

## North Dakota Freight Reliability and Preservation on US 52





### FY 2025-2026 Multimodal Project Discretionary Grant (MPDG) Program

Project Name North Dakota Freight Reliability and Preservation on US 52

Project Type INFRA/Rural Project

Future Eligible Project Costs \$40 million 2024 BIP Funds Requested \$20 million

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#### Supporting Information can be found at:

www.srfconsulting.com/25-26-mpdg-nddot-us-52/



# North Dakota Freight Reliability and Preservation on US 52

Submitted by North Dakota Department of Transportation

FY 2025-2026 Multimodal Project Discretionary Grant (MPDG) Program

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## **Statutory Project Requirements**

## Requirement #1 - The project will generate national, or regional economic, mobility, or safety benefits.

The North Dakota Freight Reliability and Preservation Project on US 52 (Project) generates national and regional economic, mobility, and safety benefits through strategic improvements along US 52 by decreasing the risk of severe (fatal and incapacitating injury) crashes and improving traffic operations. The Project will rehabilitate 45.4 miles of existing asphalt pavement from west of Drake to Fessenden, consolidate access points at the intersection of US 52 and North Dakota Highway 3 (ND 3) in Harvey, add acceleration and deceleration lanes at existing at-grade railroad crossings, and add turn lanes at critical intersections from seven miles south of Portal to Carrington. The Project will enhance safety, mobility, and reliability of freight traffic on US 52 between the U.S.-Canada border crossing at Portal and Carrington. As a critical regional and international freight corridor, freight mobility and reliability will be improved by the Project.

As described in the Project Outcome Criteria narrative of this application, the Project reduces vehicle hours traveled (VHT) on US 52 by 3.3 million VHT over twenty years. The Project results in enhanced mobility and travel time reliability. Between Minot and Portal, US 52 in the Project area is part of the National Multimodal Freight Network, National Highway Freight Network, and Primary Highway Freight System. One of the most critical highway segments on the U.S. freight transportation system, the State also identifies US 52 through the Project corridor as a Strategic Level One Freight Corridor designated as one of the most critical freight corridors in North Dakota. US 52 provides vital connection across North Dakota, between major regional economies including Fargo, Jamestown, Minot, and beyond including the U.S.-Canada Border Crossing at Portal.

A portion of the Project is in a designated disadvantaged community, Wells County Census Tract 9598 or the community of Harvey. The Project also improves connection to disadvantaged and underserved communities in Minot including the Area of Persistent Poverty (APP) in Ward County Census Tract 107.02 and additional disadvantaged communities of Census Tracts 101, 106.01, and 107.01. The Project will enhance economic vitality and economic development by improving traffic operations, reducing severe crashes, and rehabilitating pavement to state of good repair on US 52. Improvements associated with the Project are critical to freight mobility and reliability, and are part of a coordinated strategy to expand intermodal capacity and support economic development opportunities throughout the region.

## Requirement #2 – The project will be cost effective.

The benefit-cost analysis (BCA) provides an indication of the economic desirability of a scenario, but results must be weighted by decision-makers along with the assessment of other effects and impacts. Projects are considered cost-effective if the benefit-cost ratio is at least 1.0. The Project is considered very cost-effective as the benefit-cost ratio is 2.94. Initial capital costs, safety, travel time savings, vehicle maintenance cost, and operations and maintenance were all analyzed as part of the BCA. The full analysis of the benefits can be found in the BCA Narrative and BCA Calculations.

## Requirement #3 – The project will contribute to 1 or more of the national goals described under Section 150. The Project will contribute to 1 or more goals described under 23 U.S.C. § 150.

The Project aligns with USDOT priorities and contributes to the following national goals under 23 U.S.C. § 150:

#### (1) Safety

The Project components of access management (PCN 23153), acceleration and deceleration lanes at at-grade railroad crossings and turn lanes at strategic intersections (PCN 23404), and pavement rehabilitation (PCN 23641) will comprehensively reduce traffic fatalities and serious injury crashes in the Project area by nearly 25 percent. Project improvements will comprehensively reduce crash risk and save lives from incapacitating (life-changing) injury or death, forwarding the goals and policies of Vision Zero. The Project will reduce rural highway crashes on US 52 and associated vulnerabilities caused by existing transportation challenges through the Project area including: (1) access management, (2) traffic operations, and (3) pavement condition. By delivering the Project, the safety of travelers on US 52 will increase and lives will be saved.

For further detail, please refer to the Outcome Criteria Narrative, Criterion #1.

#### (2) Infrastructure Condition

The Project improvements address current and projected vulnerabilities on US 52 through rehabilitation of pavement (PCN 23641) in rapidly deteriorating areas between RP 141.2 and RP 185.6. The MPDG funding will allow NDDOT to address critical emerging pavement deterioration on US 52, which will preserve pavement in a state of good repair.

NDDOT utilizes a comprehensive set of metrics related to pavement condition and ride quality to assess lifecycle needs and prioritize roadway improvements (pavement maintenance, preservation, rehabilitation, functional improvement, and replacement). NDDOT's <u>Transportation Asset Management Plan (TAMP)</u> serves as the guide to ensure all necessary Project operation and maintenance activities are implemented.

For further detail, please refer to the Outcome Criteria Narrative, Criterion #2.

#### (3) Congestion Reduction & (4) System Reliability

Without the Project, growing traffic through the Project corridor will face more operational challenges, resulting in increased delay. Total traffic and freight traffic are forecasted to increase through 2045, which will further exacerbate existing transportation challenges along US 52 in the Project area. As shown in the Benefit Cost Analysis (BCA), the 2045 traffic increases through the Project area will cause more traffic delay under existing conditions. The additional delay will result in 3.3 million additional vehicle hours traveled (VHT) through 2045, including 1.1 million additional VHT for trucks and freight. The Project will reduce congestion and improve reliability on the National Highway System and decrease VHT by implementing proven safety countermeasures to reduce crashes, improving traffic operations, decreasing delay at railroad crossings and critical intersections, and rehabilitating and maintaining US 52 in a state of good repair.

For further detail, please refer to the Outcome Criteria Narrative, Criterion #4.

#### (5) Freight Movement and Economic Vitality

The Project's positive impact on freight will help continue to drive the North Dakota economy. Rural communities, and disadvantaged and underserved communities within the Project area and along the Project corridor will see improved access to goods and job opportunities associated with the projected growth of truck commodity volumes on US 52 through the Project corridor. Continued development at the Minot Intermodal Terminal, which has over 800 acres of shovel-ready industrial sites, will create demand for related development in convenient locations along US 52, a critical principal arterial freight corridor connecting directly to the intermodal site. The continued growth of value-added agricultural industries and freight-related industries will produce good-paying jobs for North Dakotans.

The project improves critical freight access between disadvantaged and underserved communities to strategic economic development opportunities critical to the future regional and state economy. Vision West ND is a collaborative team of representatives from central and western North Dakota counties working toward economic sustainability to address immediate, short-term needs to meet growth management challenges and to establish a diversified economy in the future. There are numerous large-scale economic development projects in the central and western North Dakota region and across the state which will rely on US 52 to move goods and connect workers to goodpaying jobs and services. According to Vision West ND, there are several notable economic development initiatives directly supported by the US 52 Project's benefits for freight movement.

For further detail, please refer to the Outcome Criteria Narrative, Criterion #5.

#### (6) Environmental Sustainability

The Project has completed environmental documentation and received National Environmental Policy Act (NEPA) clearance. NDDOT follows NEPA guidance to ensure Project delivery protects the natural environment.

For further detail, please refer to the **Project Readiness Narrative**.

#### (7) Reduced Project Delivery Delays

If MPDG funds are awarded, the Project will be ready for delivery. Preliminary engineering, environmental documentation, and final design are completed. Right-of-way acquisition is anticipated to be completed by June 2024. Project readiness is critical to reducing project cost and delivery delays, avoiding inflationary pressures that may occur when a project is not through the project development stage.

For further detail, please refer to the Project Readiness Narrative.

## Requirement #4 - The project is based on the results of preliminary engineering. (Not applicable for MEGA)

The Project is based on the results of preliminary engineering conducted by NDDOT to identify and address specific transportation challenges which exist on US 52 in the Project area. As a data-driven agency, the Department relies on high quality preliminary engineering and analysis to implement

the most responsible and effective solutions to forward NDDOT's goals across the state. The resulting Project described in this FY 2025-2026 MPDG application is a direct response to preliminary engineering and analysis which began approximately five years ago and has led to the refined, strategic Project described herein.

The Project is well positioned to begin construction on schedule in 2026. Project cost estimations are stable and based on final design. Preliminary engineering, environmental documentation or National Environmental Policy Act (NEPA) clearance, and final design have been completed since December 2023. Right-of-way (ROW) acquisition is anticipated to be completed in June 2024.

The following reports and documents have been prepared for the Project thus far, through preliminary engineering, environmental documentation, and final design:

- PCN 23153 Access Management at Intersection of US 52 and ND 3
  - o Scoping Report (January 2021)
  - o Environmental Documentation (May 2022)
  - o Final Plans (November 2022)
- PCN 23404 Acceleration and Deceleration Lanes at Railroad Crossings, and Turn Lanes
  - o Decision Document (September 2022)
  - o ROW, Railroad, and Utility Certification Information (December 2023)
  - o Environmental Documentation (February 2023)
  - o Final Plans (December 2023)
- PCN 23641 Pavement Rehabilitation
  - o Traffic Operations Study (June 2019)
  - o Linear Soils Survey and Recommendations (November 2023)
  - o Scope of Work (December 2023)
  - o Environmental Documentation (February 2023)
  - o Final Plans (December 2023)

Design criteria are established through the NDDOT's standards. The technical challenges are well documented and understood as the Department has completed similar projects throughout the state. Based upon NDDOT's experience with similar projects and status of project readiness, an inflationary rate of 8.2-percent per year from date of final engineer's cost estimate to the mid-year of anticipated construction (2026) has been established to account for cost increases. The NDDOT is prepared to handle cost overruns if they should occur, through the Flexible Transportation Fund. The Department has an exemplary record of completing project milestones on schedule and has the technical capacity to successfully deliver the Project on time and on budget.

Requirement #5 – With respect to related non-federal financial commitments, 1 or more stable and dependable sources of funding and financing are available to construct, maintain, and operate the project, and contingency amounts are available to cover unanticipated cost increases.

No statutory requirement for Small INFRA projects and Rural projects. For further detail, please refer to the Project Budget Narrative.

## Requirement #6 - The project cannot be easily and efficiently completed without other Federal funding or financing available to the project sponsor.

No statutory requirement for Small INFRA projects and Rural projects.

For further detail, please refer to the Project Budget Narrative.

## Requirement #7 - The project is reasonably expected to begin not later than 18 months after the date of obligation of funds for the project.

Project obligation is anticipated in October 2025. The Project schedule identifying the completion of major milestones is presented below (Figure 1). All planning agreements, permitting, review periods, and approvals have been considered. The North Dakota Department of Transportation (NDDOT) will be prepared for construction to begin in March 2026 and will be complete construction by the end of December 2026. The Project requires 0.142-acres of additional permanent right-of-way and acquisition, which is being acquired pursuant to the Uniform Act and the NDDOT acquisition procedures. There are minimal project risks associated with the Project as indicated by project readiness.

Figure 1. Project Schedule

Estimated Schedu	2022		2023		2024	2025	2026	2027	2028	2029	
PCN 23153		•	•					$\Box$			
PCN 23404			<	<b>*</b>	<b>A</b>	_				ė	
PCN 23641			•	•	<b>(</b>			☆			
<ul> <li>◆ Preliminary Design</li> <li>◆ NEPA Clearance</li> <li>◆ Final Design</li> <li>▲ Projects Approvals</li> <li>▼ R/W Acquisition</li> <li>■ Obligation</li> </ul>				<ul><li>■ Project Letting</li><li>■ Construction</li><li>☆Construction Complete</li></ul>			<ul> <li>Project obligation</li> <li>deadline for FY 2026 funds</li> <li>Project obligation</li> <li>deadline for FY 2025 funds</li> </ul>				

<sup>\*</sup>Project may be let earlier if funding is fully secured.

Given the systematic network of the scoped improvements proposed for US 52, the Project components will be let and constructed as a single project, with one construction phase to occur in the 2026 construction season.

For further detail, please refer to the **Project Readiness Narrative**.

## Requirement #8 - The applicant have, or will have, sufficient legal, financial, and technical capacity to carry out the project.

No statutory requirement for INFRA projects and Rural projects.

Requirement #9 - The application includes a plan for the collection and analysis of data to identify the impacts of the project and accuracy of forecasts included in the application.

No statutory requirement for INFRA projects and Rural projects.

<sup>\*\*</sup>Project end date March 2029

<sup>\*\*\*</sup>All dates assume the grant agreement is in place prior to the Project's Construction Obligation Deadline.