

## FY2025 Research Program

The following are the projects that MoDOT intends to proceed with contracting with an external organization. They are organized by broad topic. In most cases, a Request for Proposal will be developed and posted, depending on funding availability and internal staffing levels. Given that MoDOT may have higher interest levels in one aspect or portion of a submitted research idea, some externally submitted ideas for research may be reflected in part or in combination with other similar ideas.

### Bridge

- Simple for Dead, Continuous for Live (SDCL) - MoDOT Steel Superstructure Standards
- Life Expectancy of Aged Pre-tensioned MoDOT Bridge Girders. *Timing will be dependent on the construction schedule and removal of bridge A0130.*

### Construction

- Developing Guidelines for Quality Control of Recycled/Reclaimed Asphalt Pavement (RAP) Stockpiles

### Design

- Using Artificial Intelligence (AI) to Write Land / Legal Descriptions
- Using AI to Analyze Awards and Contractor Capacity. *This will be included in the FY24 project on Letting Optimization which is still pending RFP release.*

### Financial

- Exploring Roadway Funding Mechanisms for Alternative Fuel Vehicles

### Highway Safety and Traffic

- Maximizing the Wizardry of WAZE™ Mobile Applications to Expand Traveler Advisory Information and Collect Crowd-sourced Data in Order to Improve Driver Safety
- AI Enabled Vision System for Intersection Analytics. *This may be tied into an existing research project.*

### Hydraulics

- Use of Small UAVs (Unmanned Aerial Vehicles) for Field Measurement of Hydraulic Parameters in Small Drainage Basins

### Materials

- Examine Reducing Aggregate Size for Increased Durability

### Safety and Emergency Management

- Radar-aided AI for Alerting Crew on or near the Roadway