movingforward

Ohio Department of Transportation – Research Program Newsletter

OHIO DEPARTMENT OF TRANSPORTATION
RESEARCH

2026 | Volume 1

ODOT & ORIL Issue RFPs for FY2027

ODOT and Ohio's Research Initiative for Locals (ORIL) are currently accepting proposals for their fiscal year 2027 programs.

Requests for Proposal –ODOT Research Projects

RFP Number	Topic Title
2027-01	Comprehensive Evaluation of Concrete Mix Designs and Curing for Bridge Decks
2027-02	Pavement Condition Forecasting Models
2027-03	Technology Modernization and Equipment Standardization for ODOT Construction Field Vehicles
2027-04	Overhead Sign Support Design
2027-05	Applicability of Measurement While Drilling Within Ohio Geological Strata
2027-06	Investigating The Use Of eDNA As A Tool For Conducting Mussel Surveys In Ohio
2027-07	Type D Concrete Barrier In-Service Performance Evaluation
2027-08	Evaluation of Probe-Based Signal Performance Measures (PBSPMs) for Computing and Development of Signal Timing Plans
2027-09	Evaluation of Cost-Effective Commodity Storage
2027-10	Evaluating Test Methods for Measuring Friction of Aggregates in Ohio
2027-11	The Impacts on Traffic from Work Zone Shifting Taper Lengths

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In this Issue

RFP Number	Topic Title
2027-12	Automated Vehicle (AV) Pooled Fund Phase 2 Research On-Call (ROC)
2027-13	Evaluation of Consumable Inventory Tracking Tools
2027-14	Needs Analysis of Workforce Deficiencies and Solutions in the Heavy Highway Transportation Industry
2027-15	Division of Engineering Research on Call (ROC) FY2027-2029
2027-16	Division of Planning Research on Call (ROC) FY2027-2029
2027-17	Division of Construction Research On Call (ROC) Services FY2027-2029
2027-18	Division of Operations Research on Call (ROC) FY2027-2029
2027-19	DriveOhio Research on Call (ROC) FY2027-2029
2027-20	Research, Development, Technology Transfer and Advancement – Research on Call (ROC) FY2027-2029
2027-21	Small Business & External Workforce Development – Research on Call (ROC) FY2027-2029

Requests for Proposal –ORIL Research Projects

RFP Number	Topic Title
2027-ORIL1	Assessment of Rapid Rectangular Flashing Beacon (RRFB) Devices for Pedestrian Safety
2027-ORIL2	Ohio's Research Initiative for Locals (ORIL) Research on Call (ROC) FY2027-2029

Submissions for these RFPs must be received by **3 PM ET on Wednesday, March 25, 2026**. RFPs and instructions are available on the *RFP website*. Please read all instructions carefully and make sure you are following the guidelines. Be sure to allow sufficient time to submit proposals via the online submission process to avoid delays or technical issues.

Absolutely no extensions to the deadline will be granted. All questions concerning RFPs must be submitted using the *RFP clarification form*. Clarifications will be posted on the *RFP website* as they become available, so be sure to check the site regularly for updates.

If you are considering submitting a proposal, check out the article in this issue of Moving Forward on page 11, "Developing a Winning Research Proposal," or the "Insider Tips to Getting Your Proposal Noticed" article on page 6 of the *2022 Volume 1 Edition* of Moving Forward.

Research Discovers Safer, More Consistent Deer Carcass Disposal

Photo: Ohio Department of Natural Resources

Removing deer carcasses from Ohio's roadways is a routine but challenging responsibility – one that affects roadway safety, public health, environmental conditions, and coordination with local partners. A recent ODOT research project examined how deer carcasses are handled after roadway incidents and identified safer, more consistent disposal options that can be applied statewide.

The research was initiated when ODOT staff were faced with limited disposal options and growing safety risks, particularly in areas with constrained right-of-way.

"I first raised this issue because we were having a difficulty finding effective ways to manage the growing number of roadkill deer," said April Noel, ODOT Seneca County Transportation Administrator. "Unlike many other counties, we have limited right-of-way available for easy disposal, and this is an ongoing and sometimes daily challenge."

Noel said the challenge is persistent and operationally significant. "So far today, we've already picked up six that we have to relocate," she said. It wasn't even noon. "It's a big problem certain times of the year."

Disposal Limitations Drive Research

In Seneca County and elsewhere, limited disposal options heightened the urgency of the issue. "Our local landfill here in Seneca County won't accept deer, which became another big driver behind the research," she said.

These local challenges prompted broader involvement from ODOT's Office of Environmental Services and the Research Program to evaluate disposal practices more holistically.

"When April submitted her idea, we got tagged to be involved due to the environmental nature," said Matthew Perlik, ODOT Office of Environmental Services. "The work that April was doing with this research would be invaluable to update the statewide guidance for this topic."

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Perlik noted that while the issue surfaced at the District level, the findings could extend beyond ODOT operations.

“The guidance and the tools developed could potentially be used universally,” he said. “Often, townships and counties look at how ODOT handles a problem like this, so there could be a further reach than just our right-of-way.”

A Holistic, Safety-Focused Approach

The University of Akron and Stone Environmental Engineering & Science (STONE) led the research, focusing on aligning disposal recommendations with regulatory, environmental, and safety requirements.

“We approached the project in a very holistic way to make sure we understood the problem clearly,” said Samantha Robbins, Project Manager, STONE. “It came from April’s need and District work, and we wanted to make sure that what we provided was useful to everybody.”

Robbins said the research examined national practices and regulatory requirements before narrowing options to those most feasible for ODOT.

“We developed a matrix of disposal options and compared capital costs, operational costs, biosecurity, regulatory complexity, siting requirements, and general pros and cons,” she said. “We wanted this to be a launch point for each District to create their own plan.”

Biosecurity and Public Safety

A key focus of the research was disease prevention and biosecurity – particularly as they relate to chronic wasting disease (CWD) and other pathogens affecting deer populations. The lead researcher was Olive Stringer with STONE.

“My background is in wildlife and conservation biology, so I wanted to emphasize biosecurity,” Stringer said. “Chronic wasting disease is a prion disease, and those prions persist in the environment for years.”

Stringer emphasized that while CWD is not known to transmit to humans, caution is critical.

“It’s always good practice to err on the side of caution and think about these diseases so humans aren’t coming in contact with them,” she said.

Safety considerations extended beyond ODOT personnel to include nearby motorists and surrounding communities.

Findings and Next Steps

The research evaluated disposal methods, including roadside abandonment, landfill disposal, composting, incineration, and contracted services. Each method presented tradeoffs depending on District conditions, right-of-way availability, and local regulations.

“Each District really needs to create its own plan,” Robbins said. “This provides a framework and primary disposal methods they can start from.”

While ODOT is responsible for removing deer carcasses from most interstates and state routes, wildlife management and disease monitoring are the responsibility of the Ohio Department of Natural Resources, making interagency coordination an important part of the removal process.

ODOT Research Reimagines TOAST to Focus on Congestion

ODOT's Traffic Operations Assessment Systems Tool (TOAST) Reimagined 2025 project has laid out a clear path to make congestion data easier for Districts to understand, explain, and use.

Since its introduction in 2018, TOAST has served as a statewide scanning device to identify corridors experiencing congestion and operational challenges. As ODOT's Transportation Systems Management and Operations (TSMO) program has continued to mature, leaders recognized an opportunity to rethink how TOAST is structured, explained, and ultimately used.

That opportunity became TOAST Reimagined 2025, a research project to examine how the tool could better support Districts, leadership, and partners across the state.

Why TOAST Needed a Rethink

Feedback from ODOT Districts consistently pointed to the same challenge: while TOAST contained valuable data, it was not always easy to interpret or apply.

"There's a lot of good data here, but we don't always know how to use it," said Stephanie Marik, TSMO Systems Engineer. "Because TOAST is this giant spreadsheet essentially, it's hard sometimes for the Districts to dive into the data further to really understand where these numbers are coming from."

Marik explained that the research project was driven by a desire to make the tool more usable and more clearly aligned with how Districts make decisions.

"The questions were, 'How can we make this more usable for the Districts?' and 'How can we improve it?'" she said. "We're always looking to improve the metrics that we're using and the data we're seeing to make sure it really fits into the TSMO program."

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Refocusing TOAST on Congestion

According to the research team, part of the challenge was that TOAST had become complex in its description and understanding – particularly for non-technical audiences.

“When people asked what TOAST was, we were giving them word salad,” said John MacAdam, principal and lead researcher at MacAdam Consulting. “We were talking about operational readiness and operational needs, and it wasn’t simple.”

Therefore, a key outcome of the research was reframing TOAST around a single, clear purpose.

“What we did in the research project was reframe it around congestion problems,” he said. “So when people think TSMO, we want them to think congestion problems, period.”

He added that this reframing helps align the TSMO program with ODOT’s Safety program.

“If you think about ODOT from a high-level program perspective, the highway safety program has data behind it that points you to a crash problem,” MacAdam said. “This is the same thing on the operations – TOAST is the data that sits underneath the TSMO program and points you to where the problems are.”

Six Clear Recommendations

The TOAST Reimagined research resulted in six recommended actions designed to improve data clarity, communication, and decision-making:

1. Redefine the master TOAST framework
2. Introduce program-specific “mini-TOASTs”
3. Incorporate traffic signal performance measures
4. Create clearer study and funding processes
5. Assign simplified grades to performance data
6. Develop an interactive dashboard

Marik said those recommendations are intended to support District staff directly. “It’s not only seeing the dashboard or seeing how to get into the data,” she said. “It’s also having simplified templates that help with standard TSMO studies or funding applications. It helps Districts know how to target different funding.”

Validation Beyond Ohio

As part of the research, the team interviewed transportation agencies in other states to understand national best practices. In many cases, the feedback reinforced Ohio’s leadership role.

“Everybody told us, ‘Why are you asking us? We look to ODOT for that best practice,’” MacAdam said. “That was their number one point of feedback.”

He added that while the team gathered ideas from other states, the research largely confirmed the direction ODOT was already heading.

With this reimagining, TOAST will continue to provide Districts with improved and enhanced congestion information to better serve drivers across the state.

ORIL Project Highlight: Research Identifies Maintenance Practices to Slow Corrosion in Prestressed Concrete Box Beam Bridges

Prestressed concrete box beam bridges are common in Ohio, particularly on local and county roadways. Over time, exposure to salt, water infiltration, and heavy traffic can lead to corrosion of internal steel reinforcement – often accelerating deterioration and shortening a bridge's service life.

A recent ORIL research project examined how targeted maintenance practices could slow corrosion impacts and extend the useful life of these bridges, offering local agencies more options between routine upkeep and full replacement.

A Local Problem with Statewide Implications

The research was initiated after county engineers raised concerns about recurring deterioration tied to salt exposure and leaking joints.

"We're dealing with precast reinforced concrete box beams that are directly impacted by salt," said Alan Exley, Lake County Engineer. "As soon as you start seeing corrosion of the reinforcing steel, ODOT guidance says you can't count those strands for strength anymore."

Exley explained that once corrosion becomes visible, deterioration can progress quickly.

"Concrete falls off around the steel as it corrodes pretty soon after," he said. "We were looking for ways that, as soon as you see a problem start, you should do … to try to save your bridge and add some longevity before a full replacement."

Defiance County Engineer and ORIL Board Member Warren Schlatter said the lack of intermediate maintenance options made the research particularly valuable.

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“This was really a problem across the state,” Schlatter said. “Historically, when you saw a problem, the advice was you better figure out where your replacement funding is coming from, because there probably isn’t a repair.”

A Practical Maintenance Framework

The University of Cincinnati led the research, with Rachel Cross serving as principal investigator.

“The main ask was for a matrix that lays out options,” said Cross, Associate Professor at the University of Cincinnati. “Depending on the location and extent of the damage, you wouldn’t approach the problem the same way.”

The goal was to understand where various approaches would be most effective and what limitations agencies should expect.

Cross said the research focused on both routine and more substantial repairs, especially in known problem areas like longitudinal joints and exterior girders.

“We tried to identify repair methods that could be used in specific areas and assess the challenges, costs, and limitations associated with installing them,” she said.

Testing Real-World Repairs

To evaluate repair strategies, the research team conducted field-scale testing using decommissioned box beam girders.

The team also studied surface-applied cathodic protection systems, polyurea coatings on fascia beams, and chip sealing as a low-cost way to limit water and chloride intrusion from above. Due to the limited project duration, long-term corrosion reduction could not be fully quantified, but researchers were able to assess ease of installation, constructibility, and short-term performance trends.

Findings with Immediate Application

One key finding was somewhat surprising for the research team.

“What the research found was that the reinforcing steel inside the decommissioned beams was electrically connected,” Schlatter said. “That means applying cathodic protection at the ends of the beams may be more effective than we would have guessed before.”

This electrical connectivity greatly simplifies cathodic protection installation, reducing the need for individual connections to each strand. However, researchers noted that cathodic protection appears most effective when deterioration is limited and is less successful once extensive spalling or strand loss has already occurred.

Schlatter said the finding has already influenced how counties approach maintenance.

“I have five bridges where I plan to apply cathodic protection at the beam ends,” he said. “That’s about a $1,000-per-bridge cost, compared to a quarter-million-dollar replacement. It’s worth taking that now-educated attempt at a repair.”

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Extending Service Life, Improving Funding Options

Exley said the research changed how counties think about intervention timing.

“This is something that can be done by county forces,” he said. “That’s a real plus because it gives us a way to buy time and keep a bridge in service.”

Extending bridge life can also affect funding strategies.

“Most funding sources start several years out,” Exley said. “You’ve got to find a way to make sure that bridge makes it those four years.”

Supporting Broader Practice

A key deliverable of the project was a maintenance and repair decision matrix developed specifically for county engineers. The matrix links common corrosion conditions – such as joint leakage, fascia beam deterioration, or early strand exposure – with appropriate maintenance or repair options along with relative costs, equipment needs, and anticipated service-life extension.

While the project was aimed at local agencies, ODOT staff noted that the findings complement their ongoing material and specification improvements.

“There have been specification changes made to improve box beams outside of this research,” said Daniel Miller, Administrator of ODOT’s Office of Materials Management. “Those changes, along with this research, are all beneficial from a longevity standpoint.”

Looking Ahead

Beyond maintaining existing bridges, the research identified relatively simple design and construction practices that could delay corrosion in new box-beam bridges. These include improved longitudinal joint details, protective coatings on fascia beams, and electrical continuity to facilitate future cathodic protection, if needed.

While long-term performance will continue to be monitored, the research provides county engineers with practical tools and options they did not previously have.

“All the indicators pointed toward these methods helping,” Schlatter said. “And that’s more than we had before.”

ODOT's Mike Fitch, P.E., Retires After Four Decades of Public Service

After more than 40 years of professional experience – including more than 32 years of public service across Ohio, Virginia, and Maryland – Mike Fitch, P.E., has retired from ODOT.

Mike has served as a program manager for Ohio's Local Technical Assistance Program (LTAP) since 1995, collaborating closely with ODOT's Research Program for decades. His work has been instrumental in strengthening connections between state research efforts and local transportation agencies across Ohio.

Since the launch of Ohio's Research Initiative for Locals (ORIL) in 2013, Mike has served as LTAP's liaison and was a founding member of the program. In this role, he worked closely with the County Engineers Association of Ohio (CEAO), the Ohio Municipal League (OML), and the Ohio Township Association (OTA) to coordinate the appointment of local agency representatives to the ORIL Board. He also served as the primary point of contact for sharing ORIL updates, announcements, and research surveys through the LTAP newsletter and email distribution lists – reaching more than 6,000 professionals statewide.

Mike's path to a career in transportation began early. While in high school, he volunteered as a summer student at Johns Hopkins Hospital in Baltimore and later worked on a farm in Maryland. One of his most memorable summer jobs involved working with Arthur J. Donovan Jr., a Professional Football Hall of Fame inductee and former Baltimore Colts player, who later became a recurring guest on The David Letterman Show.

Mike went on to earn both his bachelor's and master's degrees in civil engineering from Virginia Tech. During his undergraduate years, he spent three consecutive summers working for the Maryland Department of Transportation. As a graduate student, he served as a research assistant on a Strategic Highway Research Program (SHRP) project, co-authoring the final report. He also co-authored multiple research articles published by the Transportation Research Board in the 1990s.

His 31 years of LTAP service include more than seven years with the civil engineering department at The Ohio State University. Mike has also been a consistent presence at the Ohio Transportation Engineering Conference (OTEC), attending annually since 1992 and frequently serving as a session speaker or moderator.

We thank Mike for his decades of dedication, leadership, and service to Ohio's transportation community. We wish him all the best in a well-earned and happy retirement!

Developing a Winning Research Proposal

Readers will see on page 1 and the back page of the newsletter that it is time for ODOT Research's annual Request for Proposals (RFPs). The RFP process is how ODOT and ORIL award research projects. And, while the process may seem daunting, here are some tips on developing a winning proposal. Let's break it down.

1. READ. THE. RFP.

No, really. Read the RFP. This is vital for two reasons. The first is to determine who is asking for the proposal – ODOT or ORIL. The second is to avoid being known as "that researcher" who applies incorrectly.

2. Review & Understand the Formatting Requirements

After reading the RFP, review the proposal formatting requirements. Again, keep in mind that the requirements are different for *ODOT* and *ORIL*. There are two different links on this page. This is a two-step process: first, determine who is asking for the proposal, and then click the correct program requirements link on the *Research Manual & Forms* web page.

There are more details on the RFP solicitation and proposal review processes in *Chapter 4 of the Research Manual*, specifically sections 4.1.1 and 4.1.2.

3. Do NOT Repeat the RFP

Once the RFP review and formatting requirements are reviewed, turn off all notifications and begin to write. The number one thing to remember is not to regurgitate what is in the RFP in your proposal. Not only is this a big red flag, but the proposal will also be considered non-responsive and excluded from consideration.

Writing the RFP is the time to shine. Give props to your team, your subs, and yourself as the proposed Principal Investigator. Why should ODOT choose yours? This is also the time to showcase facilities, labs, and field equipment related to the RFP. However, it is NOT the time to list every piece of equipment in every lab.

Organize the proposal around the research tasks, who will work on them, and how long each will take. These tasks will then make up your work plan and the project's goals and objectives.

4. It's All About Me

Not exactly, but when writing the proposal, be clear about the research's benefits. Who or what will it help? How much time or money will it save? Where will there be improvements or changes?

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Finally, as the proposal is being written, keep in mind that if the team needs help from ODOT or ORIL with parts of the research tasks, include that in the proposal as well.

5. Follow the Formatting Rule (In addition to the Golden Rule)

Once the response is drafted, re-read the proposal formatting requirements; researchers can also be disqualified if they are not followed.

In addition to the proposal, researchers must submit a budget. See the article, “Tips and Tricks for Putting Together a Budget for a Proposal,” for suggestions.

6. Check in Early with the Powers that Be

In addition to crunching numbers for the budget, review the standard ODOT Research agreement. If your organization’s finance team or contract administrators push back, saying it cannot accept the terms of the standard contract, consider not submitting a proposal.

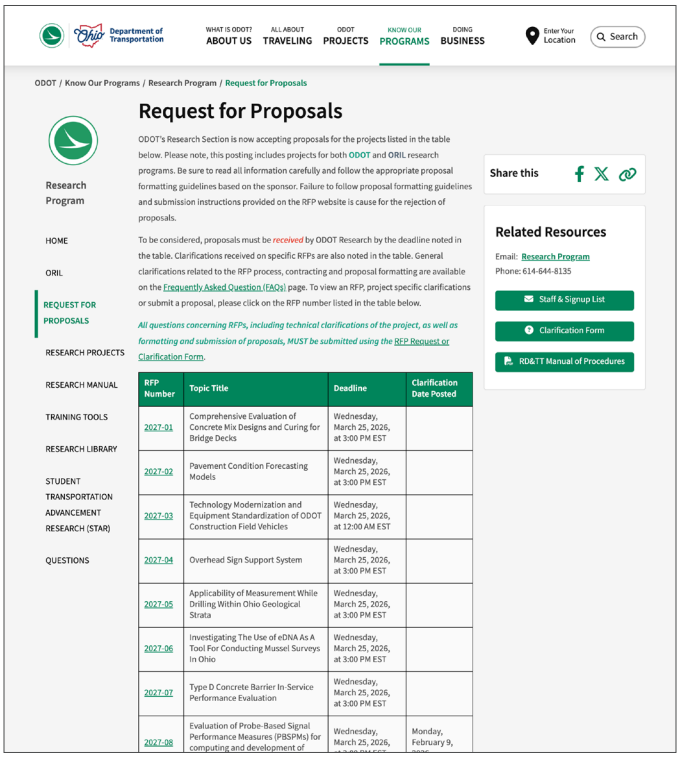
7. Proofreading and AMA (Ask Me Anything), Well Almost …

Once the proposal is drafted, read and re-read it. Then ask a trusted colleague who is also a “grammar guru” to review it for spelling, punctuation, and grammar.

As the proposal is being proofread or written, questions might come up. It could be something technical, about the formatting, or what can be included in the budget. There is one form to use for answers to these questions and more: the RFP Request for Clarification Form. Fill it out, and the Research team will respond right away.

Visit the *RFP web page* early and often when writing an ODOT or ORIL proposal.

As questions are received about RFPs, the questions and their responses will be posted on the RFP page. Please check the page frequently for updates.



Tips and Tricks for Putting Together a Budget for a Proposal

In addition to writing proposals for ODOT Research's annual RFP process, a budget must also be submitted. Researchers should keep in mind that accurate, complete budgets are not only required but are essential to the RFP review process.

Budgets support the proposed scope of work, demonstrate financial feasibility, and ensure compliance with ODOT Research requirements. Here are some best practices for developing a proposal budget using the *official ODOT Research budget form* and resources from the *ODOT Research Manual*.

Use the Current ODOT Research Budget Form

All research proposals must include a budget prepared using the ODOT Research Budget Form available on the *Research Manual & Forms* web page. The budget form includes standardized line items and aligns cost categories with ODOT financial reporting requirements. It is very important to use the most *recent version* of the form. As researchers get their budgets underway, another invaluable resource is the *Research Manual*.

Refer to Chapter 5.3 in the Research Manual

Chapter 5.3 – Invoice Processing – of the Research Manual includes definitions and instructions for all budget categories. Researchers should review these sections to understand allowable costs, expectations for reimbursement documentation, and the classification of expenditures. Key sections include:

- Salaries and Wages
- Fringe Benefits
- Subcontractors
- Travel
- Supplies and Services
- Equipment
- Indirect Costs
- Fees
- Other Expenses

Understanding these definitions ensures that the cost items in the proposal budget align with ODOT practices and requirements.

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Align Budget Items with Project Tasks

Be sure to clearly support a specific task in the scope of work with each budget line item:

- Link personnel hours to specific research activities or tasks. Specify travel only where supported in the project scope narrative
- Identify materials and supplies that directly contribute to project deliverables

Costs without a clear connection to the project scope may be questioned during proposal review.

Be Detailed and Justifiable

- Provide clear descriptions and calculations for each proposed cost
- Specify labor classifications and estimated hours (Please note, key project personnel must be named)
- Break down travel costs by location, purpose, and applicable rates
- Include supporting documents and quotes for estimating materials and equipment charges
- Include a budget form for each subcontractor that uses the same requirements, along with a letter of support from the agency
- Include documentation of the current approved indirect rate for all agencies

*Please note that labor, fringe, and indirect rates will be locked in for the life of the agreement.

Detailed budgets reduce ambiguity and support the review panel's evaluation of cost reasonableness.

Follow Reimbursement Rules and Policies

When estimating expenses, ensure compliance with ODOT reimbursement policies:

- Travel costs must conform to applicable state travel rules established by the *State of Ohio's Office of Budget and Management (OBM)*
- Equipment must meet ODOT criteria for research use
- Indirect costs should be calculated according to the *Research Manual's* guidance

Following these rules during the RFP process reduces revisions after submission and improves budget accuracy.

Verify Calculations and Totals – Do Not Round

Before submitting a proposal:

- Check all formulas and sum totals for accuracy (Do not change formulas)
- Confirm subtotals align with the total project cost

Keep in mind that inaccurate arithmetic or misaligned totals can delay the acceptance of a proposal.

Seek Clarification as Needed

Early engagement helps resolve uncertainties and ensures budgets align with ODOT expectations.

If questions arise during budget preparation, researchers are encouraged to contact ODOT Research staff for clarification at *research@dot.ohio.gov* or by using the phone numbers on the newsletter's back page.

Building Accessibility with 508 Compliance for ODOT Research Projects

Accessibility is no longer an optional final step in publishing research but a core requirement to be built into documents from the beginning. Research only has value if everyone can access and understand it.

Updates to Section 508 of the federal Rehabilitation Act requires that electronic documents be accessible to people with disabilities, including those who use screen readers and other assistive technologies. Along with the Americans with Disabilities Act (ADA) and the WCAG (Web Content Accessibility Guidelines), Section 508 ensures equal access to digital information.

For ODOT Research and its partners, this means accessibility must be part of every stage of document creation, from drafting to final publication. Accessibility is not an item on a checklist. It is about creating documents that truly work for all users. The goal is to produce clear, usable, and inclusive research.

Templates Create Foundation for Accessibility Success

Most research reports begin in Microsoft Word, which serves as the foundation for accessibility. Starting with a strong, compliant template is one of the most effective ways to stay on track. Remember, using a good template:

- Establishes proper document structure
- Reduces rework later
- Improves consistency and navigation
- Makes compliance more achievable

Use the Accessibility Checker, but DO NOT Rely on It Alone

Microsoft Word's Accessibility Checker is a valuable tool that helps identify common issues, such as:

- Missing alternate (alt) text
- Improperly formatted graphics
- Merged table cells
- Color contrast problems

The Checker often recommends fixes and continues to improve, but it is not perfect. Some issues still require manual review and judgment. Think of it as a guide, not a guarantee.

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Why Styles Matter

Using Microsoft Word's built-in Styles tool is essential for accessibility. By using Styles, researchers:

- Improve navigation for all readers
- Help screen readers navigate content correctly
- Make formatting changes faster and more consistently

Skipping styles and manually formatting text can create significant accessibility barriers. A well-designed template makes using styles automatic and straightforward.

Writing Effective Alt Text

Alt text allows screen readers to describe images and graphics. Strong alt text in a document:

- Explains what and/or how an image contributes to understanding the overall document
- Is clear and concise
- Uses appropriate grammar and punctuation
- Includes logos and icons when relevant
- Avoids repeating caption text

Alt text should communicate meaning, not just appearance. For example, a chart's alt text should describe the trend or takeaway, not just say "bar chart."

Common mistakes include:

- Duplicating caption information
- Repeating language like "photo of" unnecessarily
- Writing too much or too little

Keeping Tables Simple

Tables are a frequent source of accessibility issues. Simple tables are accessible when they:

- Use a single header row
- Avoid merged cells
- Contain data in every cell

Complex tables with merged cells or multiple header layers are difficult for screen readers to interpret and should be avoided whenever possible. Simpler tables improve accessibility and clarity for everyone reading.

Using Color and Links Accessibly

Color should never be the only way to communicate information. Do not rely on color alone to convey meaning because readers with color vision deficiency or who use assistive technology may not perceive it. Microsoft Word now has a "High Contrast Only" box that can be selected to ensure accessible color options are chosen for text and highlighting.

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Color use best practices include:

- Using strong contrast between text and background
- Pairing color with text labels or symbols
- Avoiding color-only warnings or cues

Accessible links should be meaningful on their own. Instead of writing “click here,” or using long URLs, include descriptive text such as: “Read the Guidelines for Preparing 508-Compliant Research Reports.” This improves accessibility and makes documents easier for all readers to understand.

Preparing Accessible PDFs

There are two ways to convert a Word document to a PDF: either by saving the file as a PDF or by clicking on PDF when going to print a document. This may require trying both processes to identify which produces fewer accessibility errors in the document.

Once a document is converted to PDF, using Adobe Acrobat’s Accessibility Checker becomes essential. The Checker:

- Identifies missing tags and structure
- Flags alt text and heading issues
- Highlights document property errors

However, many PDF errors originate in Word. Fixing accessibility problems is often an iterative process between the two programs. The stronger the Word document and its underlying template, the easier it will be to change the Word file and create an accessible PDF.

Common PDF issues include:

- Missing document titles
- Untagged content
- Improper headings
- Table structure errors
- Missing alt text

Shifting How Research Results are Created

These updated 508 requirements represent a shift in mindset and in how researchers write. Accessibility is now an integral (and mandatory) component of how results are written, designed, and reviewed by researchers, and consumed by all readers.

More information and learning resources are available on the National Transportation Library’s Transportation Research and Connectivity Pooled Fund Study: Section 508/Accessibility *website*.

STAR Students Share Constellation of Innovative Ideas at OTEC 2025

The Student Transportation Advancement Research (STAR) Program was well represented at the Ohio Transportation Engineering Conference (OTEC) 2025 through a series of project booths showcasing student-led research with real-world transportation applications. The projects demonstrated how applied research can support safer, more efficient, and more sustainable transportation systems across Ohio.

What is STAR?

STAR is ODOT's program designed to engage college students to address transportation issues in innovative ways. STAR challenges students (and ODOT) to think outside the box. Students identify new approaches to solving issues, create new value by applying new processes or techniques to established topics, or simply test new ideas. Research teams are comprised of students (undergrad, graduate, or combination) and academic advisors.

Applying Research to Practical Challenges

At OTEC, several STAR projects focused on improving how transportation agencies collect data and evaluate infrastructure performance.

One project explored the use of unmanned aerial vehicles (UAVs) to capture pollutant data during highway construction. By collecting data from the above, the research examined safer, more efficient ways to monitor environmental impacts while supporting more sustainable construction practices.

Another project evaluated prestressed concrete box beam bridge designs, a common structure type in Ohio. Students developed an Excel-based analysis tool to improve consistency and efficiency in bridge design evaluation, providing a practical resource for engineering decision-making.

Rethinking Mobility at Transit Centers

A third project examined next-generation smart mobility hubs, reimagining transit centers as integrated spaces that improve multimodal mobility, safety, and equity. The research highlighted opportunities to better connect transit, pedestrians, cyclists, and emerging mobility options at the community level.

Additional STAR displays focused on projects ranging from Advanced Air Mobility (AAM) infrastructure to optimize surveillance systems, to AV- and VR-enhanced tools for STEAM-integrated education, to the impact of AI on LIDAR data for surveillance, and to a virtual immersive simulation training (VISTA) for drones.

Preparing Future Transportation Professionals

Together, the STAR projects featured at OTEC 2025 demonstrated the value of student-led research in addressing real transportation needs. Students gained practical experience while contributing tools and ideas that support Ohio's transportation system today and into the future.

Visit the *STAR program's web page* to learn more.

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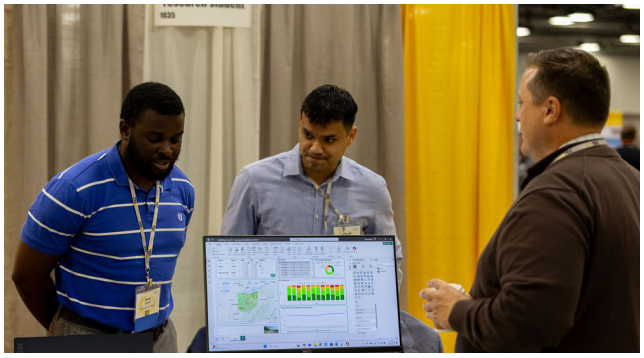
Virtual Immersive Simulation for Training (VISTA) with Drones Bowling Green State University

Using Unmanned Aerial Vehicles to Capture Pollutant Data During Highway Construction Cleveland State University

Advanced Air Mobility Infrastructure – Surveillance System Optimized Kent State University

Next Generation Smart Mobility Hubs to Improve Multi-Modal Mobility, Safety, and Equity for Ohio Residents University of Cincinnati

The Impact of AI & LIDAR data for Surveying University of Cincinnati



Innovative Evaluation of Prestressed Concrete Box Beam Bridge Designs University of Toledo

AV/VR-Enhanced Tools for STEAM-Integrated Education University of Cincinnati

The ODOT Research team at their booth during OTEC 2025

FY 2026 STAR Recipients

The Office of Statewide Planning and Research issued its fiscal year (FY) 2026 Request for Proposals (RFP) in September 2025 to researchers at Ohio universities. The following four researchers have been selected for the FY2026 program after review by ODOT Technical Advisory Committees and approval by ODOT Leadership. Each project received $150,000 each in funding. Congratulations to the recipients! Watch for the STAR solicitation for FY2027 this fall.

STAR Project	Project Name	Principal Investigator	Student Team	Agency
2026-10STAR-A1	Integrated Acoustic and Human-Centered Development and Digital Twin Testing for Rail Noise Abatement Strategies in Ohio	Alejandro Lozano Robledo, Research Associate, FMDL Director	• Domagoj Bui Ph.D. Student • Edwardo Webster Rachid, Ph.D. Student • Mythili Amani, MS Student • Tristan Lopez, BS Student	University of Cincinnati
2026-10STAR-A2	Railway Noise Abatement Strategies: State of the Art and Applicability for Ohio Corridors	Hamed Attariani, Ph.D., Associate Professor	• Isaac Kunkler, BS Student • Jared Andrus, BS Student	Wright State University
2026-10STAR-B	Developing an Automated Framework for Aggregating Right-of-Way Data through GIS and Computer Vision Methods	Zhenhua Chen, Ph.D., Associate Professor	• Donghwan Ki, Ph.D. Student • Yingren Deng, BS Student	The Ohio State University
2026-10STAR-C	Artificial Intelligence Based Computer Vision	Eddie Chou, Ph.D., Professor & Director of Transportation Systems Research Lab	• Arua Udensi, BS Student • Bibudh Dwa, BS Student • Syam Nallamekala, BS Student	The University of Toledo

ORIL Board Appoints Chair for 2026

In January 2026, the ORIL Board unanimously selected Greg Butcher, City Manager for the City of Pickerington, as Board Chair for the 2026 calendar year. Greg previously served as Chair, and under his leadership, the program achieved significant milestones, expanded its visibility, and strengthened its reputation both across Ohio and nationally.

“Since 2011, [ORIL] has provided an opportunity for Ohio’s local governments to participate in local road research,” Greg said. “The goals of the program are to focus on research directly relating to safety, infrastructure preservation, and operational and business practices.”

Greg has more than three decades of experience in public service, engineering, and local government leadership. He has served as Pickerington’s City Manager since 2019, following nearly 19 years as Township Engineer for Violet Township. His background also includes private-sector leadership as a vice president in the construction industry, giving him a well-rounded perspective that bridges technical expertise, fiscal stewardship, and community-focused governance.

He holds a Master of Public Administration from Ohio University and a Bachelor of Science in Civil Engineering from The Ohio State University.

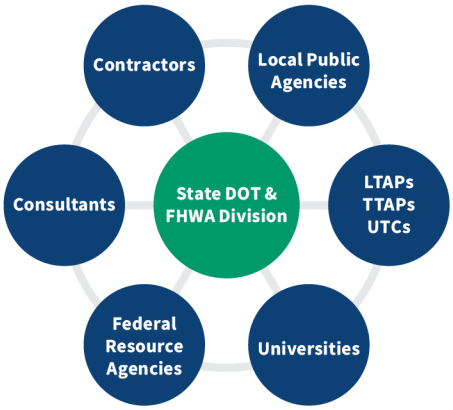
His reappointment as Chair reflects the Board’s strong confidence in his steady leadership, collaborative approach, and long-term vision for ORIL. The Board looks forward to continued momentum and innovation under Greg’s guidance as the program builds on its success in 2026 and beyond.

About ORIL’s Board

The ORIL program is administered by a 15-person board composed of County Engineers, City Engineers, a Township Representative, Academics and ODOT Technical Experts. The board is supported by non-voting members from the Ohio LTAP Center, ODOT’s Research Program and the FHWA Ohio Division Office.

About the State Transportation Innovation Council (STIC) Program

ODOT's State Transportation Innovation Council (STIC) program focuses on fostering innovative solutions and advancements in the state's transportation system. The STIC program encourages the development and deployment of new technologies and practices to improve the efficiency, safety, and sustainability of transportation in Ohio. It also identifies and promotes innovations to accelerate their implementation within the transportation community.



Funding Opportunities

The STIC program offers funding opportunities to various entities, including counties, municipalities, universities, state agencies, Metroparks, transit authorities, as well as local and tribal governments. In March 2026, the Ohio STIC will be soliciting new applications for innovative transportation projects.

The total annual program funding is $125,000 per state, and selected applicants are required to provide a minimum 20% match. The funding could be awarded to a single project or divided among multiple projects. **The application deadline is May 15, 2026.**

The application and more details will be online at: *https://www.transportation.ohio.gov/programs/stic*.

Project Alignment and Reporting

Projects must align with the Federal Technology & Innovation Deployment Program (TIDP) goals, which include accelerating the adoption of innovative technologies in surface transportation, improving highway efficiency, safety, and sustainability, and deploying new tools and practices to foster statewide innovation. Successful applicants will also need to submit progress summary reports every six months and a final outcomes report upon project completion.

Fiscal Year 2025 STIC Projects

Description	Organization	STIC Funding Requested	Applicant Match	Total Funding
PaVision Low-Cost Data Collection and Analysis	Hamilton County Engineer's Office	$25,000	$6,250	$31,250
Construction Inspection Survey Technology Workforce Development	ODOT CADD & Mapping	$100,000	$25,000	$125,000

New Final Reports Available Online

Researchers and their teams have wrapped up several projects over the past few months and shared results. Here are the final reports published since the last issue of *Moving Forward*.

Project Title	Principal Investigator, Research Agency	State Job Number	Links
From Data to Action: Leveraging Machine Learning/ Artificial Intelligence to Guide Proactive Pedestrian and Cyclist Safety Initiatives	University of Toledo	**136837**	*Report* *Factsheet*
DriveOhio Research on Call (ROC) FY2024-2026 – Task#2 – UAS Data Management and Analysis Recommendations	Ohio University	**136679**	*Report*
DriveOhio Research on Call (ROC) FY2024-2026 – Task#4 – AAM Workforce Growth Opportunities Research	Ohio University	**136679**	*Report* *Factsheet*
Veterans' Glass City Skyway Bridge Main Cable Evaluation	University of Toledo	**136664**	*Report* *Factsheet*
Shoulder Drop-off/Mounding Severity Determination	University of Cincinnati	**136135**	*Report* *Factsheet*
Identification of Maintenance Practices to Impede Corrosion Impacts of Prestressed Concrete Box Beam Bridges	University of Cincinnati	**136344**	*Report* *Factsheet*
Using Unmanned Aerial Vehicles to Capture Pollutant Data During Highway Construction	Cleveland State University	**136836**	*Report*
Investigation of Pavement Performance in Historically Under-Performing Regions	University of Toledo	**136521**	*Report* *Factsheet*
Ohio's Research Initiative for Locals (ORIL) Research On-Call 2026 ORIL6 Task 4: Implementation of Updated CMP Spreadsheet for Low Cover Culverts	University of Akron	**136682**	*Report*
Ohio's Research initiative for Locals (ORIL) Research On-Call Task 3: Field Evaluation RAP and GTR Test Sections	University of Cincinnati	**136682**	*Report* *Factsheet*
Division of Construction ROC 2024-18 Task 5: Alternate Curing Method for Structural Concrete using E5 Internal Cure and Liquid Fly Ash	Ohio University	**136677**	*Report*
Exploring the Use of Ground-Based Robotic Assistance in Uncrewed Operations of State DOTs	University of Cincinnati	**136674**	*Report*

Upcoming Events and Key Dates

Month/Year	Date/Event
February 2026	**ODOT & ORIL issue FY2027 RFP** **16 |** ODOT Closed **17 |** 11 AM (ET) – Results Presentation: Guidance for Sustainable Integration of Automated Transportation Technologies (AV Pooled Fund Study) – To register, click here. AASHTO High Value Research Awards Nominations Opens NCHRP Issues FY2028 Ballot
March 2026	**17 |** STIC Meeting **25 |** ODOT & ORIL FY2027 RFP closes at 3 PM ET
April 2026	**21 |** ORIL Board Meeting: Researcher Selections ODOT and ORIL Review Proposals AASHTO High Value Research Awards Voting Closes AASHTO R&I Committee Meeting STIC Solicitation for FY2026 Funding Issued
May 2026	**25 |** ODOT Closed SP&R-B FY2027 Work Program Book Submitted to FHWA Ohio Division Office NCHRP Panel Nominations Opens STIC Solicitation for FY2028 Funding Closes
June 2026	**9 |** STIC Funding Subcommittee Meeting **19 |** ODOT Closed **23 |** STIC Committee Meeting ODOT Leadership Finalizes Researcher Selections for FY2027 Projects

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OHIO DEPARTMENT OF TRANSPORTATION
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