



# State DOT Innovation Programs: Identifying New Technologies and Practices from the Front Lines

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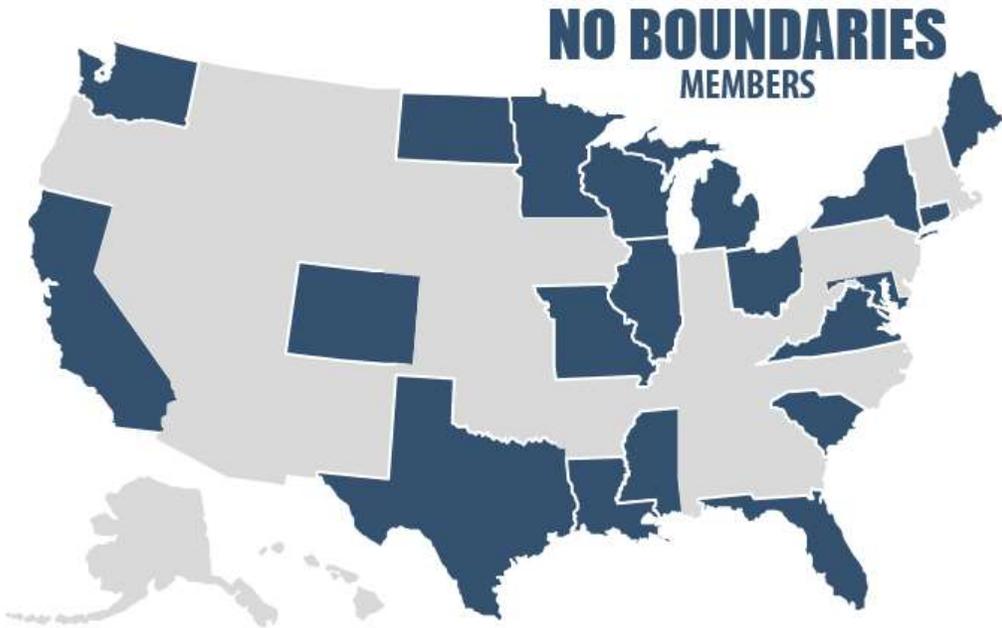


## What is No Boundaries

- Pooled fund project [#TPF-5\(330\)](#)
  - A community of practice for roadway maintenance professionals
  - Identify innovative technologies and practices used by DOTs
  - Promote their use across states through marketing materials, training classes, webinars and other technology transfer efforts
- Complements AASHTO MaC peer discussions and relationships
- Focus on spring/summer/fall maintenance needs; excludes winter-specific maintenance

# Current Members

## 20 State DOTs



## Benefits

- **Networking and collaboration** with other agencies
  - Happens at a national level
  - Two-way street
- **Practitioner oriented**
  - Hands-on and usable today
  - Share new and better equipment, materials, procedures
- **Consistency across agencies**
  - Performance-based maintenance
  - Transportation asset management
  - Shared research (statements and outcomes)
- **Cost effective**
  - Minimize duplication of effort

## Meetings for Peer Information Sharing

- Peer exchanges for members once or twice yearly
- Presentations by state DOTs and guest agencies:
  - Innovations
  - Program updates
  - Round table discussions
- Technical Tours

## Maintenance technical tours

- SR 520 floating pontoon bridge
- Texas DOT Vehicle Fabrication Shop



Innovation has become a key focus area for No Boundaries.

## Spotlight Innovation

# Sign Refurbishing

- 2017-18 sign shop budget is ~\$2.1 million.
- Sign shop manufactured ~73,680 signs last fiscal year.
- Refurbished ~160,000 square feet of signs last fiscal year.
- Refurbishing process estimated to save **\$1.40 per square foot**.
- Total savings in excess of **\$224,000** or **10.7%** of annual operating budget for the sign shop.



*Spotlight Innovation*

# Truck-mounted Flagger



- Automated Flagger Assistance Device
  - Three color variable message boards
  - Automated stop/slow paddle
  - Flashing red/yellow signal
- Benefits
  - **SAFETY** - Eliminates the need for a flagger on the ground
  - **Time Savings** - In setting up and moving between work zones
  - **Cost Savings** - Increases productivity in poor weather



# Innovations captured in the program's Innovations Database

- Innovations in all areas of non-winter maintenance
- Goal is to establish this as a national clearinghouse
- Open to submissions from all public agencies

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Submission Date	March 27, 2018
Name	Mike Shea
Agency	Missouri Department of Transportation
Email	<a href="mailto:mike.shea@mdot.mo.gov">mike.shea@mdot.mo.gov</a>
Phone	<a href="tel:3717515522">(371) 751-5522</a>
Name of product/practice	Automated Flagger Assistance Devices
Type of product/practice	<ul style="list-style-type: none"> <li>• Equipment</li> </ul>
Maintenance activity	<ul style="list-style-type: none"> <li>• Traffic Markings and Signage</li> <li>• Other</li> </ul>
Describe the product or practice and how your agency is using it (including for how long).	<ul style="list-style-type: none"> <li>• Safety</li> </ul> <p>Some strategies for improving flagger safety include slowing down approaching vehicles or removing flaggers from the immediate vicinity of traffic. The Automated Flagger Assistance Device (AFAD) is a system that can potentially accomplish both of the aforementioned strategies.</p>
What need prompted the development/use of the product or practice?	Flagger safety is an important issue in work zones due to the proximity of the flagger to traffic.
What impact or value has your agency experienced using the practice or product?	Field results found that AFADs are more effective than human flaggers, and drivers prefer AFADs over human flaggers.
Provide links to information online about your innovation.	<ul style="list-style-type: none"> <li>• <a href="https://library.mdot.missouri.gov/DOI/reports/TR201737/trc17-010.pdf">https://library.mdot.missouri.gov/DOI/reports/TR201737/trc17-010.pdf</a></li> </ul>
Attachments	
Submitter Information	(If different from agency contact information above)

**Some agencies have programs to identify, reward, and implement innovative technologies and practices.**

## Innovation Programs - Today's Lectern Session

1. Inquiry by No Boundaries subject matter expert
  - Successes and challenges of 7 DOTs
  - Presentation today by Diana Clonch of D.W. Clonch
2. and 3. Case studies
  - Minnesota - Presentation today by Mindy Heinkel, Minnesota DOT
  - Connecticut - Presentation today by Donna Shea, UConn
4. Federal perspective
  - Every Day Counts - Presentation today by Jeff Zaharewicz, FHWA

## Thank you

**David Bergner**, chair of sponsoring TRB Committee AHD15,  
Maintenance and Operations Personnel

**James Bryant**, TRB Senior Program Officer

## How to Become a Member

- Phase II is ending in June 2019, but a Phase III is planned
- Evolving Focus

No Boundaries

Transportation Maintenance Innovations

- Solicitation forthcoming on the pooled fund website
- Please contact No Boundaries for more details at [maintainroads.org](https://maintainroads.org)