MDOT Program Years 2023 to 2025 Proposed Research Projects

RAC/Focus Area	MDOT Research No.	Title	Project Manager	Project Start Date
Approved FY2023 Projects				
Aviation	OR23-019	Multimodal Aircraft Charging Station Deployment	Smith, Linn	Feb-23
Bridges & Structures	OR23-001	Capacity Prediction of Repaired and Unrepaired Bridge Beams with Deteriorated Ends	Tempinson, Don	Oct-22
Bridges & Structures	OR23-016	Improving MDOT's Movable Bridge Reliability and Operations	Halloran, Mike	Feb-23
Construction	OR23-013	Evaluation of MDOT's Methodology for Estimating Work Zone User Delay Times	Hoffman, Sarah Krom, Ben	Feb-23
Finance	OR23-020	Bonding vs. Pay-Go	Wearsch, David	Apr-23
Fleet-Facility Management & Operations	OR23-011	MDOT Fleet Electrification Strategies	Sevigny, Diane	Feb-23
Intelligent Transportation Systems & Signals	OR23-012	Revenue Opportunities from MDOT Fiber Infrastructure and Other Utility Types	Castle, Collin	Feb-23
Local Transit	OR23-021	Marketing and Education Budget for Implementation of New Transit Technology	Hohf, Kevin Kent, Ellen	Feb-23
Mobility & Traffic Incidents	OR23-005	Predicting Urban Street Speed and Its Relationship to Reliability & LOS	Engle, John	Apr-23
Mobility & Traffic Incidents	OR23-006	Identify Best Locations for New Flex-Route Projects Throughout the State of Michigan	Firman, Jason	Apr-23
Mobility & Traffic Incidents	OR23-022	Optimizing work Zone Conditions to Maximize Safety and Mobility	Brink, Steve Miller, Dawn	Apr-23
Pavements & Materials	OR23-014	Pavement ME Rehabilitation Design Protocols for MDOT Implementation	Schenkel, Justin	Feb-23
Project Development	OR23-017	Socio Economic Impacts of Technology Based Stakeholder Engagement Platforms	Martin, John	Apr-23
Project Development	OR23-018	Improving Cost Estimation and Budget Planning with New Michigan Highway Construction Cost Index	Kirkpatrick, Kristi	Apr-23
Roadway & Roadside Maintenance	OR23-003	Winter Severity Index with Winter Maintenance Expenses and Material Usage	Roath, James	Oct-22
Roadway & Roadside Maintenance	OR23-004	Identify Mapping Techniques of Invasive Plant Species within the MDOT Right-of-Way (ROW)	Ahlscwede, Carol	Apr-23
Transportation Safety	OR23-010	Efficacy of Speed Warning Technologies	Uzcategui, Alonso	Oct-22
Transportation Safety	OR23-015	Examination of Lighting Practices at Crosswalks	Smerdon, Tim	Feb-23
Proposed FY2024 Projects				
Aviation	OR24-011	Airport PFAS Remediation Testing	Budds, Bryan	Oct-23
Aviation	OR24-012	Unmanned Aircraft System Communications Mesh Test Deployment	Smith, Linn	Oct-23
Bridges & Structures	OR24-008	Enhance Bridge Image Attribution Through Automated Post Image Processing	Armour, Jacob	Oct-23
Intelligent Transportation Systems & Signals	OR24-003	Inductive Vehicle Charging - Identify Best Practices/Applications and Optimum Locations for Light to Heavy Duty Vehicles	Mueller, Michelle	Oct-23
Pavement & Materials	OR24-005	Effects of Curling and Warping on Initial Ride Quality and an Evaluation of MDOT's Current Joint Design/Spacing for PCC Pavements	Bahmer, Ethan	Dec-23
Program Development	OR24-004	Multi-Objective Decision Analysis and Optimization Model for Transportation Investment Decision-Making at MDOT	Case, Michael	Oct-23
Surveys & Automated Design	OR24-009	Real Time Augmented Visualization Methods in Field Applications	Douglas, Scott	Oct-23
Surveys & Automated Design	OR24-010	Digital Collaboration using Industry Foundation Classes (IFC) and Building Information Model (BIM) Technology	Arnold, Luke	Oct-23
Transportation Safety	OR24-006	Safety Effectiveness of Non-Freeway Sinusoidal Shoulder Corrugations	Bramble, Mary	Jan-24
Transportation Safety	OR24-007	Covid and Traffic Crashes/Impact on Safety Targets	McQuiston, Carissa	Dec-23
Proposed FY2025 Projects				
Bridges & Structures	OR25-004	Replacement of Outside Beams on Adjacent Box-Beam Structures	Zakrzewski, Brian	Oct-24
Environment & Water Resources	OR25-006	Flood Fragility of Roads and Railroads	Zweng, Hal	Oct-24
Geotechnical & Foundational Design	OR25-005	Modeling and Assessment of the Remaining Service Life for Steel Bridge Piles in Michigan	Endres, Dick	Oct-24
Intelligent Transportation Systems & Signals	OR25-001	Multimodal 3D Perception System for Active Safety at Accident-prone Location	Feldpausch, Elise	Oct-24
Pavement & Materials	OR25-002	Identify the Most Cost-Effective Base/Subbase Thicknesses for Frost-Heave Protection and Structural Support	Eacker, Mike	Oct-24