

Legislative Investment: The investment allocation from the legislature for all NDDOT's IT projects was \$13.6 million special funds during the 2021 Session Laws and \$9.1 million general funds during the 2023 Session Laws.

OVERVIEW

ROADWAY INFORMATION MANAGEMENT SYSTEM (RIMS) REWRITE PROJECT

The Roadway Information Management System (RIMS), Statewide Transportation Improvement Program (STIP) Process System, Preliminary and Construction Engineering Reports (PACER), and Construction Automated Records System (CARS), are the central hub for data and are critical to NDDOT day to day operations. It will also add a Materials Management System (MMS) to work in concert with the CARS replacement.

COST SUMMARY

- Legislative Authority - \$15,910,000
 - \$9,660,000 in Special Funds and \$6,250,000 in General Funds
- Expended thru February 2025 - \$1,128,923.20
- Est. cost to complete all projects - \$14,781,076.80

Business Process Modeling - Complete

Completed: March 2023 | Cost: \$381,000

Roadway Capital Planning and Project Master System (CPPMS) – Under Contract

Est. completion: June 20, 2025 | Cost: \$1,145,919.50 | Est. spent: \$512,714.65

Est. cost to complete: \$633,205

Transportation Infrastructure Preconstruction System (TIPS) – Under Contract

Est. completion: May 21, 2026 | Cost: \$1,070,913 | Est. spent: \$235,208.55

Est. cost to complete: \$835,705

Transportation Project Management System (TPMS) – In Procurement

Est. Completion: Aug. 1, 2026 | Cost to complete: \$2,500,000 - \$4,400,000

Phases 1, 2, 3, 4a, 5 & 7 – Remaining Phases (2025-2027 Biennium)

Est. cost to complete: \$4,364,000 - \$5,364,000

Phases 4b & 6 - 2027-2029 Biennium

AUTOMATED VEHICLE LOCATION (AVL) PROJECT

This project outfits all 350 NDDOT snowplows with equipment to monitor location, operations, and road conditions.

Est. completion: June 4, 2026 | Cost: \$1,916,361.07 | Est. spent: \$303,838.32

Est. cost to complete: \$1,612,522.75

TRAFFIC MONITORING PROJECT

The Traffic Monitoring Program consists of three separate but related projects: Traffic Data Editing and Analysis (TDEA) software, Traffic Monitoring Strategic Plan (TMSP), and Multi-Modal Probe Data.

Phase 1: Traffic Data Editing and Analysis Software (TDEA) – Complete

Completed: Nov. 2024 | Cost: \$837,775.78

Phase 2: Traffic Monitoring Strategic Plan – In Procurement

Est. completion: TBD | Cost to complete: \$1,000,000 | Remaining funds available: \$856,503.22

Phase 3: Multi-Modal Probe Data – Remaining Phase

Est. cost to complete: \$1,500,000

DOOR SECURITY SYSTEM & HVAC CONTROLS PROJECT

This is a multi-agency project and will replace the existing Andover Continuum heating, ventilation, and air conditioning system and door security access systems for the NDDOT buildings across the state.

Est. completion: July 2027 | Cost: \$1,031,000 | Est. spent: \$409,056.75

Est. cost to complete: \$621,943

RIMS REWRITE PROJECT

The project replaces core engineering systems used at the NDDOT and makes up \$15.91 million (\$9.66 million in special funds and \$6.25 million in general funds) of the total legislative investment. The Roadway Information Management System (RIMS), Statewide Transportation Improvement Program (STIP) Process System, Preliminary and Construction Engineering Reports (PACER), and Construction Automated Records System (CARS), are the central hub for data and are critical to NDDOT day to day operations. It will also add a Materials Management System (MMS) to work in concert with the CARS replacement. These systems are outdated and inefficient, lack modern capabilities, limits external customer access, are expensive to maintain, and are not mobile-friendly.

The RIMS Rewrite program aims to replace these systems with modern, web-based systems that are user-friendly, cost-effective, include advanced reporting, GIS (Geographical Information System) integrations, real-time tracking features, transparent with up-to-date dashboards, and are maintainable with current programming resources.

Complete

Business Process Modeling - Due to the sheer size and scope of the systems and impacted users, a recommendation was made to begin this program with an analysis of business processes for each system, referred to as Business Process Modeling (BPM). The goals and outcomes of this effort were to document current state, desired future state, and process improvement opportunities for each system. This vendor-led phase started in October 2021 and completed in March 2023 at a cost of approximately \$381,000.

Under Contract

Roadway Capital Planning and Project Master System (CPPMS) – this phase of the project is to replace RIMS Project Master and Statewide Transportation Improvement Program (STIP) Process System Capital Planning functions.

- Start: January 9, 2023
- Finish: June 20, 2025 (original baseline finish was December 31st, 2024)
- Cost: \$1,145,919.50
- Spent through February 2025: \$512,714.65

Estimated cost to complete phase: \$633,205

Note: Change requests to add new scope will push final acceptance into the next biennium.

Transportation Infrastructure Preconstruction System (TIPS) – this phase will replace PACER and RIMS preconstruction business functions through the execution of a construction contract.

- Start: November 8, 2023
- Finish: May 21, 2026
- Cost: \$1,070,913

- Spent (through February 2025): \$235,208.55

Estimated cost to complete phase: \$835,705

In Procurement

Transportation Project Management System (TPMS) - this phase of the project is to replace RIMS Milestone functions and the Project Status Report (PSR) system to meet current business needs.

- Start: August 23, 2024
- Finish: August 1, 2026 (est. 1.5 years of planning and execution)
- Estimated cost to complete: \$2,500,000 - \$4,400,000

Estimated cost to complete phase: \$2,500,000 - \$4,400,000

Remaining for RIMS and CARS Migration

Scheduled for 2025-2027 biennium

- Phase 1 (CPPMS) – **contract signed**
- Phase 2 (TIPS) – **contract signed**
- Phase 3 (TPMS) – **in procurement**
- Phase 4a (Asset Inventory)
- Phase 5 (Speed Zones)
- Phase 7 (Post-implementation changes, data management efforts (centralized data location), re-interfacing between new systems and non-mainframe systems (GIS, dashboards))

Estimated cost to complete phases: \$4,364,000 - \$5,364,000

Scheduled for 2027-2029 biennium

- Phase 4b (Asset Inventory, continuation)
- Phase 6 CARS replacement and implementing new Materials Management System (MMS)

AUTOMATED VEHICLE LOCATION (AVL) PROJECT

This project outfits all 350 NDDOT snowplows with equipment to monitor location, operations, and road conditions.

The project started on Sept. 27, 2023 and is scheduled to be completed by June 4, 2026.

In 2018, the NDDOT issued a request for information (RFI) to gather data on what the industry had available for replacing their aging and discontinued AVL systems that were deployed beginning in 2004. The business need for NDDOT was a comprehensive system that included equipment for an AVL system that could collect snowplow truck information and to integrate with the Maintenance Decision Support System (MDSS) using truck mounted sensors, in-vehicle cameras, and touch screen monitors.

The RFI responses showed many vendors that could complete part of the requirements, and few that have demonstrated successful integration with existing NDDOT equipment.

Because of the shortage of vendor options, there was some delay in the original project schedule as the project team evaluated the risk of awarding the contract to a company that would need to develop the necessary integrations. In the end, the team determined the best decision was to procure a commercial off-the-shelf system rather than explore options that may require custom build development.

- Project baseline cost: \$1,916,361.07
- Actual spent to date: \$303,838.32
- Legislative investment: \$2,010,000

Estimated cost to complete: \$1,612,522.75

We are estimating a total spend of \$1,379,303.84 prior to end of June 2025.

TRAFFIC MONITORING PROJECT

The Traffic Monitoring Project consists of three separate phases: Traffic Data Editing and Analysis (TDEA) software, Traffic Monitoring Strategic Plan (TMSP), and Multi-Modal Probe Data. This project encompasses \$3.5 million in special funds.

Complete

Phase 1: Traffic Data Editing and Analysis Software

The TDEA phase aims to update the NDDOT's aging equipment and software that gathers and forecasts traffic data. This data is necessary for the NDDOT to develop plans for construction projects such as roadway configuration, pavement types and thickness, number of lanes, and safety devices among others.

This phase was completed on November 25, 2024.

- Baseline cost: \$1,000,000
- Actual cost: \$837,775.78
- Cost variance: \$162,224.22 under baseline budget

In Procurement

Phase 2: Traffic Monitoring Strategic Plan

The goal of the Traffic Monitoring Strategic Plan (TMSP) is to create data-based decision-making processes that optimize the maintenance, preservation, rehabilitation, replacement, and expansion of the roadway infrastructure to maximize its lifecycle while minimizing costs.

This portion of the overall project has had a few delays. The initial request for proposals (RFP) yielded no viable vendors. A second RFP did result in a vendor being awarded the contract. After contract execution in the planning stage, a mutual decision was made by the vendor and NDDOT to terminate the contract without cause.

The phase started on Dec. 1, 2022. The completion date will be finalized once a vendor is selected and they present their schedule.

This phase is in procurement and the RFPs are due April 10, 2025.

- Baseline estimate: \$1,000,000
- Actual spent to date: \$143,496.78
- Remaining funds available: \$856,503.22

Remaining Phase

Phase 3: Multi-Modal Probe Data

- Estimated Cost: \$1,500,000

DOOR SECURITY SYSTEM & HVAC CONTROLS

This is a multi-agency project with coordination by NDDOT, ND Highway Patrol (NDHP), Office of Management and Budget (OMB), and North Dakota Information Technology (NDIT). This project will replace the existing Andover Continuum heating, ventilation, and air conditioning system and door security access systems for the NDDOT buildings across the state. This project consists of \$166,000 of SIIF from OMB added to the original \$865,000 in general funds.

The project started on Aug. 30, 2023 and is scheduled to complete no later than July 14, 2027. It is currently in the execution stage.

- Project baseline cost: \$1,031,000
- Actual spent to date: \$409,056.75

Estimated cost to complete: \$621,943

