Jon Peterson, Research Coordinator, Multimodal

Guest DOT

Iowa Department of Transportation
- Khyle Clute, SPR Research and Pooled Fund Programs Manager

Federal Highway Administration

- Kirk Fauver, Texas Division Office

Staff from consulting firm CTC & Associates coordinated, facilitated and documented the peer exchange.

FORMAT

Participants (Figure 1) attended the in-person peer exchange at Hyatt Place Austin Downtown in Austin, Texas. The meeting agenda for the two-and-a-half-day event is included as Appendix A to this report.

Figure 1. Meeting Participants

From left to right: Jon Peterson, Lieska Halsey, Steve Cohn, Mark Fisher, Khyle Clute, Joe Horton, Gary Hook, Lucy Koury, Kevin Pete, Wade Odell, Melissa DeMattei, Phillip Hempel, Katelyn Kasberg, Amanda Laib, Alexandra Nelson, T.J. Murphy, Enid White, Sang Le, Cameron Kergaye, Thad Bauer, Mitch Ison.

TOPIC DISCUSSIONS

Participants discussed research-related themes of specific interest to the three host agencies. Each session included prepared presentations from the hosts, as well as additional presentations from participating states.

PEER EXCHANGE THEME 1—MEASURING RESEARCH SUCCESS

OVERVIEW

In this first session, attendees shared useful or meaningful ways to measure the success of a research project, and examples of measurement or calculation frameworks and processes their agency considers.

PRESENTATIONS

To kick off discussion on measuring research, the three host states and three participating states gave presentations on efforts at their agencies. These are reproduced as appendices to this report.

Appendix B. Nebraska DOT – Measuring Research Success, Lieska Halsey, Nebraska DOT

Appendix C. Texas DOT – Measuring Research Success, Phillip Hempel, Texas DOT

Appendix D. Wyoming DOT – Measuring Research Success and Pooled Fund Management Projects, Enid White, Wyoming DOT

Appendix E. Idaho TD – Measuring Research Success, Amanda Laib, Idaho TD

Appendix F. Montana DOT – Measuring Research Success in Montana, Alexandra Nelson, Montana DOT

Appendix G. Utah DOT – Measuring Research Success, Cameron Kergaye, Utah DOT

DISCUSSIONS AND FINDINGS

Attendees shared useful and meaningful measures of research success and how best to use them and examples of measurement or calculation frameworks/processes considered by their agency. Attendees also discussed their agency's most significant challenges related to measuring research success, and how they address those challenges. These comments were collected during group discussions and in report-out forms that participants completed and submitted after the session.

Below are the best practices and ideas shared. Highlights from Nebraska, Texas and Wyoming are featured in Strengths and Opportunities for Host States. **TOP IDEAS** are those that were highlighted by several participants.

Successes and Best Practices

- Idaho TD
    - Undertake a research project to develop a method for estimating return on ROI and defining value-based success metrics across diverse research types.
    - Tailor metrics to different types of research projects to enhance relevance and accuracy.
    - Develop communication strategies to effectively share research results and benefits to audiences inside and outside of the department.

- Establish who is responsible for measuring research success and when key activities should take place:
    - Pre-project: Involve the project manager to ensure alignment with objectives and to assess feasibility early.
    - During the project: Confirm that the work aligns with performance objectives and should take corrective actions if needed.
    - Post-project: Evaluate ROI and long-term impacts/uses to inform future research priorities.

- Montana DOT
    - MDT's research program has experienced a paradigm shift that focuses on accountability and innovation.
        - Accountability helps the research program justify public investments, support agency goals and make better decisions.
        - Innovation helps the agency think critically about improvement, generates conversation that strengthens the agency's social fabric and makes the agency more adaptable.
    - Research success doesn't have to be big, and finding out something doesn't work is a valuable research result.
    - Research success increases efficiency through cost and time savings.

- Utah DOT
    - Assess the value of implemented research to gain important information. Two-to-three years post-project, the research team conducts assessments through a survey, and the project champion estimates a project's value.
        - Provide a wide array of benefit types to demonstrate all forms of benefits.
    - Develop a cost estimate that includes contract costs, TAC costs and project manager costs.
    - Create a dashboard to track multiple elements of a research program such as research deliverables and benefits, benefit-cost and research funding, benefit-cost by researcher, benefit-cost by project grades and project grade by researcher.
        - Don't reinvent the wheel; utilize what other agencies have done to develop your own measurements and dashboard.

Challenges and Strategies

- Idaho TD
    - Balance quantifiable results with qualitative benefits and storytelling since quantifying benefits can be difficult.
    - Maintain tools and systems to track success consistently across projects.
    - Follow up on implementation, tracking real-world use and impacts to address the time lag between research and outcomes.
- Montana DOT
    - Encourage and support the enthusiasm of the agency staff participating on a research project, because enthusiasm is important.
    - Pose one well-defined research question to staff so they have a clear understanding of a research project's purpose and objective.
    - Avoid research fatigue by outlining a timeline for a project and helping staff see the finish line.
- Utah DOT
    - Challenges to developing and tracking benefit-cost ratios include quantifying benefits, locating implementors and researchers, and timing.

TOP IDEAS:

- Consider a research project to **develop a method for estimating ROI** and **defining value-based success metrics**.
- **Tailor metrics** to different types of research projects.
- Establish **who is responsible** for measuring research success and **when key activities should take place**.
- **Balance quantifiable results with qualitative benefits** and storytelling.
- **Pose one well-defined research question** to staff so they have a clear understanding of a research project's purpose and objective.
- Avoid research fatigue by **outlining a timeline for a project** and helping staff see the finish line.
- **Understand that research success doesn't have to be big** and finding out something doesn't work is a valuable research result.
- **Conduct post-project assessments** through a survey to implementers to track real-world use and impacts.
- **Use a dashboard** to track multiple elements of a research program.

PEER EXCHANGE THEME 2—POOLED FUND MANAGEMENT

OVERVIEW

Attendees provided examples of successes and best practices for both leading and participating in pooled fund studies, strategies they have used to overcome obstacles, and current program challenges.

PRESENTATIONS

The three host states and eight of the participating states gave presentations on efforts at their agencies. These are reproduced as appendices to this report.

Appendix H. Iowa DOT – Pooled Fund Management, Khyle Clute, Iowa DOT

Appendix I. Nebraska DOT – Nebraska DOT Pooled Fund Management, Mark Fischer, Nebraska DOT

Appendix J. Texas DOT – Pooled Fund Management: TxDOT, Katelyn Kasberg, Texas DOT

Appendix K. Wyoming DOT – Measuring Research Success and Pooled Fund Management Projects, Enid White, Wyoming DOT

Appendix L. Caltrans – Transportation Pooled Fund Management, Sang Le, Caltrans

Appendix M. Colorado DOT – Transportation Pooled Funds, Steve Cohn, Colorado DOT

Appendix N. Nevada DOT – Transportation Pooled Fund Management, Lucy Koury, Nevada DOT

Appendix O. North Dakota DOT – Pooled Fund Management, T.J. Murphy, North Dakota DOT

Appendix P. Oklahoma DOT – ODOT Research, Gary Hook, Oklahoma DOT

Appendix Q. South Dakota DOT – SDDOT Pooled Fund Management, Thad Bauer, South Dakota DOT

Appendix R. Washington State DOT – Pooled Fund Management, Jon Peterson, Washington State DOT

DISCUSSION AND FINDINGS

Attendees shared best practices and strategies for successfully leading and participating in pooled funds, and strategies for maximizing the value of these multi-state collaborations. These comments were collected during group discussions and in report-out forms that participants completed and submitted after the session.

Below are the best practices and ideas shared. Highlights from Nebraska, Texas and Wyoming are featured in Strengths and Opportunities for Host States. **TOP IDEAS** are those that were highlighted by several participants.

Successes and Best Practices

- Caltrans
    - Some pooled fund studies allow partners to contribute extra money to fund special tasks within the study.

    - When leading a pooled fund study, preschedule regular project meetings for updates. Capture action items from each meeting and evaluate their status at the next meeting.

- Colorado DOT
    - States are more likely to join a pooled fund that you lead if the yearly contribution is $25,000 or less.
    - When leading a pooled fund study, your TAC member should be an active leader, ensuring the work benefits your state.
    - If a pooled fund project exceeds five years, verify its past value and make sure it remains relevant to your agency.
    - Pooled funds vary greatly, so be collaborative, deliberative and flexible in leading and managing studies.
    - If your state identifies a major problem that is common to many states, consider starting a pooled fund to address it.
- Iowa DOT
    - Research using leveraged funding solves problems and provides a funding mechanism that otherwise wouldn't be available to the DOT.
    - Keep upper management aware of what is happening in the research program to spend less time defending what you are doing.
    - Use the Transportation Pooled Fund program to turn a single-state funded problem into a multi-state funded problem.
    - When considering leading a pooled fund study, find a connected champion within your agency who is a chair or co-chair of committee in a national transportation organization like the American Association of State Highway and Transportation Officials (AASHTO) or the Transportation Research Board (TRB). These leaders have access to others in the same space and can find interested partners to join a study based on similar issues and interests.
- Nevada DOT
    - If a staff member approaches the research program about joining a study, they will have more passion and a greater investment in being the technical lead.
    - Paying for all commitments at the start of a study allows your agency to continue supporting a study even if the agency technical lead is not participating fully.
    - Connect internal subject matter experts (SMEs) with pooled fund technical leads to get like-minded staff talking.

- North Dakota DOT
    - Executive committees that help drive the pooled fund produce deliverables that meet all partners' needs.
    - Communication with the lead vendor or higher education staff running the fund is important.
    - Internal support from finance and contracts departments is vital for a lead state.
    - Assure the right SMEs represent your agency and stay active in pooled funds.
    - It's key to have division top-down support for SME participation in a study to encourage a growth and learning mindset.
    - Implement process changes learned from studies.
    - Consider having SMEs present the benefits of pooled fund participation to the Research Advisory Committee for continued funding.
- Oklahoma DOT
    - Executive-level support for a study your agency leads is key.
    - The SME and project investigator (PI) should collaborate to develop a project proposal that both support.
    - The pooled fund's lead state should work with its finance department to ensure that funds that come to the agency from study partners are available for the study to use.
    - Ensure that your SMEs are fully engaged with the studies, attending meetings and briefing others as the pool fund progresses.
- South Dakota DOT
    - Regular meetings with a study TAC, especially in person, provide opportunities for frequent and meaningful collaboration.
    - Assign task groups to help distribute the workload among study members. Having defined roles within a study—such as a chair, secretary or treasurer—also spreads out the work among the members.
    - Ask members what the pooled fund should focus on to prioritize study activities.
    - A meaningful and beneficial study topic is vital. Ask whether the study itself is useful, and does it provide value to the member states?
    - Invite directors and other executives and staff members to meetings of the study so they can understand the value of the pooled fund study.
    - Distribute study reports and information to agency staff so they benefit from the agency's participation in a study.

- Connect with your SMEs annually to determine if the agency continues to get value from participation in a study. Have SMEs present the value and benefits to your research oversight board when they are deciding to fund a study.

- Washington State DOT
  - Participation in pooled funds brings individual agencies more brainpower, resources and funding than a state would have if they addressed an issue alone. Washington State DOT achieves an ROI ranging from 5 to 70 for the research value alone from a study.
  - In addition to a final report and product, a broad audience webinar is a good way to communicate information from a pooled fund.
  - Have SMEs share study results with their staff and peers on national committees and also within the agency.
  - Assign a research coordinator to oversee the agency's participation in pooled funds.
  - To decide which pooled funds to participate in, collaborate with research coordinators, the pooled fund's project administrator and SMEs.

Challenges and Strategies

- Caltrans
  - If contracting takes a long time at your agency, encourage another agency to lead a pooled fund study around an issue of shared interest.
  - Maintain close communications with pooled fund technical leads to ensure that the agency's participation in each study is ongoing, valuable and funded in a timely manner.

- Colorado DOT
  - Designate co-champions or a backup champion to ensure the study stays on track if the primary champion leaves the agency. If there is no longer a strong champion within the agency, allow another state to become the lead agency if the pooled fund extends to a next phase.
  - As a lead state, if study members cannot transfer funds through FMIS, reach out to FHWA to learn about other transfer options.
  - As a lead state, if you cannot contract until funds are received, consider asking partners to front-load their contributions.
  - There are no contracting issues as a pooled fund partner!

- Iowa DOT
  - If your state leads multiple pooled funds, develop processes to streamline administrative tasks.

- Nevada DOT
    - There is a need for a mechanism to collect more data on pooled fund participation to help gauge the value of continued participation in studies.
    - Check in with technical leads annually to determine what is of interest and could become internal research.
- North Dakota DOT
    - As a lead state, working through billing and contracting procedures with a vendor can help the pooled fund function well.
    - Allow another state to lead a study if they have the staff capacity for tracking finances and coordinating travel.
    - Good communication with partner agencies, their finance staff and FHWA's Financial Management and Information Systems staff to track your transfers to a lead state is important.
- Oklahoma DOT
    - As a lead agency, make sure that there are enough partner commitments to cover contract costs.
    - Oklahoma has developed a form that an organization can submit to request ODOT/state involvement in a pool fund study.
- South Dakota DOT
    - Leading a study takes a lot of time. Using a contractor to help with tasks such as scheduling or travel coordination is beneficial.
    - There can be ongoing issues for technology, such as software, that comes out of pooled fund studies. Documentation is vital.
    - Managing the budget and collecting funds are big tasks for lead states.
    - Continued participation of members is critical. When members leave, it affects the study.
- Washington State DOT
    - When a partner state wants to contribute non-SPR funds to a pooled fund, have them sign up as a vendor to your agency to make the process easier. This works with Canadian provinces also.

TOP IDEAS:

- Use the Transportation Pooled Fund program to **turn a single state funded problem into a multi-state funded problem**.

- **Allow another state to lead a study** if they have the staff capacity for tracking finances and coordinating travel, or if contracting is easier for their agency.
- **It's easier for other states to participate** in a pooled fund if the yearly contribution is $25,000 or less.
- **Executive-level support** for studies your agency leads or participates in is key to encourage a growth and learning mindset.
- **Internal support from finance and contracts** departments is vital for a lead state.
- **Consider having co-champions or a backup champion** to keep the study on track in the event that someone leaves the agency.
- Assure the right **SMEs represent your agency and stay active** in pooled fund studies by **attending meetings and briefing others** as the pool fund progresses.
- **Assign task groups** to help distribute the workload among study members.
- When leading a pooled fund study**, preschedule regular project meetings for updates. Capture action items** from each meeting **and evaluate their status at the next meeting.**
- **Conduct annual check-ins with technical leads and SMEs** to identify potential research opportunities and determine whether pooled fund participation continues to provide value for the agency.
- **Have SMEs present the value and benefits** to your research oversight board when it is time to select which pooled fund studies the agency should invest in.
- **Distribute study reports and information to internal staff** so they get value from the agency's participation in a study. Consider **a broad audience webinar to communicate** information from a pooled fund.

PEER EXCHANGE THEME 3—REGIONAL RESEARCH

OVERVIEW

In the final session, participants addressed challenges and best practices for working together as part of a research consortium comprised of states in the same geographic region of the United States. This discussion complemented business and planning discussions for the Western Transportation Research Consortium (WTRC).

PRESENTATIONS

Khyle Clute from Iowa DOT provided guidance and best practices from his state's experience as a member of Region 3 of AASHTO's Research Advisory Committee.

> Appendix S. Iowa DOT – Theme 3: Regional Research, Khyle Clute, Iowa DOT

DISCUSSION AND FINDINGS

Attendees identified opportunities for WTRC, including best practices and additional consortium activities.

TOP IDEAS are those that were highlighted by several participants.

Consortium Best Practices

- Meet regularly. Region 3 alternates between business meetings (30 minutes) and collaboration meetings (90 minutes).
    - Business meetings are formal, and notes are taken.
    - Collaboration meetings are roundtables; no notes taken.
- Incorporate therapy sessions into meetings so members can share struggles or frustrations and get advice from others who may have the same issues. Issues can be state-specific or national.
- Spend time together outside of work meetings and do non-business activities (concerts, hiking, tourist activities, etc.) to create connections to the individuals, not the job titles.
    - Personal connections can remove the barrier of over-professionalism and help members find solutions that may be simpler than a formal research project.
- Collaborate regionally on activities such as voting for National Cooperative Highway Research Program (NCHRP) projects, High Value Research (HVR) voting and pooled funds. This promotes a connected, "one region, one voice" mindset.
    - For HVR projects, Region 3 votes in a way that more states can win in a category or an honorable mention in a category. This is helpful for research as a whole and for specific state research programs. The goal is for all states to receive recognition and show their program's worth.

    - For NCHRP voting, Region 3 shares their voting among the members, so the two voting members at each agency know how the region feels about the projects.

- To avoid an echo chamber effect, bring in or interview outsiders to share information from outside the regional group.
- Consider initiating or contributing funds to a pooled fund or other research effort that could help the region even if it doesn't help your state specifically.

TOP IDEAS:

- **Build a personal network** along with the professional network. Focus on building personal relationships within WTRC to make regional collaboration easier.
- **Be available** to other members **to discuss work or personal problems**. Share cell phone numbers so members can text each other to find time for a discussion.
- **Consider adding therapy sessions** to WTRC meetings.
- **Identify ongoing research and best practices of other member states** that can help states enhance their processes.

STRENGTHS AND OPPORTUNITIES FOR HOST STATES

A measure of a successful peer exchange is how the host states learn from others and identify the tools and practices that may solve their problems and help grow their programs. Throughout the peer exchange and in submitted report-out forms, attendees praised the many impressive achievements of each host state's research program and highlighted strategies to address the challenges that each agency had presented.

NEBRASKA DOT

Nebraska's Strengths

Attendees noted the many ways that NDOT's research program excels:

- **Nebraska has well-defined processes** for research project idea generation, proposal submission and projects selection. An **annual research program cycle** is important for success.
    - Nebraska collaborates with the Nebraska Transportation Center on a Research Summit. DOT division and section heads meet with university professors in transportation-related fields to share the DOT's near-future needs and to hear professors' expert ideas.
    - Professors work with DOT staff and submit ideas through the annual Research Statement of Need process. Ideas are presented at the annual Nebraska Transportation Research Council meeting.
    - Research proposals are created and submitted.
    - The NDOT Research Advisory Committee selects research projects from the submitted proposals.
- All **completed research projects** since 2019 have **final reports, technology transfer and Research Readiness Level (RRL) assessments**.
    - Final reports are uploaded TRID , NDOT Website and to the University of Nebraska Digital Commons. The Digital Commons houses a complete archive of NDOT research reports. The research reports go back as far as 2003 and are downloaded from all over the world from this site. The site is updated by the minute and displays on a map in real time where reports are being downloaded.
    - A Research Pays Off webinar is held every six months and showcases recently completed projects and provides an overview of NDOT's implementation efforts. Attendees receive one Professional Development Hour (PDH).
    - Research collaborates with the Nebraska Transportation Center to provide Transportation Seminars (worth one PDH to NDOT staff) featuring completed research projects as topics.
    - Nebraska has developed Research Readiness Level assessments consisting of five levels to identify immediate next steps for completed research to best support the development and implementation of the results and practices discovered.

    - Two-page write-ups summarize the research project and provide implementation recommendations. These summaries are used to submit High Value Research (HVR) projects to AASHTO.
    - An annual At-A-Glance document (Research Hub) is distributed within the department and to cities and counties, showing them the projects proposed and conducted that are available, along with the Research Readiness Level assessment for implementation.

- Nebraska **uses SPR-A funds (approximately $1M from Planning each year) for NCHRP and TRB dues and pooled funds**. This allows NDOT to use SPR-B funds for projects to research Nebraska-specific issues through the University of Nebraska and other research institutions.
- For the pooled fund study Nebraska leads, it has a **good partnership with the University of Nebraska**. Consistent university staff and scheduling communication at set times throughout the year makes leading the study easier for Nebraska.
    - Members can utilize Nebraska's agreement with the university, which is administratively easier and less expensive, to do their own projects within the pooled fund.
- As a pooled fund lead state, Nebraska promotes transparency with members. NDOT recently started to **share a tracking spreadsheet that shows funds spent and progress status for each project**.

Opportunities for Nebraska

Attendees also offered suggestions to enhance NDOT's research program:

- Consider developing **a summary report for completed projects that members can use to show the value of participating** in Nebraska's pooled fund. **Share "wins"** from the study with member agencies as a way to **show administration the benefits of membership**.
- To ensure NDOT is getting full value from the pooled fund studies it participates in, the research program could **consider annual check-ins with its technical representatives**.
- Research can also **reach out to study members to learn what value they realize** from pooled fund membership.

TEXAS DOT

Texas' Strengths

Attendees noted the many ways that TxDOT's research program excels:

- TxDOT abides by a philosophy of **putting operational solutions in the hands of real-world practitioners**.
- **TxDOT adapted FHWA's Technology Readiness Levels (TRL) to work better with transportation.**
    - There are nine levels; research happens between levels 3 through 8.

    - Implementation doesn't happen until an idea has reached level 8.
    - A level 9 idea is shared with divisions and districts to implement.
    - To assess a project's progress through the TRL levels**, researchers submit monthly project progress reports that include the TRL level. A successful project tracks up to level 8.** If a project won't reach a level 8, TxDOT makes changes or discontinues the project.

- **Implementation status** is a good way **to determine if solutions are getting to practitioners.**
    - A project with a status of "internally adopted" or "implementing" is considered successful. A project with a status of "completed (no further action)" defines a project as not moving to implementation for a variety of reasons.
- Because the DOT **experiences value only when an idea is being actively used in the operational environment, Texas focuses on the value of implementation,** instead of the value of research.
    - Six months prior to the end of a research project, TxDOT asks if implementation is a go/no-go and assesses the variables to calculate the future value of implementation (VOI).
    - Calculating VOI requires knowing which variables to measure, where to find the amounts and the time period to measure.
    - Monitoring implementation can be difficult.
- Texas pays attention to the **happiness of a project's research panel.** Success is when non-compensated participants opt to participate on future panels.
- As a pooled fund study lead state, Texas **defines roles and responsibilities early for everyone** and **sets expectations for communication, decision-making and deliverables**.
- To **keep pooled funds on track**, Texas develops and maintains a **detailed project schedule** with clear milestones, **monitors progress closely** and **manages amendments proactively**.
- TxDOT **engages partner states and stakeholders** with updates, meetings, and meaningful input opportunities, and **encourages participation** from all contributors. The agency also **uses surveys or quick polls** for **efficient and actionable input, which help** quiet members to be heard.
- Pooled fund finances can be difficult to manage. Texas **clearly communicates** contributions, budgeting, and cost-sharing mechanisms, and **provides routine budget status updates** to all partners.
- **To focus on implementation and impact** of a pooled fund, Texas **plans for tech transfer and implementation from the beginning**. The agency creates concise, practical final products (guides, toolkits, presentations) and includes a sustainability or tech-transfer strategy in the final report.

Opportunities for Texas

Attendees also offered suggestions to enhance TxDOT's research program:

- Consider who at the agency might be able to help select research project panel members. A panel should be broad and represent a variety of viewpoints, and **relying on only the champion to select members could be limiting.**
- There is an opportunity for Texas to **expand the technical expertise within their team to partner with SMEs**.

WYOMING DOT

Wyoming's Strengths

Attendees noted the many ways that WYDOT's research program excels:

- **Wyoming sole-sources all contracts**, including pooled funds, which reduces the time to contract because it does not use an RFP process.
- **Wyoming uses an outside entity to evaluate its research program and projects** every few years.
    - Each evaluation uses agreed-upon performance.
    - Wyoming reviews each project (SPR-B funded and pooled funds), how it worked (over time) and if everyone involved performed according to the performance measures. It also seeks to determine the benefits of each project to the state of Wyoming.
    - Performance measures are based on information from contracts, amendments, proposals and pre-proposals (whether funded or not) and all pooled funds (whether WYDOT served as lead state or partner).
    - Wyoming looks at outlook measures (What did Wyoming get out of the research projects?) and output measures (quantified comparison between the actual result and the intended result).
    - Performance measures are tied to strategic goals and strategic intent areas, and can include project champion involvement, funding and project timeliness.
    - Evaluation results are available online.
- **Research has valuable information to provide to the Wyoming state legislature,** which pays close attention to their activities.
- **Research emphasizes projects that deal with major challenges Wyoming faces** (impact of wildlife and crashes on their highway system, trucking industry) and demonstrates the value of research in addressing them.
- Wyoming **treats pooled funds the same as regular research projects.** As the lead state, the pooled fund PI has to do all of the same activities as a PI of a regular Wyoming research project.

Opportunities for Wyoming

Attendees also offered suggestions to enhance WYDOT's research program:

- Wyoming has an opportunity to **manage pooled funds the same way it manages SPR-B funded projects**.
- **Wyoming can improve internal communication around non-SPR funded pooled fund contributions** so the research program knows about all studies the agency is involved in.
- WYDOT should update the **TPF website to include non-SPR contributions**.

APPENDIX A. WTRC 2025 MEETING AND PEER EXCHANGE AGENDA

Western Transportation Research Consortium

Meeting and Peer Exchange — Agenda

May 20-22, 2025 | Hyatt Place Austin Downtown, 211 East 3rd Street, Austin, TX 78701

Microsoft Teams Meeting: Direct Link, Meeting ID: 2993730831077, Passcode: ZU2ZW7P5
Dial by phone: 872-242-8805, Conference ID: 542164011#

All times are **Central** — Breaks will be taken as needed

Tuesday, May 20

Hotel buffet breakfast is included in the room rate; please eat before the meeting.

8:30 a.m. to 12:00 p.m.	**Call to Order**, Cameron Kergaye, Utah DOT
	
	Texas DOT Welcome
	
	• Darran Anderson, Director of Strategy and Innovation
	• Kevin Pete, Research and Technology Implementation Division
	
	Meeting Goals, Brian Hirt, CTC & Associates
	
	Introductions, All
	
	PEER EXCHANGE THEME 1: MEASURING RESEARCH SUCCESS
	
	• Presentations and perspectives — successes and challenges, and how did you get there? (15-20 minutes each, including Q-and-A)
	  ○ Presentations from Co-Host States (NE, TX, WY)
	  ○ Presentations from Guest States (ID, MT, UT)
	• Additional discussion with perspectives from remaining states and group Q&A
	• Menti-based report-out
	  ○ Where host states are excelling
	  ○ Opportunities for improvements for host states
	  ○ Great ideas from peers to bring home

12:00 to 1:00	*Lunch*

1:00 to 4:30	**PEER EXCHANGE THEME 2. POOLED FUND MANAGEMENT**
	
	• Presentations and perspectives — successes and challenges, and how did you get there? (15-20 minutes each, including Q-and-A)
	  ○ Presentations from Co-Host States (NE, TX, WY)
	  ○ Presentations from Guest States (CA, CO, NV, ND, OK, SD, WA)
	• Additional discussion with perspectives from remaining states and group Q&A
	• Menti-based report-out
	  ○ Where host states are excelling
	  ○ Opportunities for improvements for host states
	  ○ Great ideas from peers to bring home

4:30	**Adjourn Day 1,** Cameron Kergaye
Evening	**Group Dinner.** *Time and location to be provided at the meeting.*

Western Transportation Research Consortium

Meeting and Peer Exchange — Agenda

May 20-22, 2025 | Hyatt Place Austin Downtown, 211 East 3rd Street, Austin, TX 78701

Microsoft Teams Meeting: Direct Link, Meeting ID: 2993730831077, Passcode: ZU2ZW7P5
Dial by phone: 872-242-8805, Conference ID: 542164011#

All times are **Central** — Breaks will be taken as needed

Wednesday, May 21

Hotel buffet breakfast is included in the room rate; please eat before the meeting.

8:30 a.m. to 12:00 p.m.	**PEER EXCHANGE THEME 3. REGIONAL RESEARCH**
	Guest Presentation
	• Region 3 Collaboration: Experiences and Challenges, Khyle Clute, Iowa DOT
	WTRC Activities
	• WTRC Update
	  ○ WTRC study extension to 2027 and 2028
	  ○ Management: Administration, contract, budget
	• Research Cycle: Development and delivery timeline
	• 2025 Research
	  ○ Discussion of initial voting and selection of 2025 research
	  ○ Next steps for selected projects
	  ○ Next steps and alternatives for other projects
	  ○ UDOT contracting

12:00 to 1:00	*Lunch*

1:00 p.m. to 4:30	**WTRC Activities**
	• Review Research Process
	  ○ Improving the research idea form and selection process
	• WTRC Work Plan Items
	  ○ Topical webinars (SME Meetings)
	  ○ Other priorities
	• Communication and outreach
	  ○ Liaison with other states, regional and national committees

4:30	**Adjourn Day 2,** Cameron Kergaye
Evening	*Small group dinners or dinner on your own*

Western Transportation Research Consortium

Meeting and Peer Exchange — Agenda

May 20-22, 2025 | Hyatt Place Austin Downtown, 211 East 3rd Street, Austin, TX 78701

Microsoft Teams Meeting: Direct Link, Meeting ID: 2993730831077, Passcode: ZU2ZW7P5
Dial by phone: 872-242-8805, Conference ID: 542164011#

All times are **Central** — Breaks will be taken as needed

Thursday, May 22

Hotel buffet breakfast is included in the room rate; please eat before the meeting

8:30 a.m. to 12:00 p.m.	**PEER EXCHANGE THEME 3. REGIONAL RESEARCH**
	
	WTRC Activities
	• Planning
	  ○ Identify Year 3 WTRC Meeting: location and month
	  ○ Identify Year 3 Peer Exchange: co-hosts; format
	  ○ Next TAC call
	• WTRC Charter and Operating Procedures
	  ○ Discuss and vote on changes, if needed
	• Additional Topics and Open Forum
	• Wrap-up Day 3 Activities
	  ○ Action Item Review

12:00	**Adjourn Meeting,** Cameron Kergaye

APPENDIX B. NEBRASKA DOT – MEASURING RESEARCH SUCCESS

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

WTRC
Western Transportation Research Consortium

MEASURING RESEARCH SUCCESS

By Lieska Halsey– NDOT Research Engineer

2025 Meeting and Peer Exchange

Austin, Texas

NDOT Research

NEBRASKA
DEPARTMENT OF TRANSPORTATION

U.S. Department of Transportation
Federal Highway Administration

RESEARCH SECTION

Total Personnel

4 full time staff members

- (3) Engineers
- (1) Federal Aid Administrator

Funding

FHWA State Planning and Research (SPR)

2% of NDOT apportioned funds

(23 CFR 505)

≈ $2 million a year to NDOT

increases as apportioned funds increase

≈ 12-15 projects a year

NDOT Emphasis areas

Total Program Size SPR B : $2 M towards funding research projects
State Match 20%

Contributions to National Research Efforts SPR A:
(TRB, NCHRP, TPF) : $1.2 M

NDOT Research

Contracted Research

- Federal Funded
- Research often done by University Professors
  - University of Nebraska, Auburn, Michigan State and BYU
- Pooled Funds Participation

In House Research

- Research done by NDOT Employee
  - The Research Section works with Pavement Design , Concrete , Geotechnical, Bridge, Districts and Maintenance

Assess emerging needs and determine appropriate solutions to benefit Nebraska's Transportation

RESEARCH STATEMENT OF NEED

NEBRASKA
Good Life. Great Journey
DEPARTMENT OF TRANSPORTATION

MATERIAL & RESEARCH – RESEARCH SECTION CONTACT INFORMATION

(402) 479-4697
Research Section
NDOT.RESEARCH@NEBRASKA.GOV
NDOT Research Site

SUBMITTED BY: CLICK OR TAP HERE TO ENTER TEXT.

INSTITUTION: CLICK OR TAP HERE TO ENTER TEXT.

TELEPHONE NUMBER: CLICK OR TAP HERE TO ENTER TEXT.

EMAIL: CLICK OR TAP HERE TO ENTER TEXT.

TOPIC AREA (SELECT UP TO TWO):

MATERIALS ☐ PAVEMENT ☐ MAINTENANCE ☐ CONSTRUCTION ☐
TRAFFIC ☐ SAFETY ☐ PLANNING ☐ TECHNOLOGY ☐
STRUCTURES ☐ GEOTECHNICAL ☐
ROADWAY ☐ HYDRAULICS ☐ ENVIRONMENTAL ☐

HAVE YOU DISCUSSED THIS RESEARCH IDEA WITH AN NDOT REPRESENTATIVE?

☐ YES ☐ NO

IF YES, NAME OF PERSON AND DIVISION/DEPARTMENT:
CLICK OR TAP HERE TO ENTER TEXT.

PLEASE SUBMIT THIS FORM TO: NDOT.RESEARCH@NEBRASKA.GOV

Statements of need are a tool for the submitter to describe a current issue or research idea to the Nebraska Transportation Research Council (NTRC). Providing a brief yet comprehensive description to the NTRC is the best way to convey your support for a research idea. When submitting your son, keep in mind this is your tool to convey your ideas to individuals who will determine which son will be developed into proposals. Innovative ways to solve issues focusing on the benefits, safety, efficiency, and cost savings to NDOT and the public will have the best chance of being selected.

These ideas are open for the public, cities, counties, consultants, suppliers, contractors, universities, FHWA and within Nebraska Department of Transportation.

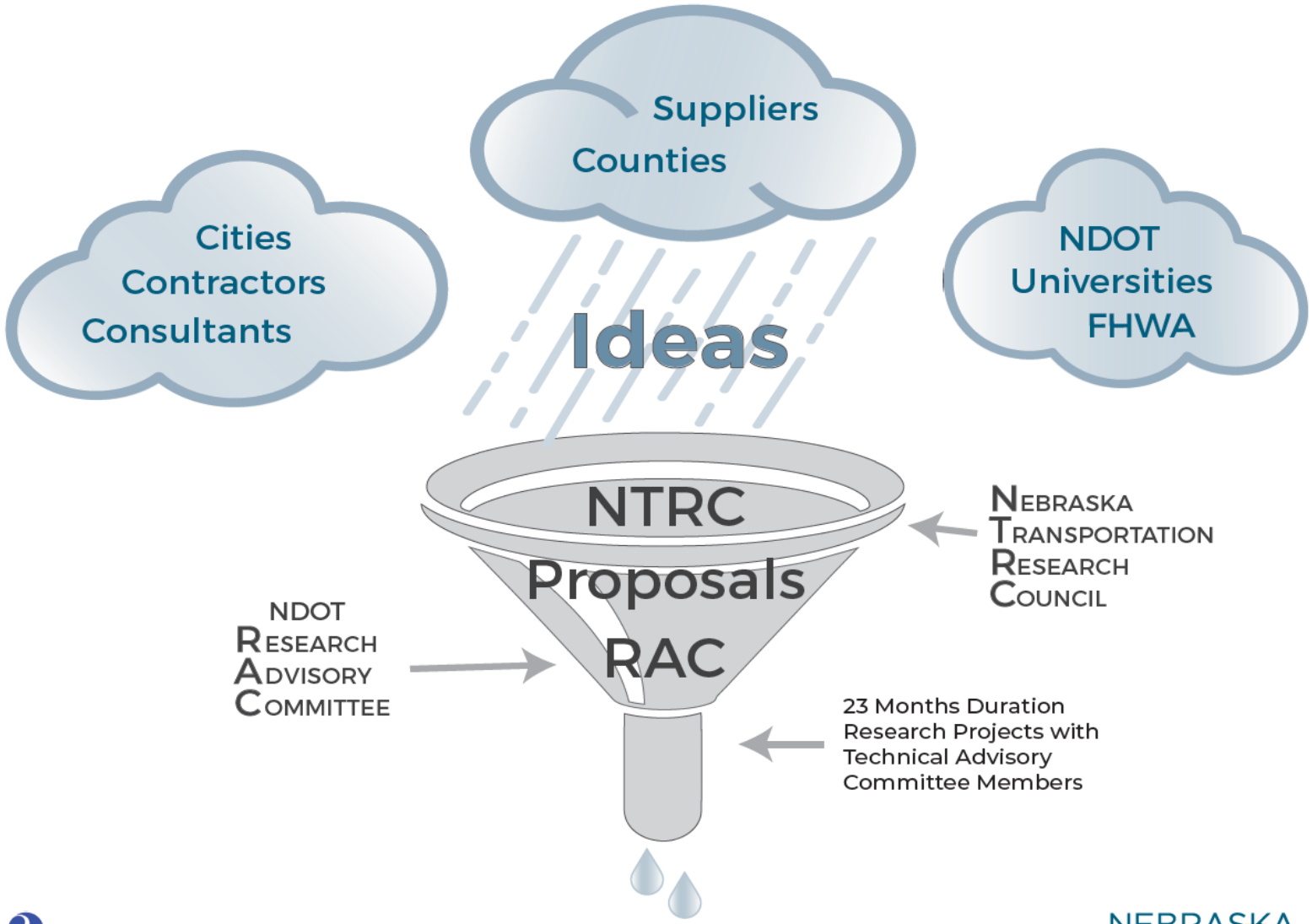
Need a problem solved?
We can help!
- Submit a Statement of Need -

Please Click on each box to insert your statement

Title of Research Idea
Explain the specific topic or issue to address (3000 Character Limit)
What is the goal/objective of the research? (3000 Character Limit)
Describe the expected products/deliverables of the research (3000 Character Limit)

RESEARCH PROGRAM SNAPSHOT

Illustration of Ideas



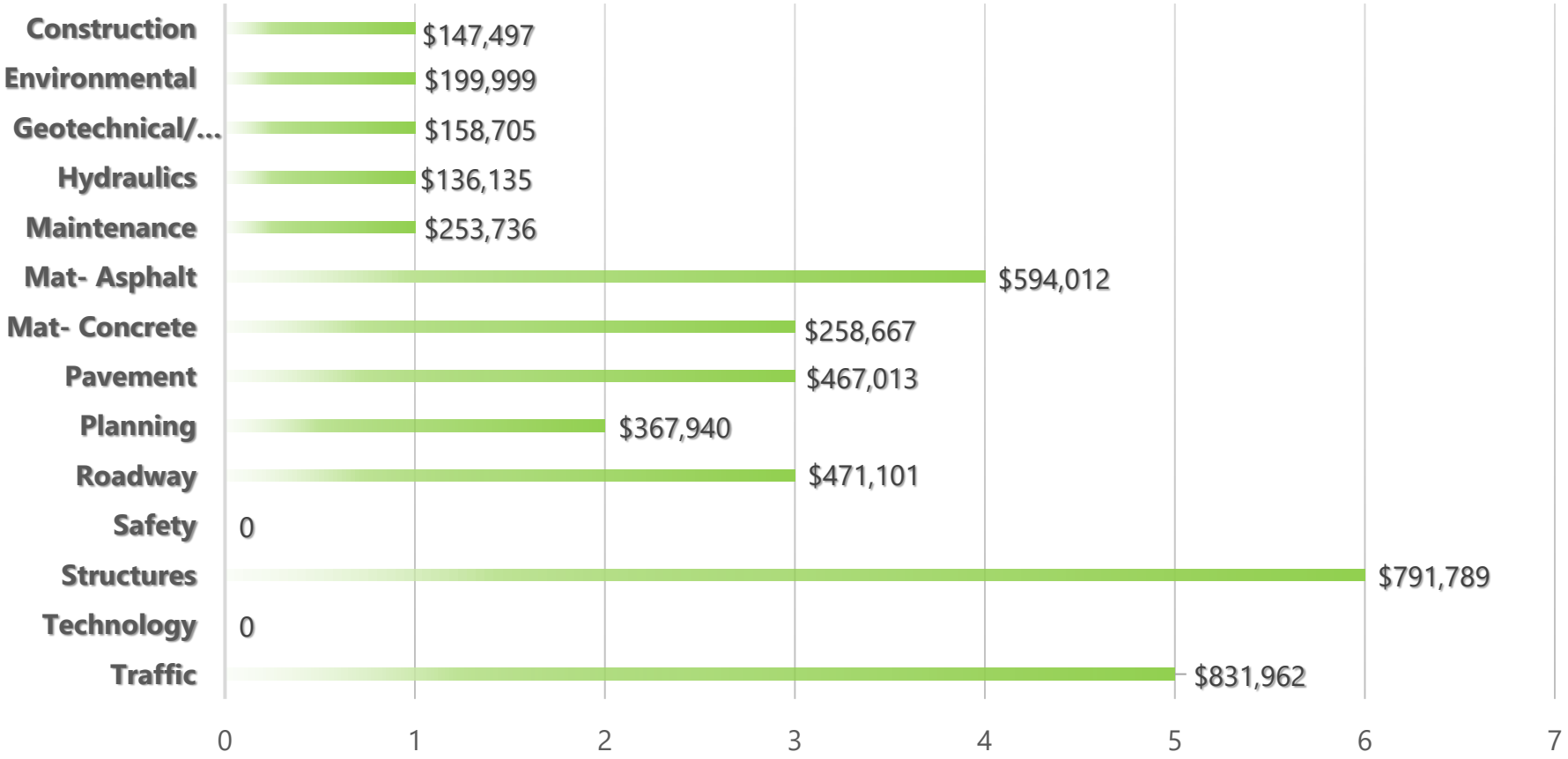
U.S. Department of Transportation
Federal Highway Administration

Completed Projects follow with
Research Readiness Level (Implementation)

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

IN PROGRESS CONTRACTED RESEARCH BY TOPIC AREA

NUMBER OF PROJECTS

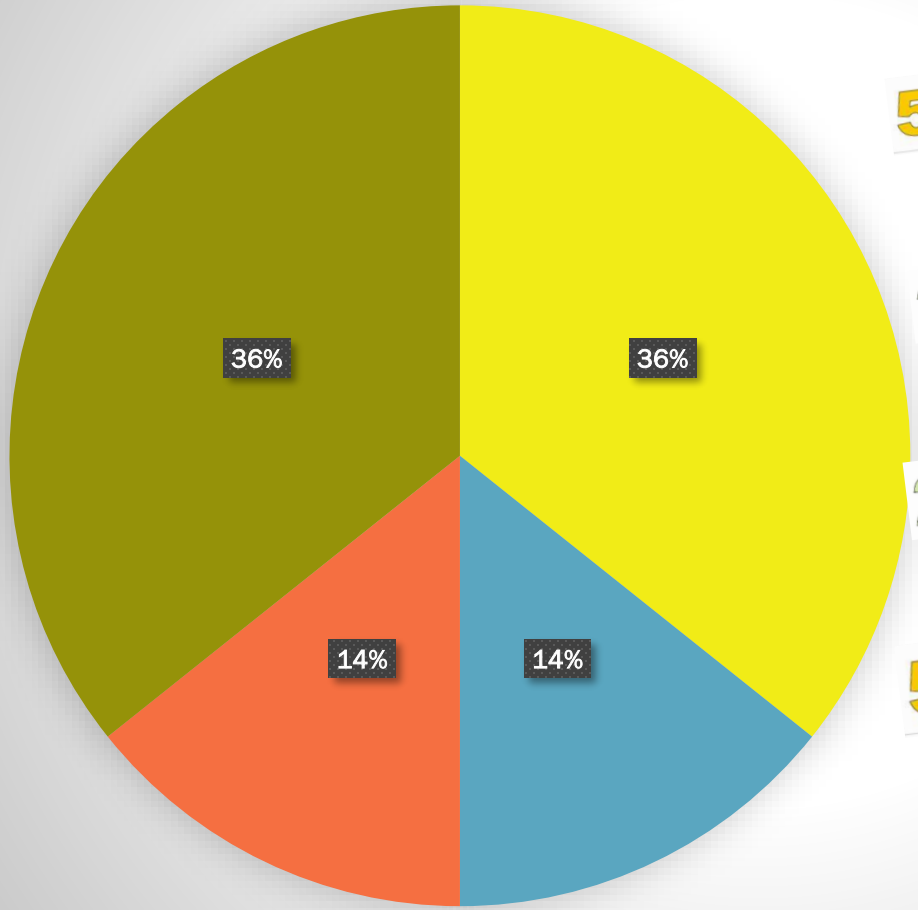


Category	# of Projects
Construction	1
Environmental	1
Geotechnical/Soils	1
Hydraulics	1
Maintenance	1
Materials/Asphalt	4
Materials/Concrete	3
Pavement	3
Planning	2
Roadway	3
Safety	0
Structures	6
Technology	0
Traffic	5
Total Active	**31**

Total Projects Budget $4,675,556

14 NEW Projects for FY 26 Starting July 2025

NDOT Funded Research by Topic Area



- 5 Materials, Pavement, Maintenance & Construction
- 2 Roadway, Hydraulics, and Environmental
- 2 Structures and Geotechnical
- 5 Traffic, Safety, Planning & Technology

Total Budget for FY26 NEW Projects ~ $ 2,2 M

Nebraska's Lead State

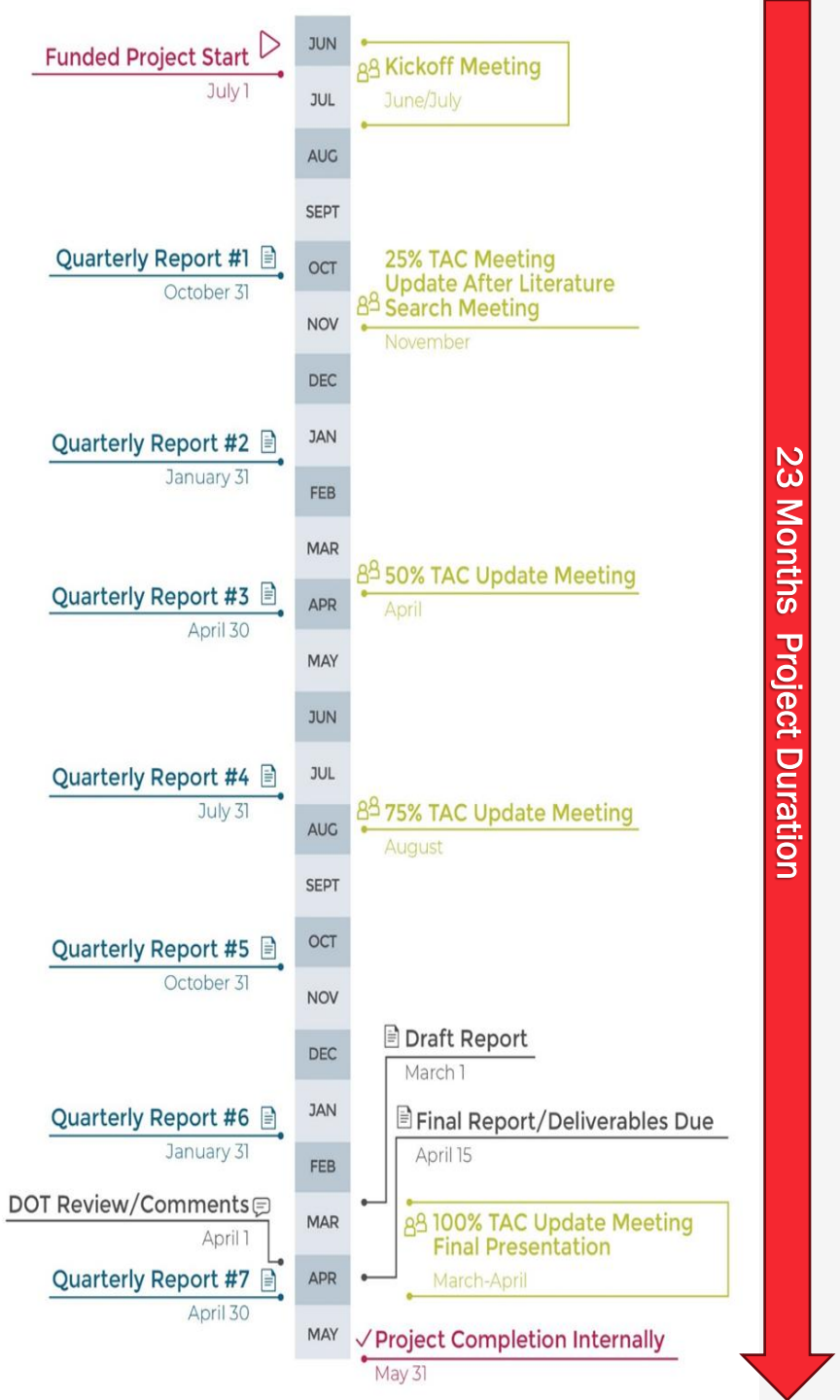
COMPLETED RESEARCH PROJECT

Research Report

Technology Transfer

Research Readiness Level

COMPLETED RESEARCH PROJECT: Implementation



NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Technology Transfers

❖ **NDOT Completed Research Reports**

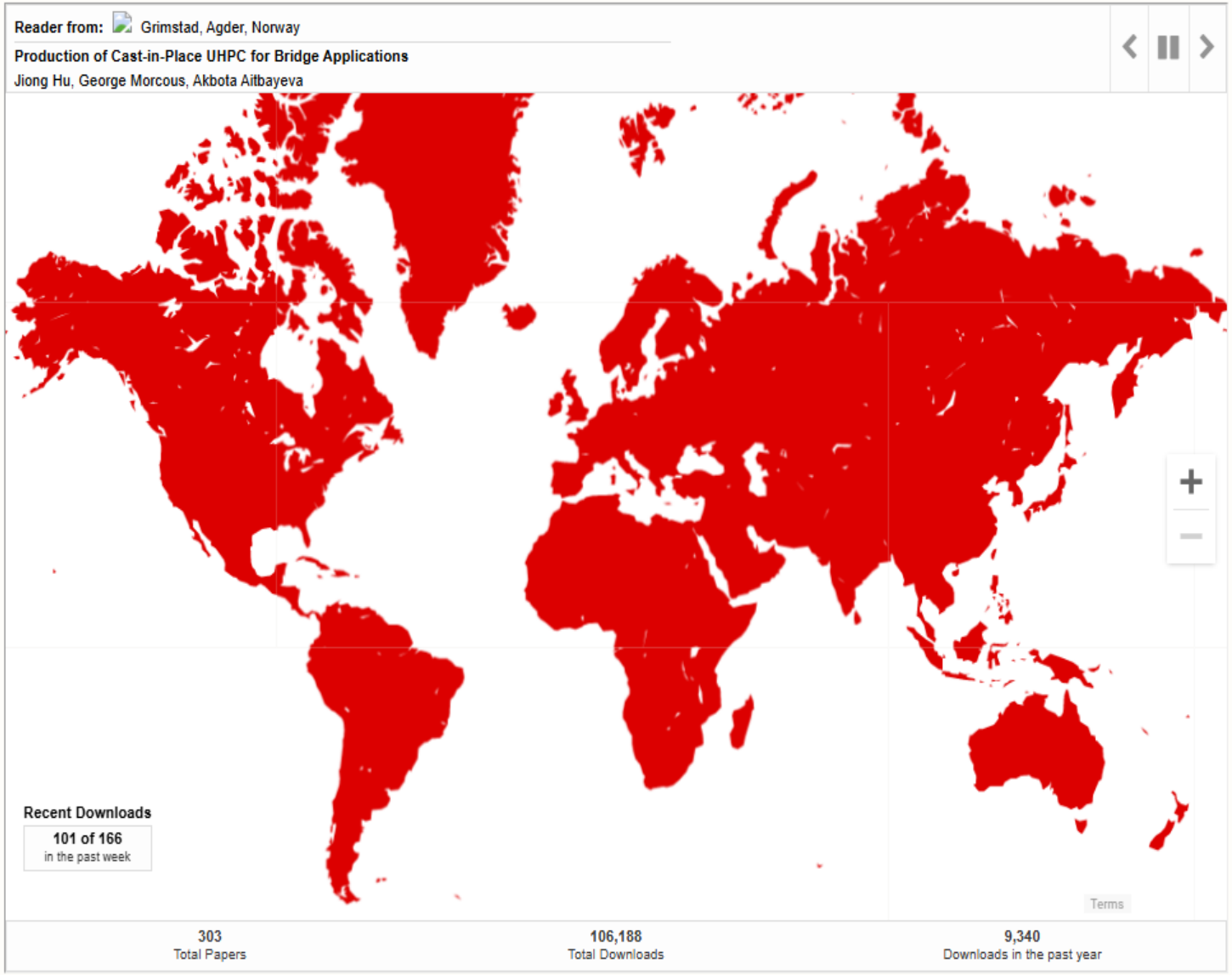
- A complete archive of the Nebraska Department of Transportation research reports is located in the University of Nebraska digital commons.
- The reports are **accessible to people all over the world**, and the research being done here is helping infrastructure departments and workers in Nebraska and beyond. To access the entire report archive visit

digitalcommons.unl.edu/NDOR.

❖ **Transportation Research Board (TRB) Website**

❖ **Transport Research International Documentation (TRID)**

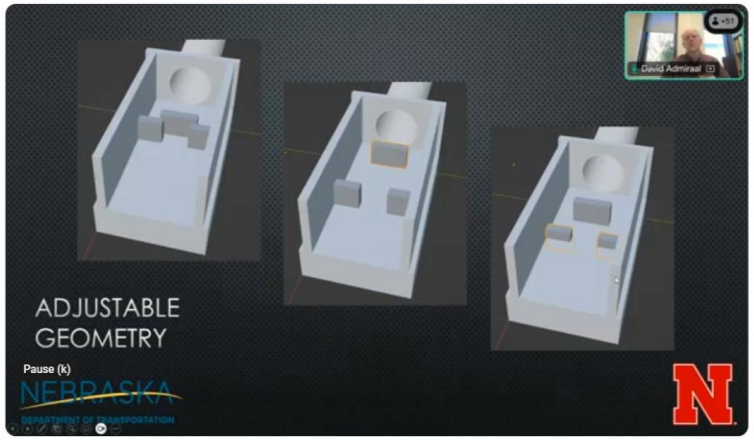
❖ **National Libraries**

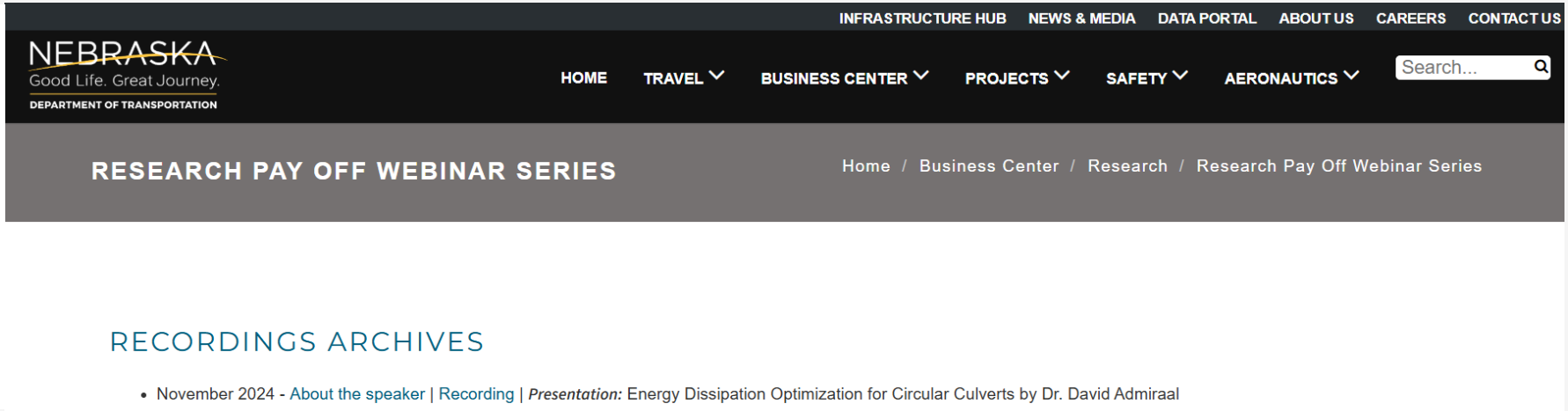


Technology Transfer

RESEARCH PAYS OFF WEBINAR SERIES

- Highlighting Completed Projects every 6 months worth 1 (one) PDH
  - Webinars will be archived @ NDOT Research Website
- Collaborated with University of Nebraska - Transportation Center to provide Transportation Seminars (worth 1 (one) PDH hour to NDOT personnel) with completed research projects as topics (Structures and Traffic)



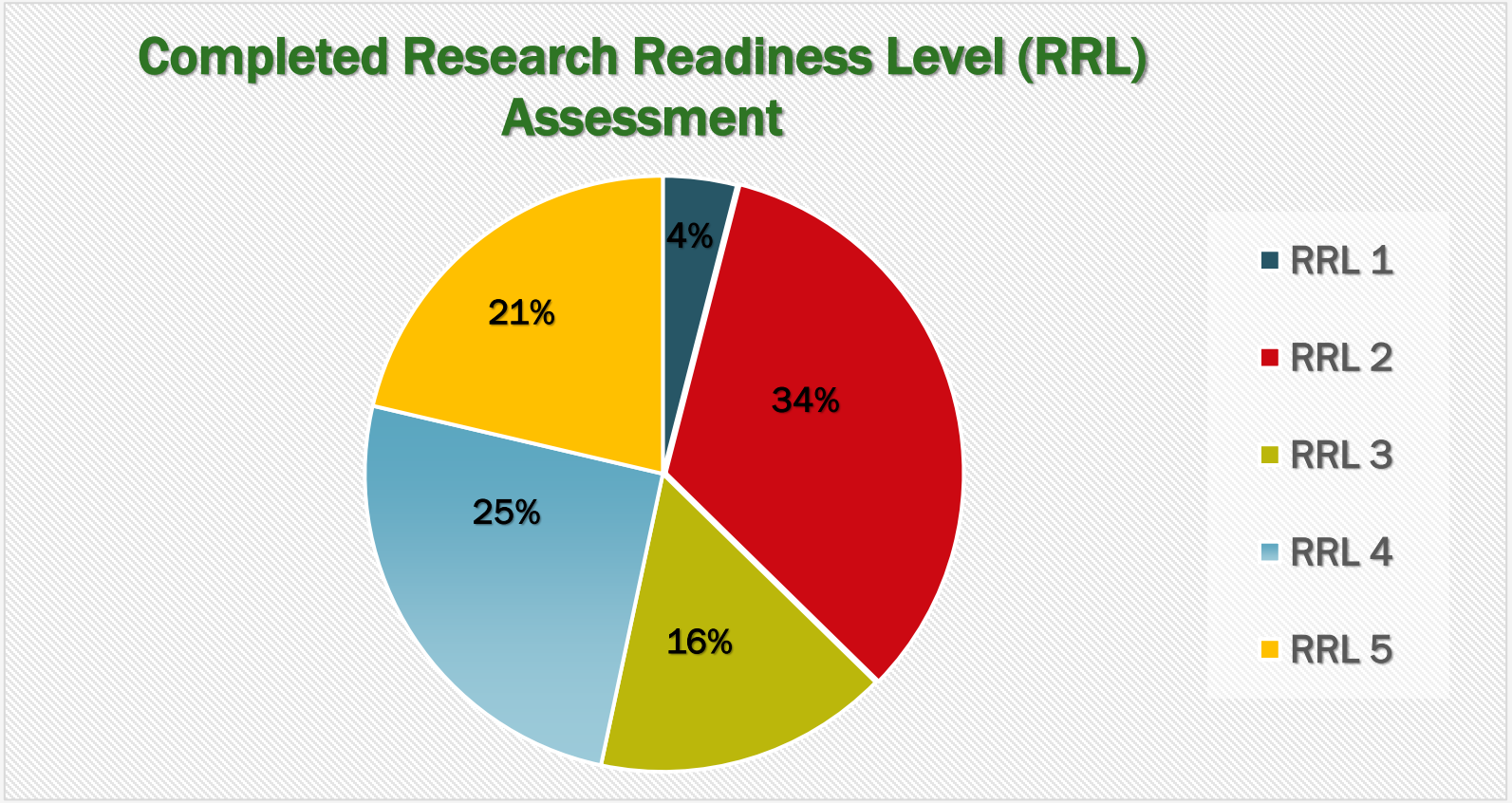


COMPLETED RESEARCH READINESS LEVEL (RRL) ASSESSMENT

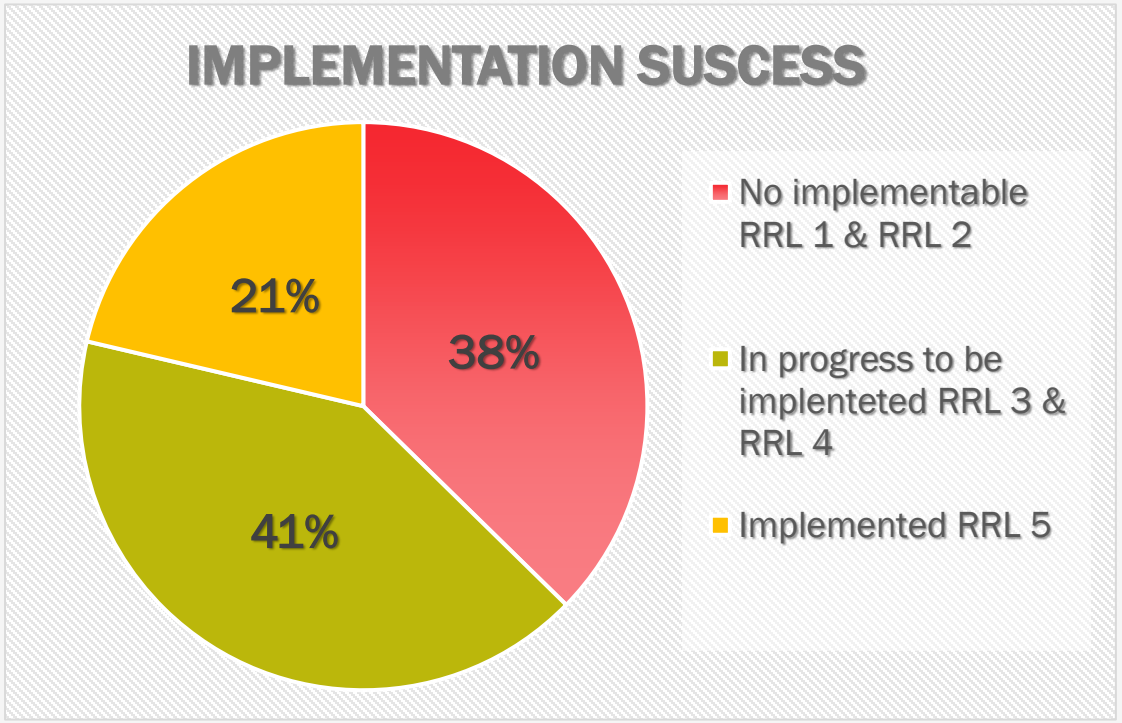
- The RRL concept is based on the FHWA Technology Readiness Level Guide and was adapted to meet NDOT's specific needs.
- Research Readiness Level (RRL) Assessment identifies the immediate next steps for a research or technology development project by assigning an RRL number indicating how close to acceptance as standard practice the project is.
- The RRL Assessment provides a systematic method for identifying how NDOT can best support the development of research at various stages in the process.

NDOT Completed Projects Implementation

NDOT Research has been tracking Research Implementation since late 2018 - Completed total 75 Projects



How NDOT Measures Success



Any projects in the **RRL 1 & RRL 2** are candidates for future research

Any research projects found in the **RRL 3 Development Level** are in development within the NDOT by the Lead Technical Advisor(Research Idea Champion). This Level corresponds to translating research into practice. This initiative demonstrates commitment to evidence-based decision-making and long-term transportation improvements.

Any research projects found in the **RRL 4 Implementation with follow up Level** indicate the successful completion of the research project; the Department has initiated its implementation due to the demonstrated benefits. The DOT will continuously monitor the progress of the implementation through performance metrics, stakeholder feedback, and data analysis to ensure successful adoption. Adjustments will be made as needed to optimize outcomes and scalability.

Any research projects found in the **RRL 5 Standard Practice/ Fully Understood Level** have been fully implemented by the Department, marking a significant milestone in translating research into real-world applications. This initiative demonstrates the DOT's commitment to evidence-based decision-making, ensuring that policies, infrastructure, and operational strategies are guided by data-driven insights.

What obstacles Nebraska continues to overcome and how ?

- NDOT Project Manager Prepare Write up based on Discussion with TAC Lead Member (Project Champion)
- Find available time to meet with TAC Lead member
- Prepare Draft for TAC Lead Member to Review
- Upload project on NDOT SharePoint for future Follow up with the Project Champion
- Employee turnover

Research Readiness Level

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Nebraska Department of Transportation
Funded Research
February 2024

Executive Summary, Research Readiness Level Assessment, and Technology Transfer

Approach Guardrail Transition Retrofit to Existing Buttresses and Bridge Rails

Research Objectives

The objective of this project is to develop retrofit options for attachment of 31-in. tall thrie beam AGT systems to existing NDOT bridge rails and concrete parapets. The retrofits may involve the addition of connection plates to attach the thrie beam to the parapet, the addition of deflector plates to prevent vehicle snag, and/or overlapping the AGT on the parapet to prevent contact with the end of the parapet. However, the existing concrete structures are not to be modified except for the installation of anchorage hardware. The new retrofit designs will improve the overall safety of the barrier systems by ensuring its performance satisfies the Manual for Assessing Safety Hardware (MASH) Test Level 3 (TL-3) performance criteria, while preventing costly replacements of concrete structures.

Research Benefits

Development of crashworthy retrofit options for the attachment of thrie beam AGT systems to existing NDOT bridge and concrete parapets will provide NDOT with a safe and cost-effective solution for upgrading guardrail and AGT systems without requiring difficult and costly modifications to the concrete parapets themselves or the addition of a new end buttress adjacent to the current end of the parapet. Further, the retrofit design will reduce installation times and limit the amount of lane closures and exposed workers as compared to reconstructing the concrete parapets. The availability of these retrofit attachments would also improve the long-term safety of the bridge and approach section by conforming to the safety performance criteria of MASH TL-3.

Principal Investigator

Scott Rosenbaugh
University of Nebraska- Lincoln

NDOT Lead TAC Member

Fouad Jaber, PE, Bridge Engineer

Background

When a roadway/bridge is resurfaced with an overlay, NDOT plans to replace the AGT adjacent to the bridge with a MASH TL-3 crashworthy design. To minimize repair costs, NDOT does not desire to replace or alter any bridge rails with adequate structural capacity and height. Bridge rails installed under NCHRP 230 or earlier standards are likely too short for current standards and need to be replaced, but bridge rails installed to NCHRP Report 350 standards should meet MASH TL-3 criteria and could remain in place. However, this creates a problem of attaching new, 31-in. tall AGTs to existing concrete bridge rails and parapets (after an overlay) that were not designed for such connections and the resulting system may not be crashworthy to current safety standards. Therefore, the development of cost-effective retrofit options are desired for attaching new, 31-in. tall AGTs to existing NDOT bridge rail and parapet designs.

Conclusion

The Nebraska Department of Transportation (NDOT) frequently applies roadway overlays to the surface of bridges to extend the bridge's lifespan. To minimize repair costs, NDOT does not desire to replace or alter any bridge rails with adequate structural capacity and height. Bridge rails installed to NCHRP Report 350 or MASH standards are likely to remain in place, though their effective heights would be reduced by the overlay. This creates a problem of attaching new, 31-in. tall approach guardrail transitions (AGTs) to existing concrete bridge rails and buttressess (after an overlay) that were not designed for such connections and the resulting system may not be crashworthy to current safety standards. The objective of this project was to develop retrofit options for attachment of thrie-beam AGT systems to existing NDOT bridge railings and buttresses. The project began with a review of existing bridge railings and end buttresses used by NDOT to identify issues related to connection hardware alignment and crash safety performance. Retrofit options were then developed to address these issues while adhering to established design criteria. A new connector plate assembly was designed to facilitate the attachment of the thrie-beam terminal connector to these bridge railings and buttresses. Additionally, three retrofit concepts, including concrete fill, a steel assembly, and a curb, were considered to mitigate concerns related to vehicle snag below the thrie beam. These selected retrofit concepts were evaluated through a combination of structural analysis and computer simulated crash tests. All simulations of the AGT attached to these buttresses through these retrofit concepts met MASH TL-3 safety performance criteria.

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Nebraska Department of Transportation
Funded Research
February 2024

Executive Summary, Research Readiness Level Assessment, and Technology Transfer

Interested in finding out more?
Final report is available:
HERE

NDOT Recommendations Based Off Research Project

The information provided by this research is being implemented into NDOT's Roadway Special Plan. The retrofit provided in this research will allow for time and money savings, as well as increase the safety of construction workers and the public by reducing construction time. This research allows the use of a connection plate at the existing concrete buttresses to connect to the guardrail. Previously, the concrete buttresses had to be completely removed and reconstructed to allow for the connection to the guardrail when an asphalt overlay was placed on the bridge. In fact, the development of cost-effective retrofit options was confirmed by attaching a new, 31-in. tall AGTs to existing NDOT bridge rail and parapet designs. With the addition of special provisions to the NDOT Roadway Special Plan, responsibility of this research is handed over to the Roadway Design Division. This research has a cost saving estimate of $600,000 in the 2026 fiscal year alone, with similar estimates savings in other upcoming fiscal years.

- *As provided by Emilie Hudon and Matthew Wieseler, TAC Members*

Research Readiness Level (RRL) Assessment

Level 5: Standard Practice/Fully Understood
Research adopted; no evaluation is required.

RRL 5

Technology Transfer

Principal Investigator did not have any technology transfer for this research project.

Technology Transfer cont'd


Thank you
NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

APPENDIX C. TEXAS DOT – MEASURING RESEARCH SUCCESS

Measuring Research Success

Phillip Hempel P.E., PMP

Texas Department of Transportation

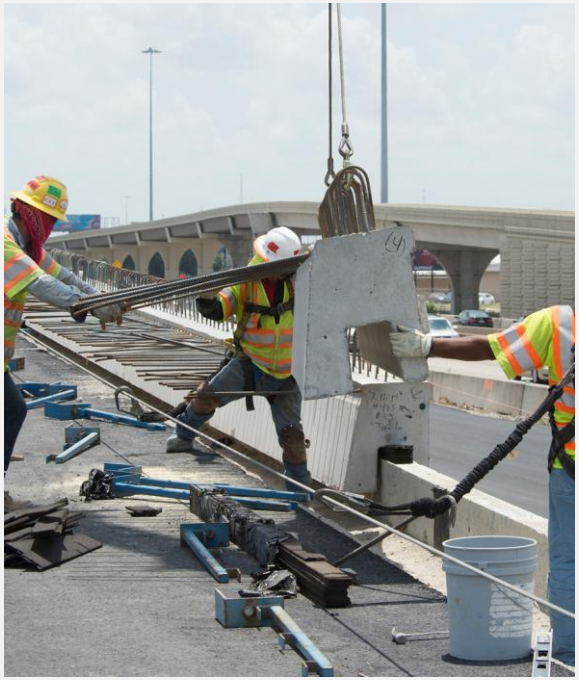
August 18, 2025

Research Program Overview

Primary Function
Total Projects FY24: 101 (+42 non-contracted)
RTI Staff: 18

Research Program Funding Overview

FY25 Program	Total Project Budgets
Research (including pooled funds)	$28,849,714
Implementation (including LTAP)	$3,658,912
Pooled Fund Contributions (non-TxDOT-led)	$1,556,667
TOTAL	**$34,065,293**



My personal mission…

Put operational solutions in the hands of real-world practitioners.

Technology Readiness Level (TRL)

 IMPLEMENTATION	9	Technology Refined and Adopted	• Fully deployed as a standard method • Finalized training and outreach • Published TxDOT or AASHTO specification
 DEVELOPMENT	8	Technology Proven in Fully Operational Environment	• Fully proven across expected real world conditions • Expanded pilots or larger deployments • System refinements • Preliminary training and outreach • Refined draft specification
	7	Prototype Demonstrated in Operational Environment	• Completed prototype • Test with real world conditions • Involve broader user community • Preliminary draft specification
	6	Prototype Demonstrated in Realistic Environment	• Limited prototype testing • Realistic environment • Operational requirements satisfied
 APPLIED RESEARCH	5	Integrated Components Demonstrated in Controlled Environment	• Integrated components • Fully controlled setting • System interfaces documented • Operational requirements developed
	4	Components Validated in a Controlled Setting	• Controlled environments • Individual components • Component compatibility • Individual functions tested
 BASIC RESEARCH	3	Proof of Concept	• Feasibility and case studies • Modeling and simulation • Prove innovative technology or idea • Solicit user input
	2	Application Formulated	• New ideas and knowledge • Develop methodology and approach • Early analysis and experiments • Show sound science
	1	Basic Principles and Research	• Understand concepts • Basic scientific principles

Implementation

Research

Tell Everyone the Answers

Find the Answers

IMPLEMENTATION

9	Technology Refined and Adopted	• Fully deployed as a standard method • Finalized training and outreach • Published TxDOT or AASHTO specification

DEVELOPMENT

8	Technology Proven in Fully Operational Environment	• Fully proven across expected real world conditions • Expanded pilots or larger deployments • System refinements • Preliminary training and outreach • Refined draft specification
7	Prototype Demonstrated in Operational Environment	• Completed prototype • Test with real world conditions • Involve broader user community • Preliminary draft specification
6	Prototype Demonstrated in Realistic Environment	• Limited prototype testing • Realistic environment • Operational requirements satisfied

APPLIED RESEARCH

5	Integrated Components Demonstrated in Controlled Environment	• Integrated components • Fully controlled setting • System interfaces documented • Operational requirements developed
4	Components Validated in a Controlled Setting	• Controlled environments • Individual components • Component compatibility • Individual functions tested

BASIC RESEARCH

3	Proof of Concept	• Feasibility and case studies • Modeling and simulation • Prove innovative technology or idea • Solicit user input
2	Application Formulated	• New ideas and knowledge • Develop methodology and approach • Early analysis and experiments • Show sound science
1	Basic Principles and Research	• Understand concepts • Basic scientific principles

How do we measure research success?

- Tracking TRL Value
- Implementation Status
- Value of Implementation (VOI)
- Are the research panel members happy with the experience?

Tracking TRL Value

- **Monthly Progress Reports (MPR) are submitted each month**
- **Includes current TRL value**
- **Are these increasing as expected?**

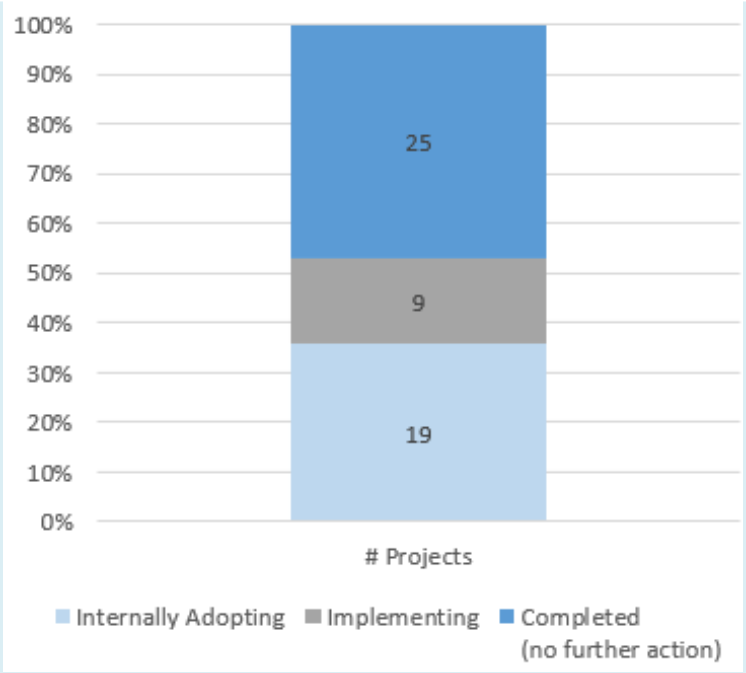
Success is: Tracking up to TRL 8

How do we measure research success??

- Tracking TRL Value
- Implementation Status
- Value of Implementation (VOI)
- Are the research panel members happy with the experience?

FY24 Implementation Statuses (Completed Projects)

Owner: Ned

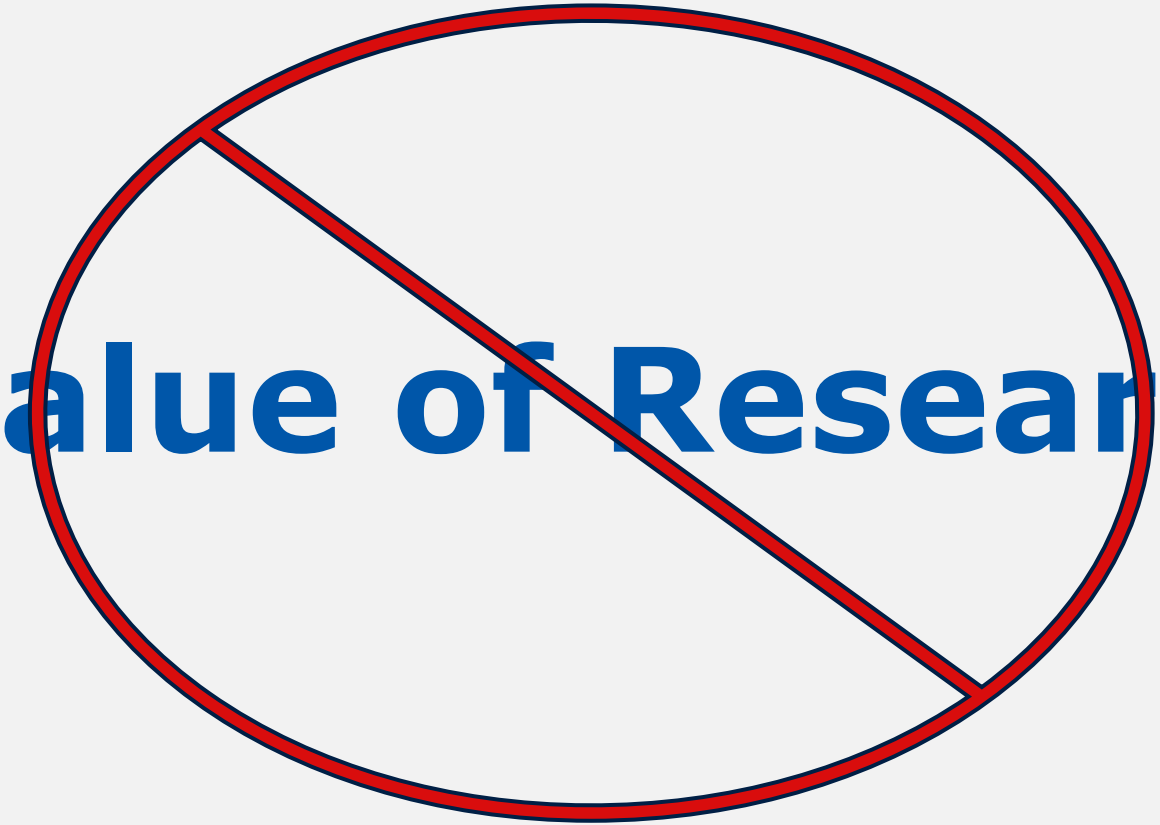


- **Implementation Status Definitions**
  - Internally Adopting - Closing out and aren't slated for an implementation phase, but findings are already being used internally by TxDOT and do not require an implementation phase for further distribution.
  - Implementing – Closing out and have immediate plans for moving into the implementation phase.
  - Completed (no further action) – Not moving to implementation for any reason (e.g., results are premature, or idea was not a success).

Success is: Getting more solutions in operations

How do we measure research success?

- Tracking TRL Value
- Implementation Status
- Value of Implementation (VOI)
- Are the research panel members happy with the experience?


Value of Research

What Value of Research?

There is no value of research. The only group that receives value from research are the researchers.

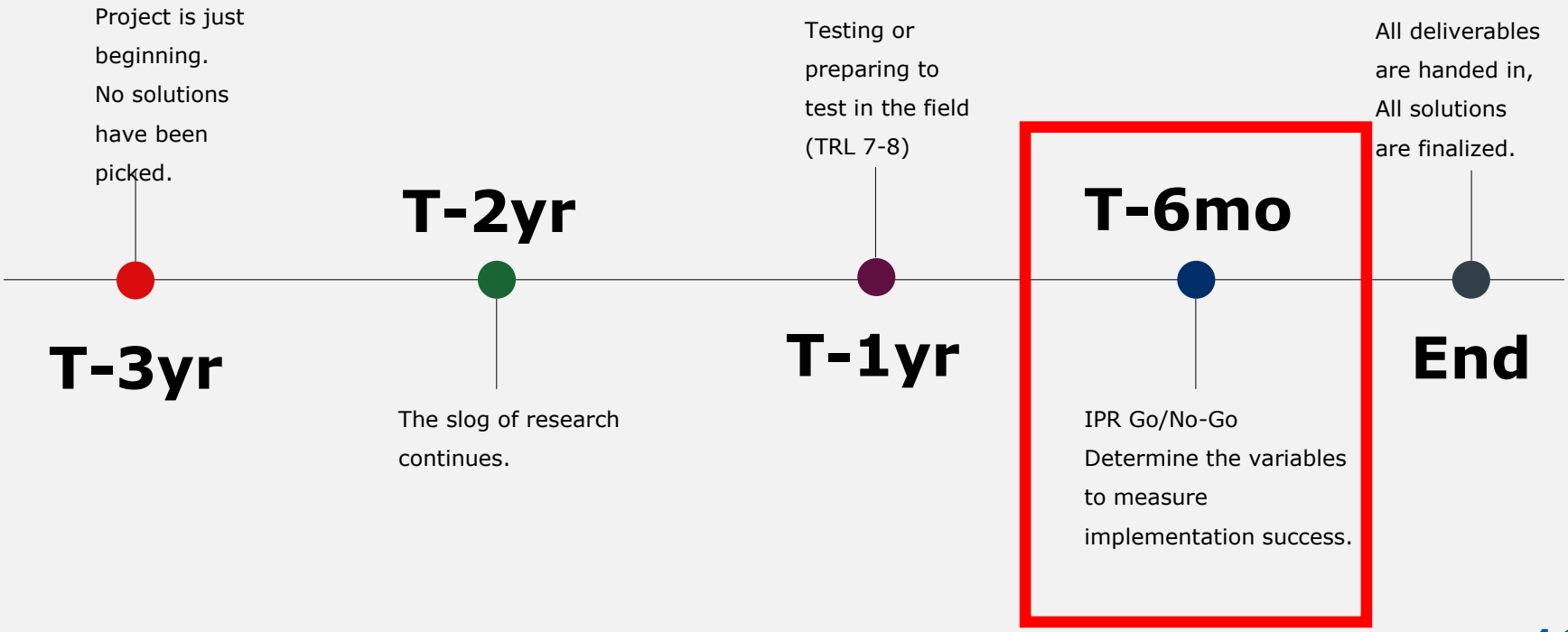
Value of Implementation (VOI)

Value to the DOT is only realized when a solution is being actively used in the operational environment.

Calculated Value of Research???

- **Numbers are completely fake**
- **If understood enough to calculate, not doing research**

When to determine Discuss VOI



Calculating VOI

- **Obtain variables to measure (% increase in improvement, material volumes, lane miles, # of installs, reduced # of contractors, etc.)**
- **Where can we find these amounts? (specific projects types, geographic areas, certain letting types, etc.)**
- **Over what time period to measure?**

What to do After the Project?

- **Someone needs to be monitoring the projects that may be influenced by the research and quantifying the VOI.**
- **TxDOT is not currently doing this…yet.**


Play (k)


01
01
01 01
UTSA
02 02
02
02

Overview of VOI Calculation

- **Variables:**
  - **Cost of Camera Equipment**
  - **Cost of Staff Time to Train and Operate**
  - **Number of Hours of Staff Time to Train and Operate**
  - **Number of Bridges Investigated**
  - **Cost of Contractor Investigation**

Overview of VOI Calculation II

- **Over the Past Year:**

  Camera Equipment ($20k) + (# Bridges (10) * Staff Time (30hrs)) * Staff Cost ($100/hr)) = $50k

  <u>Cost of Contractor Investigation</u>

  $35k per bridge. $350k for the 10 bridges.

  <u>POTENTIAL</u> Savings: $350k - $50k = $300k in one year, BUT…

Success is: Getting BIG numbers…that are real.

How do we measure research success?

- Tracking TRL Value
- Implementation Status
- Value of Implementation (VOI)
- Are the research panel members happy with the experience?

Research Panel Happiness

- **Did the project bring about a solution the team could use?**
- **Was the research team easy to work with?**
- **Was the PMC easy to work with?**
- **All of this to say….a researcher or DOT team member that makes it difficult to get the job done is not worth the headache.**
- **Success is: When the non-compensated participants come back**

Overall Thoughts

- **Don’t try to estimate value before the research is started**
- **Use TRL’s during research**
- **Use TRL’s to decide further progress**
- **Track what happens with your projects (implement, internal, none)**
- **Create individualized VOI algorithms late in the research**
- **Don’t get too caught up in calculating value (Ex: Inspector Training)**
- **Make sure your teams are getting along**

Phillip O. Hempel P.E., PMP
Phillip.Hempel@TxDOT.gov

Texas Department of Transportation

August 18, 2025

HELP MAKE TEXAS SAFER FOR EVERYONE

DRIVE *like a* TEXAN™

Kind. Courteous. Safe.

APPENDIX D. WYOMING DOT – MEASURING RESEARCH SUCCESS AND POOLED FUND MANAGEMENT PROJECTS

Measuring Research Success and Pooled Fund Management Projects

Enid White, Research Manager, WYDOT

WYDOT Research Overview II

- STAFF: Research Manager
- SUPERVISOR: Research Engineer
- LOCATION: Materials Department
- FUNDING: 100 percent SPR-B FUNDS

  (Approx: $1.6 Million a year)

  (80 percent Federal/20 percent State)
- Research projects and Pooled Funds

Ways WYDOT Measures Success

- Perform a program evaluation ever 3-4 years.
- Use agreed upon performance measures for each evaluation.
- Implement recommendations from evaluation.
- Track performance measures for each evaluation.
- Reviews projects that use SP&R-B funds and all Pooled Funds, whether lead state or not.

Performance measures

Performance measure are compiled using information from the following documents:

- Contracts and amendments
- Proposals and pre-proposals presented to the RAC, whether funded or not
- Information on all Pooled funds, whether lead state or not

Performance Measures II

Performance measures used to assess quality of services:

- Strategic goals
  - Actual purpose/mission of the project as set out in proposal
  - Was the actual proposal/mission accomplished
  - Was the actual proposal/mission changed during research project
- Strategic intent areas
  - Safety
  - Preservation
  - Cost Savings
  - Infrastructure Upgrade
  - Public Affairs
  - Wildlife

Performance Measures III

- Outcome Measure areas
  - New knowledge
  - Product Standards
  - Specifications revised
  - New methodologies implemented
  - Dollars saved/costs avoided
  - Crashes/fatalities reduced
  - New products evaluated/implemented
  - Policy/legislative impact
- Output measure areas
  - Work performed
  - Results achieved
  - Efficiency measures
  - Inputs

Additional Measures

- Additional measures considered
  - Project Champion and WYDOT Department
  - Funding amount per WYDOT Department
    - Amount actually funded per evaluation period
    - Amount requested, whether funded or not, per evaluation period
  - Timeliness
    - Start/End date of project from contract
    - Actual completion date
    - Time and funding extensions

Contact

Enid White

Wyoming Department of Transportation

5300 Bishop Blvd

Cheyenne WY 82009

307-777-4182

Orcid.org/0000-0002-3758-8309

APPENDIX E. IDAHO TD – MEASURING RESEARCH SUCCESS

Measuring Research Success

Idaho Transportation Department

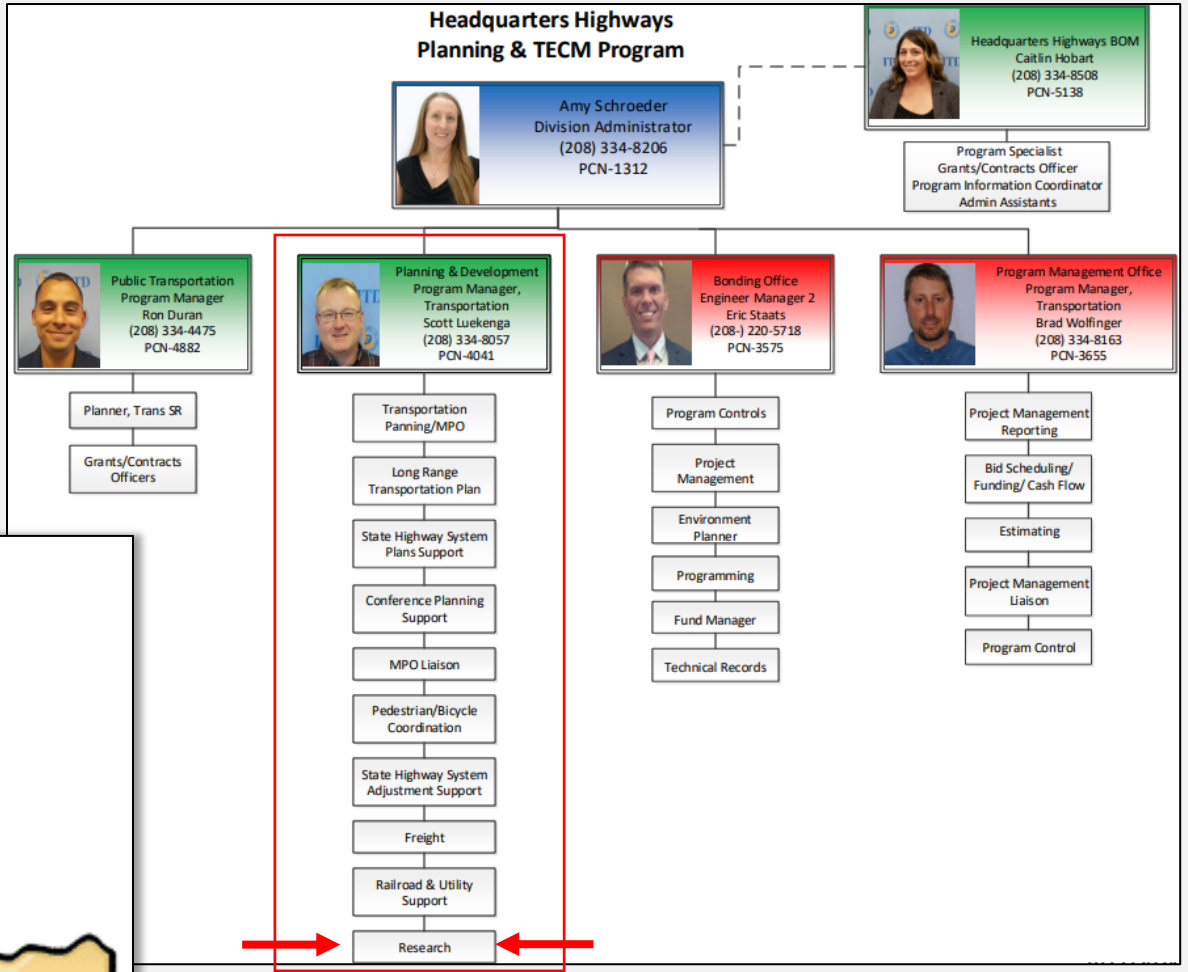
Western Transportation Research Consortium & Peer Exchange
5/20/2025

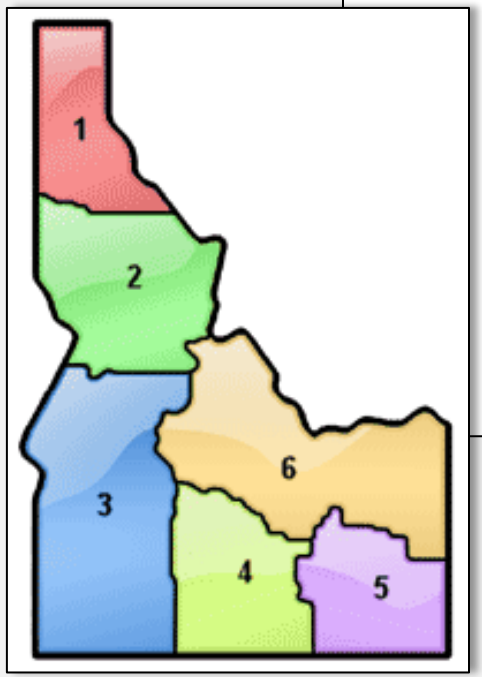
Amanda Laib

Your Safety • Your Mobility • Your Economic Opportunity

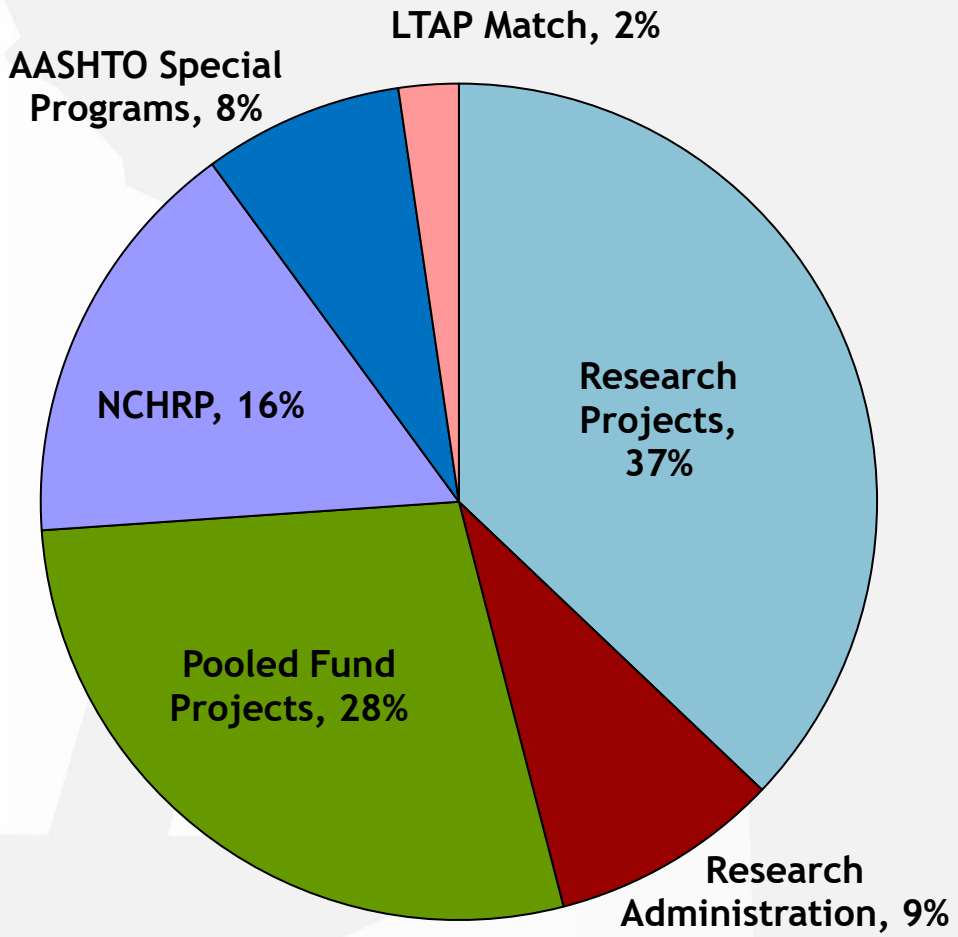
ITD General Overview

- Serve population of 2 million
  - Approximate FY25 budget $1.37 billion
- Six District Offices
- Three Primary Divisions
  - Highways
    - Development
    - Operations & Maintenance
    - Planning
  - DMV Services
  - Aeronautics





ITD and Research Program Overview

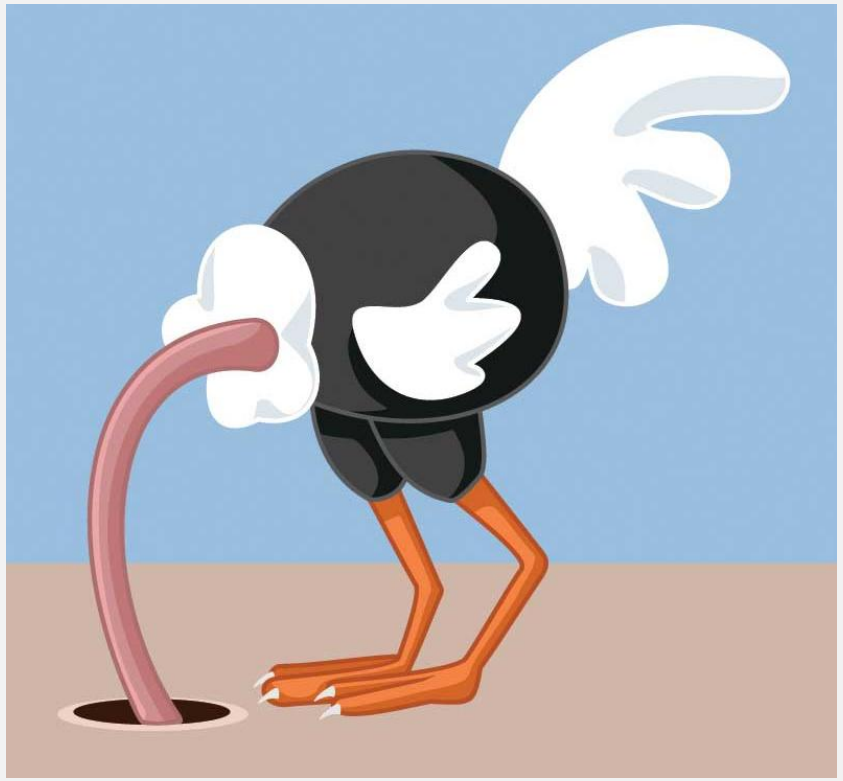


Research

- 2 FTEs
- 21 New and active research projects
- Total FY2025 Budget = $2.59 million

How Do We Measure Success?

True confession: We don't…



Performance Measures in Development

- New Project - *Benefits of Transportation Research in Idaho*
- Objective: Develop a method for estimating ROI and defining value-based success metrics across diverse research types
  - Customization: Tailor metrics to different types of research projects to enhance relevance and accuracy
  - Communication Strategies: Guidance on strategies to effectively communicate results and research benefits internally and externally.

> "The main question that I am immediately concerned with….is whether we shall get a dollar's result for every dollar we expend for roads. I am quite sure that if we do so and we can convince the people that we have done so, they will be willing to put much more money into good roads where they are needed."
>
> - David F. Houston, Secretary of Agriculture 1913-1920

Performance Measures in Development

Research Approach

- Comprehensive Best Practices Review
  - Draw from literature and models used by leading state DOTs
- Stakeholder Input and Collaboration
  - Feedback through structured engagement - internal and external
- Methodology Development
  - For quantitative and qualitative benefits
- Testing and Case Studies of Completed Projects
  - Ensure sustainable framework for ongoing use

What Makes a Useful Measure?

- Relevance to Agency Goals
  - Should align with ITD's Mission
  - "Invest with purpose"
- Clarity and Communication
  - Should be easily interpreted by diverse stakeholders including technical and non-technical audiences.
- Actionability and Scalability
  - Should enable and inform decision-making and be applied across individual projects and the broader program

When and Who?

Pre-project – Project Manager

- During idea generation to ensure alignment with objectives and feasibility assessment early

During Project - TAC

- Ongoing monitoring to ensure work aligns with performance objectives, use corrective action if needed

Post-project – Research Program

- Evaluate return on investment, long-term impacts, and inform future research priorities

Challenges

Defining Success

- Interpretations of what constitutes “success” may vary

Difficulty in Quantifying Benefits

- Balancing with qualitative benefits and storytelling

Following up on Implementation

- Time lag between research and outcomes, tracking real-world use and impacts falls through the cracks

Sustainability and Consistency

- Maintaining tools or systems to track success consistently across projects

Resistance to Scrutiny

- Inviting unwanted criticism or pressure to justify funding

Resource Constraints

- Limited staff and expertise

Thank You

Questions?

APPENDIX F. MONTANA DOT – MEASURING RESEARCH SUCCESS IN MONTANA

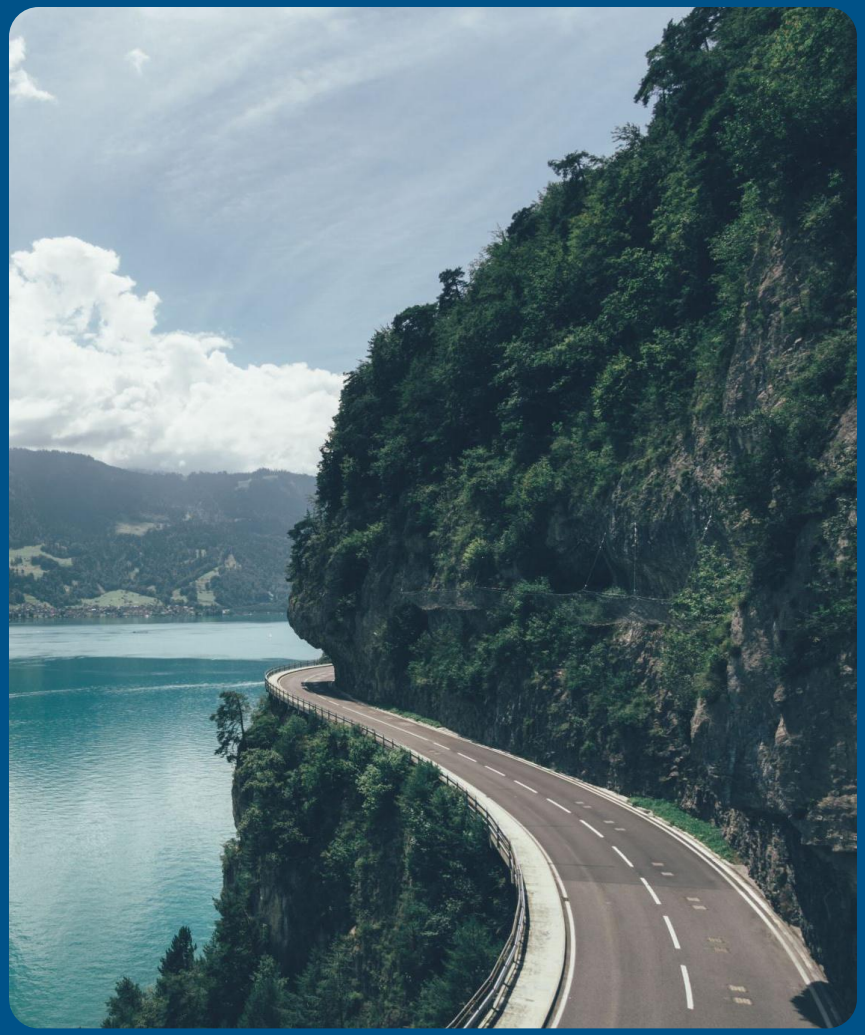
Measuring Research Success in Montana

Alexandra Nelson

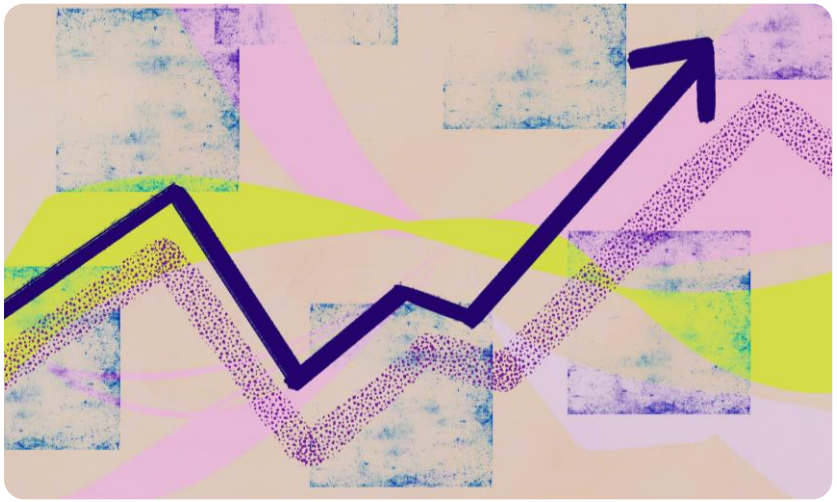
MONTANA
Department of Transportation

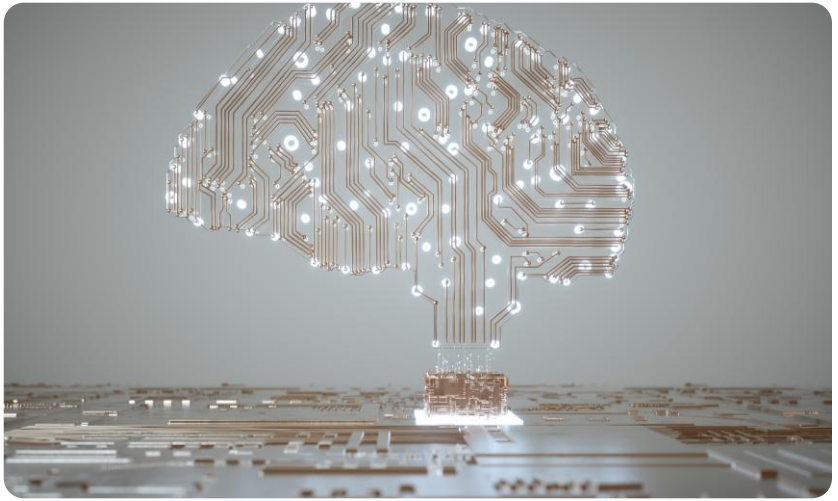
Why?

- **We want to solve real-world transportation challenges.**
  - Improve
  - Use & support data
  - Uphold obligations
  - Advance



Why do we measure research success?





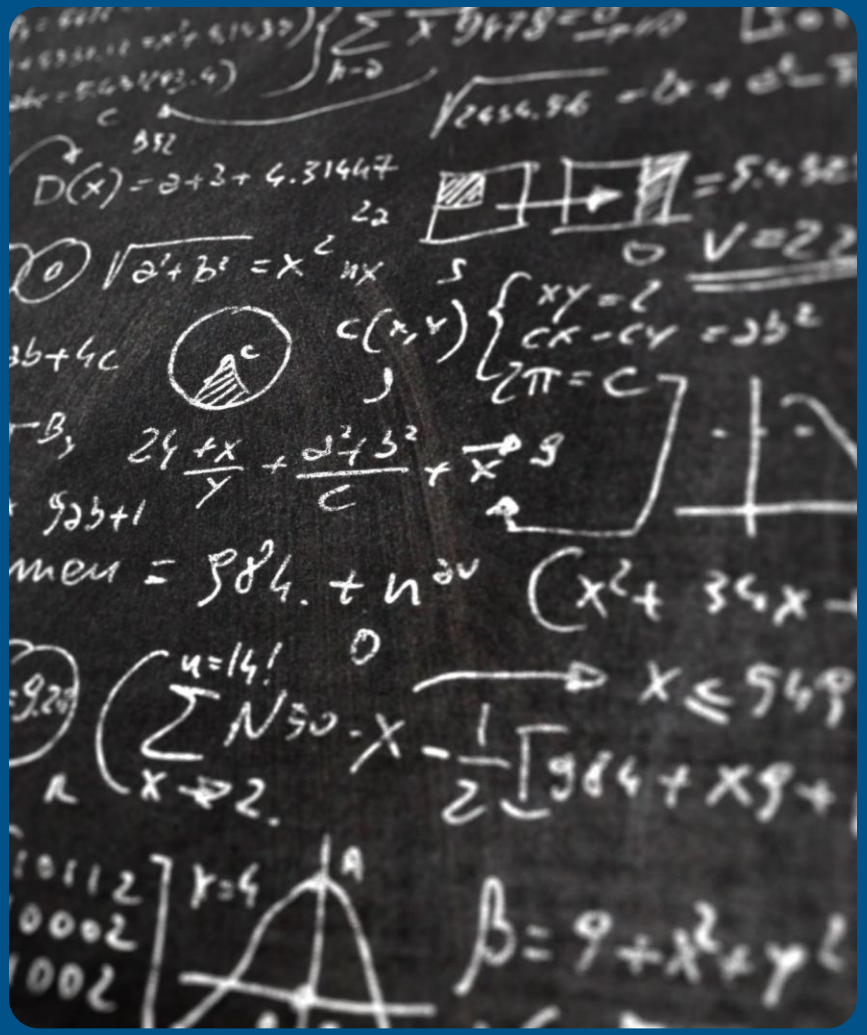
- **Accountability**
  - Justify investments
  - Support agency goals
  - Better decisions
- **Innovation**
  - Improve future projects
  - Generate conversation
  - Adaptable

Challenges

- Enthusiasm
- Is there a finish line?
- Was there a well-defined research question to begin with?

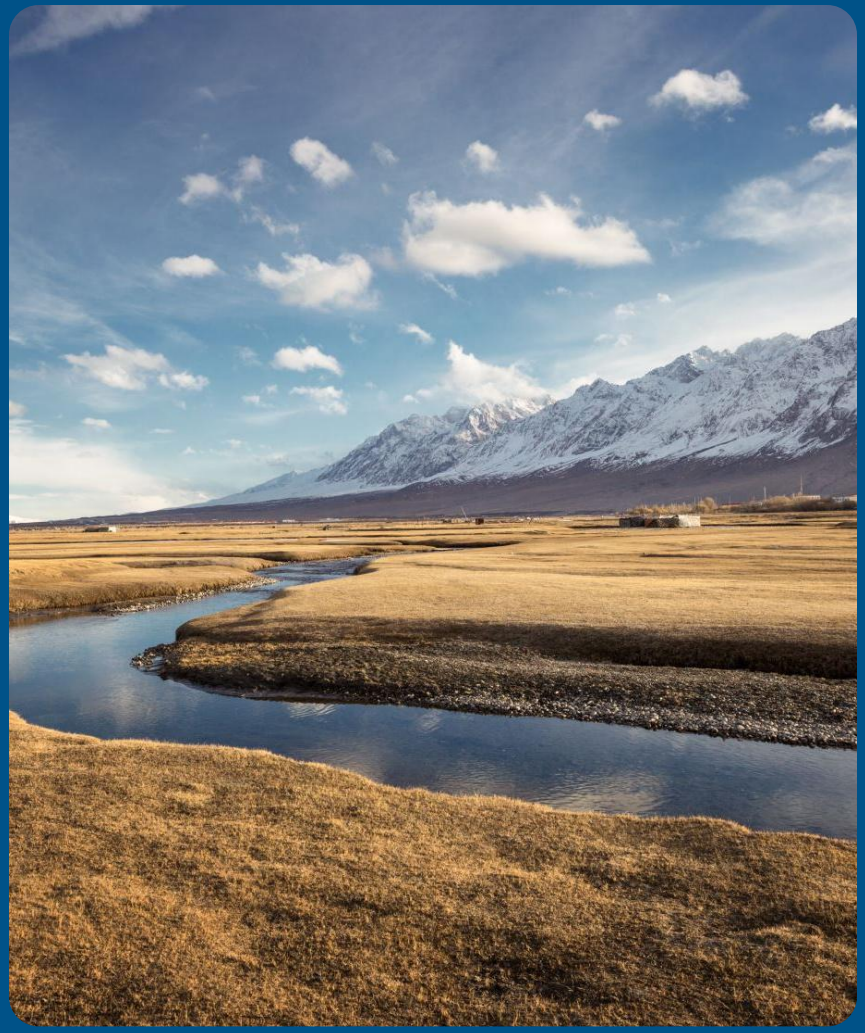
How? Is there some magical formula?

- Build confidence
  - One on one
  - Engage with *everyone*
- Guide, not lead
  - Everyone has a good idea…
  - Simplify and shape it



What Does Success Look Like?

- It doesn't have to be big, as long as it's implementable.
- Cost-saving and efficiency.
- Make life better.
  - Safer
  - Work more enjoyable
  - Paths more walkable
  - Highways more beautiful



Thank you!

Alexandra Nelson
Research Project Manager
Montana Department of Transportation
406-444-6149 | alexnelson@mt.gov
mdt.mt.gov

Follow Us:

APPENDIX G. UTAH DOT – MEASURING RESEARCH SUCCESS

Measuring Research Success

Cameron Kergaye, UDOT Research & Innovation

WTRC Peer Exchange - May 2025

Valuing Implemented Research

- Assessments conducted by research team
- Estimation of value by project champion
- Time lapse: 2-3 years after research
- Current challenges:
  - Quantification of benefits
  - Locating implementers/champions
  - Timing

Benefit Types Included in the Survey

1- Asset improvements
2- User impacts
3- Safety impacts
4- Cost savings to UDOT
5- Environmental & Wildlife
6- Policy & Administrative issues
7- Institutional Knowledge

Example Benefits and Cost Savings

- Reduced construction costs
- Lower operational costs
- Decreased manpower requirements
- Reduced materials costs
- More efficient equipment
- Better utilization of existing equipment
- Crash numbers reduced
- Severity of crashes reduced
- Construction zone delays minimized
- Crash delays reduced
- Decrease emissions and particulates to improve air quality
- Reduce chemical discharges from pavements and materials
- Improve animal migration to reduce conflicts along highways
- Control noxious weeds on rights-of-way

Cost Estimates

- **Contract Costs (3 years) = $3,459,000**
- **TAC Costs = 6 members x $60 /hr x 3 hrs x 5 meetings x 57 projects = $307,800**
- **PM Costs = 57 x $9,000 = $513,000**

The total cost of the 57 projects is estimated at $4,280,000

Benefits Calculations

The estimated benefits of 34 of the 73 deliverables is

$111.79 million

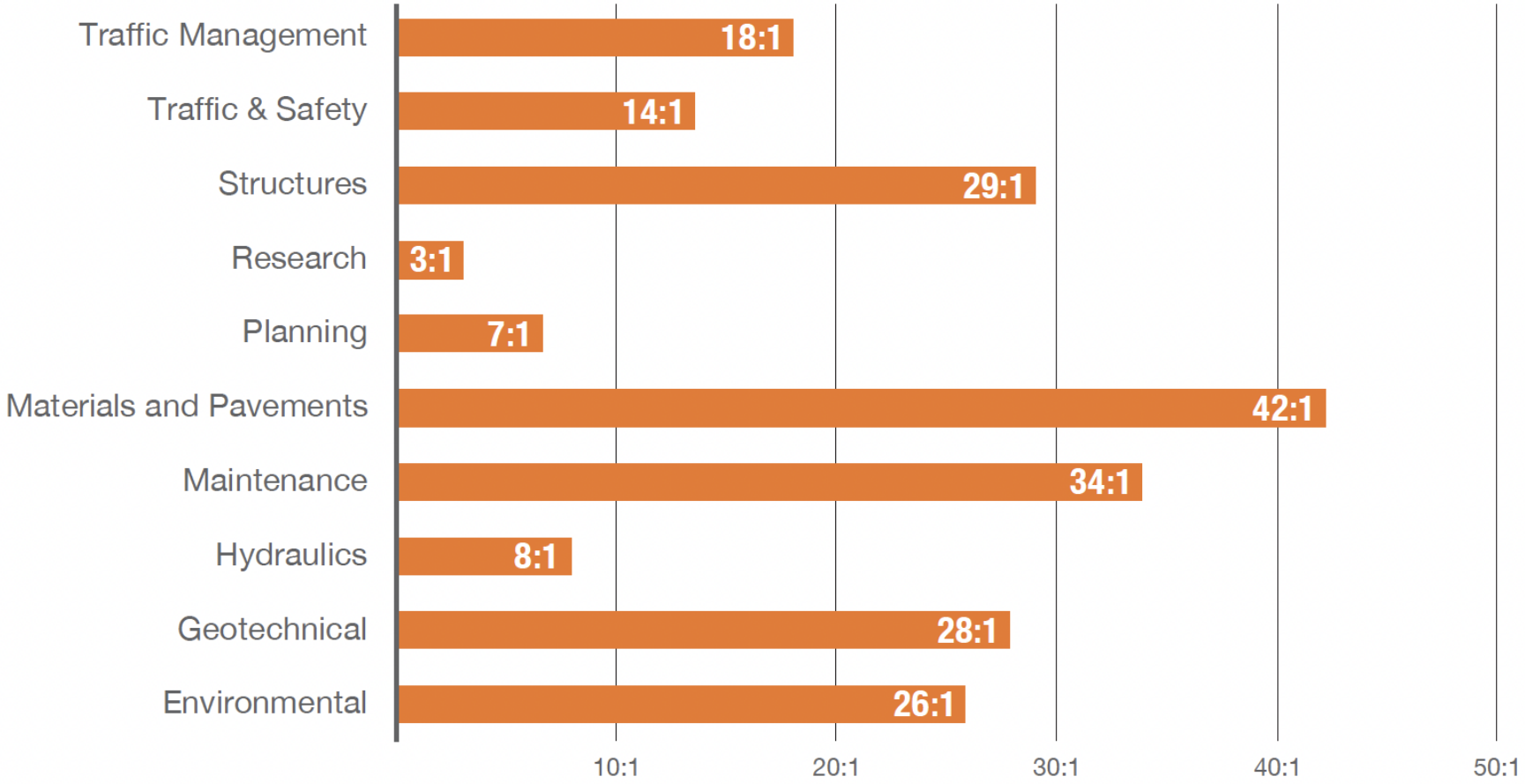
Benefit-Cost Ratio

Benefit/Cost = (Total $ Benefits)/
(Contract + TAC + PM costs)

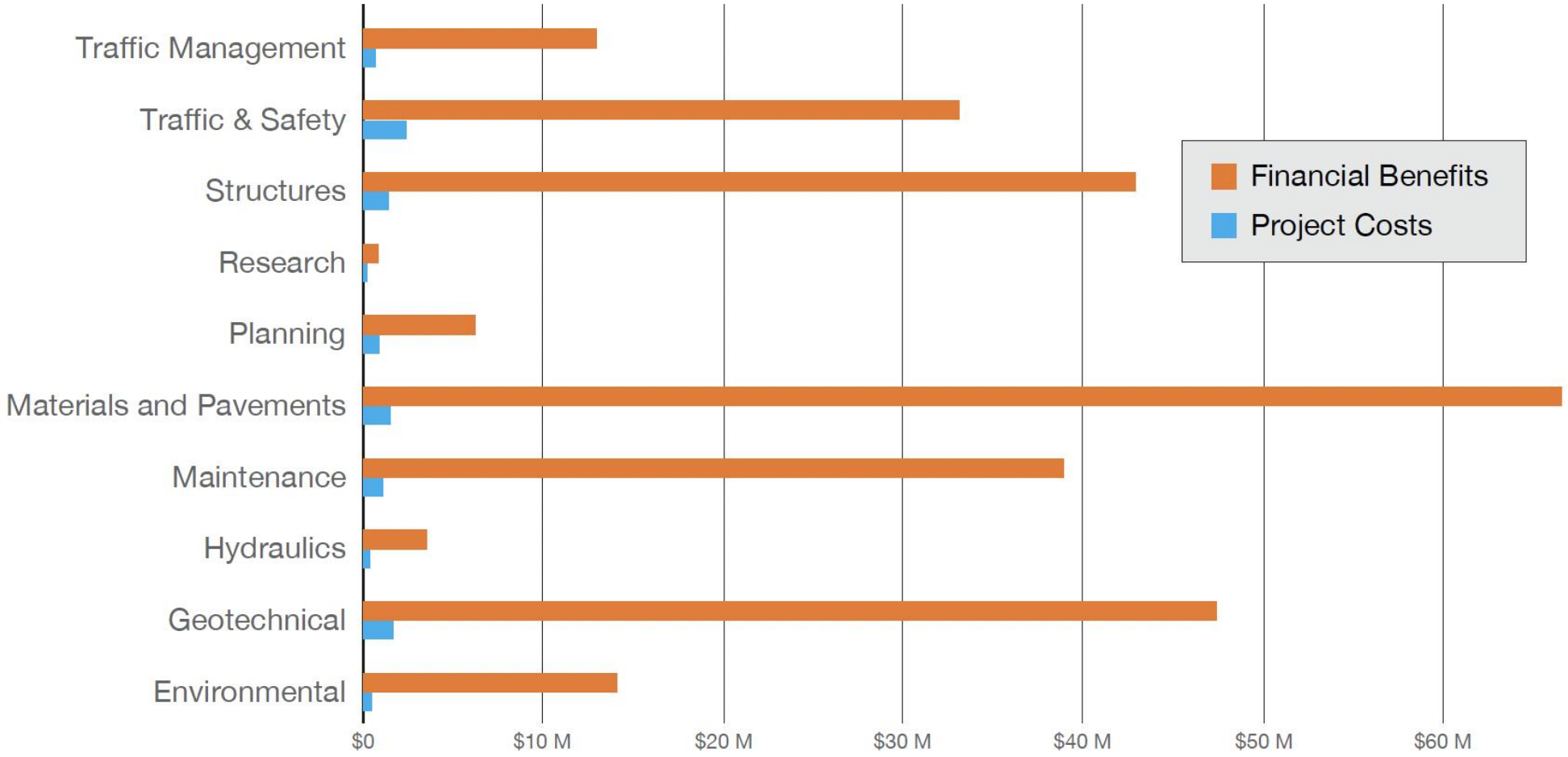
Benefit/Cost = $111.79M/$4.28M = 26.1

26:1 Ratio

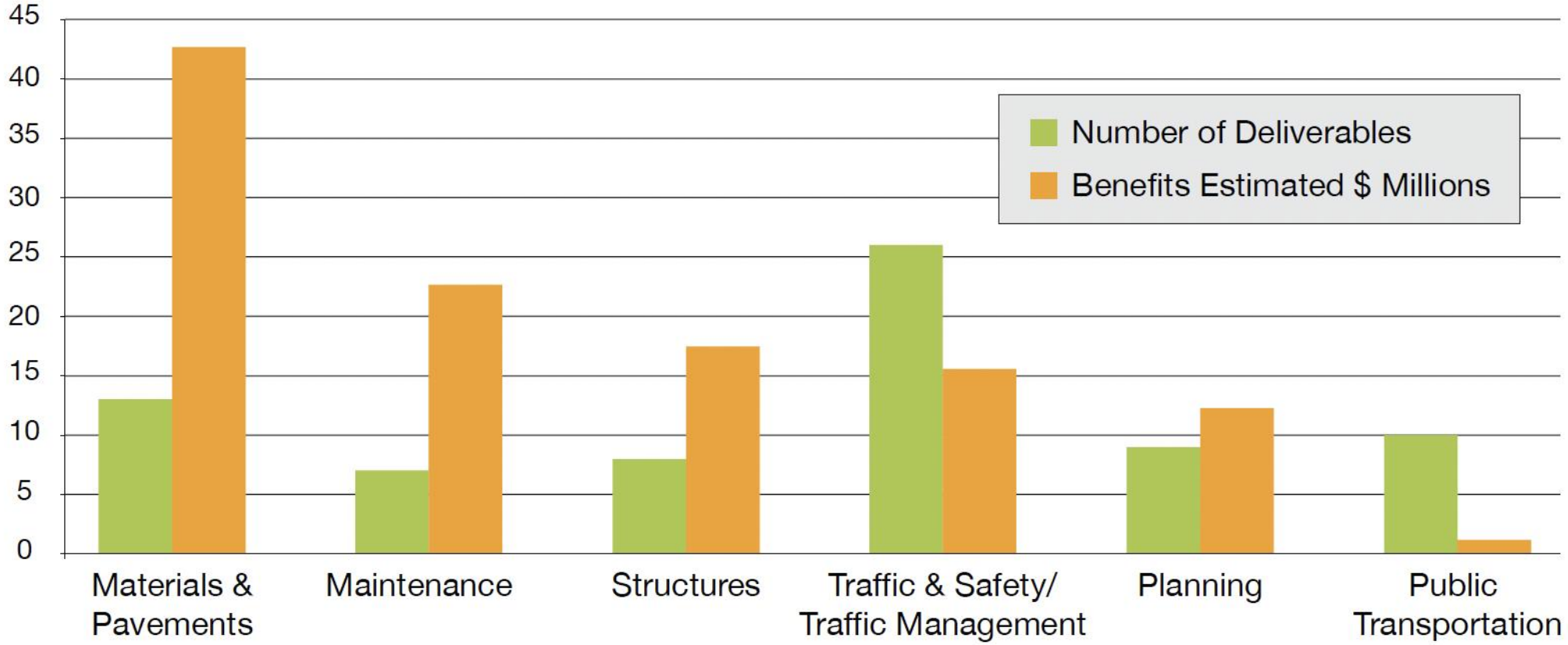
Benefits-Cost Ratios



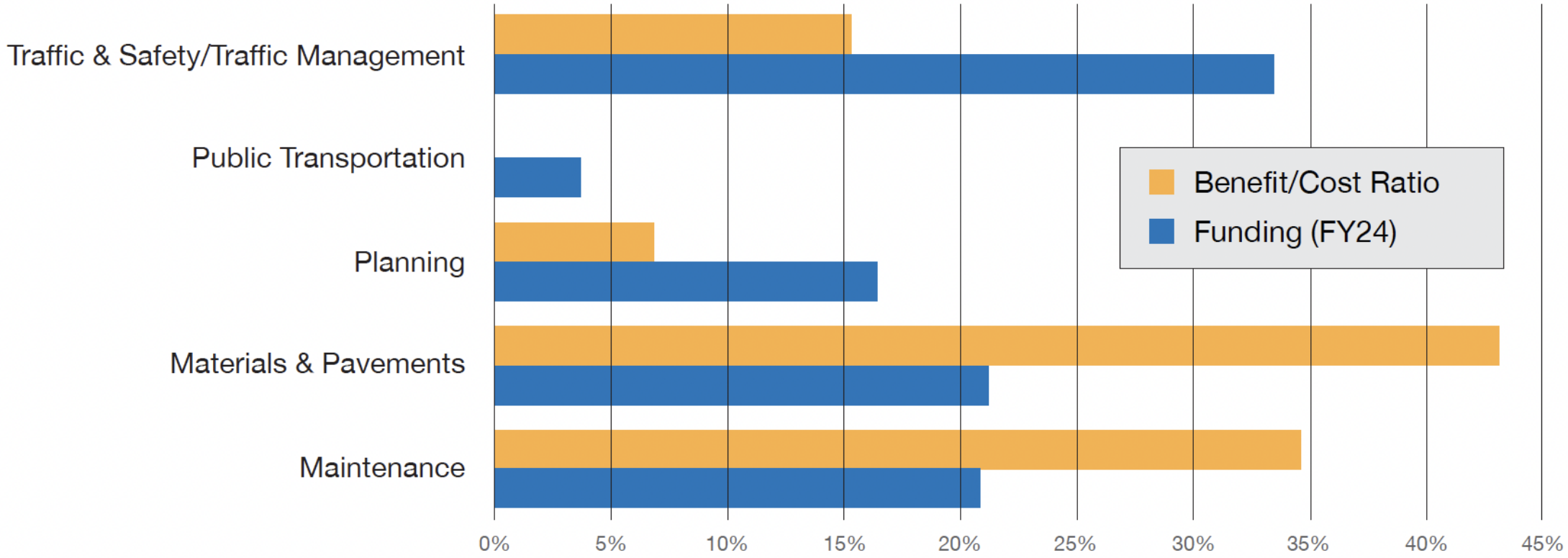
Financial Benefits and Project Costs

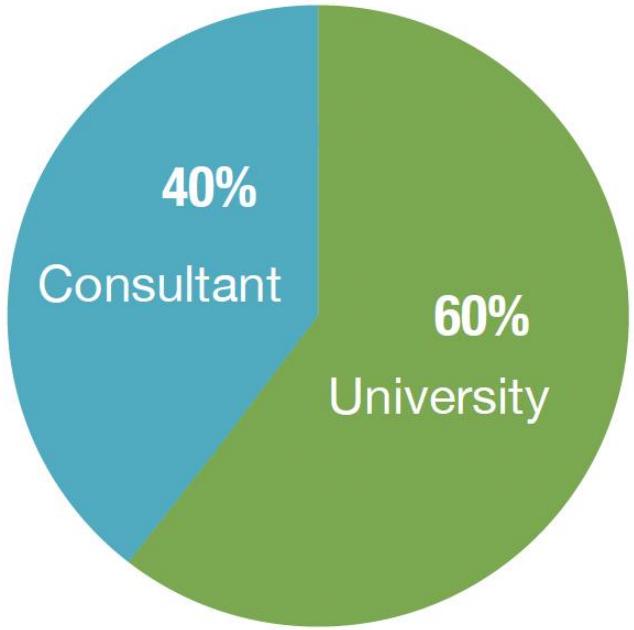


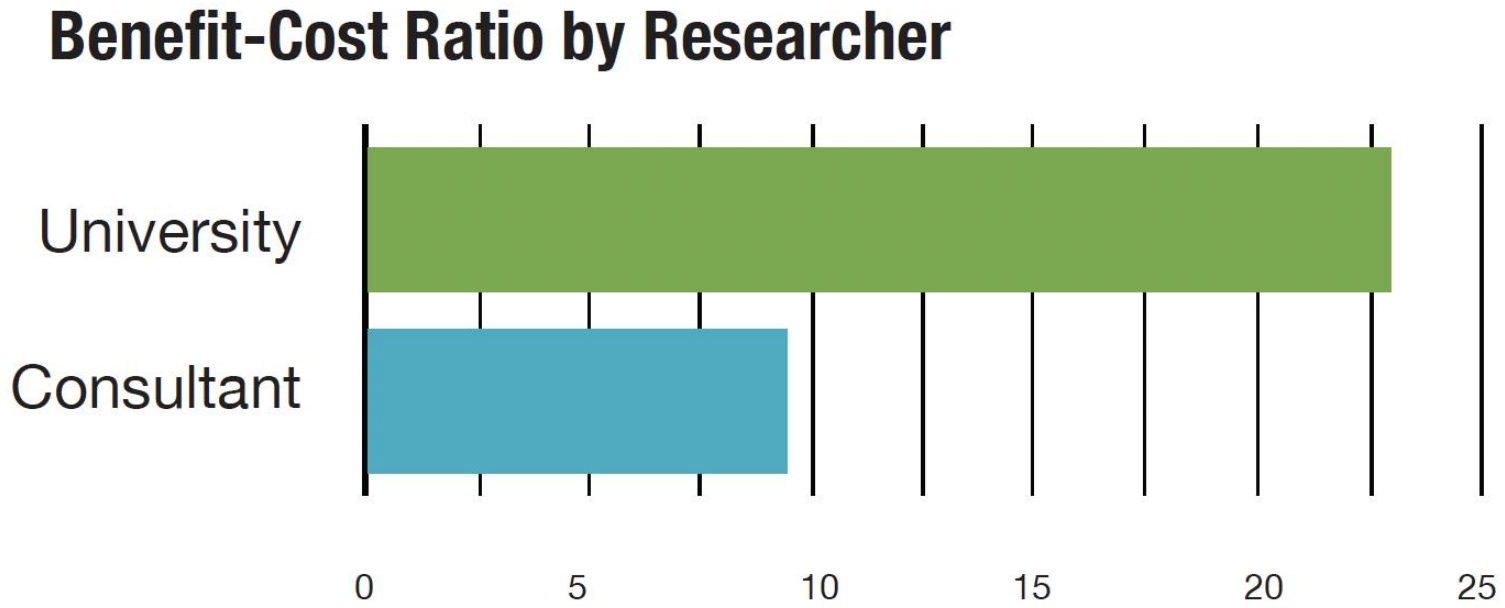
Research Deliverables and Benefits



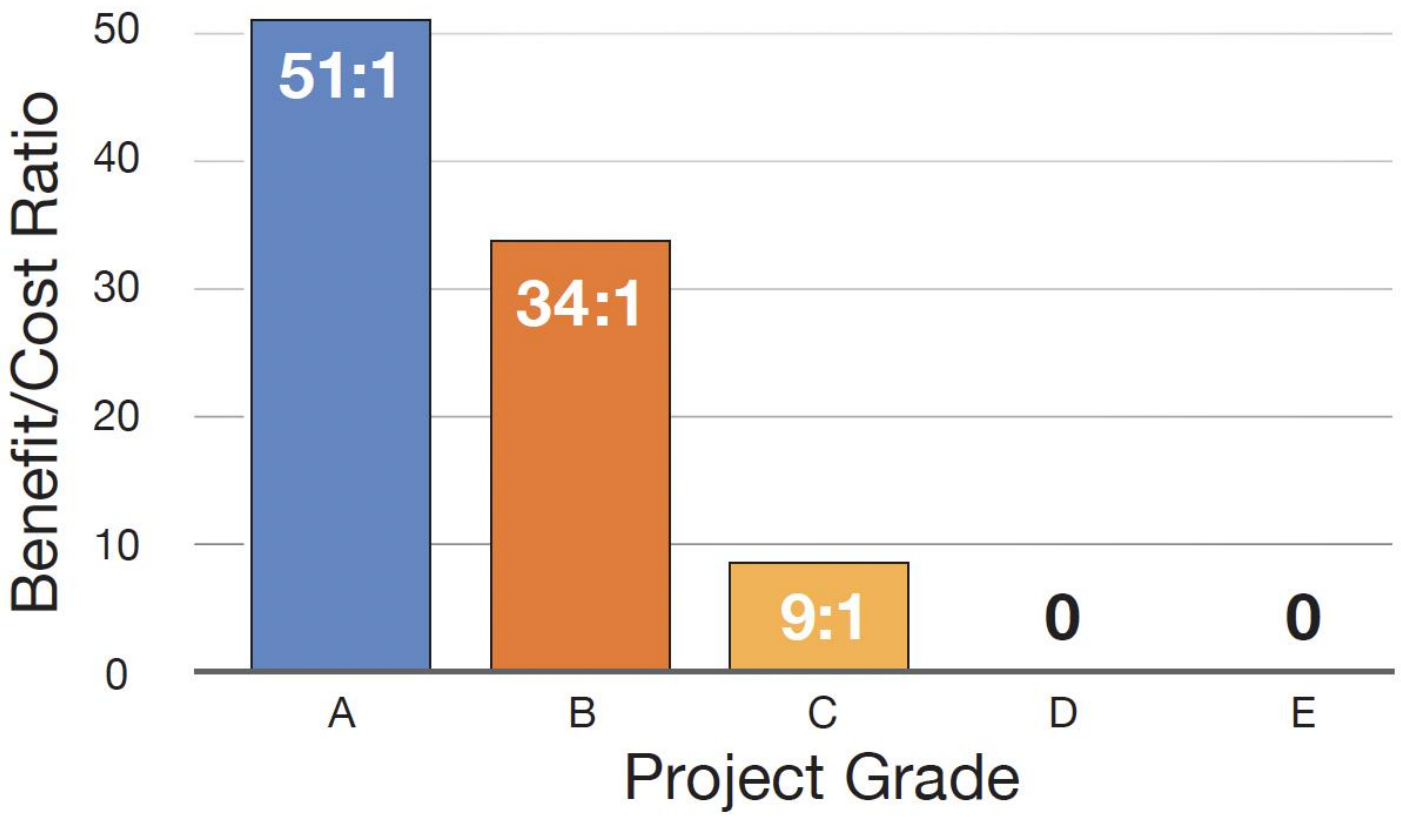
Benefit-Cost and Research Funding



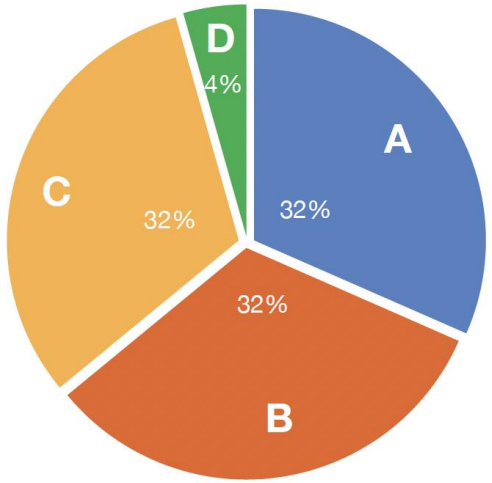

40%
Consultant
60%
University


Benefit-Cost Ratio by Researcher
University
Consultant
0
5
10
15
20
25

Benefit-Cost Ratio by Project Grades

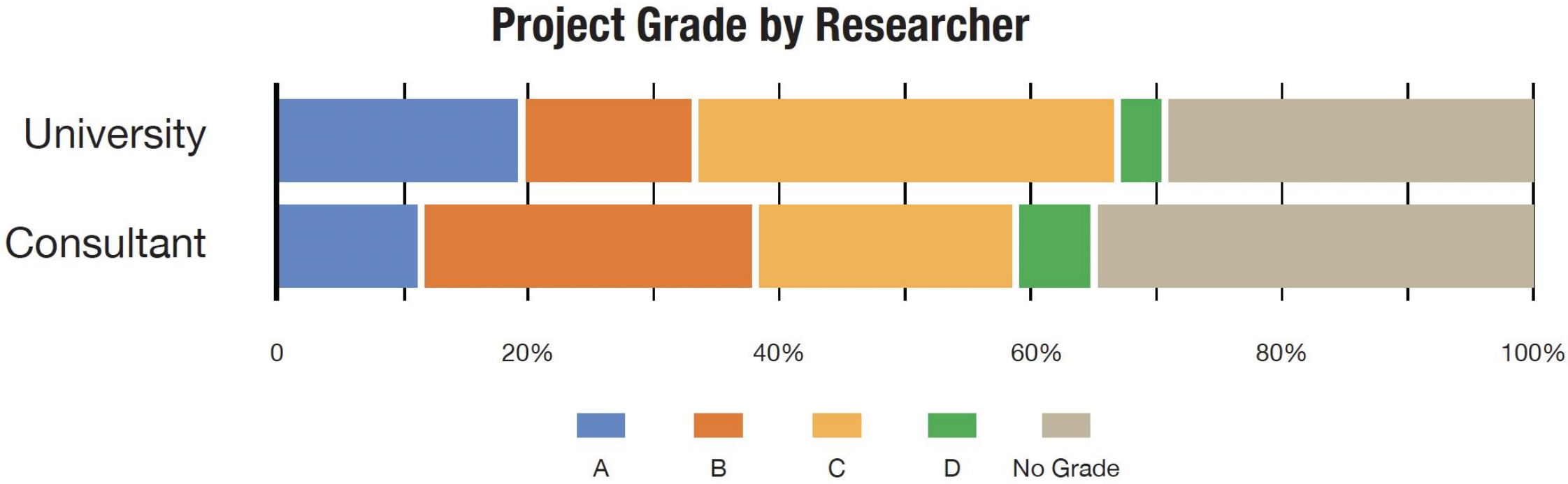


Distribution of Grades



Project Grades

Grade	Definitions
A	Major impact: New or revised specification, policy, method
B	Significant impact: Improved operations, procedure or policy
C	Contributed to state-of-the-practice or institutional knowledge
D	Unclear or contradicting findings
E	No contributions


Project Grade by Researcher
University
Consultant
0
20%
40%
60%
80%
100%
A
B
C
D
No Grade

Research Project Management System (RPMs)

Manage Individual Projects

*PIC UT21.209 | Back | Delete | Apply Changes | Add Project

Project Information

Status: OPEN | Project Types:

Program/Phase: 5H092 33H

ePM Pin: 22020

*Contract Title: Pilot Pollinator Habitat at UDOT Rest Area (Perry)

SOW Summary: Establish successful pollinator habitat at a UDOT rest area, determine its success for potential implementation, and produce a UDOT

Division: Maintenance

Initial Estimate $: 56,000.00

Report Numbers: UT-23.12; also expecting a follow-up memo on site maintenance and volunteer training in 2024

RIP Link:

General Notes: R&I Division funding $56K. Potential $8,900 in-kind time from university employees. Approx. 16-month project. May 2022: PM role transferred from Vincent to David. In good working progress and should be ready to

Contact Information

*PM: David Stevens

PI: Mindy Wheeler

Champion: Rhonda Thiele

TAC Members: Bren Edwards

Ryan Ellsworth

Rod Hess

Ryan Halverson

Jennifer Dowd (RAE Enviro)

Becky Yeager (Paisley LLC)

*Required Field

Contract Information

Contract Number: 22-8158 | MOD#: 4

Consultant: Utah State University

Start Date: 08/17/2021

Original SOW End Date: 06/30/2022

Original Contract End Date: 12/31/2022

Current SOW End Date: 09/30/2024

Current Contract End Date: 09/30/2024

Funding Type: SPR

Original Contract Amt: $56,000.00

Current Contract Amt: $61,000.00

Balance as of Today: $5,000.00

Money Spent: 92%

Time Spent (SOW): 94%

Payments

Actual

* $ Payment	*FY	Invoice Date	Invoice #	*Approval Date
15,000.00	FY24	07/10/2023	203816-3-0 (FY24)	07/31/2023
15,000.00	FY23	05/17/2023	203816-2-4 (state f...	05/30/2023
26,000.00	FY22	10/18/2021	203816-1-2	02/10/2022

1 - 3 of 3

Total: $56,000.00

Back | Apply Changes | Up

Planned

Documents | Next Steps | Implementation Assessment

Implementation Assessment

PIC UT16.101 Implementation Assessment

Delete | Apply Changes

Project Info

Contract Title:	Evaluation of Field Materials For Asph	PM:	David Stevens	Current Contract Amt:	$160,000.00
Division:	Materials	Champion:	Howard Anderson	Current Contract End Date:	06/30/2019

Open Assessment Persons Profile

Search: All Text Columns | Go | Add Asssessment Record

Assessed Date:	Who did Assessment:	Who was Assessed:	Assessment Notes:
05/30/2023	Rukhsana Lindsey	Howard Anderson	Refer to final assessment notes.

Total 1

Responsible Person: David Stevens

Financial Benefit $: .00

Final Assessment Complete: ☑

Benefit Cost Ratio:

Overall Project Grade: C - Contributed to state-of-the-practice c

Final Assessment End Date: 05/30/2023

Additive $: 14,400.00

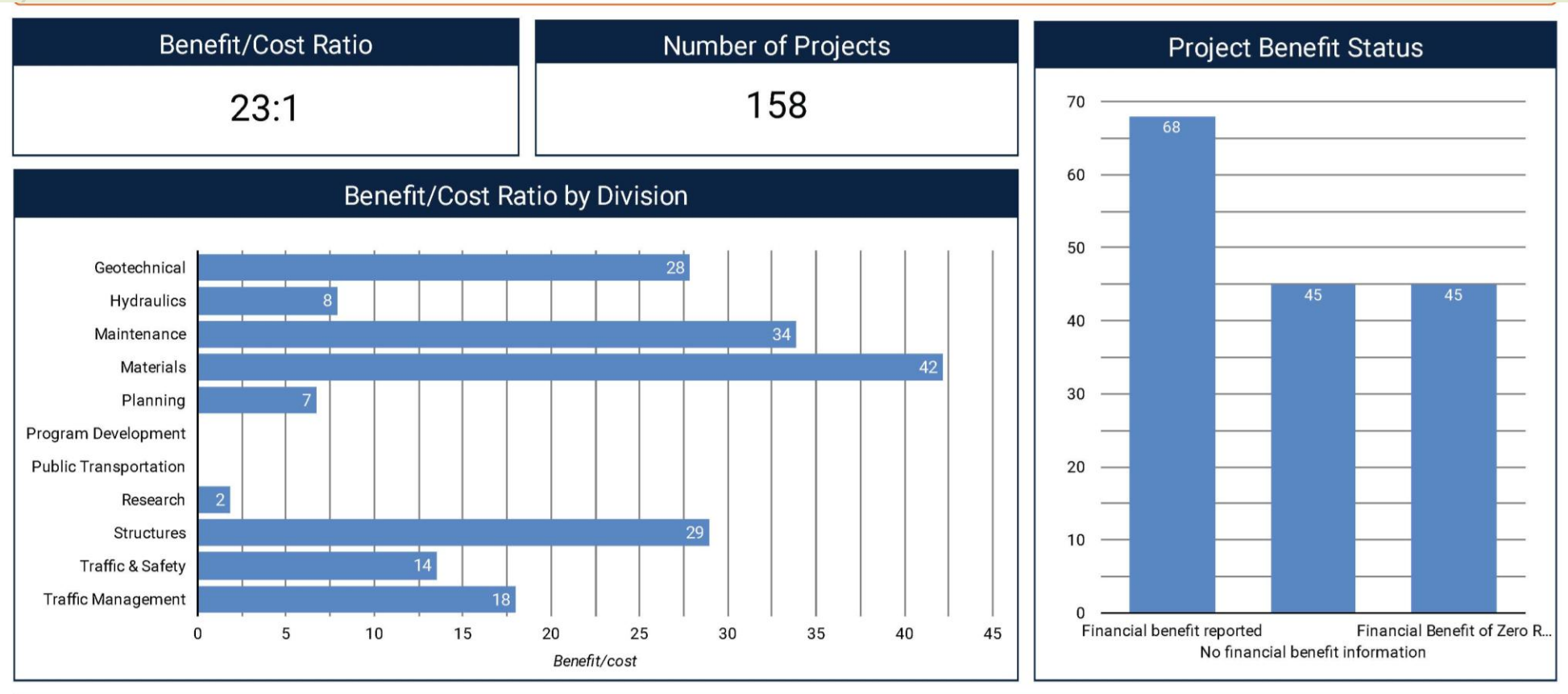
Final Assessment Notes:

Additional phases of research were funded to validate test methods for Utah mixes and establish thresholds.
The BBR and SCB-IFIT tests were looked at for an Asphalt Pavement performance test for cracking. The University of Utah and UDOT Central lab had the ability to make and run the test but implementing statewide has been difficult. Relating the test to field mixtures showed promise but was not proven.

409 of 4000

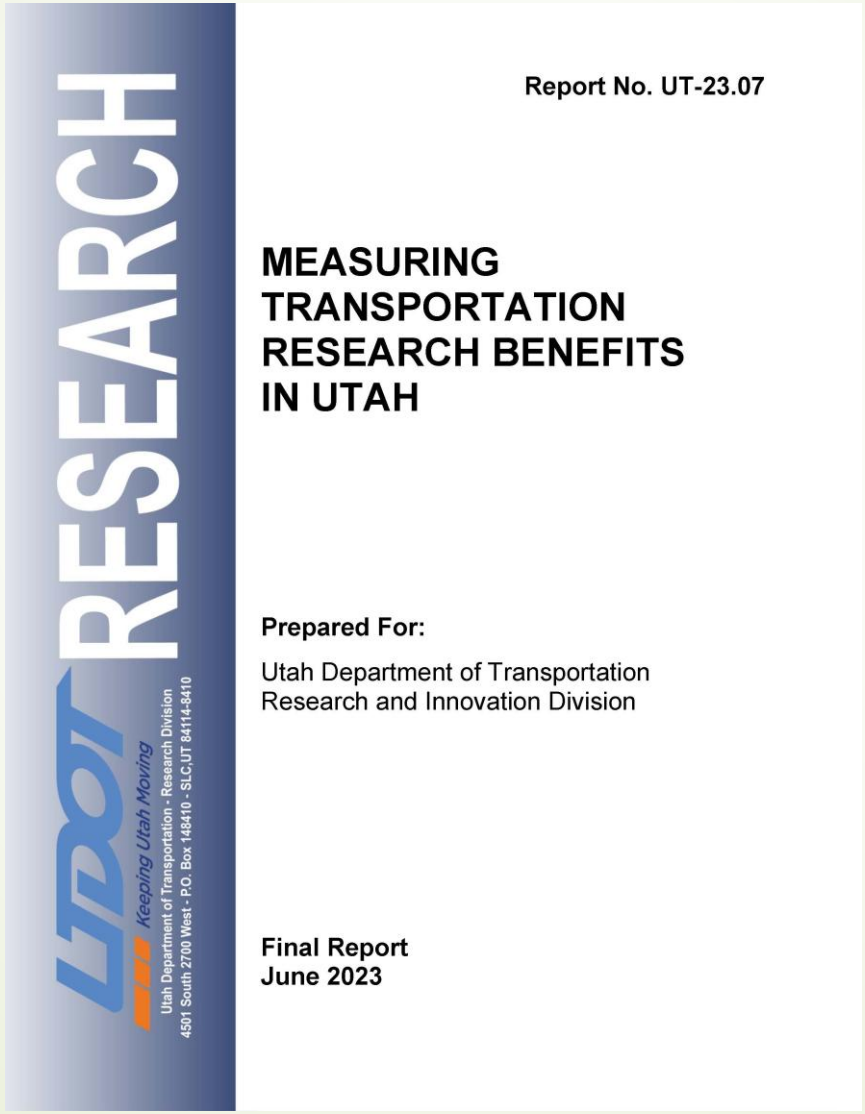
Implementation Tracking Dashboard

- Link to the Research Implementation Tracking Dashboard
- Data comes from Research Database for assessed projects



Benefits of Research Study

- Link to Report No. UT-23.07

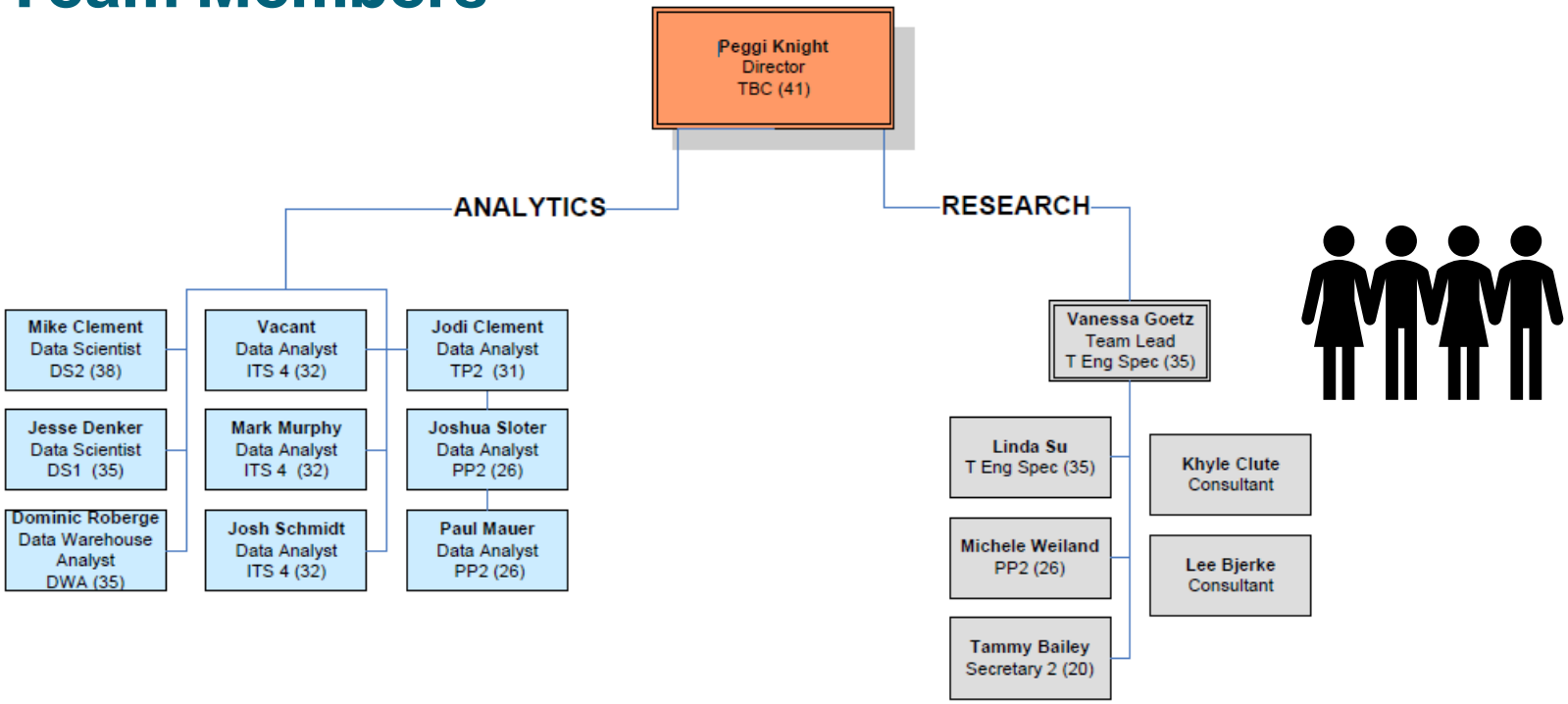


APPENDIX H. IOWA DOT – POOLED FUND MANAGEMENT

Theme 2 : Pooled Fund Management

WTRC Peer Exchange
May 2025

Team Members



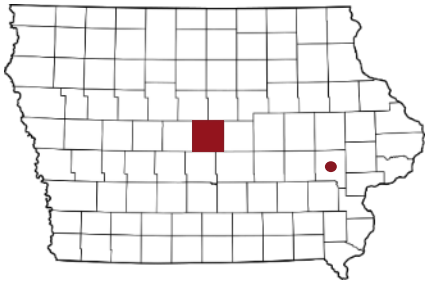
Iowa Department of Transportation
Transportation Development Division

2/14/2025

Theme 2 : Pooled Fund Management

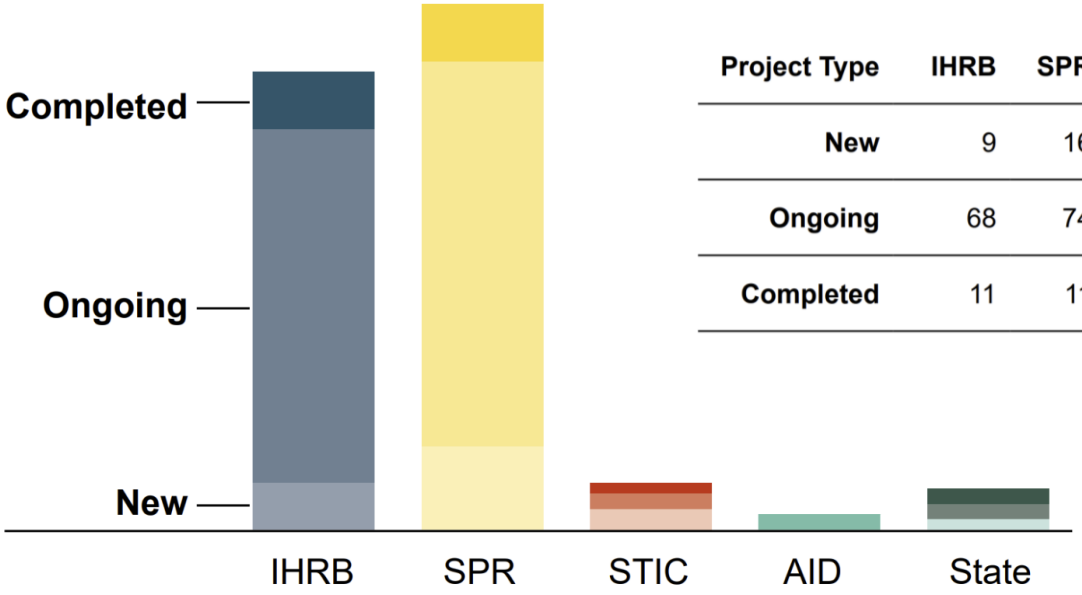
Areas of Focus

Iowa Highway Research Board/State Research Programs	SPR Research & Pooled Fund Programs	Innovation Programs & Other Partnerships
STATE	NATIONAL	AASHTO/RAC/ICOP
COUNTY	REGIONAL	TRB
LOCAL	STATE	USDOT / FHWA



Theme 2 : Pooled Fund Management

Program Activity



Project Type	IHRB	SPR	STIC	AID	State	Total
New	9	16	4	0	2	31
Ongoing	68	74	3	3	3	151
Completed	11	11	2	0	3	30

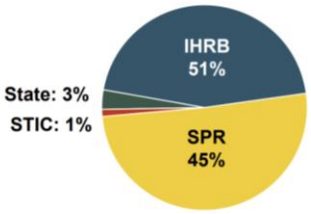
212 projects in 2023!

Theme 2 : Pooled Fund Management

Funding

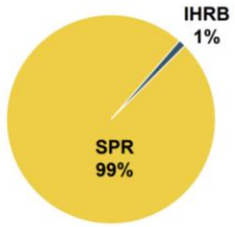
FY2023 FUNDING BY PROGRAM:

New FY2023 Funding



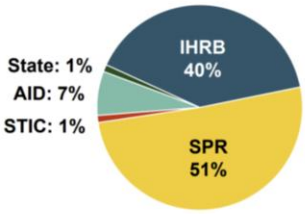
IHRB	$4,179,051
SPR	$3,692,398
STIC	$100,000
AID	—
State	$250,000
Total	**$8,221,449**

New Leveraged Funding for FY2023



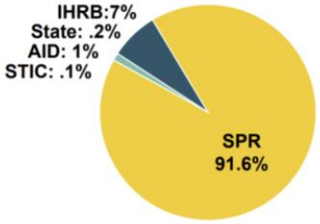
IHRB	$859,279
SPR	$99,944,185
STIC	—
AID	—
State	—
Total	**$100,803,464**

Total Iowa Funding for All Active Projects



IHRB	$10,843,923
SPR	$14,015,406
STIC	$200,000
AID	$1,797,500
State	$378,000
Total	**$27,234,829**

Total Funding from All Sources for All Active Projects



IHRB	$11,758,473
SPR	$154,687,435
STIC	$200,000
AID	$1,797,500
State	$378,000
Total	**$168,821,408**

12:1 Funding Leverage in 2023!

Theme 2 : Pooled Fund Management

Pooled Fund Involvment

Lead Organization on **26** pooled funds + 4 more solicitations

(Led 39 pooled funds since 2017)

Partner Organization on **42** pooled funds + 1 more solicitation

Overall involvement in **73** pooled funds

(Involved in 129 pooled funds since 2017)

Annually, about 50% of SPR-B budget goes to pooled funds.
The % or funding amount is not pre-determined.

Pooled Fund Types

Single Project Pooled Funds

Program Type Pooled Funds

Idea development, RFP, selection cycle each year

Knowledge Transfer Type Pooled Funds

Stand alone tech transfer and/or adjacent to conference

Roadmap and Coordination Type Pooled Funds

Coordinate individual projects, national initiatives

Pooled Fund Flexibility

Open RFP or Sole Source

University, Consultant, Private Company

Full Contracts vs. Fee for Service

In-State, Out of State, Out of Country

SPR funds, State funds, FHWA allocations, Industry association

Questions?

Khyle Clute

SPR Research and Pooled Funds Program Manager

Khyle.Clute@iowadot.us

APPENDIX I. NEBRASKA DOT – NEBRASKA DOT POOLED FUND MANAGEMENT


Mark Fischer, Research Program Manager
NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Program Status

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Current Active Projects

- 31 Projects

FY-2026 Program

- 14 new projects
- $2.1 million

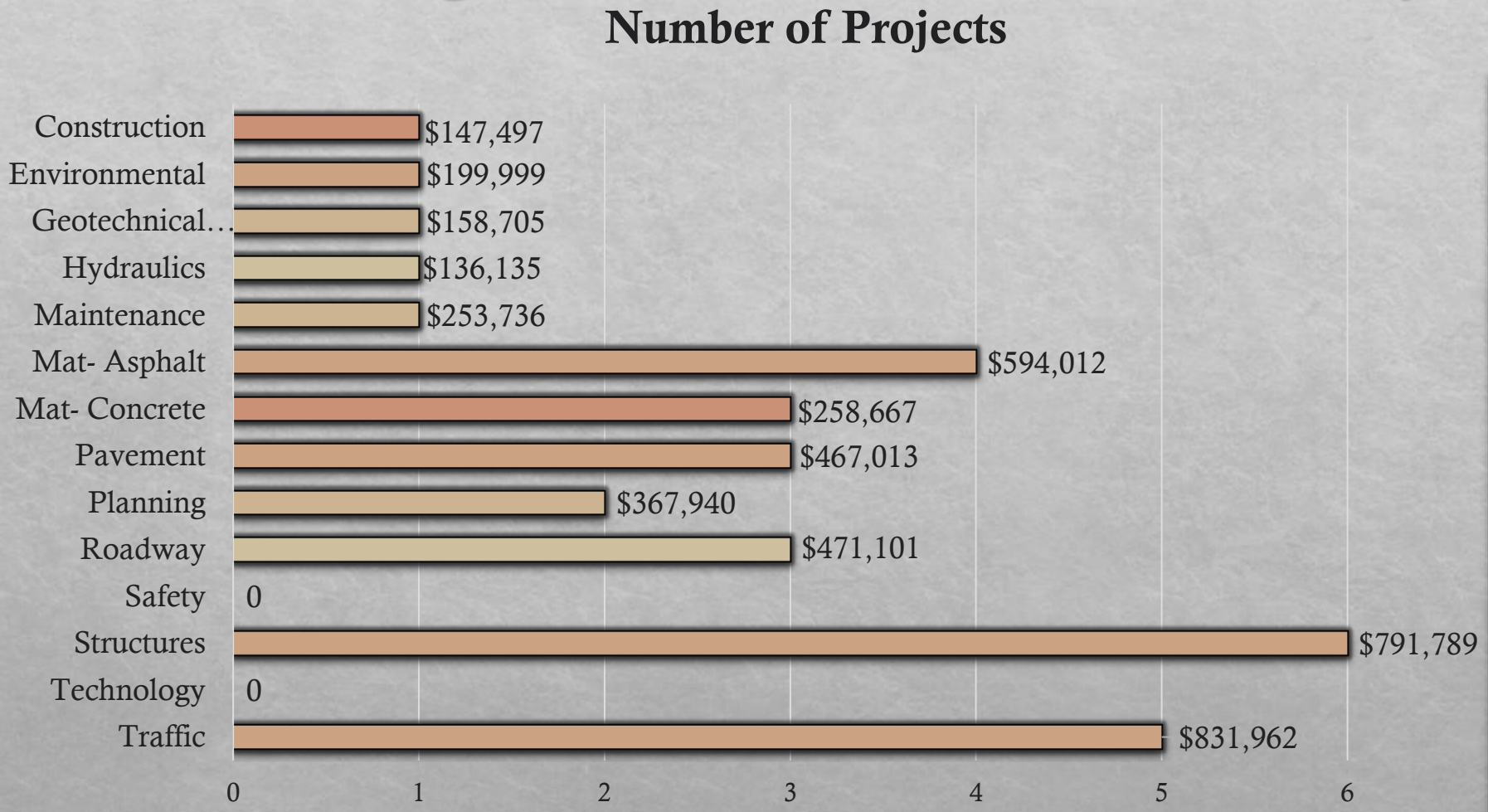
Completed in 2024

- 19 Projects

Staff

- Three full time research personnel – Project Manager, Research Engineer, Federal Aid Administrator
- Part-Time Research Program Manager

In Progress Contracted Research By Topic Area



Total Projects Budget	$4,675,556

Category	# of Projects
Construction	1
Environmental	1
Geotechnical/Soils	1
Hydraulics	1
Maintenance	1
Materials/Asphalt	4
Materials/Concrete	3
Pavement	3
Planning	2
Roadway	3
Safety	0
Structures	6
Technology	0
Traffic	5
Total Active	**31**

Pooled Pund Projects	
Study Titles	**Commitments For FY26**
TPF-5(347) *Development of Maintenance Decision Support System*	$30,000
TPF-5(437)/TPF5-(544) *Technology Transfer Concrete Consortium (FY25-FY29)*	$12,000
TPF-5(438)/TPF-5(545) *Smart Work Zone Deployment Initiative (FY25-FY29)*	$25,000
TPF-5(447)/TPF-5(554) *Traffic Control Device Consortium*	$30,000
TPF-5(448) *Improving Specifications to Resist Frost Damage in Modern Concrete Mixes*	$20,000
TPF-5(451) *Road Usage Charge (RUC) America*	$25,000
TPF-5(465) *Consortium for Asphalt Pavement Research and Implementation (CAPRI)*	$10,000
TPF-5(466) *National Road Research Alliance- NRRA (Phase II)*	$75,000
TPF-5(467) *Project Management Software for Research*	$0
TPF-5(470) *Guidelines for Determining Traffic Signal Charge and Clearance Intervals*	$30,000
TPF-5(479) *Clear Roads Winter Highway Operations Phase III*	$25,000
TPF-5(480) *Building Information Modeling (BIM) for Infrastructure*	$30,000
TPF-5(492) *2023 through 2025 Biennial Asset Management Conference and Training on Implementation Strategies*	$12,000
TPF-5(508) *Concrete Bridge Engineering Institute (CBEI)*	$30,000
TPF-5(515) *Evaluation of Low-Cost Safety Improvements*	$5,000
TPF-5(520) *Improving Traffic Detection Through New Innovative i-LST Technology Demonstration Pilot Print*	$30,000
TPF-5(523) *Building Information Modeling (BIM) for Bridges and Structures Phase II*	$20,000
TPF-5(526) *Western States Consortium*	$15,000
***TPF-5(533)** *Midwest Roadside Safety Pooled Fund Program (FY25-FY29)*	$65,000
TPF-5(536) *Ahead of the Curve-Migration from NCHRP to AASHTO Technical Training Solutions*	$10,000
TPF-5(546) *Recycled Materials Resource Center – 5th Generation*	$40,000
TPF-5(550) *Performance Based Specification of Fiber Reinforced Concrete*	$30,000
Solicitation 1620 *Uncrewed Aircraft Systems (UAS) Standardization*	$25,000
Commitment for FY2026	**$594,000**
***Pooled Fund Lead State**	

Midwest Roadside Safety Pooled Fund Program TPF-5(533)

HBIB-6

- Pickup truck impact in reverse-direction downstream from the rubrail termination
  - MASH 3-37a
  - 63.0 mph, 24.9 degrees to tangent MGS
- Successfully contained and redirected → PASS

Test No. INPCB-1 (3-11)

Pooled Fund Budget

- Annual Budget Approximately $1.4 million
- Projects selected annual meeting
  - Average 13 new projects per year
- 65 projects developed totaling just over $11 million
- States can fund their own projects
  - Allows the state to use the pooled fund's indirect cost rate for their project

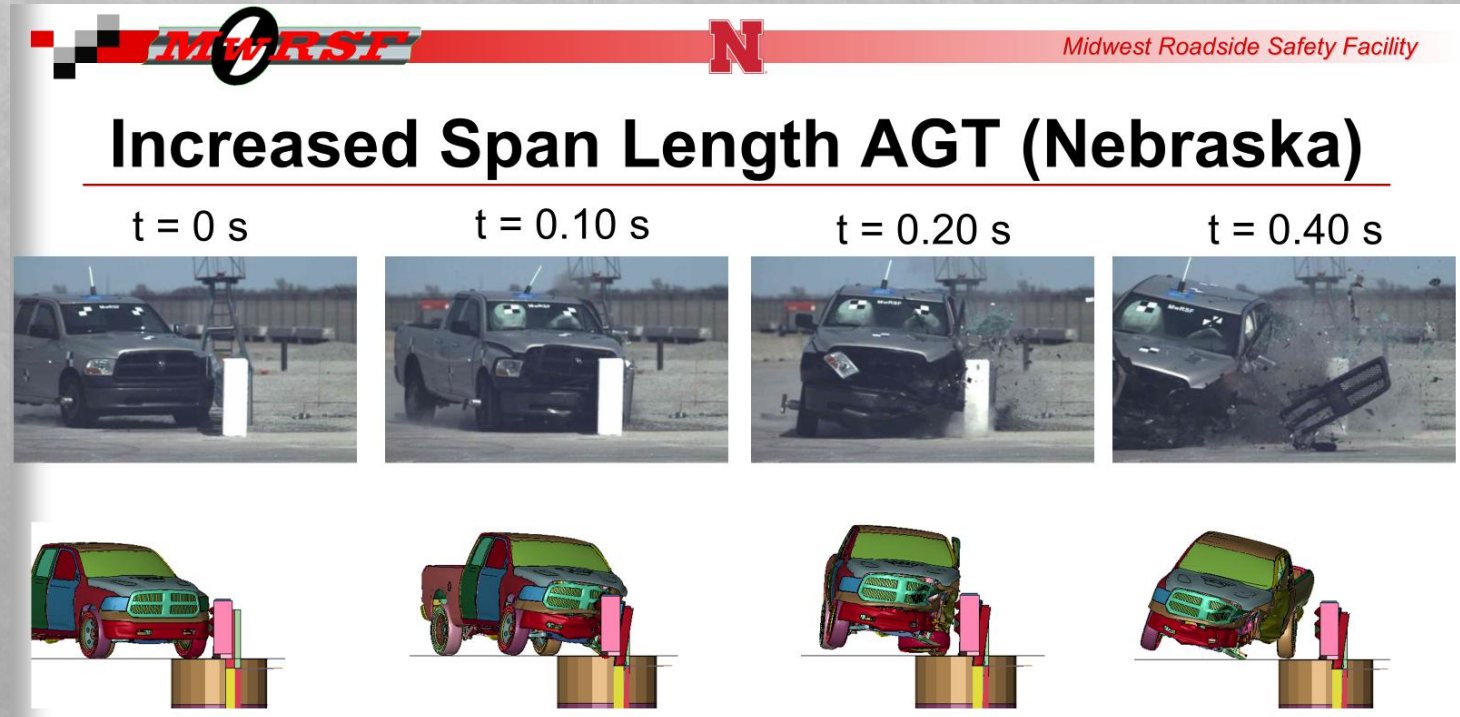
Pooled Fund Management Best Practice

- Good partnership with the University
  - Have scheduled communication at set times throughout the year
- Transparency with the other member states on progress
  - Project tracking mechanism

Project	NDOT Project No.	MwRSF Project Lead	Start date	Current Close date	Estimated Completion Date	Project Tasks/Status	Total Project % Completed	Notes/Remaining Tasks
						progress		
RPFP-FY2022-MGS-5: Surface Mounted Strong-Post MGS	TPF-5(430) – Suppl. #29	Scott Rosenbaugh	7/1/2022	7/31/2026	7/31/2026	1. Project Planning and Correspondence - In progress 2. Design and Analysis - In progress 3. Dynamic Bogie Testing (# of tests TBD) - Completed 4. Reporting and Project Deliverables - In progress	60.0%	MwRSF has completed a literature search and development of design concepts. Three dynamic component tests of preferred concepts were conducted. Two tests were performed on preferrred concepts with slots in the compression flange of the post. An additional test was conducted on a post foundation option. Simulations were conducted investigating the connection between standard MGS in soil and the surface-mounted MGS. All simulation results were consistent with standard MGS with posts installed in soil. No simulations exhibited tendencies for vaulting, instability, pocketing, or wheel snag. Some additional simulations are currently in progress to investigate a surface mounted MGS approaching the surface-mounted approach guardrail transition. Reporting of the effort is in progress.

Pooled Fund Management Challenges

- Documentation
  - Fund tracking
  - Project tracking (Interstate agreements)
- Appropriate amount of communication
- Length of projects (3 year avg.)
- Travel
- Using the TPF Website
  - Update commitments
  - Technical representative
- Multi-phase pooled fund



Pooled Fund Participation

Participant

- Use a portion of our RAC meeting to discuss the pooled fund value
- Our implementation is very dependent on the technical SME
- The main value is sharing common issues and getting technical staff with the other states' staff
- We do not have check-ins with our technical staff in pooled funds

Lead State

- Make sure the final is communicated to the participants
- Implementation can be seen in other state's roadside hardware
- Make sure our administration knows the value


Questions and Comments:
ndot.research@nebraska.gov
Pooled Fund Website:
mwrsf.unl.edu
NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

APPENDIX J. TEXAS DOT – POOLED FUND MANAGEMENT: TXDOT

Pooled Fund Management: TxDOT

2025 WTRC Peer Exchange

Katelyn Kasberg, Research Project Manager

Texas Department of Transportation

August 19, 2025

Research Program Overview

Primary Function
Total Projects FY24: 101 (+42 non-contracted)
RTI Staff: 16

Research Program Funding Overview

Program	SPR	Total Funding Obligated (FY25)
Research Program	Including pooled funds	$28,849,714
Implementation Program	Including LTAP	$3,658,912
Pooled Fund Contributions	Non-TxDOT led	$1,556,667
Total		**$34,065,293**

Research Program Funding Overview

Functional Area Committee Budget (FY25)

Functional Area	Budget
Construction, Maintenance & Materials	$5,207,275
Planning and Environmental	$1,248,214
Safety and Operations	$1,857,498
Structures and Hydraulics	$6,366,911
Strategy and Innovation	$395,289

Research Program Funding Overview

RTI National Exposure

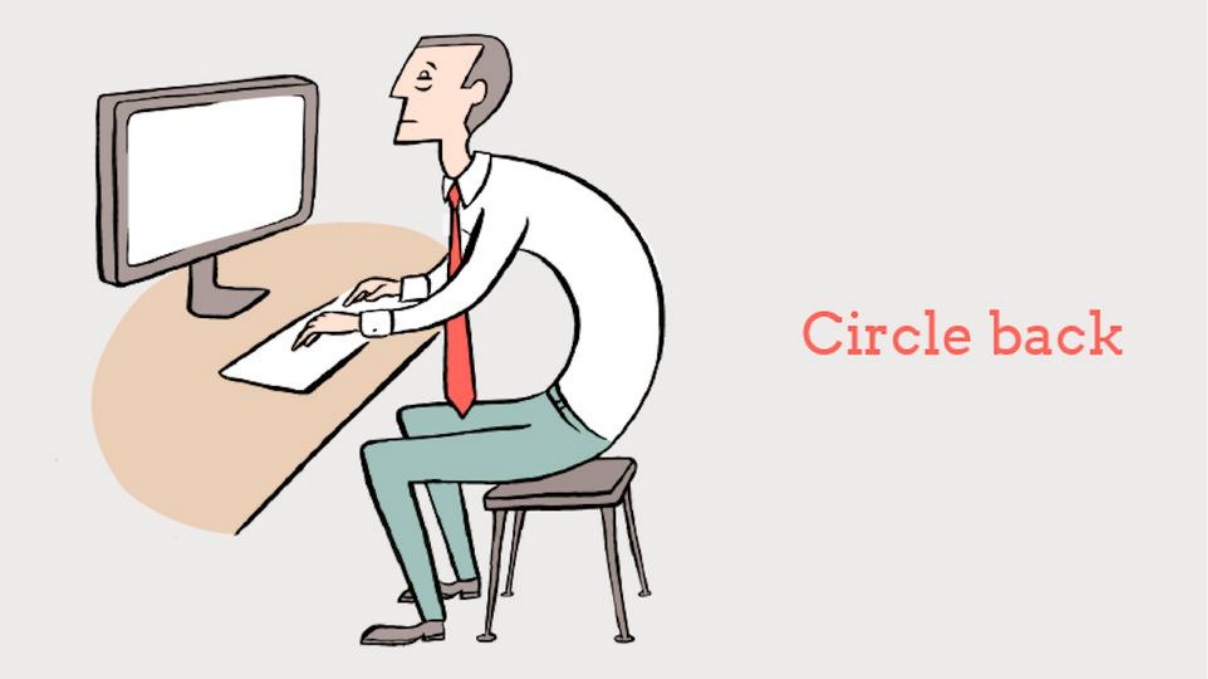
Program	SPR Contribution
Pooled-fund Projects	$1,556,667
National Cooperative Highway Research Program (NCHRP)	$5,900,184
Transportation Research Board (TRB)	$725,041

Research Program Overview

Who does RTI work with?

State-Supported Universities
Center for Transportation Research (UT Austin)
Texas Transportation Institute (Texas A&M)
University of Texas Arlington
Texas State University
University of Texas El Paso
Texas Tech University
University of Texas San Antonio

Pooled Fund Management



Establish a Clear Governance Structure

- Define roles and responsibilities early: lead state, technical advisory committee (TAC), project manager, etc.
- Set expectations for communication, decision-making, and deliverables.

✓ Tip: Create a governance charter to align all partners from the start.

Keep the Research on Track

- Develop and maintain a detailed project schedule with clear milestones.
- Monitor progress closely and manage amendments proactively.

✓ Tip: Schedule standing check-ins with the research team and TAC to address issues early.

Foster Strong Stakeholder Engagement

- Regularly engage partner states and stakeholders with updates, meetings, and meaningful input opportunities.
- Be inclusive—encourage participation from all contributors.

✓ Tip: Use surveys or quick polls to keep input efficient and actionable.

Prioritize Transparent Financial Management

- Clearly communicate contributions, budgeting, and cost-sharing mechanisms.
- Provide routine budget status updates to all partners.
- ✓ Tip: Use standardized tracking templates or dashboards for visibility.

Focus on Implementation and Impact

- Start planning for tech transfer and implementation from the beginning.
- Create concise, practical final products

  (guides, toolkits, presentations).

✓ Tip: Include a sustainability or tech-transfer strategy in the final report.

HELP MAKE TEXAS SAFER FOR EVERYONE

DRIVE *like a* TEXAN™

Kind. Courteous. Safe.

APPENDIX K. WYOMING DOT – MEASURING RESEARCH SUCCESS AND POOLED FUND MANAGEMENT PROJECTS

Measuring Research Success and Pooled Fund Management Projects

Enid White, Research Manager, WYDOT

Overview

- STAFF: Research Manager
- SUPERVISOR: Research Engineer
- LOCATION: Materials Department
- FUNDING: 100 percent SPR-B FUNDS

  (Approx: $1.6 Million a year)

  (80 percent Federal/20 percent State)
- Research projects and Pooled Funds

Pooled Funds

Ways WYDOT Measures Success

- Success for Pooled Funds
  - We treat pooled funds that use SP&R funds and research projects the same.
- Challenges
  - I never know when other departments commit funds or become lead states for Pooled Funds.

Thank you

Thank you

Enid White

Wyoming Department of Transportation

5300 Bishop Blvd

Cheyenne WY 82009

307-777-4182

Orcid.org/0000-0002-3758-8309

APPENDIX L. CALTRANS – TRANSPORTATION POOLED FUND MANAGEMENT

DRISI

Transportation Pooled Fund Management

Sang Le, PE
Cooperative Research Specialist

Division Chief's Vision

- The Transportation Pooled Fund program has always stood as a testament to the power of collective effort. By pooling resources and expertise, we have been able to tackle complex challenges, explore new technologies, and advance the state of transportation in ways that would not have been possible individually.

Caltrans TPF Program

- Caltrans has been an active participant in the TPF program since 1987, contributing to over 200 studies to date.
- August 2024, we are involved in 32 pooled fund studies, with a total contribution of $2,470,000, alongside $66,884,483 in total contributions from all partners.
- For 37 years, Caltrans has been a consistent contributor and valued partner in TPF studies, with average annual fund transfers of $2 million over the past five years.

TPF Selection

- Requests for funding of TPF projects follow the same process as other Caltrans research projects. These requests are submitted by Caltrans Programs through their respective Program Steering Committees (PSCs) during the annual Research and Deployment Advisory Committee (RDAC) process for funding consideration. TPF projects are funded using State Planning and Research Subpart B (SPR II) funds, which are then programmed into the SPR II Annual Work Program and approved by FHWA.

Caltrans-led TPF

- TPF-5(357), Connecting the DOTs: Implementing ShakeCast Across Multiple State Departments of Transportation for Rapid Post-Earthquake Response

Success

- Ensure that all partners are represented by having at least one main person as point of contact in the project.
- Preschedule recurring quarterly project meeting with TPF partners for project status update.
- Capture meeting discussion and action items after each meeting. Reevaluate status of action items at the next status meeting.

Caltrans-led TPF cont'd

- TPF-5(357), Connecting the DOTs: Implementing ShakeCast Across Multiple State Departments of Transportation for Rapid Post-Earthquake Response

Challenges

- Since the funding cycle for each DOT is different, large amount of effort is required to track funding transferred from partnering DOTs to the lead agency.
- Difficult to coordinate in-person meeting due to funding restrictions.

Caltrans participating TPF

- 32 Active Studies

Success

- FY23/24: $2,470,000, alongside $66,884,483 in total contributions from all partners. This excludes TRB and NCHRP programs.
- Provided TPF participation to ten Caltrans' divisions
  - Engineering Services, Environmental Analysis, Maintenance, Library, Transportation Planning, Research and Innovation, Design, Traffic Operations, District 2 and Safety.

Caltrans participating TPF cont'd

- 32 Active Studies

Challenges

- Customer engagement. Task managers are sometimes unaware of the customer participation in the study which leads to lack of awareness for funding continuation and/or trips.
- Customer withdraw from studies. Safety has requested to withdraw from two studies in the past.
- FHWA delay in closing TPFs.

QUESTIONS?

APPENDIX M. COLORADO DOT – TRANSPORTATION POOLED FUNDS

Transportation Pooled Funds

WTRC Peer Exchange

20 May 2025

COLORADO
Department of Transportation

Steve Cohn
Assistant Director for Research
Division of Transportation Development
Colorado Department of Transportation
steve.cohn@state.co.us

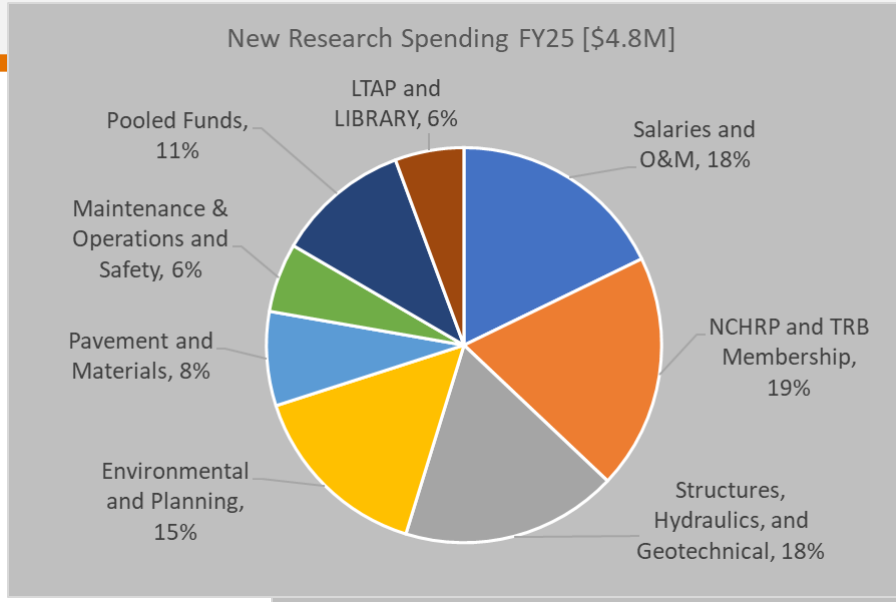
Research Program Overview

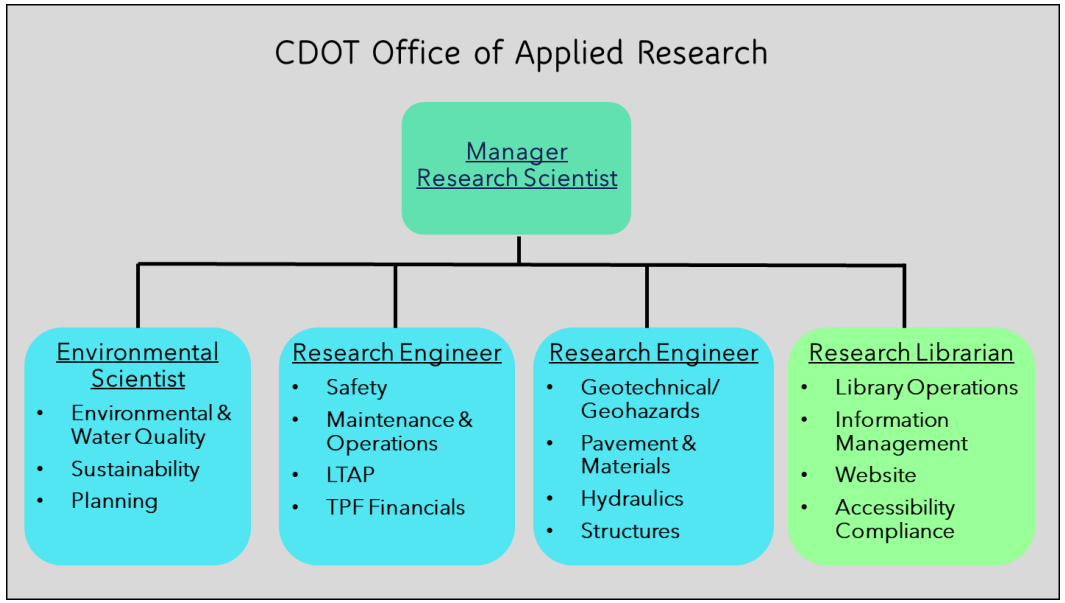
General (FY25)

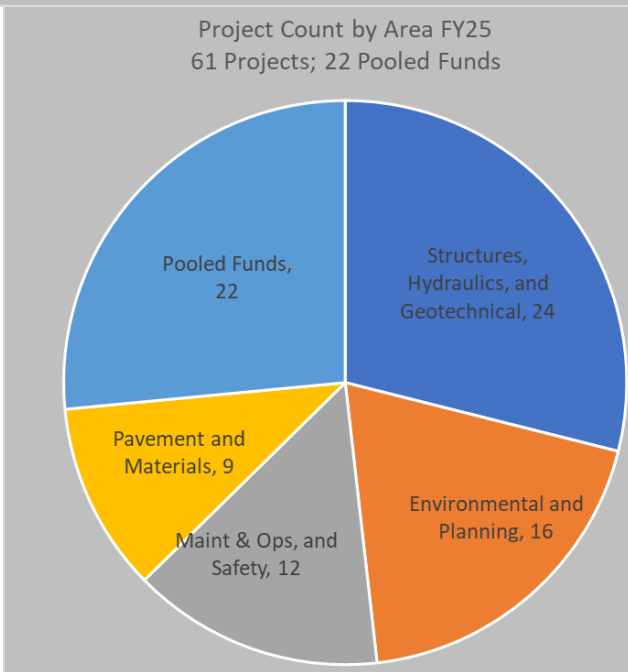
- Research sits in CDOT's **Div of Transportation Development**
- Budget: **~$4.4M/yr** (SPR-B)
- Staff: **5 FTE**, including Library professional
- Project count: **61 projects, and 22 TPF** (lead 4)

Responsibilities

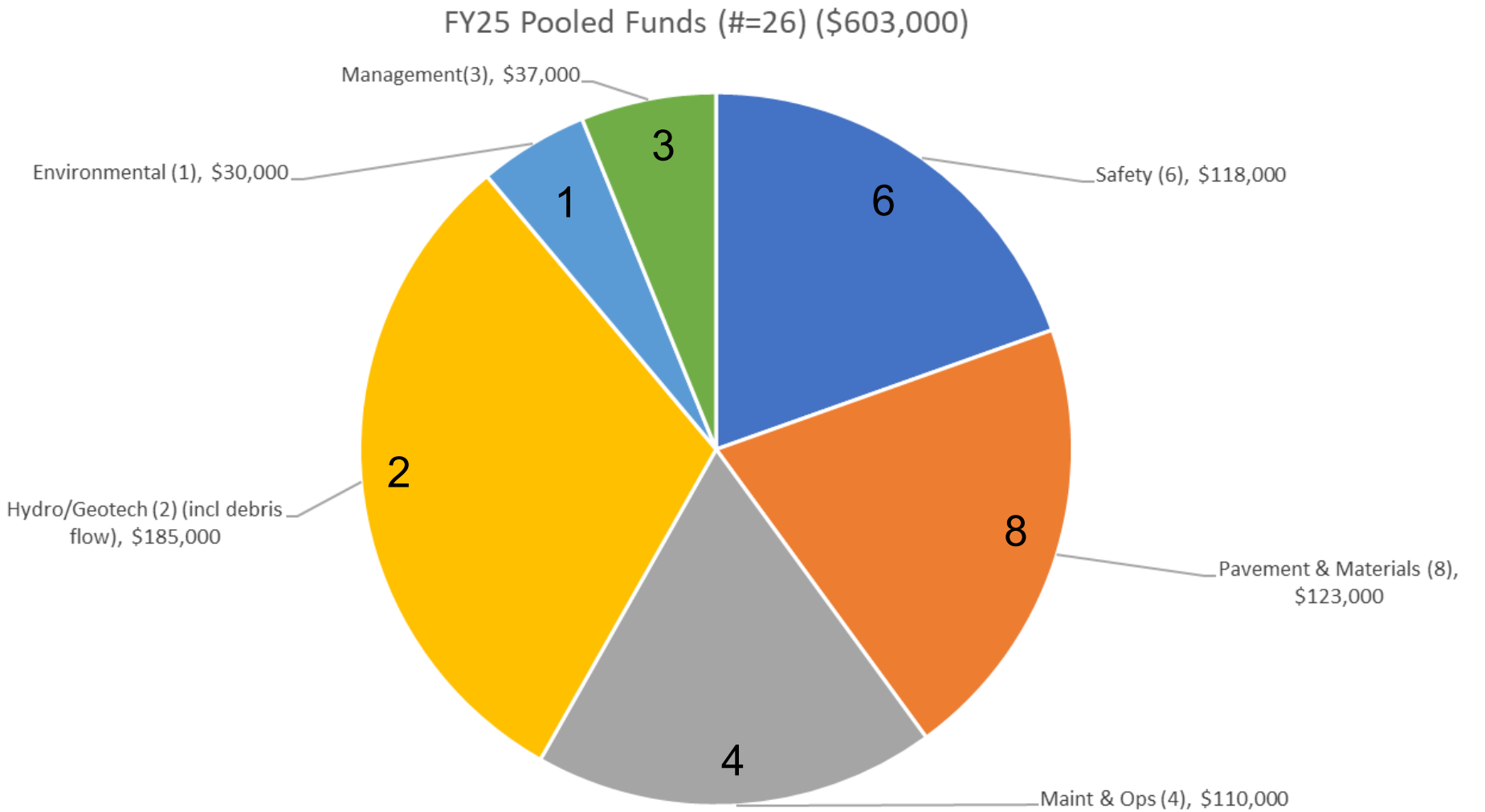
- Research projects
- Pooled Funds
- National (TRB, NCHRP)
- Research Library
- LTAP, T2 & STIC
- **NOT** Innovation







FY2025 Research Spending - Pooled Funds



Pooled Fund Future Commitments	
FY26	$ 341,000
FY27	$ 176,000
FY28	$ 58,000
FY29	$ 33,000

CDOT Led Pooled Funds

TPF-5(548) No Boundaries Transportation Maintenance Innovations Phase IV

TPF-5(441) No Boundaries Transportation Maintenance Innovations (Phase III)

TPF 5(541) Post-Wildfire Debris Flow

TPF-5(497) Transportation Avalanche Research Pool (TARP) 2.0 [also led TARP "1.0")

TPF-5(380) Autonomous Maintenance Technology (AMT) [Indiana will lead next Phase]

- One more just closed

  TPF 5(260) Construction Management
- CDOT Led 4 others >15 years ago

  (per PooledFund.org)

Distinction between:

- Pooled funds with a focused goals and one contract

  Post-Wildfire Debris Flow, No Boundaries
- Pooled funds with a general goal and many contracts

  TARP; AMT

Idea and Initiation

- Our processes are deliberative and collaborative but not very formal (not everything is flowcharted).
- Ideas may originate from a SME or within OAR
- Evaluation & approval follows usual process competing with research projects

  Importance to CDOT priorities, expectation of implementation, improve safety, save money, ...

- Debris Flow example: We observed a recurring, major problem, and explored how research could contribute to a solution. A pooled fund approach fit the needed scale.

Active Leadership

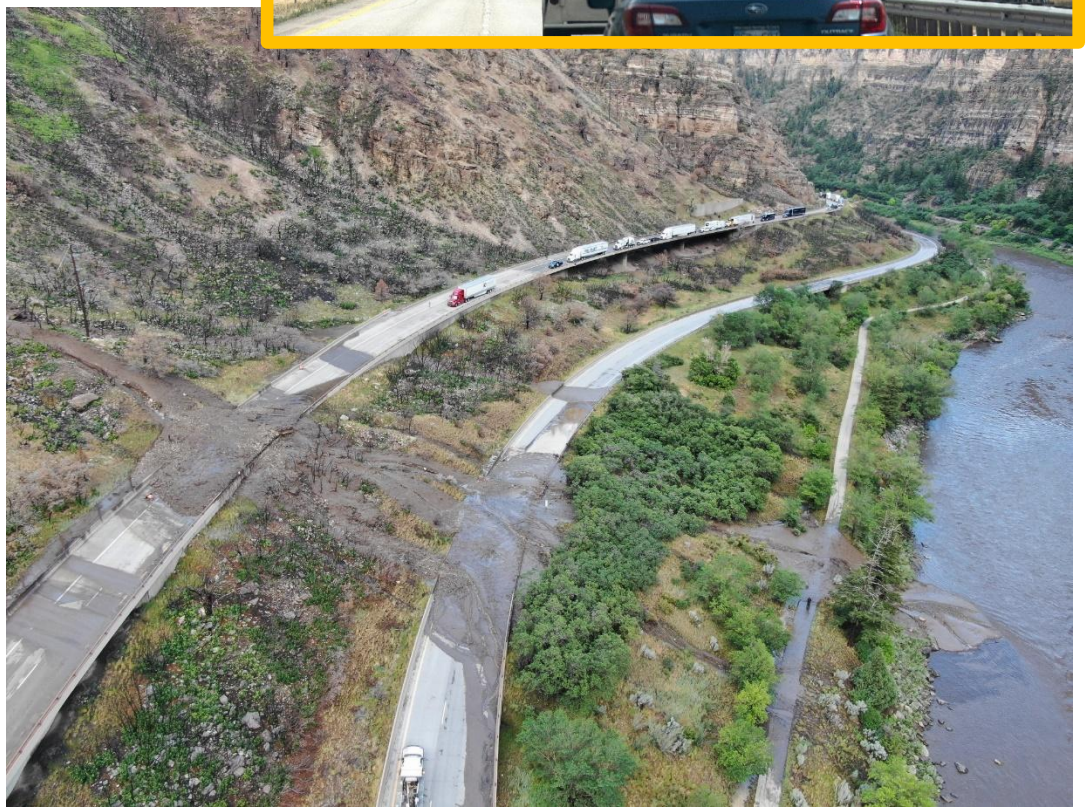
- Decision to lead must “make sense”. Have substantial benefit to Colorado.
- In the past CDOT has also taken on leadership as a ‘service’ role
- A lot is expected of the CDOT Champion / SME - lead and influence the TAC
  - It’s been difficult to maintain momentum when the Champion leaves mid-project.
- Workload for Research PM is greater than for an internal project (financial)
- Managing cash-flow can be complicated - cannot commit funds to a contract until we receive them (PM responsibility)
- Starting a PooledFund can take a lot longer than starting internal research

Debris Flow example

Idea originated with my team

- We observed the problem and considered how to help
- Explored our related projects, conducted a literature search, explored gaps
- Spoke with CDOT hydrologists and Geotech, and university SMEs and developed a general goal
- Contacted other states for interest & needs; iterated

(continued)



Debris Flow example

(continued)

- Engaged more broadly with other states through SMEs and research units
- Went through internal project / funding approval
- We thought we had the needed interest / partners posted to PooledFund.org
- Some commitments did not follow through so we rescoped.
- Heeded advice from Tricia Sergeson: keep <= $25K
- Succeeded: the Solicitation became a PooledFund

Transportation Avalanche Research Program (TARP) example

TARP – ongoing since at least 2015

- **A group of like-minded organizations looking for ways to improve avalanche prediction, preparation, countermeasures, and response.**

Imaging Disdrometer

Twin snow shed, BC, Canada

OBellX

Transportation Avalanche Research Program (TARP) example

- Joined by 7 state DOT's, and
- Alaska Railroad Corporation
- British Columbia Ministry of Transportation & Infrastructure
- Colorado Avalanche Information Center
- Milford Road NZ Transportation Agency
- Norwegian Public Roads Administration
- Parks Canada / Government of Canada

- Pools money
- Solicits research ideas
- Great discussions of issues and solutions
- Meets in person when opportunities present (last week at Avalanche Artillery Users of North America Committee in Seattle)

Transportation Avalanche Research Program (TARP) example

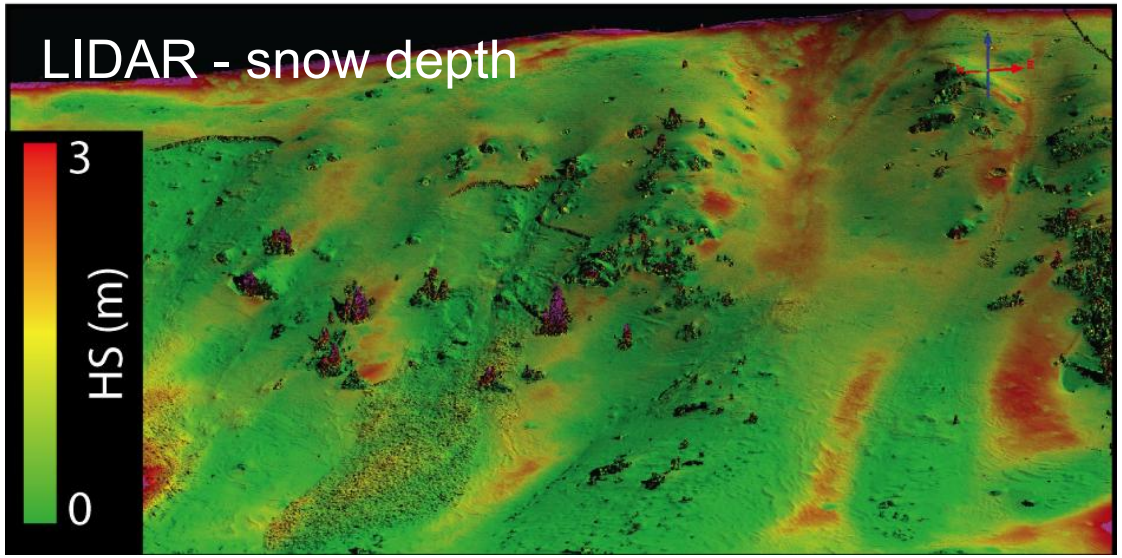
My observations

- Extremely productive and team-oriented
- Has general goals, rather than specific targets (i.e., does not have “plan”)
- A lot of work for CDOT PM procurement. Many contracts.
- Substantial CDOT benefits. Worth the work.

*We lost our long-time Champion but were lucky to get a good replacement.

Lesson learned:

- Strategy, planning, and organization are important, but…having the right people is key and can make or break a project.



Autonomous Maintenance Technology (AMT) example

AMT – ongoing since 2018

- **Advancing autonomous technologies for work zone safety, efficiency, and quality.**
- **Joined by 17 state DOTs.**
- **Information exchange**
- **Research projects on technology, legal, procedures and best practices.**

- **Pools money**
- **Solicits research ideas**
- **Discussions of issues / solutions**
- **Meets in person annually**

Autonomous Maintenance Technology (AMT) example

Observations

- Both CDOT co-Champions left at about the same time. Both had been strong leaders.
- New Champions were less committed. More work fell on the Research PM.
- Contract extension with a facilitation provider was delayed. Even more work fell on PM.
- Research project contracting was also slow and this frustrated participants.

Observations (continued)

- All this was impacting the TPF productivity. CDOT felt it was no longer the right home.
- Indiana DOT stepped up to lead Phase 2.

Lesson Learned:

- Plan for a backup Champion (or two?)
- Its ok to pass the baton.

Participating in Pooled Funds

- Selection / approval process is the same as for research projects.
- Champion submits a Problem Statement. RIC process. Work Program approval.
- Generally viewed as good benefit / cost
- We will also “manage” non-SPR-B participation for other groups in CDOT (does not need RIC approval)

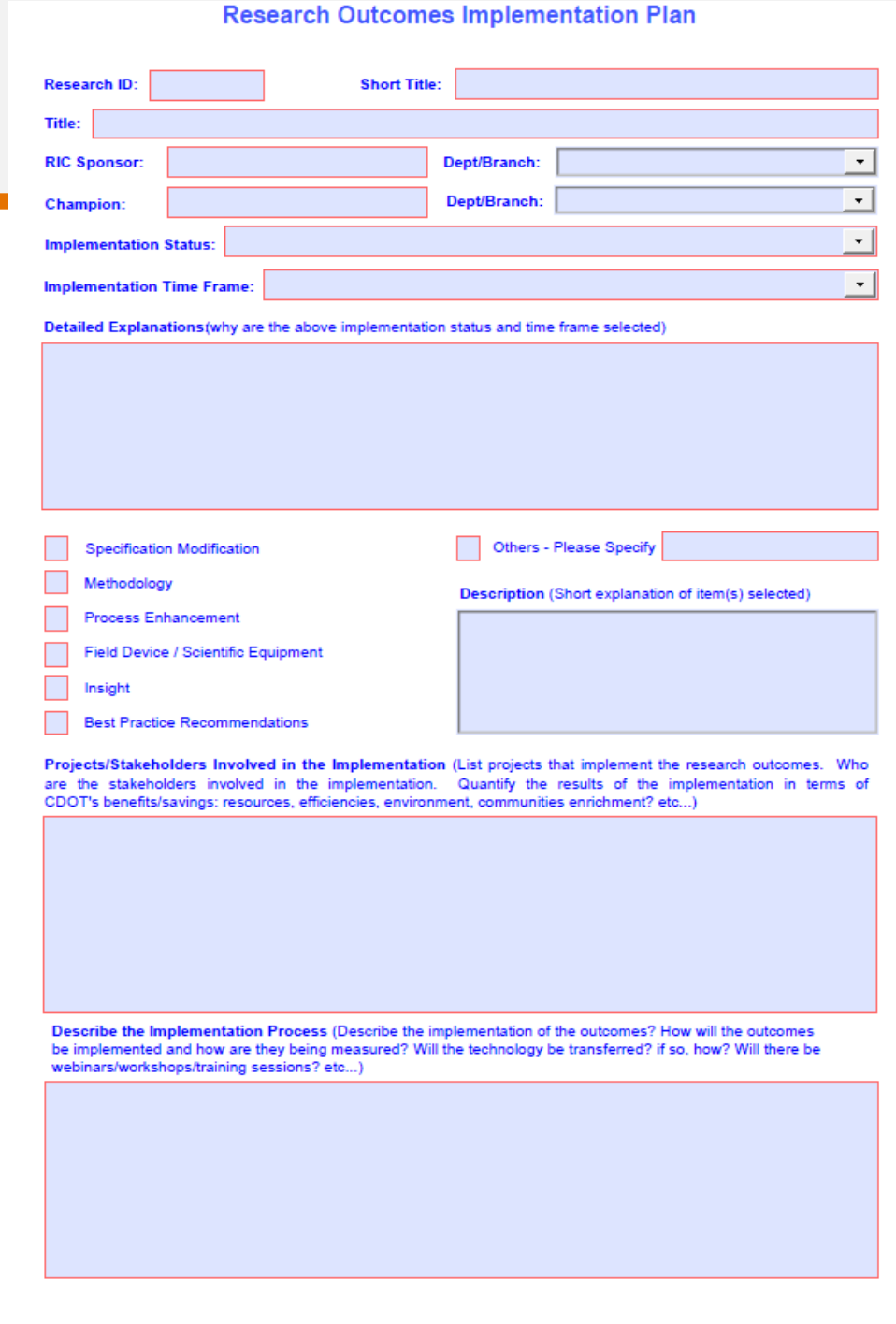
<u>Issues that sometimes Come Up</u>

- Transfer of non-FHWA funds (i.e. state funds)
- Ensuring the TAC member is involved, committed, benefits are brought to CDOT
- Getting progress updates and benefits from TAC members
- When pooled funds are “ongoing”, ensuring they remain relevant to CDOT

CDOT’s participation in Pooled Funds has increased considerably over the past 5 years

Support Structures

- The Division that OAR is within recently stood up an Administration Branch. Intended to be an interface between us and the CDOT Business Office.
- Developing an SOP to formalize financial and Work Program process (responsibilities, naming conventions).
- The Division recently developed a dashboard to provide better visibility of projects' financial status and contracting status.
- We have developed flowcharts for some processes
- We developed WCAG (508) compliant templates for Research Reports, Research Briefs, Implementation Template, etc.



Research Outcomes Implementation Plan

Research ID: Short Title:

Title:

RIC Sponsor: Dept/Branch:

Champion: Dept/Branch:

Implementation Status:

Implementation Time Frame:

Detailed Explanations(why are the above implementation status and time frame selected)

Specification Modification
Methodology
Process Enhancement
Field Device / Scientific Equipment
Insight
Best Practice Recommendations
Others - Please Specify

Description (Short explanation of item(s) selected)

Projects/Stakeholders Involved in the Implementation (List projects that implement the research outcomes. Who are the stakeholders involved in the implementation. Quantify the results of the implementation in terms of CDOT's benefits/savings: resources, efficiencies, environment, communities enrichment? etc...)

Describe the Implementation Process (Describe the implementation of the outcomes? How will the outcomes be implemented and how are they being measured? Will the technology be transferred? if so, how? Will there be webinars/workshops/training sessions? etc...)

Summary: Challenges and Solutions

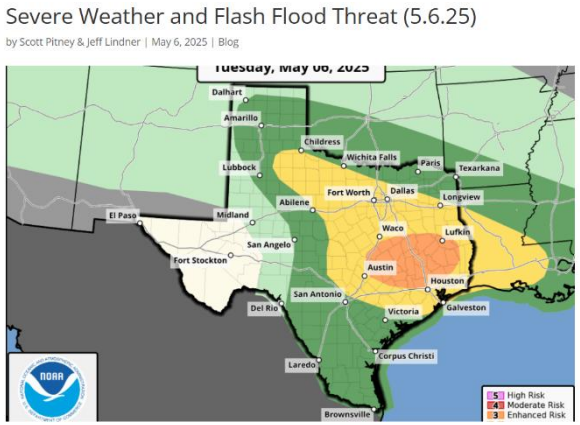
- **Procurement: It's a problem we live with (leading). I'd love to hear other ideas / workarounds**
- **Champion turnover: We rely on the position's supervisor to provide a new champion. But might also identify backup champions at project initiation**
- **Cash flow: We have no choice but to create contracts with future options. (I wonder if there is a way to borrow / bond advance funds?)**

While these are challenges, we deal with them and benefit greatly from Pooled Funds

The MAGIC of Pooled Funds

#1 - No procurement friction as a participating state. This is a huge advantage.

#2 - Many smart people with varied perspectives to help. Leads to a better result AND you learn from the interactions with them.



#3 - Highly leveraged funds. Its like hosting a potluck!

Transportation Pooled Fund Management

WTRC Peer Exchange
20 May 2025

COLORADO
Department of Transportation

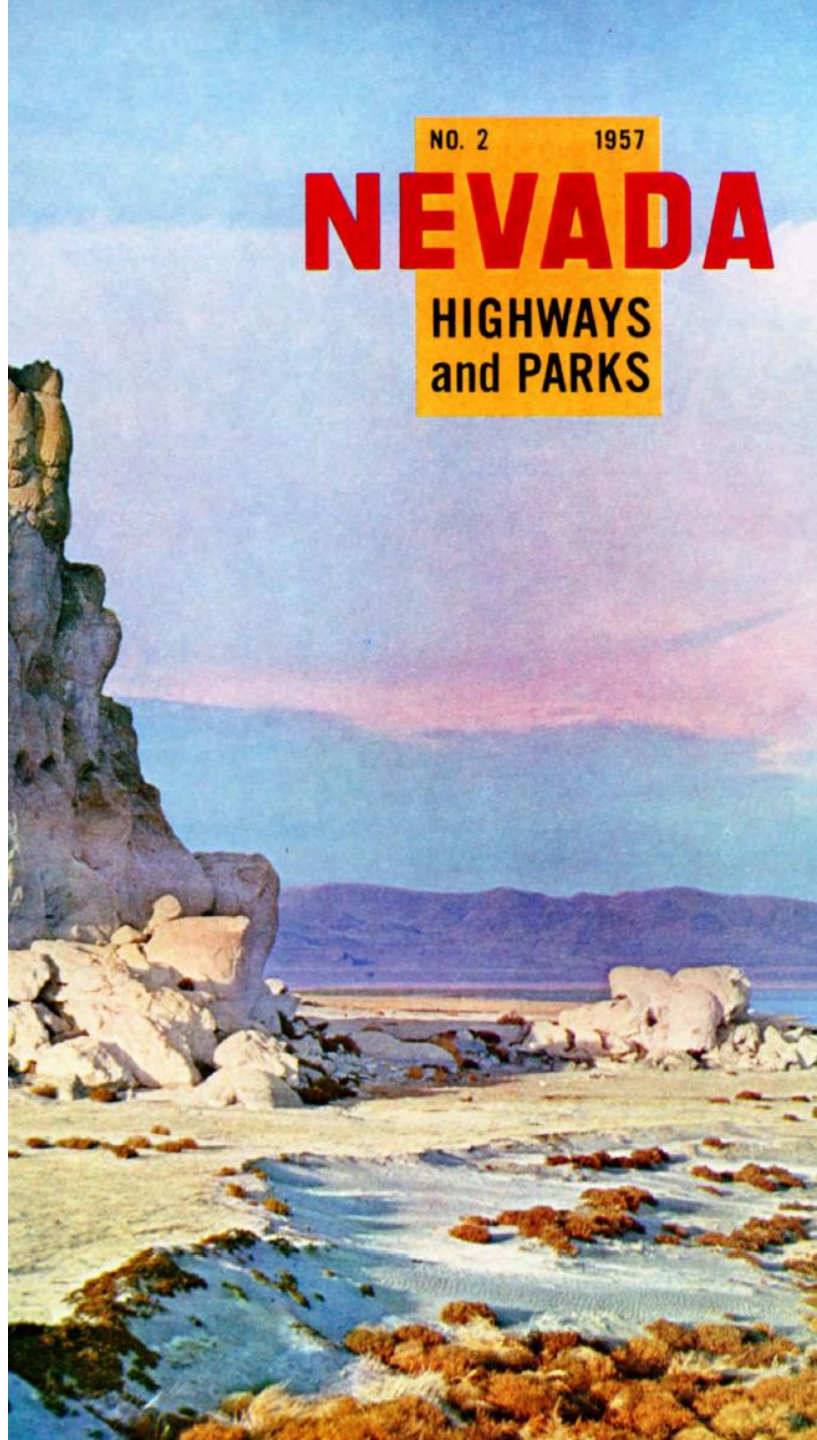
Steve Cohn
Assistant Director for Research
Division of Transportation Development
Colorado Department of Transportation
steve.cohn@state.co.us

APPENDIX N. NEVADA DOT – TRANSPORTATION POOLED FUND MANAGEMENT

WTRC/Peer Exchange Theme 2

Transportation Pooled Fund Management

May 20, 2025



Organization Stats*

- 1,600 employees spread across three Districts
  - District 1 contains more people than the rest of the state combined
- 5,230 centerline miles of NDOT maintained roads
  - Lots of rural highways
  - Urban freeways and interchanges
- 1,200 NDOT maintained bridges
- $2.2 billion program

Research Program Stats*

- 6 research ideas submitted annually
- Of those, 4 become projects
- 2.5 fulltime staff
  - Research Coordinator – Mitch Ison (1)
  - Research Analyst – Melissa DeMattei (1)
  - Assistant Chief – Lucy Koury (.5)
- $2.3 million program
  - Research projects & operating expenses
  - Product Evaluation Program
  - Transportation Pooled Fund studies

*All numbers are estimated and subject to change.

NEVADA DOT SAFE AND CONNECTED

Speaking of Transportation Pooled Fund Studies…

- NDOT has led exactly 1 TPF
  - TPF-5(358) Wildlife Vehicle Collision Reduction and Habitat Connectivity
  - 11 partner agencies:
    State DOTs: AK, AZ, CA, IA, MI, MN, NM, OR, and WA, and Parks Canada, and Ontario MOT
  - All resulting reports are available on our website
- NDOT participation stats
  - Average of 15 per year (excluding NCHRP and TRB)
  - Contribute an average of $320,000 per year

It’s Not You, It’s Me | Barriers to Leading TPFs

- NDOT led 1 successful TPF
  - Amazing technical lead (e.g., champion) led the way
  - Amazing partnerships were developed
  - Excellent, directly applicable results
  - Why not lead more?
- Barriers
  - Small Research office/few staff
  - Lack of champion appetite
  - Lack of financial team appetite

Return on Investment | Getting the Most Out

- Champions identify the TPFs of interest
  - With few exceptions, Research doesn't match a champion to a TPF
  - Reasoning: an interested champion is a passionate champion
  - Passion begets action and active involvement
- Value over time
  - No mechanism for gauging the value of continued participation
  - A commitment is a commitment/no money take backs
  - Growth potential: checking in with the NDOT champion annually

Internal Coordination | SME and You

- Research office responsibility
  - Mostly front-end and initial support
  - Serve as the internal point of contact for TPFs
  - Answer questions and provide general guidance
  - Connect NDOT SMEs to TPF SMEs
  - Receive/process all TPF participation requests
  - Financial contact/transfer initiator

Questions?


NEVADA
DOT
SAFE AND CONNECTED

APPENDIX O. NORTH DAKOTA DOT – POOLED FUND MANAGEMENT

Pooled Fund Management

WTRC - Peer Exchange 2025

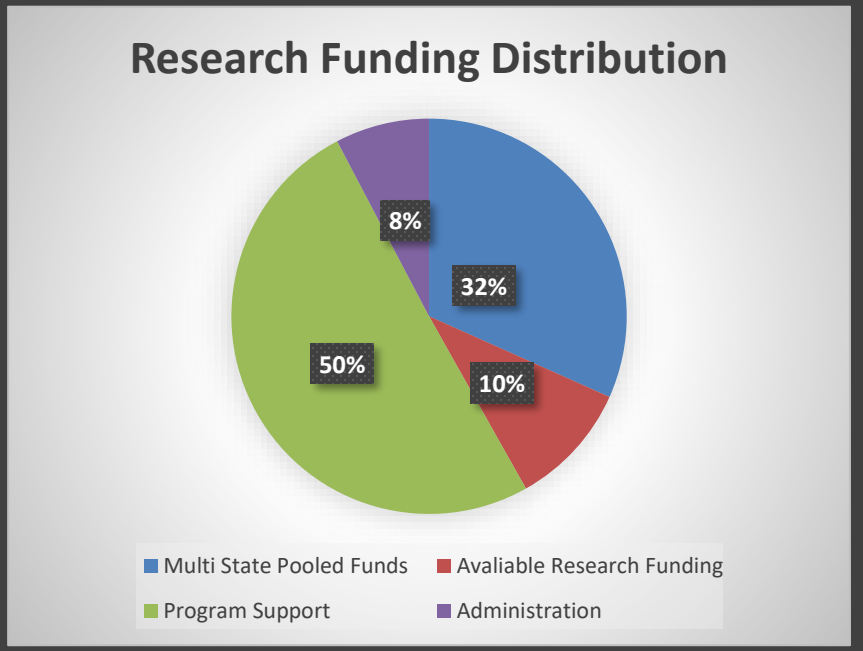
NORTH Dakota
Be Legendary.™

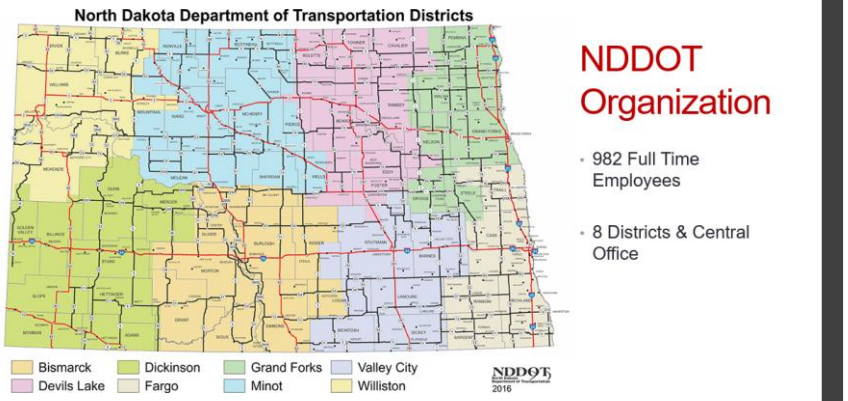
TJ Murphy, PE
Section Leader

Two Staff
Jon Stork, PE
Research Transportation Engineer

Brayden Traxel
Products Engineer

Research Program SnapShot





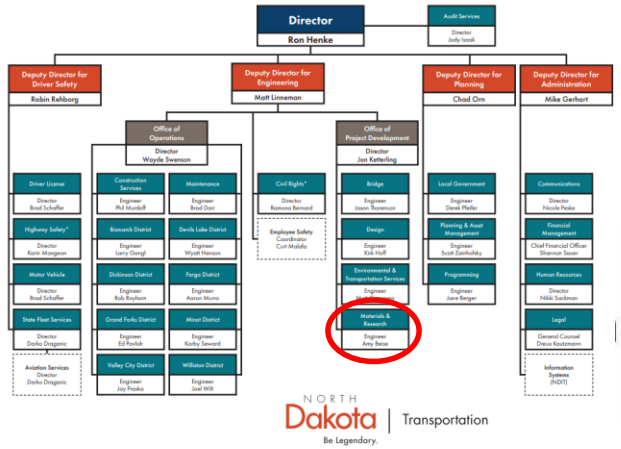
NDDOT Organization

- 982 Full Time Employees
- 8 Districts & Central Office

North Dakota Transportation Facts

- **8,613** Miles of Roadway
- **1,722** Bridges
- **1,159,000+** Registered Vehicles
- **350** Snowplows
- Average **39** events per year that require snow/ice treatment

NORTH Dakota | Transportation Be Legendary.



Research Program – Work Program

- SUBMIT ANNUALLY DECEMBER 31ST
- ANYTHING THAT USES SPR – B FUNDING
- AMEND AS NEEDED

- Work Program ($1,500,000)
- Research (25-35%)
- Nondestructive Testing (20-25%)
- Culvert Inspection (10-15%)
- SME's (10-15%)
- QPL Management(20-25%)

TRANSPORTATION LEARNING NETWORK

A partnership with MDT▪NDDOT▪SDDOT▪WYDOT
and the Center for Transformative Infrastructure
Preservation and Sustainability (CTIPS) universities

TRANSPORTATION LEARNING NETWORK

Empower Your Workforce with TLN - Because Excellence is Non-Negotiable

THEME: Pooled Fund Management

- What are your practices for successfully leading pooled funds?
- Top-Down Support, Executive committees to help drive the fund to produce deliverables that meet all the agency's needs.
- Communication with lead vendor or higher education staff running the fund.
- What structures have you put in place, and what internal support do you receive?
  - Sub Recipient Contracting.
  - Sub Recipient Monitoring Policy's.
  - Risk Assessment Forms for contract holders.
  - Assistance from Finance for Billing and Payment

NORTH Dakota | Transportation
Be Legendary.™

Biggest Challenges

- Billing and Contracting, no big hurdles just working through the standard State OMB processes and the partner university contracting processes and billing contracts.
- Communication with Partner States and Finance Staff and FHWA FMIS staff.

NORTH Dakota | Transportation
Be Legendary.™

To Lead or Not to Lead?

- Finance Staffing and Travel Coordination
- Universities and Local Staff SME's
- Surrounding States and other Pooled Fund Efforts.

NORTH Dakota | Transportation
Be Legendary.™

What are your practices for getting the most out of participating in pooled funds?

- Assure the right staff are attending or participating in the fund and staying active with the working groups.
- Division Top-down support withing the Subject Matter experts to encourage a growth and learning mind set to implement changes found from TPF studies.
- Implementing the process changes as needed.

NORTH Dakota | Transportation
Be Legendary.™

What are your practices for implementing pooled fund results, particularly when you are not the lead state?

- No formal process, Technical leads or Subject Matter experts work to implement any warranted findings as needed.
- In the process of developing a form with the proposed benefit and implementation for tracking of pooled fund efforts and for submission during voting at annual RAC.

NORTH Dakota | Transportation
Be Legendary.™

How do you determine whether participating in a pooled fund is still of value to your agency?

Pooled Funds Value's and Finding are presented to the RAC committee who then votes on the participation in the fund or extended participations in the fund.

NORTH Dakota | Transportation

Be Legendary.™

How does your research office coordinate with your agency subject matter experts for any given pooled fund?

- Spotlights from TPF's successes and discussion on the fund's activities to the Research Advisory committee.
- Alert key SME to new Solicitations on the TPF web-site and update the TPF web-site with SME's info and commitments after approval and transfer.

NORTH Dakota | Transportation
Be Legendary.™


Empower people
Improve lives
Inspire success
NORTH
Dakota
Be Legendary.

Thank You

TJ Murphy, PE
Research Engineer
tjmurphy@nd.gov

APPENDIX P. OKLAHOMA DOT – ODOT RESEARCH

OKLAHOMA
Transportation

ODOT Research

Pooled Fund Management

MAY 20, 2025

GARY HOOK

Organizational placement – Location in the agency, reporting to what level of management, etc.

Secretary/Director Transportation-Tim Gatz

V

Office of Innovation-Tara Cullum

V

Research and Implementation Team

Research & Implementation Team

Engineering Services Branch

Vacant, EM2

Gary Hook, PE, EM1

Wayne Rice, TM1

Sheree Black,

Program mission

SPR and other funds to provide transportation research for Oklahoma Transportation

- Research and implementation support to ODOT and transportation community
- Value toward safety, economics, time and environment

Program responsibilities

With direction from the Oklahoma Transportation (OT)'s Executive Staff and the Research Steering Committee,
ORI (Research and Implementation):

- Establishes and facilitates the process to identify, select, program, manage, and implement research
- Meets all federal-aid program requirements, including the preparation and maintenance of OT's Annual State Planning and Research (SP&R) Part 2 Annual Work Program (AWP) and an Annual SPR2 Performance & Expenditure Report (APER), host periodic Research Peer Exchange, and update OT's Research Guidance documents. OT will also coordinate implementation of STIC, EDC and AID projects.

Continued>

Program responsibilities II

Continued>

ORI:

- Establishes the research agenda based on the involvement and participation of its customers
- Develops and performs applied transportation research for all modes of transportation
  - Provides technical assistance to its customers to implement transportation research products
- Engages in both short-term and long-term research
  - Allocates funding for the research that includes leveraging national research funding from other transportation organizations and pooled funding opportunities

By the numbers: Size, research projects, budget, staff, etc.

Office Size- Four Authorizations:

- 3 Project Managers and 1 Administrative Staff
- Oversight by Deputy Chief Innovation Officer

SPR Part B (2) Budget FFY25- $5,489,467

- General Annual Items-7
- Continuing Research & Implementation Projects-7
- Continuing Pooled Fund Projects-12
- Oklahoma's Lead Pooled Fund Projects-3 (active)
- Active and Paid Pooled Fund Projects-9
- New Research & Implementation Projects-4

Pool Fund Studies – Lead State

TPF-5(297) Improving Specifications to Resist Frost Damage in Modern Concrete Mixes - closed

TPF-5(442) Transportation Research and Connectivity/Library

TPF-5(448) Integrating Construction Practices and Weather into Freeze Thaw Specifications

TPF-5(550) Performance Based Specifications of Fiber Reinforced Concrete - starts October 1, 2025

Pool Fund Studies we Participate In

TPF-5(xxx) NCHRP

TPF-5(TRB) Core Program

TPF-5(447) Traffic Control Consortium

TPF-5(451) Road Usage Charge West

TPF-5(465) Consortium Asphalt Pavement

TPF-5(478) Demo to Advance New Pavement Tech

TPF-5(479) Clear Roads Winter Highway Ops

TPF-5(517) Performance Centered Concrete

TPF-5(518) Implementation of Structural Data from Traffic Speed Deflection Devices

Pool Fund Studies we Participate In-Continued

TPF-5(523) Building Info Modeling(BIM) for Bridges

TPF-5(526) Western Transportation Research Consortium

TPF-5(531) Accelerated Performance Testing 2024 NCAT

Pool Fund Studies-Active and Paid

TPF-5(343) Roadside Safety Mash

TPF-5(357) Implementing Shake Cast Multiple States

TPF-5(372) Building Information Modeling (BIM)

TPF-5(380) Autonomous Maintenance Technology (AMT)

TPF-5(394) Western Maintenance Partnership

TPF-5(431) Applications of Enterprise for Transportation

TPF-5(437) Technology Transfer Concrete Consortium

TPF-5(469) Accelerated Performance Testing on the 2021 NCAT Track

TPF-5(484) Protecting Bridge Girders Against Over-Height

Truck impact on site

Pool Fund Studies-Active and Paid II

TPF-5(343) Roadside Safety Mash

TPF-5(357) Implementing Shake Cast Multiple States

TPF-5(372) Building Information Modeling (BIM)

TPF-5(380) Autonomous Maintenance Technology (AMT)

TPF-5(394) Western Maintenance Partnership

TPF-5(431) Applications of Enterprise for Transportation

TPF-5(437) Technology Transfer Concrete Consortium

TPF-5(469) Accelerated Performance Testing on the 2021 NCAT Track

TPF-5(484) Protecting Bridge Girders Against Over-Height

Truck impact on site

Oklahoma as Lead Pool Fund State

Initial Tasks/Practices for Study:

- Ensure we have ODOT Deputy Director Support for Study
- The PI and the SME have developed a proposal they both agree with
- Get local FHWA support/comments for study
- We establish a job piece number with the comptroller at ODOT for dollars to flow thru
- Request Pool Fund Project, enter solicitation, submit match waiver

Challenges for leading a Pool Fund Study:

- Once the yearly budgets are developed by the PI ensuring that Commitments =Dollars
- When invoices come in ensure funds are released by Comptroller to pay invoice
- Ensure the quarterly reports are submitted on time

Oklahoma as Non-Lead State for Pool Fund Studies

To get the most out of a Pool Fund study you must ensure that your SME is fully engaged with the scheduled meetings, providing workload input as required, briefing others at the center as the pool fund progresses

When we get an email about a new solicitation we will send that notification out to who we think might be interested in this area to see if they would like to be involved with the future study

We have developed a form that an organization can submit to request ODOT/State involvement in a pool fund study

ODOT will spend around $100,000 per year on a research project, normally pool fund studies are from $15,000-$30,000 per year a good return on investment

ODOT Research Home Page

OOI / ORI (Office of Innovation / Research & Implementation)

https://oklahoma.gov/odot/programs-and-projects/programs/office-of-research-and-implementation.html

Questions

Gary Hook
Email: ghook@odot.org, Phone 405-209-4352
Wayne Rice
Email: jrice@odot.org
Sheree Black
Email: sblack@odot.org , Phone 405-522-8971

OKLAHOMA Transportation Turnpike Authority Aeronautics

APPENDIX Q. SOUTH DAKOTA DOT – SDDOT POOLED FUND MANAGEMENT

SD DEPARTMENT OF TRANSPORTATION

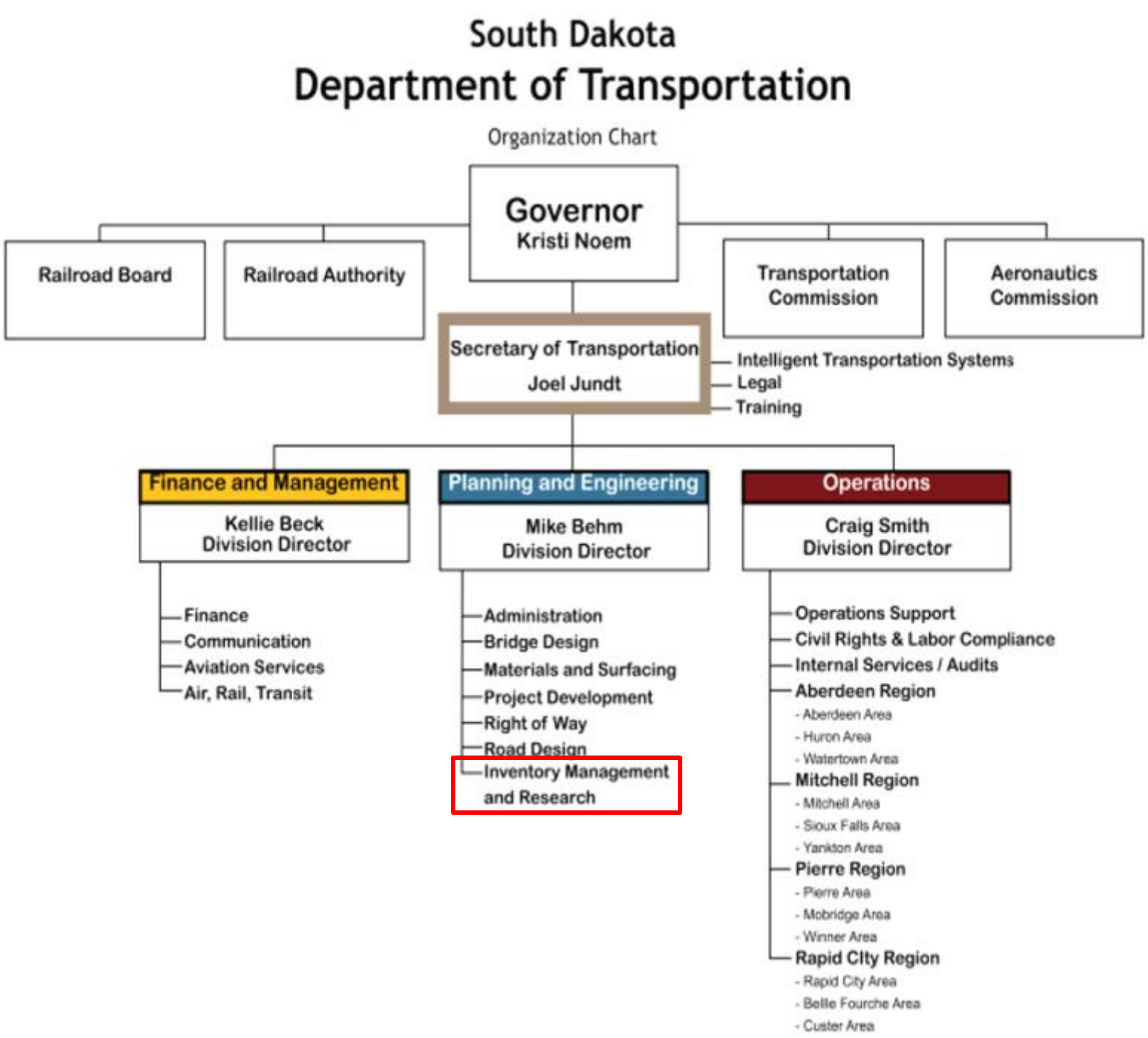
SDDOT Pooled Fund Management

Thad Bauer, Research Program Manager

Western States Peer Exchange

May 2025

- Staffing: 7, including Program Manager
- Annual Budget ~$2.8M
- Lead 3 Pooled Fund Studies
- Participate in 16 Pooled Fund Studies
- Organizational Home: Report to Director of Planning & Engineering



SDDOT Research Staff

Thad Bauer
Program Manager

Andy Vandel
Research Manager

Nicole Brooks
Admin, Library

Margo McDowell
Structural

Mike Border
Materials

Cliff Reuer
SDLTAP

Danny Doorn
GeoTech

John DeBoer
Mechanical

Gill Hedman
SDLTAP

Cliff Reuer & Gill Hedman work for SDLTAP but reside in Research

Pooled Fund Studies SDDOT Manages

TPF-5(460)

- Flood-Frequency Analysis in the Midwest

TPF-5(354)

- Improving the Quality of Highway Profile Measurement

TPF-5(347)

- Development of Maintenance Decision Support System

SD DEPARTMENT OF TRANSPORTATION

Practices for Leading Pooled Fund Studies

Regular Meetings with Member States

Assigning Task Groups

Feedback from Member States for Priorities

Meaningful and Beneficial Study Topic

SD DEPARTMENT OF TRANSPORTATION

Challenges?

FINDING TIME TO DEDICATE TO THE POOLED FUND

ONGOING ISSUES FOR SUPPORTING TECHNOLOGY

MANAGING THE BUDGET AND COLLECTING FUNDS

CONTINUED PARTICIPATION

ISSUES WITH THE TPF WEBSITE

SD DEPARTMENT OF TRANSPORTATION

What are your practices for getting the most out of participating in pooled funds?

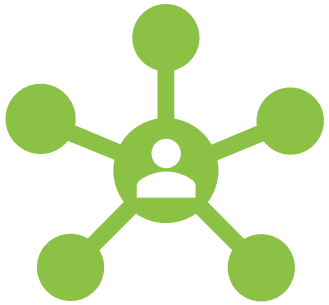
PARTICIPATION IN POOLED FUND STUDY MEETINGS

INVITING DIRECTORS AND OTHER TEAM MEMBERS TO POOLED FUND STUDY MEETINGS

DISTRIBUTING REPORTS, PRESENTATIONS, OR HANDOUTS OF FINDINGS FROM RESEARCH PROJECTS

SD DEPARTMENT OF TRANSPORTATION

How does your research office coordinate with your agency subject matter experts for any given pooled fund?



Either the SME approaches me, or I reach out to them

I include their request to participate as an item for RRB meetings

SD DEPARTMENT OF TRANSPORTATION

How do you determine whether participating in a pooled fund is still of value to your agency?

The SME makes this decision and will notify me

The SME and Research Program Manager provides the RRB with the benefits of why we should continue participation

SD DEPARTMENT OF TRANSPORTATION

What are your practices for implementing pooled fund results, particularly when you are not the lead state?

- Reliance on the SME to use the findings in their area of involvement.
- Discussions with the Research Review Board for how we have benefited from each study and how we are using the results.

Pooled Fund Study	FY	Commitment	Study Objective	Contact
TPF-5(399) Improve Pavement Surface Distress and Transverse Profile Data Collection	2024	$20,000	Focuses on improving the quality of pavement distress and transverse profile data collection and analysis.	Thad Bauer
TPF-5(479) Clear Roads Highway Operations Phase III	2024	$25,000	Focuses on advancing winter highway operations through research related to materials, equipment, and methods.	Dan Varilek
TPF-5(442) Transportation Research and Connectivity	2023	$15,000	Supports coordinated development of transportation libraries as well as research organizations without dedicated libraries. Assists DOTs with 508 accessibility.	Thad Bauer
TPF-5(451) Road Usage Charge (RUC) America	2023	$25,000	A coalition of state Departments of Transportation and provincial Ministries of Transport that are committed to collaborative research and development of a potential new transportation funding method that would collect a road usage charge (RUC) based on actual road usage.	Dave Huft
TPF-5(430) Midwest Roadside Safety Pooled Fund Program	2024	$65,000	A collaborative program between state DOTs and the Midwest Roadside Safety Facility (MwRSF) dedicated to sponsoring roadside safety research.	Randy Brown
TPF-5(394) Western Maintenance Partnership - Phase 3	2023	$15,000	Provides a partnering forum for promoting effective maintenance strategies.	Christina Bennett
TPF-5(376) Northwest Passage #4	2024	$30,000	Focuses on developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders. The vision provides a framework to guide the states' future projects in the corridor.	Dave Huft
TPF-5(347) Development of Maintenance Decision Support System	2022	$221,045.00	Developed Maintenance Decision Support System (MDSS), which is a computer-based tool that provides winter maintenance personnel with route-specific weather forecast information and treatment recommendations.	Dave Huft
	2023	$256,544.09		
TPF-5(457) Transportation Learning Network	2023	$117,000	Provides technology transfer to member states, counties, and cities.	Thad Bauer
TPF-1582 Performance Centered Concrete Construction	2023-2027	$20,000 / year	Continuation of TPF-5(368), which focused on the successful deployment of performance engineered mixtures. Focus was on implementation, education and training, adjusting specification values to relate accurately to good pavement performance in the field, and continued development of relating early age concrete properties to performance.	Darin Hodges
*TPF-1585 New Performance Approach to Evaluate ASR in Concrete (New)	2023-2027	$5,000 / year	Purpose is to evaluate a wide selection of concrete mix designs to validate the use of the new AASHTO TP-144-21 (T-FAST) and alkali threshold test (ATT) methods in conjunction with mix design data, cement mill reports and SCM properties to determine the likelihood of ASR gel formation in concrete.	Darin Hodges

SD DEPARTMENT OF TRANSPORTATION

Discussion & Questions

Thad Bauer
605-773-4404
thad.bauer@state.sd.us

SD DEPARTMENT OF TRANSPORTATION

APPENDIX R. WASHINGTON STATE DOT – POOLED FUND MANAGEMENT, JON PETERSON, WASHINGTON STATE DOT

Western Transportation Research Consortium – Pooled Fund Management

Jon Peterson, Research Coordinator

May 20-22, 2025

Julie Meredith, Secretary of Transportation

What we'll cover…

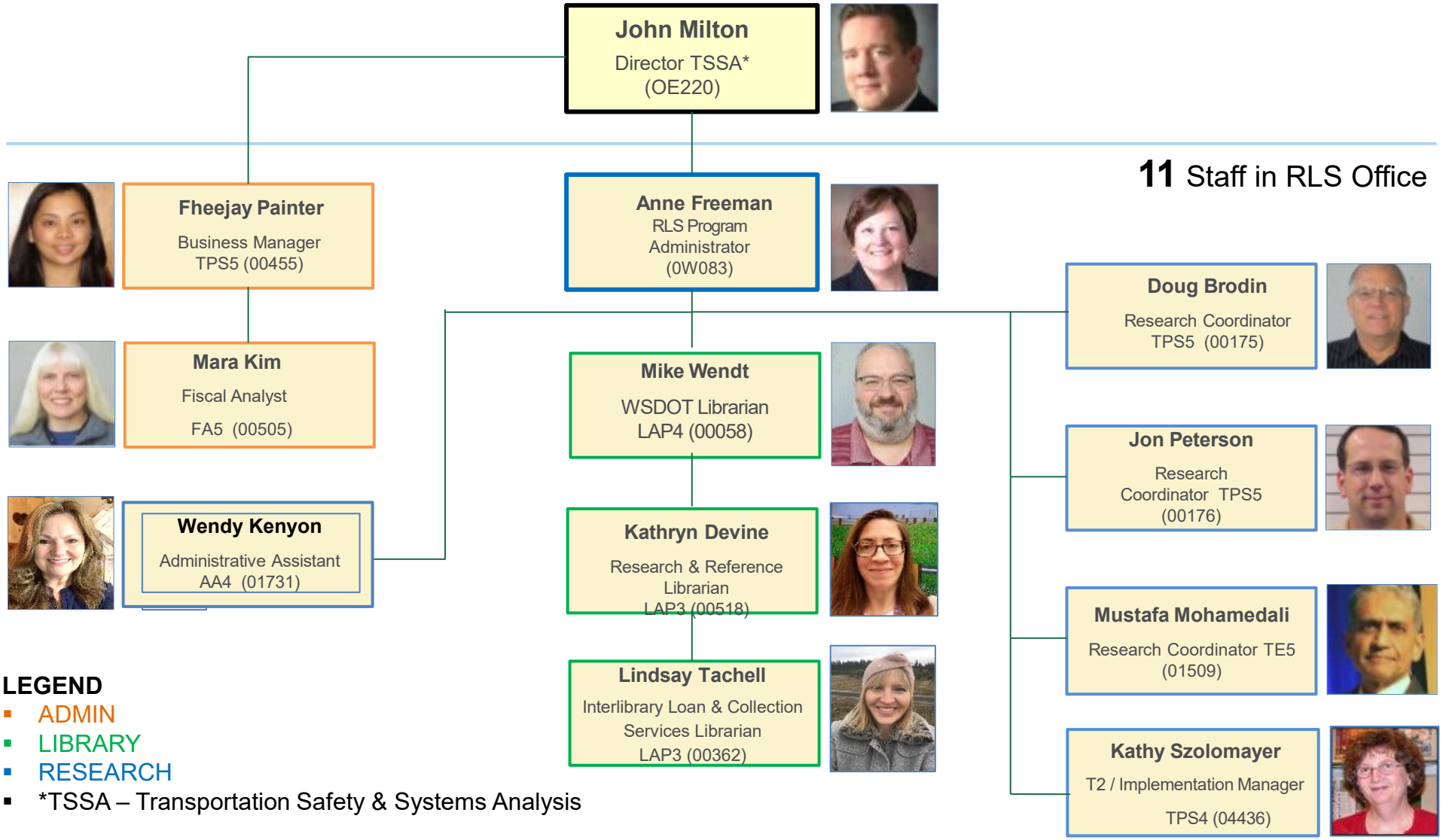
- What this means to you
- Roles and responsibilities
- Current portfolio – lead & participate
- 2 of the Pooled Funds I lead

https://pooledfund.org/

The why, who, when & how… /1

- **Here's why**
  - Issues, problems, and needs that are common to more than one state
  - Pooled resources—much bigger bang for the buck
  - ROI = can range from 1:5 to 1:70 or more for the value of research alone

Research & Library Services Org Chart



LEGEND

- ADMIN
- LIBRARY
- RESEARCH
- *TSSA – Transportation Safety & Systems Analysis

Our current portfolio - Lead

- **The 7 Projects we lead…**

1) TPF 5(386) - Gravel-Bed River Assessment Tool for Improve Resiliency of Engineering Design – 3 states & FHWA - $455,000

2) TPF 5(459) – Developing & Calibrating Fragmental Rockfall Models using Physics Engines – 8 states - $850,000

3) TPF 5(491) – Super Elastic Shape Memory Alloys & Engineered Cementitious Composites for Seismic Recovery – 4 states & FHWA - $450,000

4) TPF-5(494) – Western States Rural Transportation Consortium Phase 2 – 5 states - $1,970,500

5) TPF-5(500) – Long Term Pavement Performance Investigations – 7 states - $440,000

6) TPF-5(501) – Roadside Safety Pooled Fund Phase 3 – 28 states & Ontario, $8,854,795

7) TPF-5(527) – International Conference on Ecology & Transportation 2025 – 13 states – $88,200

Our current portfolio - Participate

- **The 45 projects we participate in…**

1	TPF-5(255) - Highway Safety Manual Implementation | Lead Agency: Federal	24	TPF-5(470) - Traffic Signal Change & Clearance Interval Pooled Fund Study |
2	TPF-5(288) - Western Road Usage Charging Consortium | Lead Agency: Oregon	25	TPF-5(473) - Transportation Research Board (TRB) Core Program Services for a
3	TPF-5(299) - Improving the Quality of Pavement Surface Distress and Transverse	26	TPF-5(476) - Western Alliance for Quality Transportation Construction (WAQTC)
4	TPF-5(317) - Evaluation of Low-Cost Safety Improvements | Lead Agency:	27	TPF-5(479) Clear Roads Winter Highway Operations Phase III Pooled Fund |
5	TPF-5(322) - High Occupancy Vehicle (HOV)/ Managed Use Lane (MUL) | Lead	28	TPF-5(485) - Consequences-Based Analysis of Undrained Shear Behavior of Soils
6	TPF-5(326) - Develop & Support Transportation Performance Management	29	TPF5(487) - Transportation Management Center Phase 2| Lead Agency: Federal
7	TPF-5(370) - Fostering Innovation in Pedestrian and Bicycle Transportation	30	TPF-5(489) - Safety Service Patrol
8	TPF-5(372) - Building Information Modeling (BIM) for Bridges & Structures |	31	TPF-5(497) - Transportation Avalanche Research Pool (TARP2.0) | Lead Agency:
9	TPF-5(376) - Northwest Passage Phase 4 | Lead Agency: Minnesota Department	32	TPF-5(506) - North/West Passage Transportation Pooled Fund Study Phase 5 |
10	TPF-5(380) - Autonomous Maintenance Technology (AMT) | Lead Agency:	33	TPF-5(510) - 2023 through 2025 Innovations in Freight Data Workshop | Lead
11	TPF-5(382) - Drivers Failing to Yield at Roundabouts | Lead Agency: Federal	34	TPF-5(512) - Resilience Approaches for Pavements and Geotechnical Assets |
12	TPF-5(394) - Western Maintenance Partnership – Phase 3 | Lead Agency: Utah	35	TPF-5(516) - Highway Safety Manual 2nd Edition (HSM2) Implementation | Lead
13	TPF-5(399) - Improve Pavement Surface Distress & Transverse Profile Data	36	TPF-5(522) - National Partnership to Improve the Quality of Pavement
14	TPF-5(431) - Applications of Enterprise GIS for Transportation, Guidance for a	37	TPF-5(523) - Building Information Modeling (BIM) for Bridges and Structures-
15	TPF-5(433) - Behavior of Reinforced & Unreinforced Lightweight Cellular	38	TPF-5(524) Stormwater Management to Address Highway Runoff Toxicity Due
16	TPF-5(435) - Aurora Program (FY20-24) | Lead Agency: Iowa Department of	39	TPF-5(526) - Western Transportation Research Consortium | Lead Agency: Utah
17	TPF-5(437) - Technology Transfer Concrete Consortium (FY20-24) | Lead Agency:	40	TPF-5(528) Extending and Sharing Benefits of Strategic Planning Models (SPR-A
18	TPF-5(440) - Urban Mobility Study | Lead Agency: Texas Department of	41	TPF-5(534) Mobility Analysis and System Transportation Efficiency Research
19	TPF-5(443) - Continuous Asphalt Mixture Compaction Assessment using Density	42	TPF-5(536) Ahead of the Curve - Migration from NCHRP to AASHTO Technical
20	TPF-5(444) - Traffic Safety Culture (Phase 2) | Lead Agency: Montana	43	TPF-5(538) Phase II: Continuous Asphalt Mixture Compaction Assessment using
21	TPF-5(453) Automated Vehicle Pooled Fund Study | Lead Agency: Ohio	44	TPF-5(541) Post-Wildfire Debris Flow | Lead Agency: Colorado Department of
22	TPF-5(461) - Soil and Erosion Testing Services for Bridge Scour Evaluations |	45	TPF-5(542) Passive Force Behavior for Skewed Bridge Abutments During
23	TPF-5(465) Consortium for Asphalt Pavement Research and implementation		

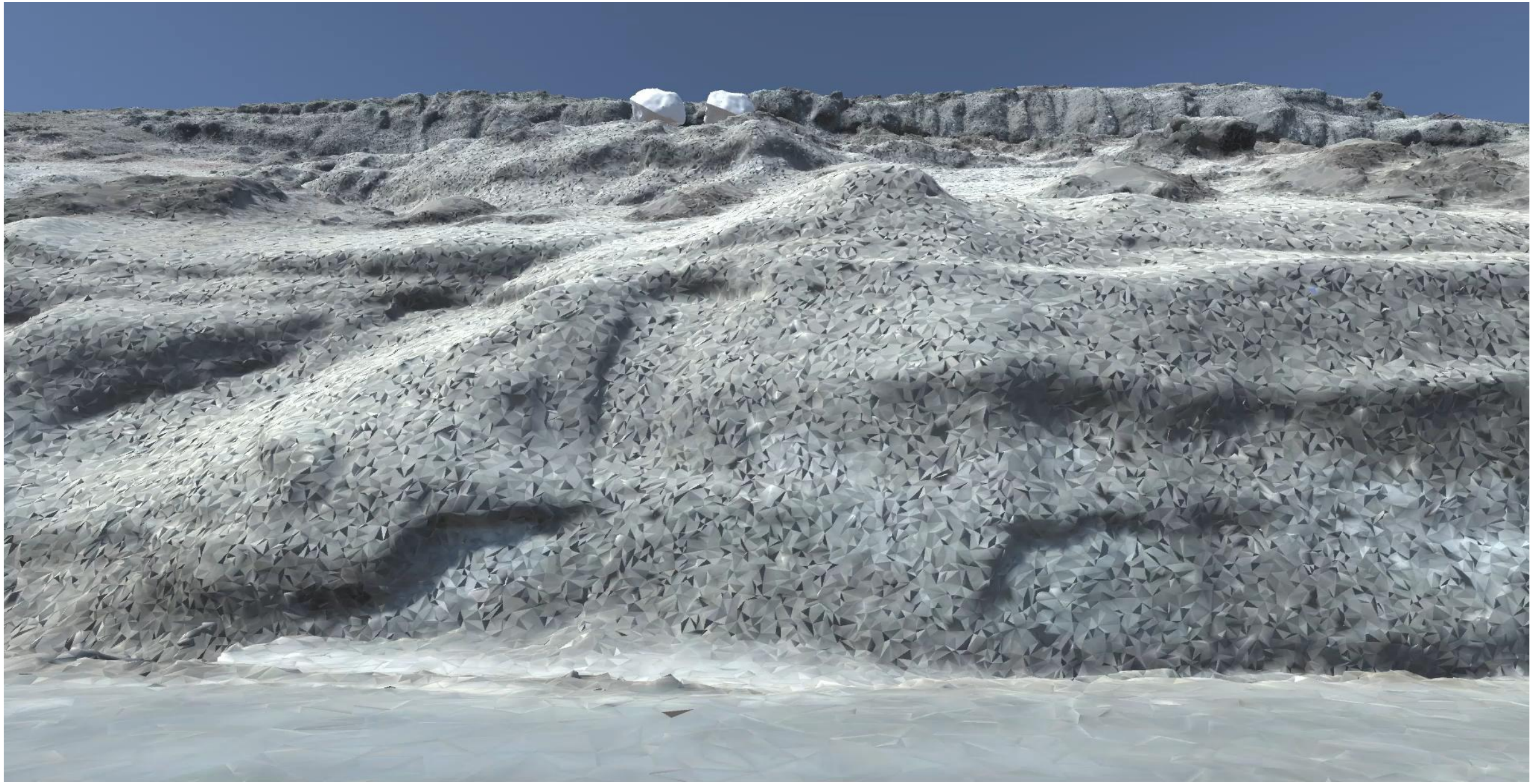
TPF-5(527), International Conference on Ecology and Transportation 2025

- Contractor – UC Davis
- Assist with providing a biennial conference on Ecology and Transportation
- AZ, GA, ID, MN, ND, NV, NY, OH, PA, TX, VT, WA & WV
- $88,200

5(459) Developing & Calibrating Fragmental Rockfall Models using Physics Engines

- Contractor – Univ. of WA & Queens University
- Development of a rockfall simulation software program using game engines
- AK, AZ, CA, CO, NY, TN, TX & WA
- Software being tested as we speak

SR10 unexpected Cam2.mp4



Wrap Up

- What are your practices for successfully leading pooled funds? What structures have you put in place, and what internal support do you receive?

We have our team in place with 3 Research Coordinators & 2 Fiscal staff that are well versed in the Pooled Fund arena. We lead 7 active pooled funds currently and participate for up to 20 or so per year ($400,000 per year).

- What are your biggest challenges for leading pooled funds, and how have you worked to overcome them?

WSDOT leads one large pooled fund with multiple task orders every year and travel for 25+ states for a yearly meeting that is a challenge for the Research Coordinator and our 2 fiscal staff and the SME for the pooled fund.

- What are your practices for getting the most out of participating in pooled funds?

If we are leading, there will be a final report and/or product, and we will most likely have a webinar to discuss the research and the results.

- What are your practices for implementing pooled fund results, particularly when you are not the lead state?

Our SME's share the results with their staff and/or peers at AASHTO etc. and we share with the agency.

- How do you determine whether participating in a pooled fund is still of value to your agency?

We collaborate amongst the research coordinators and the Project Administrator as well as our SMEs to decide which pooled funds to participate in.

- How does your research office coordinate with your agency subject matter experts for any given pooled fund?

Each pooled fund is assigned to a research coordinator for care & feeding but the SME is responsible to attend meetings and/or conferences and share the results with their peers in their office and we will share the results with the entire agency.

Q&A and THANK YOU!

Jon Peterson

Transportation Safety & System Analysis

WSDOT Research and Library Services
310 Maple Park Ave SE,
WSDOT HQ Room SLC-21

jon.peterson@wsdot.wa.gov

APPENDIX S. IOWA DOT – THEME 3: REGIONAL RESEARCH, KHYLE CLUTE, IOWA DOT

WTRC Peer Exchange
May 2025

Region 3 – Who Are We?

Nine member states

- Illinois, Indiana, Iowa, Kansas, Michigan
- Minnesota, Missouri, Ohio, Wisconsin

Meetings

- Business Meeting (odd months)
  - Notes taken, typical meeting feel
- Collaboration Meeting (even months)
  - Notes not taken, roundtable feel

Region 3 - Successes

Strength in Numbers

Smallest region in terms of partner states

One of our biggest assets

Minimizes ‘herding the cats’ on action items

Similar SPR funding levels for the most part

Shared funding issues and resulting discussion

Theme 3 : Regional Collaboration

Region 3 – Successes II

Rotating Peer Exchanges

- **Started in 2019**
- **No formal consortium**
- **No shared funding project selection**

- **Iowa, Michigan, Minnesota, Illinois & Wisconsin hosted**
- **Missouri or Ohio possible for 2026**

Theme 3 : Regional Collaboration

Region 3 – Successes III

Therapy Sessions

- **Dedicated time in each business meeting (~30 min)**
- **Nearly all time in each collaboration meeting (~90 min)**

- **Roundtable nomination and discussion of issues**
  - **State specific or national topics**

- **Introduced at 2024 Summer RAC meeting in Ohio**
  - **No accident – One of our main focuses**

Region 3 – Successes IV

Personal Connections

Aim to spend time together outside of work

Mountain hiking, rock climbing, music concerts, oddball destinations, hours long walks, late nights

Creates connections to the person, not the job title

Removes the hindering barrier of over-professionalism

For any problem, there is a group ready to help

Questions?

Khyle Clute

SPR Research and Pooled Funds Program Manager

Khyle.Clute@iowadot.us