Office of Traffic, Safety and Technology
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Next Steps for Work Zone Challenges

Intelligent Transportation Systems (ITS)/Intelligent Work Zone (IWZ) technologies can be used in work zones to promote worker safety, enhance traveler safety, and improve mobility in a constrained environment.

Work Zone Challenges

This project uses the results from MnDOT's "Systems Engineering to Address Work Zone Challenges":

- Work Zone Intrusion Warning System (WIWS)
- End of Queue Warning System for Work Zones
- Distracted Drivers Approaching or Within a Work Zone
- General Mobility Impacts Caused by Work Zone

Project Goals

To utilize low cost, high benefit technology solutions, it is important to link the appropriate technology with a project, secure funding early in project scoping, and acquire full support by the Project Stakeholders for ITS/IWZ implementation. Pilot projects identified to demonstrate ITS/IWZ operation and effectiveness in order to establish a sustainable approach to address these top work zone challenges include:

Year	District	State Project and Location	ITS/IWZ System(s)
2017	6	SP 2506-75 – TH 52 northbound Rochester to Cannon Falls	Dynamic Zipper Merge End of Queue Warning
	6	SP 7480-126 – I-35 and TH 14 on 10 Bridges near Owatonna	End of Queue Warning
2018	6	SP 6680-113 – I-35 3.7 miles north of Faribault	Dynamic Zipper Merge End of Queue Warning Travel Time
	7	SP 5209-74 – TH 169 between Saint Peter and Le Sueur	End of Queue Warning
	Metro	SP 2782-327 – I-35W Transit/Access Project	Travel Time
	Metro	SP 8280-47 – I-35 North Split Rehabilitation and Bridge	End of Queue Warning

To achieve these goals this project will:

Establish and institutionalize a process to facilitate ITS/IWZ project identification and technology selection early in project development, a scoping decision tree and cost estimating guide has been developed. Evaluation of the effectiveness of these systems on pilot projects will aid in justifying funding and application of these ITS/IWZ technologies.

Develop a sustainable process for annual project selection, standardized procurement packages, ITS/IWZ designs, performance metrics, etc. for ease of future ITS/IWZ deployments that address the top four work zone challenges identified above.

Generalized, "boiler plate" special provisions have been developed to aid in standardizing procurement packages for projects.

A Work Zone Intrusion Warning System (WIWS) is being evaluated under a Local Road Research Program project in early 2018. The results of this evaluation will be providing direction for future applications.

A distracted driver warning system for moving and mobile work zones is being investigated for demonstration and evaluation in 2018.

Project Completion is anticipated May, 2019.

Project Partners

MnDOT

SRF Consulting Group Inc.

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