Minnesota Department of Transportation District 7 Freight Plan

Working Paper 4: Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

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Acronyms and Abbreviations

Abbreviation	Definition
ATA	American Trucking Association
CHIP	Capital Highway Investment Plan
FAST Act	Fixing America's Surface Transportation Act
MHFP	Minnesota Highway Freight Program
MnDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
MRSI	Minnesota Railroad Service Improvement Program
NHFP	National Highway Freight Program
OFCVO	Office of Freight and Commercial Vehicle Operations
OSOW	Oversize-Overweight
RQI	Ride Quality Index
STEEP	Social, Technological, Environmental, Economic, and Political
STIP	State Transportation Improvement Program
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TPIMS	Truck Parking Information Management System
USMCA	U.S.-Mexico-Canada [Trade] Agreement
VMT	Vehicle Miles Traveled
WIM	Weigh In Motion

Executive Summary

The Minnesota Department of Transportation (MnDOT) District 7 consists of 13 counties: Blue Earth, Brown, Cottonwood, Faribault, Jackson, Le Sueur, Martin, Nicollet, Nobles, Rock, Sibley, Waseca, and Watonwan. The District 7 Freight Plan is being created to provide MnDOT with an improved understanding of District 7's freight transportation system, and information on how local industries use that system. Additionally, the plan identifies the District's freight transportation issues and needs with the goal to help MnDOT incorporate freight considerations into policy and programming decisions.

This Working Paper is the fourth of a series of six Working Papers that together will inform the final District 7 Freight Plan. The purpose of this Working Paper is to provide information on District 7's freight transportation issues and needs and provide preliminary approaches to address some of these issues and needs. This paper includes a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, as well as recommendations for potential programs, projects, policies, and partnerships that MnDOT may consider to further improve freight movement in the District.

Freight Issues and Needs

District 7's freight network primarily consists of roads, railroads, and pipelines. MnDOT has the greatest ability to address issues related to roads because roads are publicly owned and maintained by MnDOT and local partners. Therefore, much of this Working Paper's analysis is focused on freight issues and needs related to roads and trucking. By comparison, railroads and pipelines in District 7 are primarily privately-owned and operated, and MnDOT has fewer tools to make changes to these systems. However, some railroad needs, issues, and solutions are also documented.

The need for safety improvements was a consistent road-related freight issue that was both mentioned by stakeholders and identified through analysis of crash histories. In particular, a commonly mentioned need is additional turning signals and better signage for trucks at select trunk highway intersections. Improvements like these can help relatively slow-moving trucks safely enter, exit, or cross through traffic on higher-speed roads such as trunk highways. Stakeholder comments and data analysis also identified the safety of passively protected railroad crossings as a key consideration for District 7. Between 2010 and 2019, District 7 had the highest number of crashes at passively-protected crossings among any MnDOT district.

Roadway congestion is generally not an issue in District 7. However, a few stakeholders noted that congestion can occur in areas around Mankato and Worthington. As these areas continue to grow, stakeholders are concerned that this relatively minor existing congestion could begin to affect truck mobility. The need for additional truck parking was commonly mentioned as a truck mobility concern, particularly in the Mankato area. Other road-related issues and needs include trucking stakeholders' desire for uniform truck size and weight regulations among neighboring states such as Iowa and South Dakota, the need to improve bridge and pavement conditions along county and local roads, and the ongoing shortage of truck drivers.

In regard to railroad issues and needs, some stakeholders noted a need for access to an intermodal rail hub within District 7. Currently, intermodal users must truck their loads to and from the Twin Cities, and local intermodal or carload rail access could increase their competitiveness within their respective industries and allow them to reach a wider customer base.

Freight Strengths, Weaknesses, Opportunities, and Threats

This Working Paper includes a SWOT analysis that was developed by synthesizing feedback from stakeholder consultations, Advisory Committee and Technical Team comments, online survey responses, and an assessment of external factors. Based on the combination of these sources, a key strength of District 7 is its robust highway network with major trucking corridors that contribute to the competitiveness of the area's manufacturing and agricultural sectors. A significant weakness in District 7 is the potential lack of funding to address freight-related improvements, particularly when MnDOT expects a funding shortfall for its statewide maintenance work.

Leveraging District 7's Freight Opportunities

There are several opportunities to improve District 7's freight transportation system. A key opportunity is the chance to leverage existing MnDOT transportation programs or funding streams to address freight-related issues and needs as part of previously programmed projects. Also, there is an opportunity to improve safety at intersections and add more lanes along trucking corridors to enhance freight mobility. This Working Paper provides a set of draft recommendations on policies, partnerships, programs, and partnerships that MnDOT can use to address issues and needs or capture new opportunities. Since later stages of this project include pre-engineering feasibility work intended to provide information on the type and magnitude of investment needed to solve some freight issues or needs, particular attention is paid to potential projects that MnDOT can undertake to improve freight transportation safety and efficiency in District 7.

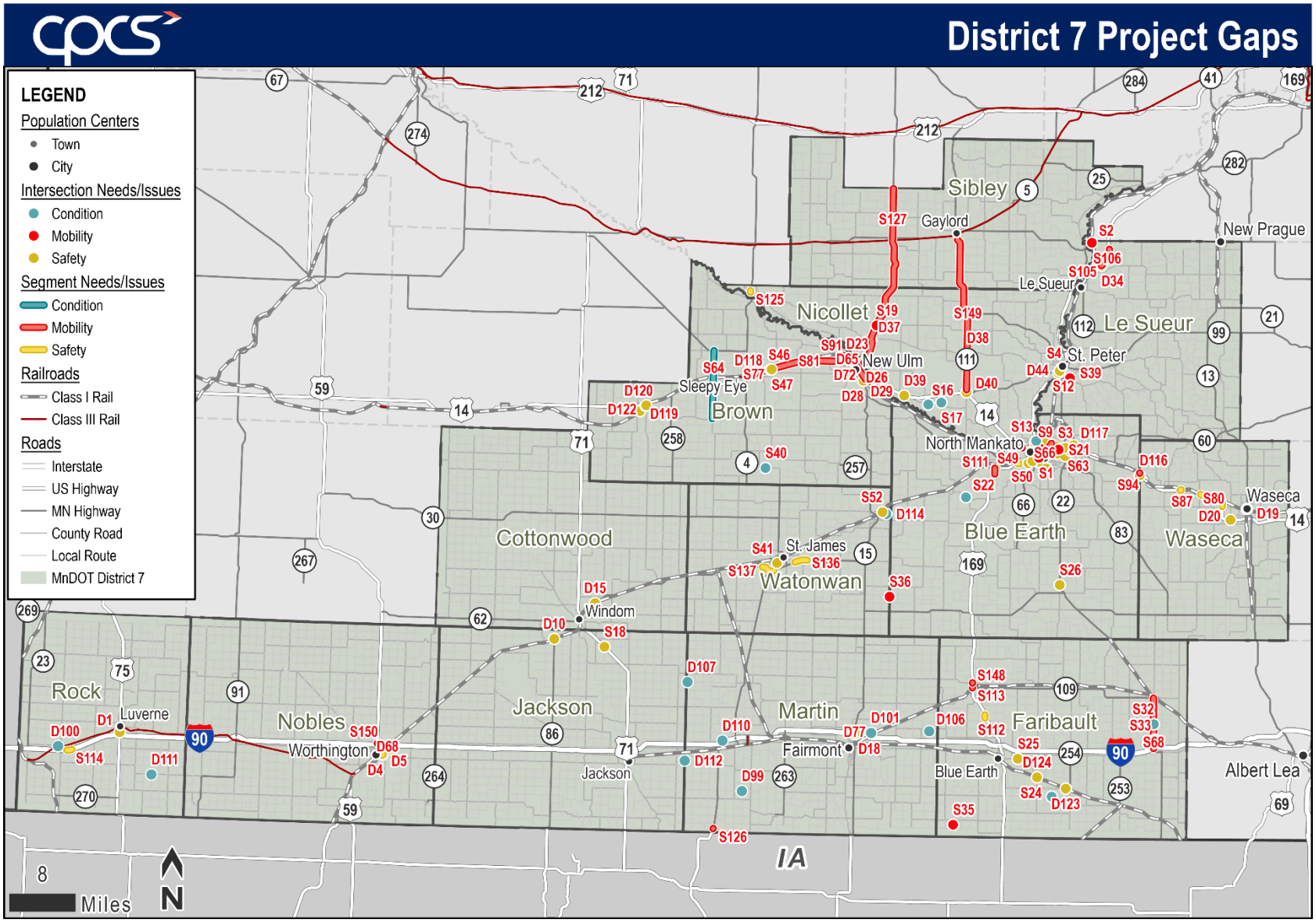
To understand opportunities that could be addressed by physical construction projects, issues and needs were mapped, along with programmed projects from the State Transportation Investment Program, Capital Highway Investment Plan, and county investment plans. Based on the overlap between issues and needs, and programmed projects, a list of "gaps" – issues and needs not covered by upcoming projects – was identified and is shown in Figure ES-1. Notable themes for gaps included:

- Safety improvement needs at intersections and issues at roadway locations with high crash rates were the most common types of gaps, making up about 70% of the total count of gaps. The most common safety concerns were intersections and road corridors with high crash counts identified from MnDOT crash history data.
- Mobility issues and needs made up about 20% of gaps. The most commonly mentioned or identified needs were additional passing, acceleration, and left-turn lanes. Other topics with multiple mentions included concerns about the size or width of roundabouts and intersections, and suggestions about potential areas for four-lane highway expansion.
- Condition gaps made up roughly 10% of the remaining gaps and were primarily related to stakeholder comments on pavement condition, and bridges that were identified as being in poor condition.

Next Steps for the District 7 Freight Plan

The issues, needs, and project gaps identified in this Working Paper will be reviewed by District 7 staff. Following review, further evaluation, scoring, and ranking exercises will be completed in line with a prioritization process developed for all MnDOT District freight plans. Priority gaps will be selected with the intention of advancement to pre-engineering feasibility studies. The goal of the pre-engineering work will be to provide potential solutions to the highest priority unaddressed freight issues and needs in the District and create project concepts that can compete for funding in future freight-related solicitations.

Figure ES-1: District 7 Project Gaps



Source: CPCS analysis of MnDOT vehicle crash data and District 7 stakeholder feedback. 2021.

1 Future Outlook in District 7

Key Findings

Demand for freight transportation services is influenced by a variety of social, technological, environmental, economic, and political factors. Understanding how these types of factors affect freight transportation operations can help MnDOT plan for future changes and mitigate future challenges. Major external factors relevant to the District 7 freight transportation system include impacts from climate change, the implementation of new vehicle technologies, and potential changes in agricultural and manufactured product production and demand.

The demand for freight transportation services is reactive to a variety of factors, such as commodity supply and demand, economic changes, and political decisions. These factors are always changing, and freight transportation demand and characteristics evolve and adapt to these changes over time. Many freight system trends and changes are based on external factors outside of the control of most individual freight stakeholders, including MnDOT.

Since freight transportation demand is affected by numerous factors, it can be difficult to anticipate the future characteristics of freight movement. However, there are certain external factors and trends that MnDOT can examine to plan for the future of freight movement in District 7. These external factors fit into five general "STEEP" categories: Social, Technological, Environmental, Economic, and Political.

This chapter provides insight into STEEP factors and trends that currently affect District 7's freight transportation network and operations, or which may affect them in the future. These factors were identified through consultations, literature review, and feedback provided by project teams. It is important to note that this is not an exhaustive list of STEEP factors and impacts, but instead a demonstration of how MnDOT may use STEEP in the future to identify freight transportation changes and impacts.

Freight transportation operations and planning decisions are driven by market choices that are constantly changing due to numerous external factors and trends. Understanding significant trends or changes can help MnDOT anticipate and plan for future changes in the District 7 freight system.

Social Factors and Trends

Social factors relate to demographics, income, consumption, and population changes. For example, District 7 is experiencing an aging population combined with minimal in-migration. This aging population may lead to a shrinking freight-related workforce as more workers retire. A workforce shortage for transportation or freight-related industries manufacturing could lead to higher trucking costs, a declining number of freight shipments, and unreliable production or shipping services for businesses. A workforce shortage could also lead to hiring issues for MnDOT for their truck-related operations such as snow plowing.

Technological Factors and Trends

New technologies in freight transportation and the industries served by freight transportation can change how the freight system operates. A common technological factor has been the development and adoption of online retail technology: as consumers have devoted an increasingly large share of spending to online shopping, this change has increased the volume of consumer goods being handled by parcel services, while potentially decreasing the volume of freight being shipped to brick-and-mortar retail stores.

Some technologies that are already affecting the freight system include autonomous trucking vehicle electrification, and automated supply chain and inventory management systems. Additionally, University of Minnesota-designed autonomous snowplows are being tested statewide as part of the annual ION Autonomous Snowplow Competition.[1] An example of technological trends impacting the freight system is the increasing size of wind energy infrastructure. In District 7, aging wind turbines need replacement and wind turbine manufacturers are replacing them with longer and taller turbines. These larger components may result in greater numbers of larger-sized oversize-overweight truck loads traveling through District 7.

Environmental Factors and Trends

Environmental factors and trends can affect freight transportation efficiency, costs, reliability, and planning. In District 7, environmental concerns like climate change can impact freight-dependent industries. For example, a warmer climate in the District may lead to positive and negative changes for the agricultural industry. A longer farming season provides an opportunity for more crop growth and increased agricultural production. However, more intense rainfall events associated with a warmer climate can also lead to flooding and crop damage. Another example is temperature impacts on infrastructure. MnDOT is confident that the possibility for warmer winters in the next 20 years is "very high"[2] and this temperature change is likely to lead to more freeze-thaw cycles, which can damage pavement and reduce pavement lifespans. Pavement condition is a concern for the freight transportation industry because poor conditions can result in damage to vehicles or their loads.

Economic Factors and Trends

Economic factors and trends, such as labor shortages or supply chain bottlenecks can have significant and rapid impacts on the operation of the freight system. Over the past year, the District's freight stakeholders have been worried about the short and long-term impacts of COVID-19 on the economy and supply chain. COVID-19 led to rising transportation and commodity prices and delays in the shipping of numerous goods. These trends make it difficult for manufacturers and carriers to set reasonable prices and commit to on-time or "just-in-time" shipping. Supply chain delays elsewhere in the global economy have also impacted MnDOT's construction operations.[3] The lack of construction workers or access to supplies needed to complete construction projects can cause project delays or postponement.

Political Factors and Trends

Political decisions can often lead to sharp changes in supply and demand, confidence in investing in infrastructure and freight improvements, and businesses' competitive advantages and disadvantages. An example of a political factor is the increasing pressure to reduce transportation-related carbon emissions. The

[1] http://studentrobotics.umn.edu/snowplow

[2] Minnesota Department of Transportation. Climate Change Adaptation. 2021. http://www.dot.state.mn.us/climate/adaptation.html

[3] Kaul, Greta. "Minnesota's construction industry has been hit hard by COVID-19, and recovery may be slow." Minn Post. June 24, 2020.

drive to reduce vehicle emissions may increase the demand for domestic biofuels, which could increase the volume of biofuel produced and shipped by companies in District 7.

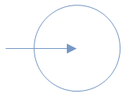
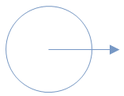
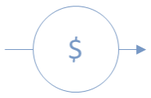
Figure 1 shows the major ways that STEEP factors can impact the freight transportation system, and Figure 2 on the following page illustrates some examples of STEEP factors and impacts for District 7.

- **Sourcing patterns.** Impacts on what, where, and how raw materials and commodities are sourced (i.e., origination).
- **Flow destination.** Impacts on where raw materials and commodities are destined for manufacturing or consumption.
- **Routing.** Impacts on how raw materials and commodities are transported within a region, including the specific path taken and the mode or modes of transportation used to ship goods.
- **Flow volume.** Impacts on the total volume of freight shipped within and through a region.
- **Value density.** Impacts on the characteristics of products and value of goods shipped.

Figure 1: External Factors and Potential Impacts to the Freight System

Source: Adapted from Chris Caplice, Massachusetts Institute of Technology

Figure 2: Potential Impacts of STEEP Factors

Potential Impacts	Social Factors	Technological Factors	Environmental Factors	Economic Factors	Political Factors
Source 	It is unlikely that social factors will impact product sourcing.	Increasing implementation of capital-intensive high technology in agricultural operations may make it difficult for smaller operators to compete with large agricultural operations, altering the production and sourcing of agricultural products.	Poor weather or flooding conditions could reduce crop yields, forcing biofuel and food manufacturers to source inputs from outside of the District.	Disrupted supply chains can cause manufacturers to source their inputs elsewhere. This delay may lead to unpredictable freight flows and longer wait times for customers.	Federal biofuel blending mandates have driven an increase in demand for agricultural products grown in District 7 such as corn and soybeans.
Destination 	An aging population with limited mobility may lead to fewer brick-and-mortar purchases and more online delivery orders. An increase in online delivery orders impacts truck routing and trucking impacts on residential communities.	Increasing e-commerce usage may lead to more freight flows directly to homes instead of brick-and-mortar retail.	Warmer winters can reduce pavement lifespan, causing trucks to avoid roadways with rough pavement. An alternative route may lead to delayed delivery times at their destinations.	Grain elevators have been consolidated into large facilities to support unit train loading. This has caused some smaller local grain elevators to shut down and has the potential to increase the distance of truck trips from field to elevator.	International tariffs placed on U.S. commodities can reduce overseas demand for the District's products, leading to fewer freight movements.
Route 	A growing population in urban areas (i.e., Mankato) can lead to changing routes and commodity flows due to more pedestrian traffic. Residents in more populous areas may demand that trucks are re-routed.	The replacement of new, bigger wind turbines in District 7 can lead to the selection of alternative truck routes that can accommodate larger OSOW movements.	Severe rainfall events can cause temporary road closures or permanent infrastructure damage, which may lead to longer truck trips.	Congestion at west coast ports and railroad yards in Chicago may result in some of District 7's freight loads being shifted from railroad to long-distance trucking.	Additional commercial vehicle weight or size restrictions can cause trucks to take alternative or longer routes.
Volume 	An increasing population in Minnesota could increase the volumes of freight being handled by distributors in Minnesota.	New ethanol or biodiesel production technology could increase the industry's demand for agricultural inputs, resulting in more agricultural tonnage being shipped to biofuel refineries in District 7.	Severe rainfall or drought events associated with climate change could negatively impact agricultural production, reducing the volume of agricultural products shipped in District 7.	A truck driver shortage may lead to more-volatile commodity flow volumes and transportation reliability issues.	Increased weight limits for commercial vehicles could make truck-served businesses in Minnesota more competitive and increase the overall volume of freight that they handle.
Value 	It is unclear how social factors will impact the value of commodities in District 7.	New additive manufacturing processes might result in additional near-shoring of additional manufacturing, increasing the value of goods moved in the region.	The impact of climate change may increase energy costs for manufacturers resulting in higher values of goods. An increase in the cost of commodities can increase truck trip prices.	The cost of raw materials or manufactured products due to COVID-19 can lead to more expensive commodities.	Increases in the gas tax or other taxes can drive up the cost of truck operations, and an increase in transportation costs may increase the cost of products for consumers.

2 District 7 Freight System Issues and Needs

Key Findings

District 7's freight issues and needs are primarily concentrated on the road system, with some additional issues noted on the rail system. Many of the stakeholder and data-identified issues and needs relate to freight mobility and improving trucking efficiency. Of note, the need for additional truck parking capacity, improved roundabout designs, and better communication about snow cover were commonly highlighted by stakeholders. Other road issues and needs related to the need to harmonize truck size and weight limits with neighboring states, enhance intersection safety, and improve infrastructure conditions along bridges and highways.

The largest rail-related issue relates to grade crossing safety at passively-protected grade crossings. Additionally, some stakeholders identified the need for improved access to intermodal shipping service.

2.1 Introduction

Freight issues often have complex and multiple causes that make organizing, discussing, and prioritizing freight needs a difficult task. For example, narrow road shoulders can be both a safety and mobility problem for trucks, as they reduce "room for error" in accommodating other road users and may also make turning or passing moves more difficult.

Additional complexity can also be introduced by potential solutions because freight transportation issues and needs must be balanced against the needs of other transportation users. For example, adding traffic calming measures such as roundabouts and curb bump-outs can slow traffic and provide additional safety for pedestrians, but these improvements may also create mobility challenges for large trucks. As a result, correctly identifying, categorizing, and solving freight system issues and needs are important to maximizing the transportation system's effectiveness.

In this chapter, District 7's freight issues and needs are identified on a mode-by-mode basis. Each mode is further categorized into three themes that were adapted from MnDOT's State Freight Investment Plan:

- **Safety,** which relates to road crash rates, grade rail grade crossings, and MnDOT's previous safety risk factor analyses.
- **Mobility,** which relates to freight system efficiency or ease of travel, including congestion, truck weight limits, and road bridge clearances.
- **Condition,** which relates to the current infrastructure conditions, and needs for improvement or maintenance.

The summary of District 7's freight issues and needs was derived from five key sources:

Advisory Committee and Technical Team Meetings: The Advisory Committee is made up of public and private system stakeholders and was created to provide "big picture" guidance in the development of the District 7 Freight Plan. The Technical Team is smaller, made up of agency staff, and provides guidance on how the plan will be used to inform investment decisions. Meetings with both groups were conducted in June and August 2021, with more meetings planned in 2021 and 2022.

Stakeholder Consultations: The project team conducted 20 phone and in-person consultations with private and public freight stakeholders between July and October 2021. The results of these consultations were synthesized with other findings on issues and needs.

Online Survey: The project team created and distributed a public online survey and project website to supplement meetings and consultations. The survey was created using the MetroQuest platform and received a total of 42 comments from 37 people.

Analysis of Data: Evaluations of safety, mobility, and condition were completed using data provided by MnDOT. Working Paper 3 provides further detail on the analytical approach and findings relevant to each data source.

Previous Studies and Plans: The project team completed an in-depth review and synthesis of issues and needs identified in previous plans and studies. A particularly important study was the 2019 *Manufacturers' Perspectives Study*, for which MnDOT staff (in conjunction with staff from Minnesota Management and Budget and local economic development agency partners) conducted in-depth stakeholder consultations.

It is important to note this chapter is a summary of major issues and needs related to District 7's freight system and is not a comprehensive inventory. **Appendix A**– Stakeholder Identified Issues and Needs and **Appendix B** – Data Identified Issues and Needs provide detailed tables listing the geographic location and description of each need or issue.

2.2 Roadway Issues and Needs

Roadway issues and needs were the most common type of issue and need documented in this planning work. The relatively large share of comments about road and truck problems reflects the fact that the majority of Minnesota's freight tonnage (about 63 percent) is carried by trucks. Therefore, it is unsurprising that the greatest number of identified issues and needs relate to roads and trucks.

The topic of road issues and needs is particularly important for MnDOT and its local planning partners because the public road network is the area where they have the greatest capacity to make changes and improvements. By comparison, MnDOT and local partners have relatively limited tools for planning and investment in other privately-owned modes of transportation such as rail.

MnDOT has the opportunity to make the biggest impact on freight transportation by addressing roadway issues and needs.

Road and trucking-related issues and needs are organized into general categories of safety, mobility, and condition. These categories reflect some of the investment categories from the Minnesota State Highway Investment Program (MnSHIP), as well as additional categories created by the project team to reflect other funding streams.

Roadway Safety

Developing and improving a safe transportation system is one of MnDOT's most important missions, and a variety of data sources were combined with stakeholder feedback to understand the most pressing safety needs in District 7. This topic is particularly important for the District: between 2010 and 2019, District 7 had the third-

highest count of commercial vehicle-involved crashes among districts in Greater Minnesota. Many of the stakeholder-identified road safety issues were related to concerns about design (i.e. roundabouts and j-turns). Discussion of road safety is broken down into two elements: intersection safety and corridor safety.

Intersection Safety

MnDOT crash data, prior studies, and stakeholder feedback indicated that highway safety and intersection safety in particular are relevant for freight in District 7. The safety review conducted in Working Paper 3 found that between 2010 and 2019, District 7 had the third-highest count of commercial vehicle crashes among districts in Greater Minnesota, and the 2016 MnDOT District Safety Plan estimated there was a need for 275 separate roadway safety projects with a total estimated cost of approximately $15 million. It is important to note that since 2016, District 7 has made some roadway safety improvements, some of which are profiled in following sections, as well as in following Working Papers.

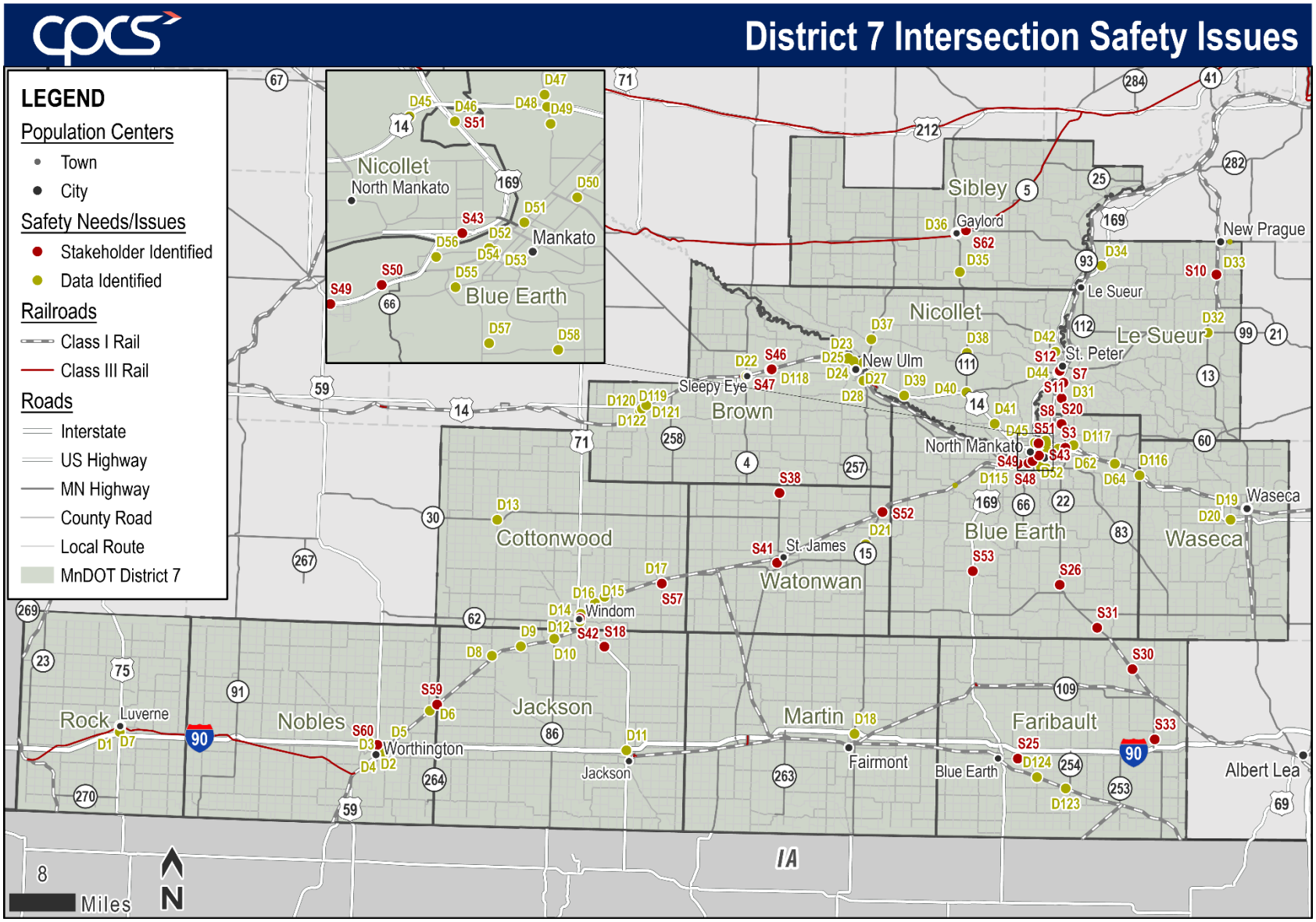
In addition to issues identified by data, stakeholders noted a few locations where intersection safety is an issue for trucks entering and exiting major highways. The need for added turn signals, turning lanes, or passing lanes was suggested at some specific locations where respondents noted safety concerns, particularly related to right-angle crashes. Figure 4 on the following page displays the locations of stakeholder and data identified intersection safety issues and needs in District 7, and **Appendix A** and **Appendix B** provide further details on issues or needs mentioned for each point. Examples of some intersections with safety concerns or needed improvements included:

- MN-15 at Torgerson Drive in Fairmont, which provides access between truck parking at a nearby Speedway gas station and I-90 and was the site of two or more truck-involved crashes between 2018 and 2019.
- MN-22 at MN-83 and Stadium Road in Mankato, which is the first signalized intersection many drivers headed on northbound MN-22 will encounter when approaching Mankato. This location had multiple truck crashes reported between 2018 and 2019.
- MN-4 and US-14 (W Main Street) in Sleepy Eye, which is located in a relatively densely developed area and the junction of multiple locally important roads. Stakeholders expressed concern about traffic speed around the intersection, and it was the site of two or more truck-involved crashes between 2018 and 2019. Figure 3 shows the intersection.
- MN-22 and US-169 in St. Peter, which MnDOT is planning to reconstruct in 2023. Stakeholders mentioned multiple concerns about the risk of crashes in the area around this intersection.

Figure 3: MN-4, MN-68, and US-14 intersection in Sleepy Eye

Source: Google Maps. 2021.

Figure 4: District 7 Intersection Safety Issues and Needs



Source: CPCS analysis of MnDOT vehicle crash data and District 7 stakeholder feedback. 2021.

Roadway Corridors

Truck congestion on mainline routes of travel is generally not a concern in District 7. However, a few stakeholders noted potential congestion issues in Mankato and Worthington. Manufacturing is continuing to grow especially in Mankato. Recently, CHS announced it would be investing $60 million in expanding its Mankato Soybean Plant to increase production levels.[4] This investment may lead to increased truck traffic in the city, particularly along portions of Riverfront Drive.

Given the general lack of congestion in District 7, many of the issues and needs documented for road corridors between towns are safety related. Figure 5 shows the corridors in District 7 that have safety issues and needs identified by data analysis and by stakeholders, and **Appendix A** and **Appendix B** provide further details on the problems documented at each location.

There are opportunities to improve both freight safety and mobility through the addition of passing lanes and widening of existing lanes on select routes.

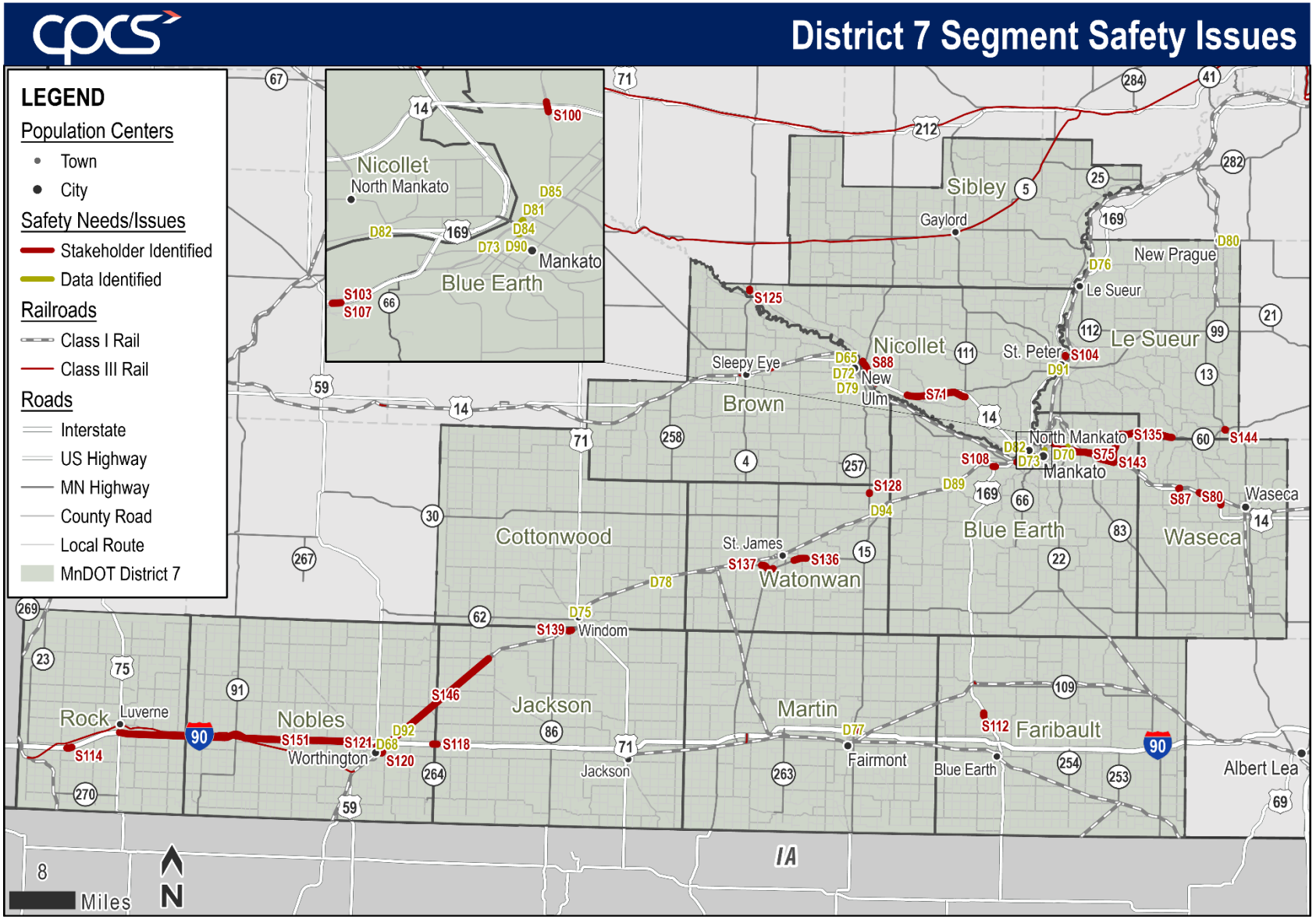
The main needs or solutions that stakeholders identified to address District 7 corridor issues include lane expansion and the addition of passing and bypass lanes. Lane expansions and passing lane additions can significantly improve corridor safety and mobility issues. Many stakeholders mentioned that they prefer to route their trucks along four-lane highways rather than two-lane routes. Respondents felt that four-lane highways have fewer crashes and are easier to navigate when inclement weather such as snow is present. Stakeholders in the 2019 Manufacturers Perspective Study broadly identified the need for more four-lane roadway sections on US-169, US-14, and MN-60. Respondents to the online MetroQuest survey also placed multiple "safety" issue pins on two sections of MN-22: one between I-90 and Mapleton, and one between Mankato and St. Peter. However, no further feedback was provided about the specific safety concerns on those corridors.

District 7 has been working to improve some of these corridor issues: a four-lane expansion of MN-60 between Windom and St. James was completed in 2018 and construction of a 4-lane expansion of US-14 between Nicollet and New Ulm is expected to begin in 2022.

In locations where four-lane highways are not feasible, stakeholders mentioned bypass and passing lanes as preferred solutions. While many stakeholders feel that bypass and passing lanes are safe and efficient, there are a few stakeholders that discussed safety concerns. These concerns include narrow lanes, inadequate signage, and unpredictable driver behavior when navigating these lanes. In addition, trucking companies expressed concern about bypass lanes being too short to safely use and not being plowed sufficiently.

[4] https://www.mankatofreepress.com/news/local_news/chs-doing-60m-expansion-at-mankato-soybean-plant/article_1c00f674-10fc-11ec-aac3-3f9e151d107d.html

Figure 5: District 7 Road Segment Safety Issues and Needs



Source: CPCS analysis of MnDOT vehicle crash data and District 7 stakeholder feedback. 2021.

Weigh Stations and Commercial Vehicle Enforcement

MnDOT's Weigh Station and Commercial Vehicle Safety and Enforcement Program administers an allocated $2 million per year. The goal of the program is to maintain and improve safety through commercial vehicle enforcement and weigh stations. In November 2018, MnDOT completed the *Minnesota Weight Enforcement Investment Plan.* This 10-year plan identifies weigh station improvements and maintenance to comply with federal requirements and maximize commercial vehicle public safety. The Plan suggested two projects for District 7:

- A need for a virtual enforcement presence along US-169 in Nicollet County north of St. Peter. US-169 is a main link between Mankato in the Twin Cities and an added enforcement presence was an identified need.
- Additional cameras at the Weigh-in-Motion (WIM) site #27 along MN-60 in Watonwan County, which is a key truck corridor linking I-90 to the west with the Twin Cities through Mankato

Roadway Mobility

Mobility considerations include topics that affect the ease or efficiency with which trucks can move through District 7. These topics include traffic congestion, truck routing, bridge clearances, and weight limits. Based on evaluations of truck speeds and travel time reliability (available in Working Paper 3: Freight System Profile), congestion is not an issue for District 7. Therefore, this section focuses on other impediments to mobility, such as geometric constraints for trucks, weight limits, and truck parking.

Roundabout Design

Ensuring roundabouts are designed to accommodate large truck traffic has been a common theme for feedback in District 7, as well as Minnesota as a whole. Consultees mentioned that roundabouts can be difficult for trucks to drive through and increase the risk of loads shifting or tipping if wide-swinging trailers encounter curbs or aprons with steep angles. In the case of some OSOW loads, particularly ones with lowboy trailers, roundabouts with raised center curbs or islands can be almost impossible to navigate. Therefore, roundabouts that are expected to accommodate large volumes of truck traffic must be designed with wide enough lanes to accommodate trucks, or lower-profile center islands that can be easily mounted by trailer wheels. District 7 has been making design adjustments to address concerns such as these, and Figure 6 provides an example of a lower-profile roundabout in District 7, in St. James.

Figure 6: Mini Roundabout Review in St. James

Source: MnDOT District 7

In District 7, stakeholders had noted the need for roundabout reconfiguration at MN-60 and US-59 in Worthington, which was needed to accommodate the movement of large trucks and prevent load shifting. Reconfiguration of that roundabout and two other MN-60 roundabouts in Worthington was completed in July 2021, and the updated roundabouts include design elements intended to improve truck mobility.

Truck Parking

Many stakeholders mentioned the need for additional truck parking facilities in District 7, as existing public and private parking facilities are not considered sufficient to meet parking demand. Parking concerns were frequently mentioned in the Mankato area along US-169 and US-14, which have experienced significant development in truck-served warehouses and distribution centers. The MnDOT 2019 Statewide Truck Parking Study highlighted two opportunities for truck parking improvements pertinent to District:

- Mankato's zip code (56001) has the 13th highest demand to capacity ratio out of all zip codes in Minnesota. This ratio compares existing parking demand to existing parking capacity. Mankato's ratio of 10.8 means that the demand for truck parking in Mankato outweighs the capacity by 10.8 times. In this area, there has been concern about trucks parking in residential areas, or on the shoulders of some highways.
- The I-90 Corridor was identified as a heavy truck corridor with limited parking availability. The study recommended that MnDOT implement a Truck Parking Information Management System (TPIMS) along the corridor to allow truck drivers to share parking availability information. Some District 7 stakeholders mentioned a need for additional truck parking in the Worthington area, which aligns with that study's findings and recommendations.

Adequate truck parking is an emerging concern in Mankato and could continue to be a problem as additional warehouses and distribution centers develop.

Concerns about truck parking have become especially relevant as electronic logging requirements have been implemented for the trucking industry. Given trucking hours of service requirements[5], truckers rely on truck parking at rest stops along their routes. Without adequate truck parking options, truckers may have to stop their driving early to find parking, and this time spent searching for parking impacts the efficiency of freight movement. Additionally, a lack of truck parking is a safety issue: if truckers are unable to find a designated truck parking facility, they may choose to park in unsafe or inappropriate areas such as neighborhoods and the shoulders of roads.

A few stakeholders that transport oversize-overweight (OSOW) cargo also identified truck parking as a major issue for their drivers. OSOW carriers plan for their drive far in advance, and often cannot park in more conventional truck stops or rest areas. Therefore, it is important for these OSOW operators to have sufficient parking options.

Truck Driver Shortage/Availability

District 7's manufacturers, trucking companies, agricultural businesses, petroleum suppliers, and other freight stakeholders are concerned about the lack of truck drivers available for hire. The truck driver shortage is not solely a District 7 concern; it is a nationwide issue. According to an American Trucking Association (ATA) report, at the end of 2018, the trucking industry needed 60,800 more truck drivers to fully meet demand.[6]

Difficulties surrounding hiring truck drivers are also causing District 7 stakeholders to become concerned about driver quality. If trucking companies are unable to hire qualified drivers, stakeholders are worried that trucking firms may be forced to hire less-experienced individuals. This could have an impact on roadway safety and make freight movements less efficient and reliable.

Truck Size and Weight

Some District 7 manufacturers and businesses indicated that Minnesota's truck weight limit (80,000 pounds on five or more axles) is too low relative to neighboring states. This difference in weight limits between states means that trucks originating in or destined for Minnesota must be loaded with less cargo than the maximum weights allowed by neighboring states. Some trucking and manufacturing stakeholders felt that this "under-loading" prohibits their ability to ship their products by truck cost-effectively. Additionally, some stakeholders noted that weight restrictions on county and local roadways force them to ship smaller loads or send their trucks on longer routes over other highways.

Another concern regarding truck size and weight was related to inefficiencies or inconsistencies during spring load restrictions. In Minnesota, heavy trucks are prohibited from operating on certain roadways during the spring when the ground is thawing out. This is because pavement conditions can be weak and additional damage can be incurred from heavy truck movements. During the spring load restriction period, manufacturers are forced to transport smaller loads or make added truck trips, which adds to overall transportation cost.

OSOW Issues

OSOW movements in District 7 are growing with the rising demand for wind energy infrastructure and other commodities that require OSOW trucks. OSOW stakeholders in District 7 identified the need to address the following operational, planning, and safety issues:

[5] The Federal Motor Carrier Safety Administration requires that truckers carrying freight must take a 10-hour break after driving a maximum of 11 hours in a day.

[6] https://www.trucking.org/news-insights/ata-releases-updated-driver-shortage-report-and-forecast

- **A more versatile MnDOT OSOW routing system.** A few OSOW carriers in District 7 noted issues working with MnDOT's routing system when planning for a certain route beyond what may be automatically generated by MnDOT's system. It is difficult for carriers to accurately mark their origin, stops, and destinations along the planned trip route to obtain a permit. This technology issue requires companies to interact directly with MnDOT's permitting and District offices to coordinate and obtain approval for specific movements. A few stakeholders noted that North Dakota has an effective system as the technology allows direct pinpoint origins, stops, and destinations and automatically detects whether a route is safe.
- **Need for OSOW movements to be included in construction planning.** OSOW stakeholders identified the need for District 7 to ensure its construction planning efforts consider how it affects OSOW movements. Occasionally, pavement-related construction projects that require detours do not provide adequate detour routes that can accommodate OSOW trucks. Additionally, when MnDOT places new roadway signs, streetlights, and overhead structures, it must consider whether an OSOW truck can safely travel through the area without interfering with MnDOT assets. One stakeholder also mentioned the importance of considering OSOW movements during planning for reconstruction along TH-22 between Mankato and St. Peter in 2024.
- **Additional truck parking for OSOW trucks.** A few OSOW trucking stakeholders mentioned that more truck parking is needed specifically for OSOW loads. Many of the existing truck parking facilities have limited or no spaces for OSOW trucks.

District 7 Freight Showcase: MN-4 and CR-29 Roundabout Project

In 2018, District 7 installed a roundabout at the intersection of MN-4 and CR-29 north of Sleepy Eye. This former 2-way stop-controlled intersection had been the site of several serious injury and two fatal crashes in the past and was replaced with a roundabout to improve traffic safety. During project development, District 7 design staff incorporated a lower curb height into the roundabout design. This design change was made in response to concerns from trucking firms elsewhere in Minnesota, who had noted that curb heights on transitions to truck aprons were too high on some other roundabouts.

Bridge Height Clearances

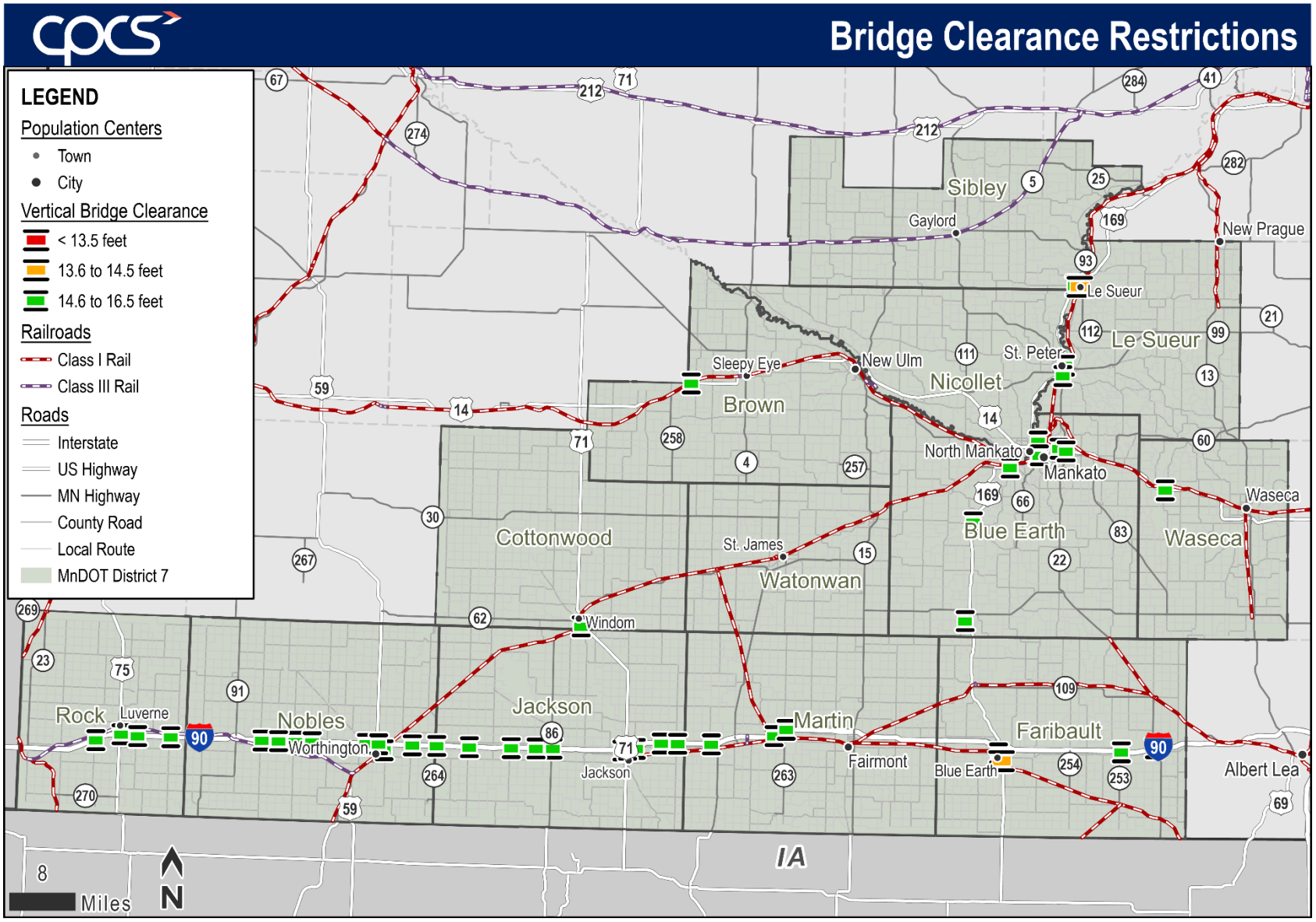
District 7's trucking companies noted that bridge height clearances cause mobility issues along their routes, particularly on I-90. This is especially an issue for OSOW movements while they map out their routes because alternative roadways sometimes do not accommodate their size and weight loads. Consequently, some manufacturers are forced to make longer or additional trips, which is costly and inefficient. Figure 7 displays District 7's bridge clearances along their roadways.

Construction Planning

One stakeholder noted that MnDOT should consider freight mobility when planning for and implementing a construction project. They felt that many construction projects are primarily concerned about pedestrian access and do not consider the project's impact on freight movements. Also, a few businesses in the Mankato area noted their concern regarding the City's proposal to redo the Riverfront Drive corridor. They are worried that truck access and mobility through Mankato will be impaired during and after construction.

In addition to these specific concerns, a few stakeholders mentioned that better planning was needed to reroute all sizes of trucks during a road closure or construction project. Occasionally, there is a lack of clear signage for trucks during detours, or they are forced to take a much longer route around the project.

Figure 7: Bridge Vertical Clearance in District 7



Source: CPCS analysis of MnDOT Bridge Office Data, 2021.

Snow Removal

District 7 stakeholders identified two issues related to snow removal. First, some stakeholders said snow and ice should be removed earlier in the day on high-capacity trucking routes, including US-169, US-14, US-71, and US-75, and MN-60, MN-13, MN-22, and MN-30. Slow snow removal can lead to safety concerns for trucks traveling along these corridors. Stakeholders also noted that certain unplowed roadway segments cause further issues for trucks and jeopardize safety. These segments include areas where roads are flat and exposed to drifting snow, icy conditions located along curved areas, and intersections that are not plowed thoroughly. It is important to note that while there are suggested snow removal improvements, stakeholders generally believe MnDOT does a good job removing snow and preparing for icy conditions.

Stakeholders are generally happy with MnDOT's snow removal efforts but are interested in opportunities to improve information about road conditions.

The second issue noted by stakeholders is that MnDOT could communicate changes in snow-related roadway conditions quicker and more effectively. One stakeholder noted that they have a policy of stopping all truck movements when roads are snow-covered. Their drivers will begin their route during a time where MnDOT's 511 information program indicates that their road is clear. However, during their drive, they learn that a particular roadway is covered with snow and unsafe for travel. This requires trucks to immediately find a location to pull over, which can create parking or safety issues.

Roadway Infrastructure Condition

Maintaining roadway infrastructure is vital to maximizing freight safety and efficiency. Poor infrastructure along roadways and bridges can damage vehicles and cargo, reduce truck speeds, and lead to unsafe driving conditions. Structurally deficient infrastructure may also force lower trucking weight limits along select highway segments, which could result in longer trips. The discussion of roadway infrastructure condition is broken down into pavement condition and bridge condition.

Pavement Condition

Smooth pavement condition is important to freight mobility and safety. If pavement condition is poor due to rough or uneven surfaces, truck cargo can shift, or trucks and trailers can be damaged. Stakeholder consultations and the online survey identified potential condition problems at MN-60 near Mankato, MN-22 between Wells and Mapleton, MN-4 north and south of St. James, and on some isolated county roads. Many of these condition problems will be addressed by upcoming projects, such as the resurfacing of MN-22 between Wells and Mapleton.

Bridge Condition

Bridge condition is important because condition ratings can impact the weight capacities allowed for bridges. For example, a bridge in poor condition may require the placement of commercial vehicle weight restrictions to preserve the bridge and prevent damage. Restrictions like this can be barriers to mobility when they force trucks to take longer alternate routes. Stakeholders did not provide feedback on bridge conditions in District 7. As noted in Working Paper 3, most of the District's deficient bridges are located on county or township roads. Thus, roadways critical to truck movements generally do not have bridge condition issues.

Appendix B contains a list of low-condition bridges that were identified using a methodology that examines substructure, superstructure, and deck condition ratings. Each of these condition attributes is rated with a score of 0 to 9, with a max total condition rating of 27. Bridges with a condition rating of 13.5 points or less are flagged as a potential problem. It is important to note that this methodology differs from the MnDOT Bridge Office methodology for assessing bridge sufficiency and deficiency, which is more detailed and has more inclusive criteria for identifying structures as deficient. This freight plan-specific evaluation is used to identify bridges that may be in particularly poor condition and are more likely to pose impediments to truck traffic.

2.3 Railroad Issues and Needs

Rail Safety

Railroad safety discussions and analysis focused on the topic of road-rail grade crossings, where there is potential for conflict between two modes of transportation, and where MnDOT has resources and planning processes in place to address safety concerns. The topic of grade crossing safety is very relevant for District 7; between 2010 and 2019, District 7 ranked first among all Districts in the number of crashes at passively protected grade crossings. However, District 7 did have the third-lowest count of crashes at actively protected crossings during the same time. In addition to this data, Advisory Committee members identified railroad grade crossing safety as a general freight-related concern for District 7.

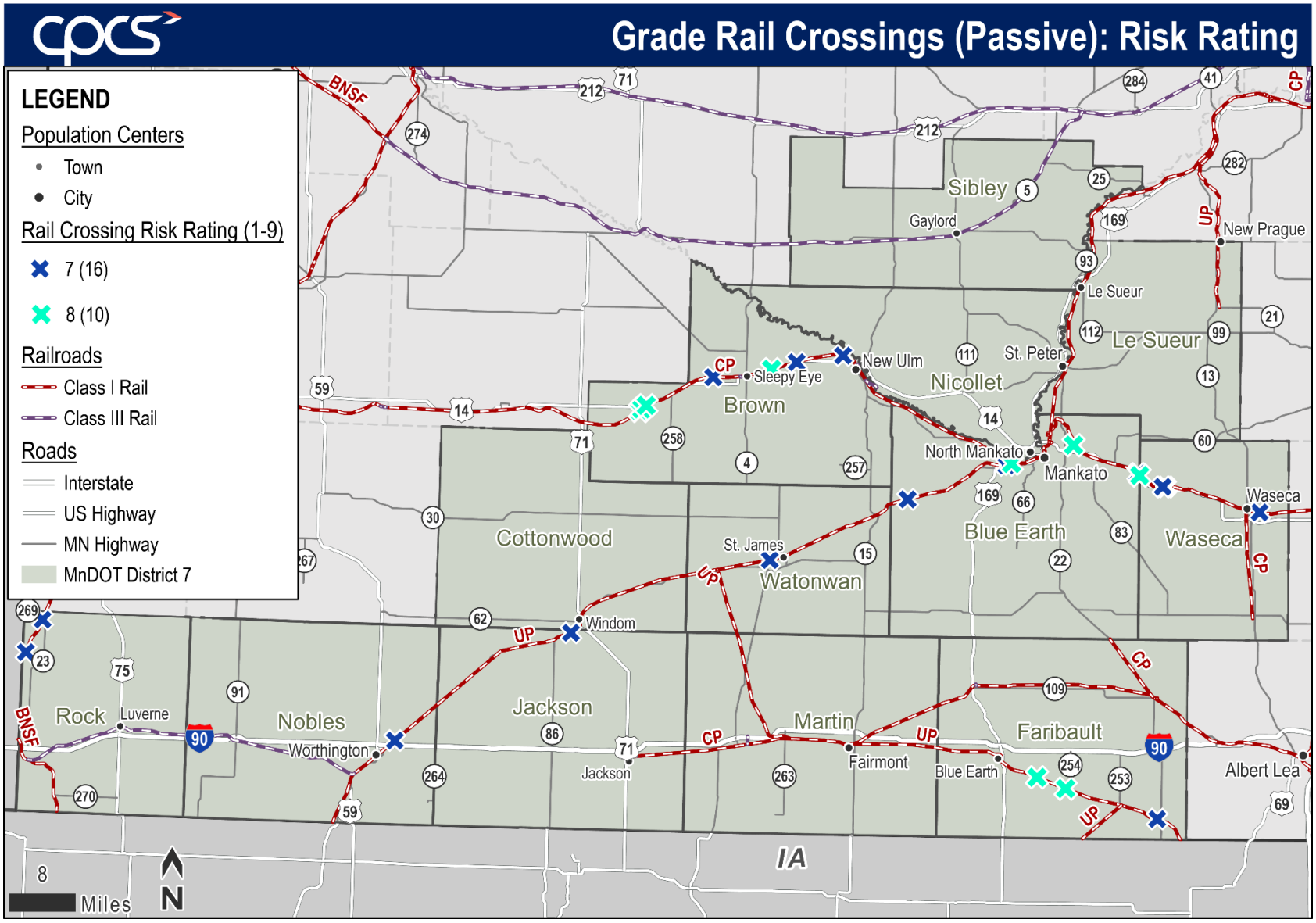
Fortunately, grade crossing crashes are relatively rare when compared to overall road crashes. As a result, this plan's assessment of grade crossing issues and needs is derived from a statewide grade crossing risk assessment completed in 2016. This risk assessment looked at nine risk factors for crashes at passively-protected crossings, and 10 risk factors for crashes at actively-protected crossings, such as the angle of crossings, number of tracks, and vehicle speeds. The highest-risk crossings have already been assessed and addressed by MnDOT, and Figure 8 shows District 7's passively-protected grade crossings with a risk rating of 7 or 8. Based on risk factors alone, railroad lines with higher operating speeds and higher volumes of train traffic stand out as more "risky," with higher-risk crossings concentrated in Blue Earth, Brown, Faribault, Nicollet, and Waseca Counties. No other stakeholder feedback about specific grade crossing safety was collected during this plan's outreach work.

Potential crash risks at passively protected rail grade crossings in District 7 are a major concern.

Rail Mobility and Access

Access to railroad shipping can be beneficial because it provides businesses with greater transportation options and opportunities to reduce transportation costs or improve transportation reliability. Some of District 7's freight stakeholders feel that District 7 needs more rail spurs to directly connect to businesses and a local intermodal facility. In particular, agricultural businesses indicated they would strongly consider using more rail to transport their products as a cheaper alternative to trucking. A few of the agricultural stakeholders noted that being able to ship in intermodal rail containers would make them more competitive in their industry and mitigate some truck size and weight issues. In particular, the ability to ship agricultural products marketed from specific regions or with specific growing practices (also known as identity-preserved) in discrete containerized loads is becoming more popular with some agricultural producers because container loads can be kept separate and tracked as they move through the supply chain.

Figure 8: District 7's High-Risk Passively-Protected Rail Grade Crossings



Source: CPCS analysis of MnDOT 2016 Rail Grade Crossing Safety Data. 2021.

Another rail mobility issue mentioned in stakeholder consultations was the consolidation of grain elevators in District 7. Currently, Class I railroads are running more long-haul grain trains of 100 cars or more than before. A few stakeholders noted that mega-elevator complexes that store large volumes of grain and allow for ease of Class I rail access have caused smaller local elevators to shut down. This has the potential to increase the distance of local truck trips from field to elevator. Conversely, mega-elevator complexes may lead to more favorable prices for suppliers and manufacturers and provide terminal operators with the benefit of fewer facilities to actively maintain.

Railroad Track Condition

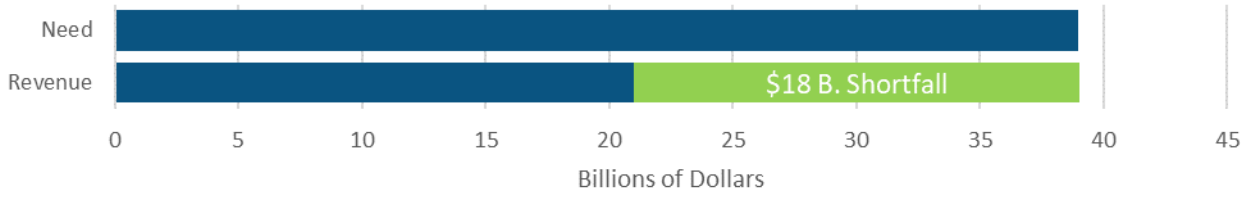
District 7 stakeholders provided relatively little feedback on issues related to rail track conditions. However, two comments were made regarding this topic:

- **Future concern for track conditions along publicly owned and short line rail lines.** Generally, track condition on Class I railroads is not an issue. However, track condition along smaller and branch lines continues to be an ongoing issue. Poor track condition can result in lower speed limits, and limits on the weight of loaded railcars (below the industry-standard 286,000-pound railcars) on certain segments of the track. Therefore, poor track conditions can result in less reliable and inefficient rail service for customers.
- **Continued support and additional funding for the Minnesota Rail Service Improvement Program.** Funds provided by this statewide program can help upgrade public rail line assets, including track. More information on this program can be found in Chapter 4.

2.4 Freight Funding

In addition to the freight-specific issues and needs previously discussed, it is important to acknowledge the financial limitations that MnDOT faces when investing in the transportation system. MnDOT's fiscally constrained capital investment plan, the 2018-2037 Minnesota State Highway Investment Plan (MnSHIP), estimates that $39 billion of investments are needed to support the state highway system through 2037. However, only $21 billion is projected to be available resulting in an $18 billion funding gap. As shown in Figure 9, this lack of funding is due to the continued growth of construction costs, and a slowing rate of revenue growth.

Figure 9: MnSHIP Highway Investment Need and Forecasted Revenue



Source: Adapted from Minnesota State Highway Investment Plan, 2017

District 7's freight system will become increasingly difficult to maintain or improve if revenue continues to grow more slowly than maintenance costs.

3 Freight System Strengths, Weaknesses, Opportunities, and Threats

Key Findings

A major strength for the District 7 freight system is its robust roadway system of key trucking corridors, such as I-90, US-169, and US-14. The effective operation of this system supports the competitiveness of the District's manufacturing and agricultural sectors. However, a key weakness for District 7's freight transportation system is the lack of adequate funding to address poor road and bridge conditions. This is a particular issue on county and local roads.

3.1 Strengths, Weaknesses, Opportunities, and Threats

A strengths, weaknesses, opportunities, and threats (SWOT) analysis helps agencies like MnDOT understand what factors or changes should be considered in their planning work. The definition of each SWOT term and each term's relationship to others is illustrated in Figure 10 and following the figure. The synthesis of SWOT factors in this chapter reflects information and data gathered from this project's prior Working Papers, as well as stakeholder feedback, and feedback from the Advisory Committee and Technical Team.

Figure 10: Strengths, Weaknesses, Opportunities, and Threats Table

	Helpful (to achieving goals)	**Harmful** (to achieving goals)
Internal (attributes of system)	**Strengths**	**Weaknesses**
External (attributes of environment)	**Opportunities**	**Threats**

- **Strengths** – Internal factors that give the District and its communities and businesses an advantage over others. These were broadly presented in Working Paper 3 as part of the District's economic and freight system profile.
- **Weaknesses** – Internal factors that place the District and its communities and businesses at a disadvantage relative to others. These were broadly described in Chapter 2 of this working paper. District 7's weakness can be described as its issues and needs.
- **Opportunities** – External factors that the District and its communities and businesses could capitalize on to its advantage. These were broadly described in Chapter 1 (Future Outlook) of this working paper.

- **Threats** – External factors that could create challenges for the District and its communities and businesses. These were broadly described in Chapter 1 (Future Outlook) of this working paper.

The results of District 7's SWOT analysis are aligned with MnDOT's Statewide Freight System Plan's five goals that reflect aspects of the multimodal freight system most important to public and private sector stakeholders. These goals include:

Economy

Broadly defined, the Minnesota Statewide Freight System Plan's economic goal is to **Support Minnesota's Economy.** Specifically, the economic goals for the freight system are to provide a system that:

- Operates efficiently.
- Connects to the rest of the world.
- Responds and adjusts to changing economic conditions.

Figure 11 displays District 7's economy-related SWOT findings. During this assessment, some common findings emerged, and several of these findings relate to other SWOT topics as well:

- **Competitive and growing manufacturing and agricultural sectors.** District 7 manufacturing and agriculture businesses have a long-standing track record of success. However, factors including supply chain disruptions and rising material costs due to COVID-19 present a significant near-term threat to these industries.
- **Nearby access to the Twin Cities.** Businesses in District 7 have efficient highway access to the Twin Cities. This allows District 7's businesses to serve customers in a major metropolitan area while also providing them with access to other markets outside of Minnesota.
- **Continued investment in renewable energy and biofuels.** The development of more efficient wind and solar electric systems may create additional renewable energy investment opportunities. District 7 already has a strong history of renewable energy development and production via soybean oil and ethanol production.
- **Public and private sector coordination.** There is an opportunity for MnDOT to work closely with private sector entities and representatives to identify infrastructure improvements that enhance freight movements. These opportunities include holding infrastructure workshops with private stakeholders in the district and piloting privately developed technologies that seek to improve freight mobility. Also, MnDOT can work with private freight stakeholders to minimize construction impacts on freight movements. For example, MnDOT District offices can work more closely with freight carriers to communicate delays and detour routes from active construction. Further partnership opportunities are explored in Chapter 4.

- **Lack of intermodal access.** While there is some rail access, District 7 lacks local access to intermodal services. Companies wishing to use intermodal container shipping must dray their containers to other terminals in the Twin Cities or even Chicago. Providing low-cost rail intermodal options to companies in the District has the opportunity to increase their competitiveness.
- **Labor shortages.** Due to an aging population and minimal in-migration, some of District 7's freight-reliant businesses are struggling to maintain their workforces. This is especially prevalent in the trucking community as it is increasingly difficult to find drivers. Additionally, the existing construction workforce in District 7 may not be big enough to accommodate future infrastructure repairs.
- **COVID-19 and other supply chain disruptors.** Largely due to COVID-19, manufacturing supply chains are slower resulting in delayed shipment to end-users. This is causing production uncertainty and a rising cost of raw materials and finished products.
- **Agriculture industry consolidation.** The increasing rise in agribusiness and agriculture company consolidation presents a threat to District 7's smaller agriculture businesses. Consolidation can decrease internal costs, which lowers the cost of products. This may cause smaller agriculture businesses to shut down or consolidate.

Figure 11: District 7 Economy SWOT

Strengths	Weaknesses
• Continued success of the agricultural and manufacturing sectors • Efficient road and rail access to the Twin Cities	• Lack of intermodal transportation facilities • Aging population, with minimal in-migration
Opportunities	**Threats**
• Continued development of biofuels and renewable energy resources • MnDOT can be proactive in working with the private sector to identify improvements and mitigate freight impacts of construction projects	• Difficulty finding and retaining workforce, including truck drivers • Delayed supply chains due to market conditions (COVID-19) • Cost of raw materials continuing to rise • Agribusiness and agriculture consolidation

Mobility

The Minnesota Statewide Freight System Plan seeks to **Improve Minnesota's Mobility** because a freight system with impaired mobility (such as congestion), is unattractive for industries, and may place them at a competitive disadvantage relative to companies in other states. Therefore, the Freight Plan established two general objectives:

- Access for all freight users.
- Reliable service with minimal chokepoints.

These elements informed the mobility-related SWOT Assessment shown in Figure 12. During the assessment common topics emerged:

- **Low highway congestion.** Outside of major peak hours, congestion does not impede freight movements in District 7. However, as Mankato continues to experience population and business growth, congestion may become a larger issue in the region.
- **Good trunk highway conditions.** District 7's trunk highways are in good or fair condition. Considering that a large portion of the District's truck movements occur along trunk highways, this good condition supports good freight mobility.

- **Truck Parking.** Previous District 7-related plans and studies, freight stakeholders, and advisory committee members identified truck parking as a major need in Minnesota. Medium- to long-haul truckers planning for their trip need to identify locations where they can stop and rest. Without adequate truck parking, may be forced to stop early (reducing trucking efficiency) or stop along the side of the road, which can be a safety hazard. Truck parking for OSOW carriers is particularly needed around Worthington. MnDOT additionally needs to consider OSOW loads when designing, adding, and regulating truck parking facilities as not all existing facilities have enough spots to accommodate them.
- **Construction planning improvements.** MnDOT can improve its construction planning by minimizing construction impacts on freight. Some stakeholders mentioned that MnDOT often prioritizes pedestrian access during construction planning but neglects to consider how the project may hinder freight.
- **Efficient first/last mile connections.** Inefficient first-final mile connections (such as right-turn-only intersections, or limited access to interstate highways) can increase the distance of freight trips and increase freight shipping costs. Restricted connections can also make some industrial parcels less appealing for future development or force trucks onto local roads.
- **MnDOT 511 Travel Information improvements.** MnDOT can improve its 511 Travel Information system by providing more accurate "real-time" updates. Specifically, more current road closures due to construction and snow and ice conditions can improve truck mobility. A lack of "real-time" information can cause shipping delays and unsafe road conditions as trucks sometimes are forced to stop traveling.
- **Low clearance bridges.** Bridge clearance restrictions along major highways in District 7 often cause mobility issues for OSOW superloads and other larger trucks. Particularly, I-90 has numerous low bridge clearances in Jackson and Nobles Counties that sometimes divert oversize trucks around the highway. US-169 also has a few low bridge clearances in Mankato.
- **Truck size and weight differences.** Minnesota and its neighboring states have different truck size and weight regulations. As a result, District 7's freight stakeholders sometimes lose inbound and outbound business as certain trucks are unable to serve all customers.
- **Local support for OSOW.** There is room for improved coordination between local MnDOT planning officials and carriers moving OSOW freight. Currently, many OSOW carriers coordinate with MnDOT's OSOW office, but it would be helpful to further coordinate with local officials. For example, OSOW carriers could provide District 7 staff with their approved and preferred truck routes, so local MnDOT staff can be aware of OSOW movements when they occur.

Figure 12: District 7 Mobility SWOT

Strengths	Weaknesses
• Limited traffic congestion outside of Mankato • Sufficient road infrastructure conditions on trunk highways	• Lack of intermodal transportation facilities • Low clearance bridges along major highways • Lack of truck size and weight uniformity • Bridge conditions • Local support for OSOW
Opportunities	**Threats**
• Improved consideration of freight movements during construction planning • Improved communication of construction and snow removal updates on 511 • Improved efficiency of first/last mile freight connections • Addressing the need for more truck parking	• Congestion in Mankato as the area develops • Ongoing truck driver shortage

Infrastructure

The Minnesota Statewide Freight System Plan seeks to **Preserve Minnesota's Infrastructure** through two areas for strategic improvements:

- Ensure critical segments and connections are available
- Ensure these segments and connections are in a good state of repair

These elements informed the infrastructure-related SWOT Assessment shown in Figure 13. During the assessment, the following common topics emerged:

- **Bridge conditions.** Within the 13 counties of District 7, there are 126 deficient bridges, which can lead to weight restrictions, truck rerouting, and longer truck routes in rural areas. However, bridges along trunk highways are generally in good condition.
- **Trunk highway conditions.** District 7's trunk highways are in good or fair condition. Considering that a large portion of the District's truck movements occur along trunk highways, this allows for good mobility. However, MnDOT's anticipated budget shortfall may make it more difficult to maintain good conditions in the future.
- **Investment flexibility.** MnDOT and the state of Minnesota have an opportunity to leverage non-freight related funds to fulfill freight projects that benefit multiple pieces of the transportation system. Some projects can improve pedestrian safety while also enhancing freight mobility.
- **Lack of transportation and freight funding.** While trunk highways in District 7 are generally in good condition, additional funding is needed to address critical infrastructure improvements. The current funding allotment at a federal, state, and local level to District 7 freight transportation assets does not suffice to maintain existing infrastructure.

Figure 13: District 7 Infrastructure SWOT

Strengths	Weaknesses
• Relatively well-maintained trunk highways and bridges	• Poor condition of county and local roads and bridges
Opportunities	**Threats**
• Opportunity to identify freight projects that can help improve other aspects of the system (e.g., safety) and leverage non-freight funds (e.g., safety) to make improvements	• Insufficient infrastructure improvement funding • Trunk highway condition is expected to decline in the absence of additional funding • Climate change impacts on road conditions

Safety

The Minnesota Statewide Freight System Plan seeks to **Safeguard Minnesotans** in two key ways:

- Enhance freight system safety
- Ensure plans are in place to protect areas where freight activity and the public interface

Figure 14 shows District 7's SWOT elements related to freight safety. Freight stakeholders mentioned that their biggest road safety concerns relate to road geometry (i.e. passing lanes, turns, redesigned intersections, etc.). Additionally, District 7's passively-protected (i.e. only stop signs, pavement markings, or crossbucks) rank the highest out of any MnDOT District in terms of crashes. However, the District's actively-protected grade crossings (i.e. gates, flashing lights, etc.) rank low in incidents compared to other Districts.

Figure 14: District 7 Safety SWOT

Strengths	Weaknesses
• Relatively low at-grade crossing incident rate at actively-controlled grade crossings compared to other Districts	• Relatively high count of crashes at passively-protected grade crossings.
Opportunities	**Threats**
• Geometric safety improvements (passing lanes, turn lanes, redesigned intersections, etc.) can provide freight benefits	• Limited funding available for safety improvements

Environment and Community

Finally, the Minnesota Statewide Freight System Plan seeks to **Protect Minnesota's Environment and Communities**. The Freight Plan's goal for the environment and communities is:

"Plan, design, develop, and preserve the freight system in a way that respects and complements the natural, cultural, and social context and is consistent with the principles of context-sensitive solutions."

This goal informed the environmental and community-related SWOT assessment shown in Figure 15. During the assessment, the following common topics emerged:

- **Decarbonization of freight.** As MnDOT works to meet its greenhouse gas emissions reduction goals via the Next Generation Energy Act[7], District 7 can integrate decarbonization of freight into its freight planning. For example, District 7 can work with local carriers to utilize alternate fuels in trucks and support the region's prevalent renewable energy and biofuel development industries. MnDOT's goal is to reduce greenhouse gas emissions by 30 percent below 2005 levels by 2030 and 80 percent below 2005 levels by 2050.
- **Statewide VMT goals and their impacts on trucking.** In March of 2021, MnDOT set a goal to reduce vehicle miles traveled (VMT) by 20% by 2050. This goal poses a potential threat to trucking as planning towards the goal could limit truck travel. However, VMT reductions may also reduce congestion on roadways near Mankato, which is an opportunity to improve freight mobility.
- **Climate change impacts.** Warmer climates during Minnesota's colder months can cause pavement and bridges to deteriorate quicker. Worsening pavement may lead to rougher rides for trucks, which is a roadway safety and commodity preservation issue. Also, more rainfall in District 7 can lead to flooding along local roads.
- **Water quality.** The use of salt and other deicing solutions during snowy conditions can worsen ground and surface water quality. The Minnesota Pollution Control Agency (MPCA) has a Mankato Area Steering Committee to address this issue. In 2017, the committee published a Mankato Area Chloride Management Plan[8] to make recommendations on limiting winter maintenance effects on freshwater resources.
- **Local truck routing.** Trucks traveling along local and county roads in District 7 pose both a threat and a weakness. Local truck traffic can lead to slower speeds, increased congestion, and a potential higher risk for collisions. Additionally, the rise in e-commerce has increased truck traffic in residential communities.

[7] https://www.revisor.mn.gov/data/revisor/slaws/2007/0/136.pdf
[8] http://freshwater.org/wp-content/uploads/2017/02/Mankato-Chloride-Management-Plan.pdf

Figure 15: District 7 Environment SWOT

Strengths	Weaknesses
• Relatively little conflict between land uses	• Snow and ice control methods have a negative impact on water quality • Truck routing through downtowns
Opportunities	**Threats**
• Integrating freight transportation decarbonization into freight planning • Further supporting the wind energy industry • Balancing community needs (i.e. bicycling infrastructure and freight community impacts) with freight needs	• Climate change impacts on infrastructure and agriculture • MnDOT VMT goal of 20% less VMT by 2050

4 Freight System Opportunities

Key Findings

While District 7's freight system has many issues and needs, there are opportunities to improve and strengthen the system. Chapter 4 provides an in-depth analysis on four types of potential opportunities related to projects, programs, policies, and partnerships. These opportunities were identified by comparing the location of issues and needs against planned investments on the road network.

Some of the opportunities identified include intersection safety improvements, highway lane expansions, and bridge and roadway condition improvements.

4.1 Summary of Freight System Opportunities

MnDOT and its stakeholders have four types of tools that can be used to address freight-related challenges, and unlock new opportunities:

- **Projects** including infrastructure maintenance, improvement, and expansion.
- **Policies** to govern the development and operation of the freight system.
- **Partnerships** with local stakeholders to better understand issues and needs, and implement or advance strategies to improve the system.
- **Programs** designed to provide funds for infrastructure improvements.

Each of these "4 P's" has a different role to play in improving the system. While projects may appear to be the most important type of action because they produce tangible results, proper selection and funding of specific projects would not be possible without partnerships to gather feedback, policies to guide investment, and established programs to allocate funding.

This chapter presents a series of strategic opportunities within each "P" category. These opportunities have been identified through the analysis of this Working Paper and Working Paper 3, as well as stakeholder feedback and recommendations from previous studies, including the Manufacturers' Perspectives study.

This slate of preliminary opportunities is conceptual and will be further explored with the Advisory Committee and Technical Team to understand the completeness of opportunities identified. Opportunities may be added to or deleted from this list before formalizing freight plan recommendations.

4.2 Initial Slate of Project Opportunities

State and County-programmed road projects may overlap with issues and needs identified as part of this Working Paper's analysis. Where needs and programmed projects overlap, there may be the opportunity to improve the District's freight network with non-freight dollars. This section provides an overview of the overlap and gaps between programmed MnDOT and County investments, and identified issues and needs.

This information on overlaps and gaps will help District 7 and its county partners understand how their currently programmed investments could affect freight transportation. Furthermore, this examination of gaps will aid in the prioritization and selection of projects for advancement to a pre-engineering feasibility assessment. This prioritization process will be described in Working Paper 5. Information on District 7's programmed projects came from the following sources:

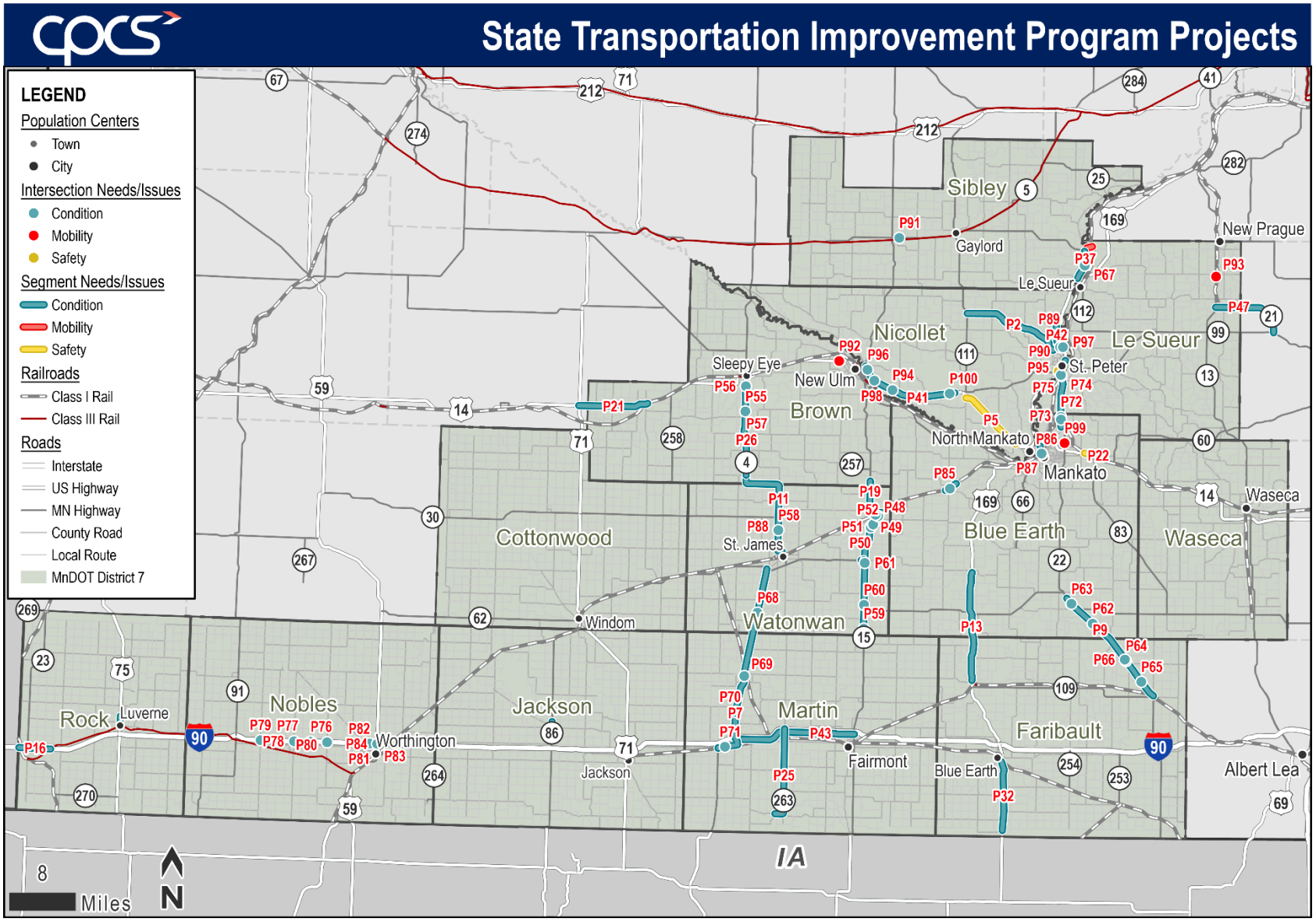
- The **State Transportation Improvement Program** (STIP) identifies a schedule and funding amount for transportation projects over the next four years. The detailed project list in the STIP includes all state and local projects with federal highway or transit funding, as well as state-funded highway projects. The STIP also contains freight and rail investments, for reference. Figure 16 illustrates District 7's STIP projects.
- MnDOT's **Capital Highway Investment Plan** (CHIP), which lists 10 years of highway investments for the trunk highway network. The CHIP includes STIP projects, as well as planned investments for additional years after the scope of the 4-year STIP. These longer-term plans for projects are not guaranteed to be constructed but are listed in the CHIP to aid in coordination and planning. Figure 17 illustrates District 7's CHIP projects.
- **County Improvement Plans** list between one and five years of upcoming road and bridge projects on county-managed road networks. Figure 18 illustrates the location of all of these county projects.

Figure 19 shows the locations of STIP, CHIP, and county projects combined. **Appendix C** provides a list of all projects.

Once a list of all projects was assembled, the location of these projects was compared against the location of identified issues and needs. In locations where issues and needs *did not* overlap with programmed projects, the issues and needs were marked as "gaps." Figure 20 illustrates the location of issue and need gaps in District 7, and **Appendix D** provides a list of each gap and its noted need or issue.

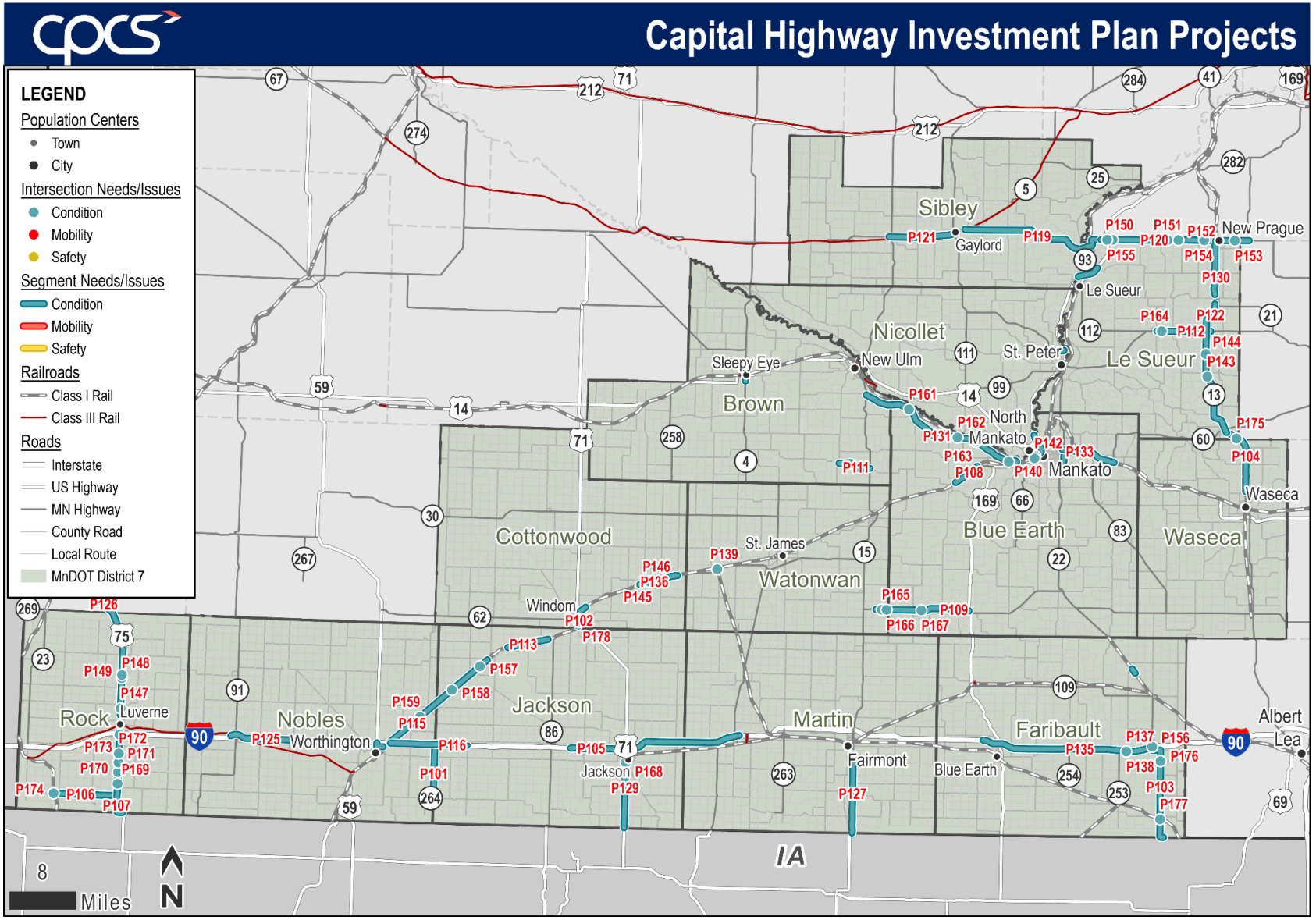
This list of gaps will be used as a starting point to conceptualize project recommendations and has been aligned with potential non-freight-specific funding options in Figure 21. This figure illustrates how many of the freight issues and needs in District 7 could potentially be addressed by other MnDOT investment efforts. Many projects fall into multiple categories, and some projects were assigned to multiple categories. Therefore, the number of projects listed is higher than the number of gaps.

Figure 16: District 7 STIP Projects



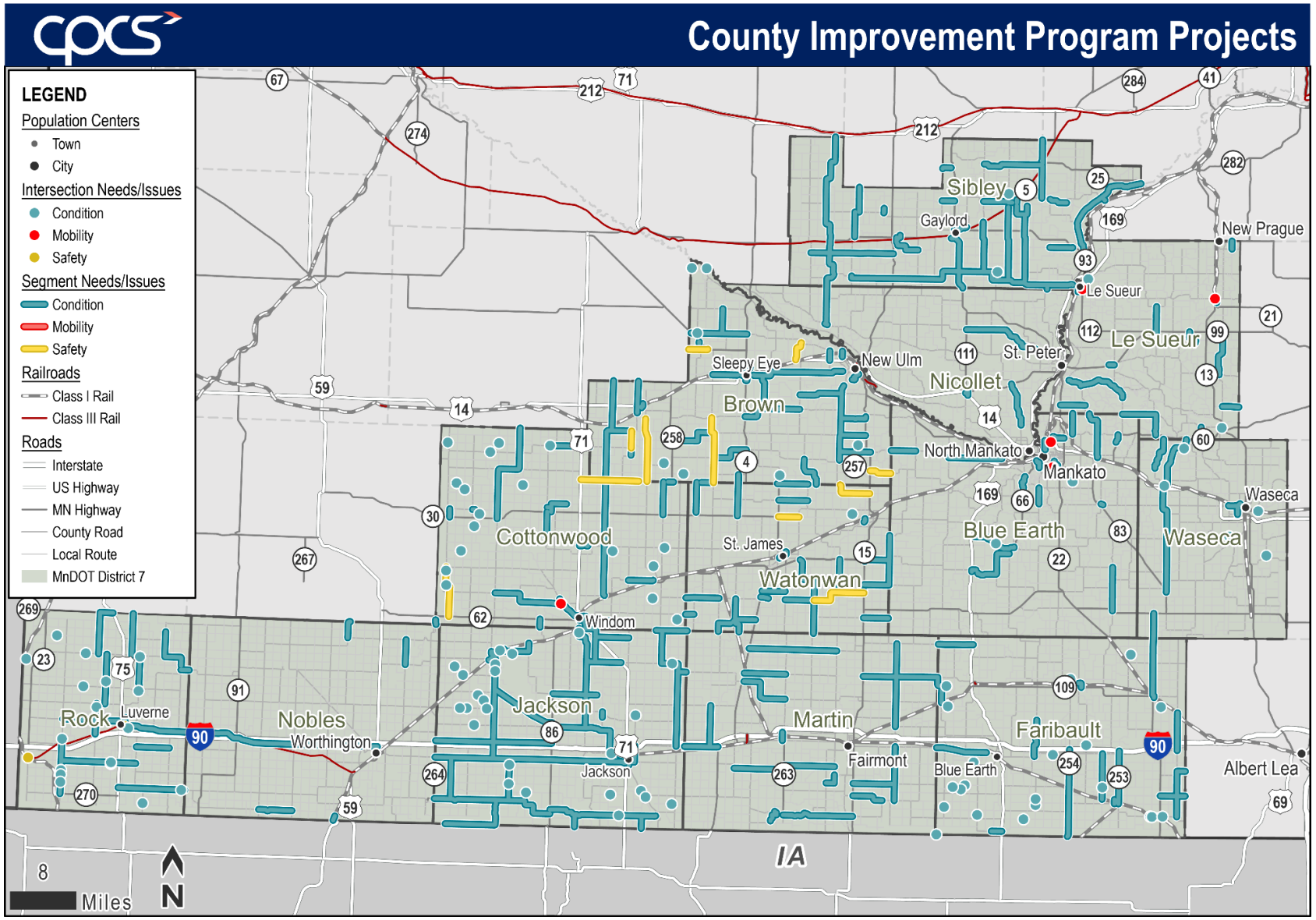
Source: CPCS analysis of MnDOT STIP project lists. 2021.

Figure 17: District 7 CHIP Projects



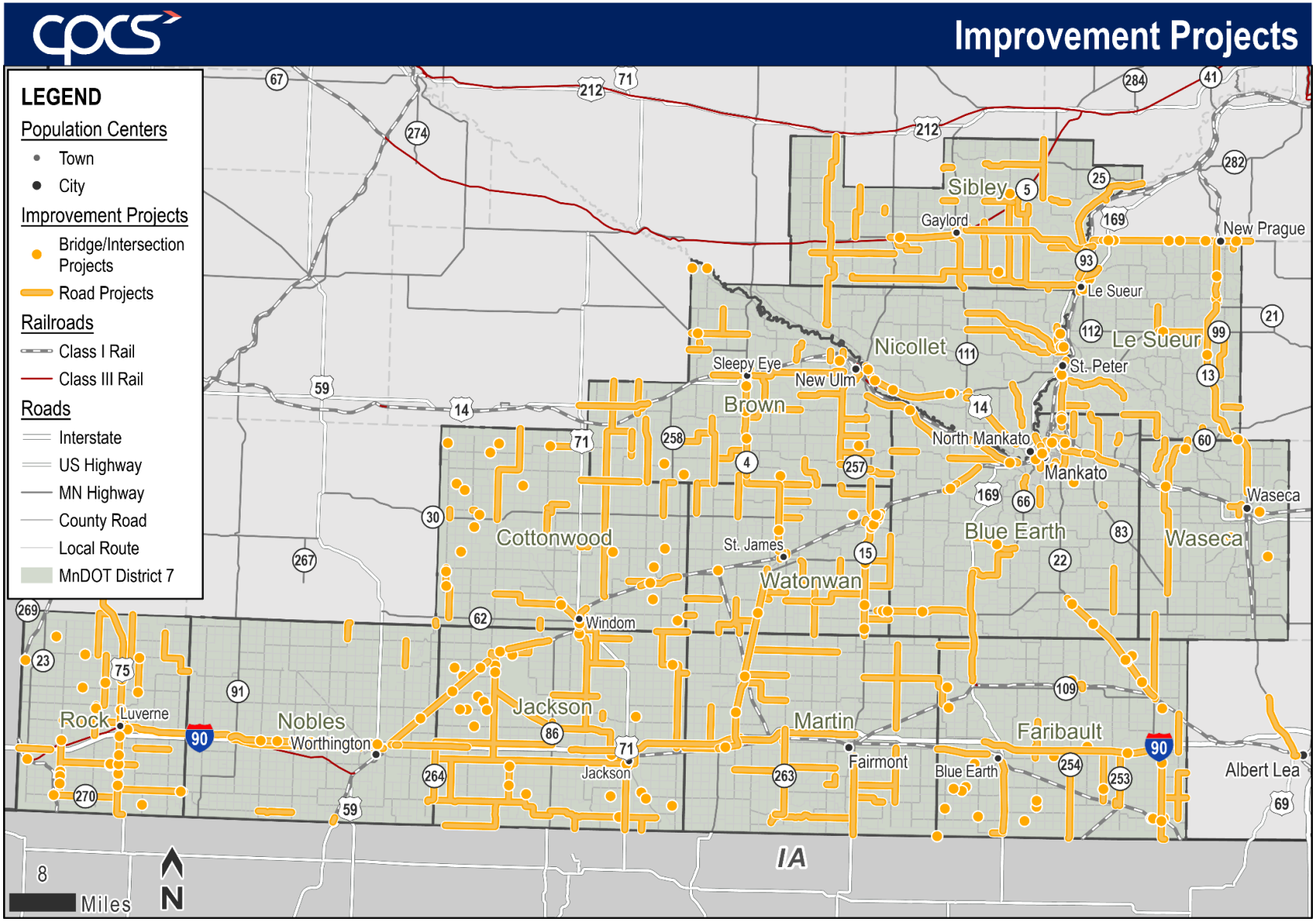
Source: CPCS analysis of MnDOT CHIP project lists. 2021.

Figure 18: District 7 County Projects



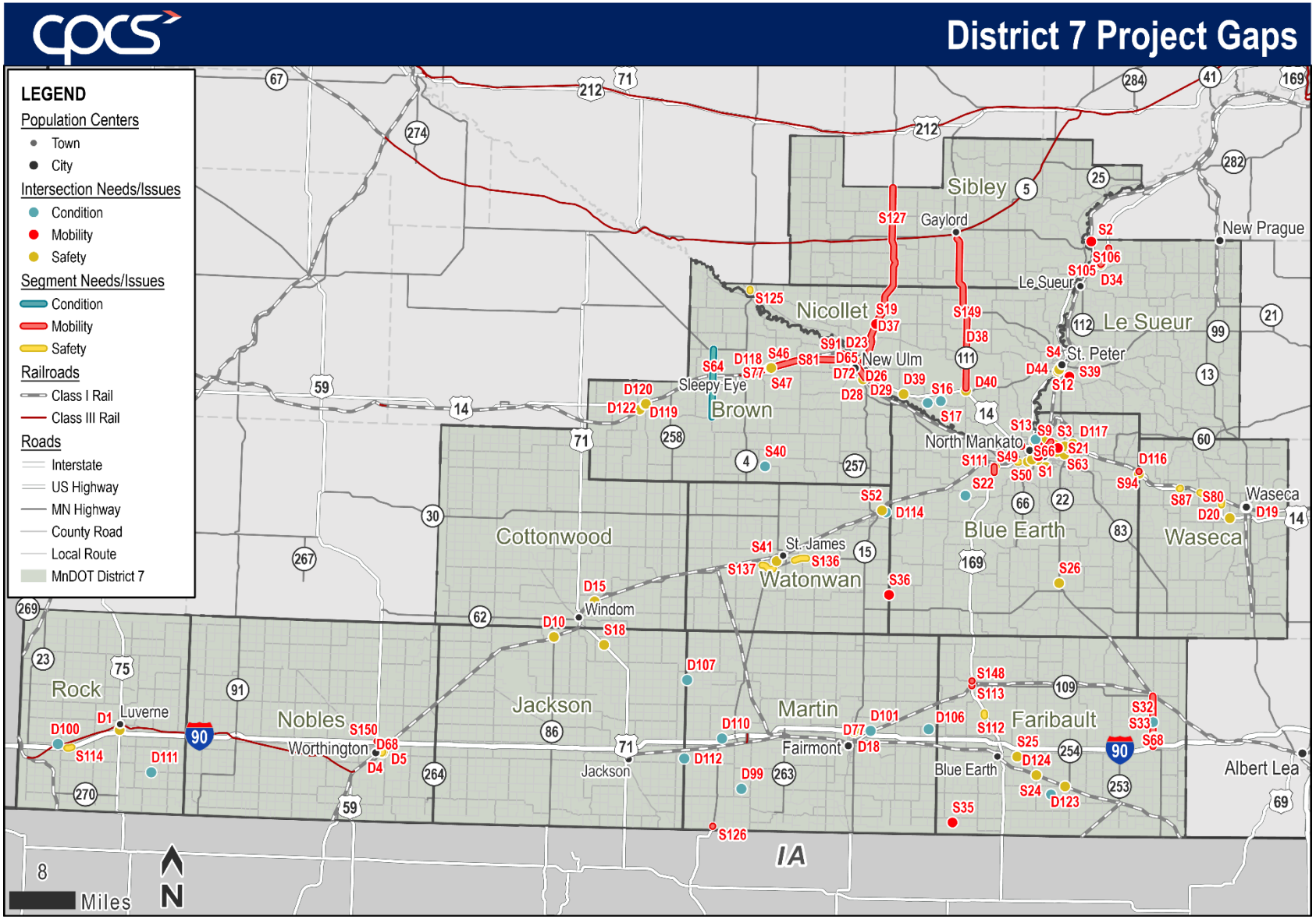
Source: CPCS analysis of District 7 county project lists. 2021.

Figure 19: All District 7 Projects



Source: CPCS analysis. 2021.

Figure 20: District 7 Project Gaps



Source: CPCS analysis. 2021.

Figure 21: 2018-2037 MnSHIP Investment Objectives and Categories Aligned with District 7 Freight Needs

Investment Objective	Investment Category	Applicable D7 Freight System Issue or Need	Number of Project Types Identified in Gap Analysis
System Stewardship	Pavement Condition	Pavement Condition	8
	Bridge Condition	Bridge Condition	9
	Roadside Infrastructure	• Signage • Traffic Signals/Controls • Other Technology and Information Management Systems	2
	Jurisdictional Transfer	N/A	N/A
	Facilities	Weigh Station and Commercial Vehicle Enforcement	2*
Transportation Safety	Traveler Safety	• Sustained Crash Locations • Rail-Highway Crossings	97
Critical Connections	Twin Cities Mobility	N/A	N/A
	Greater Minnesota Mobility	• Intersections • Passing or Turning Lanes • Corridors • Roundabouts	51
	Freight	N/A	N/A
	Bicycle Infrastructure	N/A	N/A
	Accessible Pedestrian Infrastructure	N/A	N/A
Healthy Communities	Regional and Community Improvement Priorities	First and Last-Mile Connections	1
Other	Project Delivery	N/A	N/A
	Small Programs	N/A	N/A

Note: This evaluation assumes that a dedicated freight investment category will not be available in the future.
*Weigh station investments noted in the Weight Enforcement Investment Plan are classified here as facilities investments.

As shown in Figure 20, notable gaps between programmed projects and issues and needs include:

- Safety improvements at intersections and roadway corridors with high crash rates were the most common type of gap, making up about 70% of the total count of gaps. The most common safety concerns were intersections and road corridors with high crash counts identified from MnDOT crash history data.
- Mobility issues and needs made up about 20% of gaps. The most commonly mentioned or identified problems were the need for additional passing, acceleration, and left-turn lanes. Other topics with multiple mentions included the size or width of roundabouts and intersections, and potential areas for four-lane highway expansion.
- Condition gaps made up roughly 10% of the remaining gaps and were primarily related to stakeholder comments on pavement condition, and bridges that were identified as being in poor condition.

About 70% of the identified project gaps are safety-related, while 20% are related primarily to mobility. A majority of the safety-related project gaps are related to the need to improve safety for trucks exiting, entering, and crossing highways.

While freight projects could potentially align with the MnSHIP funding categories, this does not mean there will be funding available to advance all projects due to the overall state transportation funding shortfall. However, the information in this Working Paper is intended to be an opening to a broader conversation on freight project funding; specifically, that many different types of transportation projects provide freight benefits, and that coordination with freight stakeholders, including MnDOT's Office of Freight and Commercial Vehicle Operations, should be part of statewide investment planning.

Project Concept Prioritization Methodology

The gaps identified will be analyzed further to determine those that should undergo pre-engineering analysis. The purpose of this exercise is to identify a select number of issues and needs that will receive additional attention to develop proposed solutions. Gaps will be scored and ranked according to 10 criteria, and relative scores will be used to determine which projects advance for pre-engineering analysis. Additional in-depth information on this scoring and ranking process will be provided in Working Paper 5.

Figure 22: Freight Categories and Measures

Category	Ranking Score Measure
Truck Activity	High Capacity Annual Average Daily Traffic
	Truck percent (%) of total vehicles
Safety	Addresses a sustained crash location (Y/N)
	A safety issue identified in a district or county safety plan (provide risk rating)
	Addresses at-grade crossing safety risk
Freight Mobility	Truck Travel Time Reliability
	Addresses a vertical clearance restriction
	Addresses a weight-limited bridge
Condition	Bridge condition rating (superstructure, substructure, or deck rating less than 5)
Stakeholder Need	Y/N if this issue overlaps with a stakeholder identified need

4.3 Policies

Policies, programs, and partnerships were identified in order to support the advancement of projects. Generally, policies are established to inform project and program investments, and partnerships are required for effective implementation. Potential policy opportunities for MnDOT's Office of Freight and Commercial Vehicle Operations and District 7 include:

- **Incorporate information from the District 7 Freight plan into existing planning processes and future projects.** This plan provides MnDOT and its planning partners with detailed information on the specific location and characteristics of freight problems in District 7. District and Central Office staff should use this information to understand how existing planning or project work may be able to help District 7 address freight transportation issues and needs. For example, screening specific CHIP, STIP, and county projects against this plan's issues and needs can help District staff understand if potential projects can provide freight benefits, and if additional planning steps need to be undertaken to account for freight traffic or freight issues and needs. Approaches like this can help MnDOT address some freight transportation issues and needs within the scope of existing funding streams.
- **Prioritize maintenance of existing assets over the construction of new assets**. MnDOT expects to continue experiencing funding shortfalls in the future and meeting existing maintenance needs with limited funding will become increasingly difficult. Building new infrastructure will add to this maintenance

burden, and therefore should only be undertaken when new projects will provide a clear and significant safety or mobility benefit.

- **Collect information on potential impacts of weight limit changes.** Many trucking stakeholders in District 7 as well as other MnDOT Districts have expressed interest in harmonizing MnDOT's weight limits with the higher limits used in neighboring states. Weight limits are established by the state legislature, and MnDOT does not have direct control over limits. However, MnDOT may wish to maintain information about stakeholder groups that wish to have higher weight limits, and the expected impacts these changes would produce on the road network. Collecting and archiving this information may assist with legislative discussions related to weight limit changes in the future.
- **Ensure freight transportation needs are considered in implementation of complete streets projects**. Many planning and development agencies in District 7 and elsewhere in Minnesota have mentioned that they would like additional information or guidance on how to appropriately balance freight transportation needs with the needs of bicycles and pedestrians, particularly in the context of "complete streets" highway projects in community downtown areas. In particular, several stakeholders mentioned the reconstruction of Riverfront Drive in Mankato as a potential area for conflict between freight transportation and other transportation users. While Riverfront Drive is not a state highway, MnDOT could offer to provide basic information about truck mobility, such as lane width, turning radius, or alternate truck routing during the development of these projects, as even basic information such as this can help project teams understand how freight needs should be incorporated into projects.

4.4 Partnerships

Since MnDOT only has control over a portion of the freight network and has limited resources to support maintenance and improvement. Therefore, partnership with other public agencies and private stakeholders will be an important element of future work on the freight system. Potential partnership opportunities include:

- **Outreach and information sharing for state and federal legislators.** State and federal funding for transportation programs is an important tool for addressing many of District 7's freight issues and needs. Much of the available funding for freight and transportation more broadly is created or allocated through legislative action. Therefore, MnDOT should continue engaging with state and federal legislators to educate them about the importance of freight in Minnesota, and the importance of various funding programs in addressing freight issues and needs. Providing information like this can help generate legislative support for continued or additional freight and transportation funding in the future.
- **Continue outreach to freight stakeholders**. MnDOT should consider conducting 5- or 10-year updates to the Manufacturers' Perspectives Study. This would provide the District with additional information that could be used to update the list of issues and needs created in this District Freight Plan.
- **Continue engagement with Iowa and South Dakota DOTs**. MnDOT coordination and dialogue with the Iowa and South Dakota DOTs is important to stakeholders in District 7. Communication among agencies can improve freight safety and mobility by improving the timing or coordination of projects affecting state highways or interstates that cross state borders.
- **Offer freight information resources or freight planning assistance to county and local governments.** As previously noted, many freight issues occur off MnDOT's trunk highway network, so collaboration with local governments may be necessary to solve first- and last-mile freight movement issues and needs. This type of collaboration is also critical to help local planning staff balance the needs of freight transportation with the need for walkable or bikeable infrastructure in communities.
- **Partner with local educational institutions to support truck driver training programs.** Many stakeholders in District 7 are concerned about the ongoing truck driver shortage, and the negative impact it is having on the cost and reliability of transportation. MnDOT should consider partnership opportunities with local

educational institutions and industry associations to encourage more people to take up truck driving as a career.

4.5 Programs

Many solutions for the issues and needs identified in this planning project require funding to implement. A lack of adequate funding may be the greatest issue the District 7 freight system faces. However, the need for additional funding is not unique to freight, District 7, or Minnesota. It is important to consider that freight-related improvements can be addressed using "non-freight funds" and freight solutions can benefit the entire transportation system. This section provides an overview of funding programs that may be relevant to the freight issues and needs for District 7.

Minnesota State Highway Investment Plan

MnDOT's fiscally constrained capital investment plan, the 2018-2037 Minnesota State Highway Investment Plan (MnSHIP), estimates that $39 billion of investments are needed to support the state highway system through 2037. However, only $21 billion is projected to be available resulting in an $18 billion funding gap.

The MnSHIP outlines the strategic direction for the state and aims to balance competing investment priorities that include enhancing the condition of the existing system and building new infrastructure. Figure 23 illustrates this investment direction and highlights that the System Stewardship objective, which is focused on strategically building, managing, maintaining, and operating all transportation assets, receives nearly 70 percent ($14.46 billion) of available funds. The Critical Connections objective ($1.55 billion, 7.4 percent) is focused on maintaining and improving multimodal transportation connections, as well as strategically considering new connections. This objective includes a freight-specific investment category ($610 million, 2.9 percent) that is directly linked to the FAST Act-established National Highway Freight Program (NHFP). MnDOT established the Minnesota Highway Freight Program (MHFP) with these funds.

Additionally, the Federal Infrastructure Investment and Jobs Act, under negotiation at the time of this Working Paper, would inject sizeable funding for overdue investments and maintenance backlog. Funds for Minnesota are estimated to include $4.5 billion for highways and $302 million for bridge repairs.[9] Minnesota would also be eligible to compete for the $12.5 billion Bridge Investment Program for economically significant bridges and nearly $16 billion of national funding in the bill is dedicated for major economic development projects for communities. Other estimates include $818 million over five years to improve public transportation, $68 million over five years to support the expansion of the electric vehicle charging network, and $297 million for infrastructure development for airports in the state.[10] Further updates to potential Federal transportation funding will be incorporated into this plan's draft final report as more information becomes available.

[9] MinnPost August 2021, https://www.minnpost.com/national/2021/08/infrastructure-bill-includes-significant-funding-for-minnesotas-electric-vehicle-charging-network/

[10] White House fact sheet, https://www.whitehouse.gov/wp-content/uploads/2021/08/MINNESOTA_Infrastructure-Investment-and-Jobs-Act-State-Fact-Sheet.pdf

Figure 23: MnSHIP's 20-Year Capital Highway Investment Direction

Investment Objective	Investment Category	2018-2037 $ (B)	Percent Share
System Stewardship	Pavement Condition	$10.31	69.2%
	Bridge Condition	$2.38	
	Roadside Infrastructure	$1.60	
	Jurisdictional Transfer	$0.09	
	Facilities	$0.08	
Transportation Safety	Traveler Safety	$0.67	3.2%
Critical Connections	Twin Cities Mobility	$0.24	7.4%
	Greater Minnesota Mobility	$0.03	
	Freight	**$0.61**	
	Bicycle Infrastructure	$0.14	
	Accessible Pedestrian Infrastructure	$0.53	
Healthy Communities	Regional and Community Improvement Priorities	$0.31	1.5%
Other	Project Delivery	$3.27	18.7%
	Small Programs	$0.63	
	Total	**$20.89**	**100%**

Source: Adapted from Minnesota State Highway Investment Plan, 2017

Freight-Specific Funding

MnDOT has a history of providing grant and loan funding for freight-related projects as shown in Figure 24. These freight-related funding programs have helped the state address critical freight system needs, however a challenge with these programs is that the level of funding is low compared to the need, and not all funding programs are available on regular basis (e.g., yearly), nor guaranteed they will be available in the future. The remainder of this section provides an overview of funding relevant to freight issues and needs in District 7.

Figure 24: MnDOT Freight Related Funding Programs Relevant to District 7

Source	Funding Available	Eligible Uses
Minnesota Highway Freight Program (MHFP)	$56.9 million total available between 2023-2025	Program funds are broad and include improvements such as truck parking, grade separations, active signals and signs, and truck lanes.
Railroad At-Grade Crossing Safety Program (Section 130)	~$6 million per year, federal and state match	Closures/consolidations of railroad crossings and railroad crossing safety projects at high-risk locations.
Minnesota Railroad Service Improvement Program (MRSI)	$4 million appropriated in the 2020 bonding bill, funding is not regular	Projects that improve fixed assets such as railroad roadbed, tracks, turnouts, bridges, buildings, and fixed loading/unloading equipment.
Weigh Station and Commercial Vehicle Safety/Enforcement Program	$2 million per year, state funds	Projects that maintain or improve commercial vehicle enforcement and safety.

Source: Adapted from MnDOT Office of Freight and Commercial Vehicle Operations.

MnDOT's freight and rail funding programs have helped address freight system needs where traditional highway system funds could not.

Minnesota Highway Freight Program

The Minnesota Highway Freight Program (MHFP) is directly linked to the FAST Act-established National Highway Freight Program (NHFP). As part of this Federal program, MnDOT is apportioned approximately $20 million a year and may determine its own process for selecting projects to receive this funding if it is used for freight-related investments. MnDOT elected to select projects through a competitive process and evaluated applicants on criteria that included truck parking and volume, safety, mobility, facility access, and other factors. Approximately 60% of the funds are dedicated to the MnDOT Metro District and 40% are dedicated to Greater Minnesota and other Districts.

MnDOT selected its 2022-2025 MHFP recipients in 2020 and none of the selected projects were in District 7. In total, 34 applications were received requesting over $178 million. 16 projects were selected amounting to approximately $61 million, again indicating that freight transportation system needs far outweighs available funds. Only one project in District 7 applied for MHFP funding, which was the Cottonwood County CSAH 2 Pavement Enhancement Project.

The MHFP is not a guaranteed future program and may not continue in the future, as these funds may not be again authorized at the Federal level. Additionally, MnDOT's Office of Freight and Commerce Vehicle Operations may elect to use a different process to select projects (e.g., through state and District freight system planning efforts).

Since 2017, the MHFP has awarded over $159 million to freight-related improvement projects across Minnesota.

Railroad At-Grade Crossing Safety Program

MnDOT administers the FHWA's Section 130 grade crossing safety program funds for Minnesota, which provides about $4.5 million per year as of 2021.[11] Closures and consolidation of railroad crossings are the highest priority for the 2021 program and up to $3 million of the program will be dedicated to related projects. Additionally, up to $1.5 million will be available for railroad crossing safety projects at "high risk" locations. These "high risk" locations were highlighted in MnDOT's *Rail Grade Crossing Safety Project Selection* study[12] completed in 2016. Given the current cost of grade crossing equipment and design, this allows the funding of about 20 major projects each year. While the cost of new installations has been increasing, the Federal funding has remained relatively static over the last several years, resulting in fewer projects being possible each year.[13]

MnDOT's *Rail Grade Crossing Safety Project Selection* study examined its processes for evaluating at-grade rail crossings and prioritizing grade crossing improvement projects. The research found that the density of fatal plus injury crashes is very low and that nearly 91 percent of crossings had no crashes of any kind during the study period. This data, combined with the historic use of crash prediction models to prioritize crossing

[11] MnDOT Memo. Grade Crossing Safety Program – Section 130 funding. April 30, 2021
[12] Rail Grade Crossing Safety Project Selection, June 2016
[13] Draft Minnesota State Rail Plan, March 2015

improvements, indicated to MnDOT that too much emphasis has been placed on crash history as a factor in making future investments. MnDOT is now using a risk-based approach for statewide crossing evaluation and using the results to work collaboratively with local jurisdictions to advance projects.

MnDOT Railroad At-Grade Crossing Safety Program can assist with District 7's safety concerns as passively-controlled railroad crossings.

MnDOT's Office of Freight and Commercial Vehicle Operations (OFCVO), Railroad Safety and Coordination Unit solicits projects annually to advance closures/consolidations of railroad crossings and railroad crossing safety projects at high-risk locations, as identified by the statewide crossing evaluation.

Rail Service Improvement Grant Program

The Minnesota Rail Service Improvement Program (MRSI), established in 1976, helps prevent the loss of rail service on lines by providing both loans and grants to railroads, rail users, and political subdivisions of Minnesota and the federal government.

The 2020 state bonding bill provided $4 million of state general obligation bond funds to the MRSI **grant program**. Applications for this batch of funding were due in March of 2021. The program does not have minimum or maximum funding requirements, other than what is obligated on a semi-regular basis by the Minnesota Legislature. Grant funds can only be used for direct railroad-related "fixed assets" on railroad right of way or at railroad facilities and cannot be used for regular or recurring maintenance activities. Authorized expenditures include:

- Railroad tracks and turnouts (track rehabilitation, new track construction, etc.)
- Railroad bridge construction or rehabilitation (286k upgrades or replacement of bridges that have reached the end of their useful life)
- Fixed railroad loading and unloading facilities which are used primarily for the shipment of goods by rail
- Railroad components of intermodal facilities (i.e. railroad tracks, turnouts, and any fixed assets that facilitate the direct loading and unloading of railcars)

The MRSI **loan program** provides loans up to $200,000 per project with a repayment period over 10 years. The program continually accepts applications. In 2005, the Minnesota Legislature appropriated $1.5 million in bond funds to the MRSI Program, and again appropriated $2 million in 2006. With these initial appropriations, the MRSI loan program now is self-funding with quarterly receipts from previous loans used at the discretion of MnDOT.

Loans can be used for the following activities:

- to pay a portion of the costs of rail capital improvement projects such as side tracks, connections between existing lines, construction of loading, unloading, storage, and transfer facilities,
- to acquire, maintain, manage, and dispose of railroad right-of-way,
- to pay a portion of the costs of acquiring a rail line by a regional railroad authority,
- to pay the state matching portion of federal grants for rail-highway grade crossing improvement projects, as well as for other purposes.[14]

[14] Minnesota Rail Service Improvement Program Loan Application

Weigh Station and Commercial Vehicle Safety/Enforcement Program

The Weigh Station and Commercial Vehicle Safety/Enforcement Program has approximately $2 million of state funds available each year. This program is focused on making investments that maintain or improve commercial vehicle enforcement and safety. There is currently an estimated $96 million funding gap for weight and safety enforcement needs, of which approximately $48 million are capital needs. The MnSHIP indicates that for facilities (inclusive of weigh stations and general rest areas) there is a $390 million 20-year need, with only $80 million planned for investment.

The current MnSHIP indicates that weigh scale and weigh station replacement will not keep up with need, resulting in outdated or inoperable sites in the future.

In District 7, the Weight Enforcement Investment Plan identified needs for an improved Weigh-In-Motion station on US-169 in Nicollet County (Site 7.1). It also identified the need for additional weigh-in-motion cameras on MN-60. The plan suggests that US-169 in Nicollet County be considered for a virtual weigh station site to improve enforcement presence along the US-169 corridor. The recommended approach would involve the installation of integrated cameras alongside weigh-in-motion sensors, and the creation of safe pull-over areas for inspections further down the road.

5 Conclusions and Next Steps

5.1 Conclusion

District 7's freight system is primarily made up of road, railroad, and pipeline assets and is a crucial component of the economic well-being of the District. The system supports the region's manufacturing, agricultural, and other vital industries. There are many safety, mobility, and condition issues and needs related to District 7's freight system that should be addressed. Some of the most common needs are enhancing intersection safety, improving bridge and pavement conditions on county and local roads, providing more access to truck parking, and making passively protected rail grade crossings safer.

5.2 Next Steps

A key output of this Working Paper is the list of project gaps in **Appendix D**. The next major step of work will focus on scoring and ranking the identified system gaps, to select some gaps for advancement to pre-engineering feasibility studies. The goal of this pre-engineering work will be to provide potential solutions to top unaddressed freight issues and needs in the District and create project concepts that can compete for funding in future freight-related solicitations. The next steps for work are:

1. Revision of gap list based on feedback from District staff, Advisory Committee, and Technical Team.
2. Score gaps based on pre-determined measures shown in Figure 25 and rank gaps based on their scores.
3. Based on results of scoring, and feedback from the District and Technical Team, select a set of gaps for advancement to pre-feasibility engineering work.

Figure 25: Gap Scoring Measures

Category	Ranking Score Measure
Truck Activity	Heavy Commercial Annual Average Daily Traffic
	Truck percent (%) of total vehicles
Safety	Addresses a sustained crash location (Y/N)
	A safety issue identified in a district or county safety plan (provide risk rating)
	Addresses at-grade crossing safety risk
Freight Mobility	Truck Travel Time Reliability
	Addresses a vertical clearance restriction
	Addresses a weight limited bridge
Condition	Bridge condition rating (superstructure, substructure, or deck rating less than 5)
Stakeholder Need	Y/N if this issue overlaps with a stakeholder identified need

Appendix A Stakeholder-Identified Issues and Needs

This appendix contains a list of the location-specific stakeholder issues and needs identified through consultations, Advisory Committee and Technical Team feedback, and previous work such as the Manufacturers' Perspectives Study. The fields in the following figures are:

- **ID**: This code refers to the need/issue ID printed on maps in this Working Paper. IDs beginning with "S" denote needs or issues identified by stakeholders, while IDs beginning with "D" denote needs or issues identified by analysis of data.
- **Source**: The source of the comment, such as stakeholder feedback, or analysis of a specific dataset.
- **Type:** point (such as intersection, or bridge), or segment (such as highway corridor)
- **Highway Name or Number**
- **Problem Type**: This field corresponds to the primary need or issue associated with the location. Issues and needs were coded in three ways: safety, condition, or mobility.
- **Additional Information**: where available, additional details from stakeholder comments were noted here. Note that some MetroQuest issue and need markers placed by respondents did not have a comment attached, and those entries are marked with a "N/A"

ID	Source	Type	Hwy	Problem Type	Additional Information
S1	MetroQuest	Point	Poplar St	Mobility	N/A
S2	MetroQuest	Point	MNTH 22	Mobility	Rail to highway / road connections are one of the way to reduce wear and tear on highways. By expanding rail infrastructure and constructing rail to highway terminals / connections, we can build a more interconnected system which has some level of freight.
S3	MetroQuest	Point	N Victory Dr	Safety	Pedestrians attempting to cross MN 22 at this intersection from the business park to the east risk their lives crossing 6 lanes of traffic.
S4	MetroQuest	Point	S Minnesota Ave	Mobility	Highway 169 needs to be rerouted around St. Peter next to the river or around town to the west before it gets too expensive. Also in its current position during rush hour trucks are dangerous through town.
S5	MetroQuest	Point	USTH 169	Mobility	The Mankato corridor has too many stops that slow trucks down.
S6	MetroQuest	Point	MNTH 93	Condition	This road is almost always flooded even after being "fixed".
S7	MetroQuest	Point	Shanaska Creek Rd	Safety	N/A
S8	MetroQuest	Point	MNTH 22	Safety	N/A
S9	MetroQuest	Point	Webster Ave	Mobility	N/A
S10	MetroQuest	Point	MNTH 13	Safety	Too many crashes.
S11	MetroQuest	Point	USTH 169	Safety	Seen countless T-bone crashes from people running the light constantly. Something should be brought up other than a roundabout. Maybe when a light changes to red for 169 barriers would come up to stop traffic?
S12	MetroQuest	Point	S Minnesota Ave	Safety	Lots of fast traffic running this red light leading to major traffic collisions.
S13	MetroQuest	Point	USTH 169	Condition	Very rough condition.
S14	MetroQuest	Point	MNTH 4	Condition	Road is in poor shape.
S15	MetroQuest	Point	720th Ave	Condition	Road is in poor shape.

ID	Source	Type	Hwy	Problem Type	Additional Information
S16	MetroQuest	Point	478th St	Condition	Road is in poor shape.
S17	MetroQuest	Point	491st Ave	Condition	Not safe driving a semi when it's bouncing all over the road!
S18	MetroQuest	Point	USTH 71	Safety	Very dangerous for people to cross this busy area with three highways connecting together.
S19	MetroQuest	Point	MNTH 15	Mobility	Needs four lane expansion.
S20	MetroQuest	Point	MNTH 22	Safety	Highway 22 from St. Peter to Mapleton needs to be a four lane divided highway. Very dangerous road.
S21	MetroQuest	Point	USTH 14	Mobility	Congestion in Mankato, Hwy 14 and Hwy 169
S22	MetroQuest	Point	Edgewater Rd	Condition	Many poor pavement conditions in general.
S23	MetroQuest	Point	589 Ave	Mobility	Need more air freight options in Mankato.
S24	MetroQuest	Point	60th St	Condition	N/A
S25	MetroQuest	Point	110th St	Safety	N/A
S26	MetroQuest	Point	Victory Dr	Safety	N/A
S27	MetroQuest	Point	MNTH 22	Condition	N/A
S28	MetroQuest	Point	MNTH 22	Condition	N/A
S29	MetroQuest	Point	MNTH 22	Condition	N/A
S30	MetroQuest	Point	MNTH 22	Safety	N/A
S31	MetroQuest	Point	MNTH 22	Safety	N/A
S32	MetroQuest	Point	MNTH 22	Condition	N/A
S33	MetroQuest	Point	130th St	Safety	N/A
S34	MetroQuest	Point	MNTH 4	Condition	State highway 4 from Sleepy Eye to Shurburn is in dire need of replacement.
S35	MetroQuest	Point	330th Ave	Mobility	N/A
S36	MetroQuest	Point	850th Ave	Mobility	N/A
S37	MetroQuest	Point	CSAH 24	Condition	N/A
S38	MetroQuest	Point	270th St	Safety	N/A
S39	MetroQuest	Point	Golf Course Rd	Mobility	N/A
S40	MetroQuest	Point	CSAH 10	Condition	N/A

ID	Source	Type	Hwy	Problem Type	Additional Information
S41	MetroQuest	Point	Tiell Dr	Safety	Slow down through town.
S42	MetroQuest	Point	2nd Ave	Safety	Slow down through town.
S43	MetroQuest	Point	USTH 169	Safety	Cars typically speed excessively through Mankato on Hwy 169.
S44	MetroQuest	Point	N/A	Condition	The infrastructure in this district as far as roads needs work. For example, in Windom the three highways that meet need to be configured so that you have a steady flow of traffic. Maybe a bypass of Windom of State highway 60 would be the answer.
S45	MetroQuest	Point	MNTH 22	Condition	Highway 22 has a number of rough patches, and portions need to be upgraded and widened between Wells and Gaylord.
S46	Consultations	Intersection/Bridge	USTH 14	Safety	Acceleration lane would be beneficial for trucks to safety enter traffic.
S47	Consultations	Intersection/Bridge	USTH 14	Safety	Bypass lane needed to protect cars turning left off of 14.
S48	Consultations	Intersection/Bridge	MNTH 68	Safety	MN-169 and TH68 intersection is challenging - hard to find gaps in traffic, and safety concerns.
S49	Consultations	Intersection/Bridge	USTH 169	Safety	Lots of pedestrian activity; hard to merge from CSAH 69 (Hawley Street) to eastbound Hwy 169 and the Riverfront Drive interchange.
S50	Consultations	Intersection/Bridge	USTH 169	Safety	Riverfront Drive issues – difficult for EB to NB Riverfront Drive movements due to heavy conflicting WB to NB movements and yield condition.
S51	Consultations	Intersection/Bridge	USTH 169	Safety	Lind Street traffic lights – Lind is very close to Hwy 14 on-ramps. Difficult for trucks to get up to speed and in the correct lane quickly due to short distances.
S52	Consultations	Intersection/Bridge	MNTH 60	Safety	MN-60 has tough turn, with left turn blocking traffic, and railroad grade crossing.

ID	Source	Type	Hwy	Problem Type	Additional Information
S53	Consultations	Intersection/Bridge	1st St	Safety	US-169 and County 10 intersection - turn into feed mill would be helped a lot by deceleration and left-turn lanes.
S54	Consultations	Intersection/Bridge	550th Ave	Mobility	Minor local congestion with AGCO shift changes impacts truck movements.
S55	Consultations	Intersection/Bridge	N Riverfront Dr	Mobility	Localized congestion caused by railroad switching operations.
S56	Consultations	Intersection/Bridge	Armstrong Blvd N	Mobility	Roundabout issues in St. James are still a learning curve – some drivers try to completely avoid them.
S57	Consultations	Intersection/Bridge	CSAH 1	Safety	Local residents cross Highway 60 and cause accidents.
S58	Consultations	Intersection/Bridge	MNTH 60	Mobility	The median between Highway 60 can dip at times and when it rains it doesn't drain properly.
S59	Consultations	Intersection/Bridge	Zeh Ave	Safety	3-4 accidents per year, but turning seems safe.
S60	Consultations	Intersection/Bridge	Humiston Ave	Safety	Can be hard to get off of I-90 with no stop sign for traffic on US-59.
S61	Consultations	Intersection/Bridge	MNTH 68	Mobility	Concern about potential congestion and difficulty exiting/entering facility when US-14 is closed for expansion and more traffic is shifted to MN-68.
S62	Consultations	Intersection/Bridge	MNTH 5	Safety	Concern about the MN-5, MN-19 intersection in Gaylord. Skewed intersection with grade crossing, and many adjacent intersections.
S63	Consultations	Intersection/Bridge	USTH 14	Mobility	Truck parking problem area - congestion with parked trucks.
S64	Consultations	Segment	Brown County Highway 8	Condition	Needs to be resurfaced.
S65	Consultations	Segment	Jackson County Highway 23	Mobility	OSOW loads cannot get to I-90 due to winter load postings.
S66	Consultations	Segment	Riverfront Drive	Mobility	Freight transportation needs must be considered with Riverfront Dr project.
S67	Consultations	Segment	MNTH 4	Mobility	Highway 4 north of St. James needs pavement condition updates. It's our biggest nuisance

ID	Source	Type	Hwy	Problem Type	Additional Information
					because in spring time it is posted - it adds more miles to our routes.
S68	Consultations	Segment	MNTH 109	Mobility	Increase load width limits on 109. It will reduce travel time because OSOW carriers currently have to use TH-22 to access I-90.
S69	Consultations	Segment	MNTH 22	Mobility	Upcoming construction projects should take OSOW loads into account - closure of 22 for OSOW loads during construction will result in significant detours.
S70	Manufacturers' Perspectives Study	Segment	Highway 14 in Mankato	Safety	Truckers not familiar with the area have a hard time getting back into the left lane with short notice and doing so before the crest of the hill.
S71	Manufacturers' Perspectives Study	Segment	US 14 btwn Nicollet and Courtland	Safety	Blowing snow.
S72	Manufacturers' Perspectives Study	Segment	US 14 btwn New Ulm and Courtland	Mobility	Several requests to make into 4-lane (slow commute, move freight better, etc.).
S73	Manufacturers' Perspectives Study	Segment	MN 22 near US 14	Mobility	Traffic lights on MN 22 near US 14 are close together and a pain to get through. Afternoons seem worse.
S74	Manufacturers' Perspectives Study	Segment	US 14 at 3rd Ave, Mankato	Mobility	On weekdays, difficult for trucks to turn.
S75	Manufacturers' Perspectives Study	Segment	US 14 near Casey's (CR 56), Eagle Lake	Safety	No acceleration lane on the right-hand side.
S76	Manufacturers' Perspectives Study	Segment	Mankato	Mobility	Lack of truck parking in Mankato area.
S77	Manufacturers' Perspectives Study	Segment	US 14 at Brown CR 10	Safety	No acceleration lanes and no bypass lane at CR 10.
S78	Manufacturers' Perspectives Study	Segment	US 14 at Riverfront Dr, Mankato	Mobility	Busy intersection(s); tough to turn onto road.
S79	Manufacturers' Perspectives Study	Segment	US 14 at 3rd Ave, Mankato	Mobility	Busy intersection; hard to make a left turn.
S80	Manufacturers' Perspectives Study	Segment	US 14 west of Waseca by Crystal Valley Coop, where road goes from NB to WB	Safety	Snow issues.

ID	Source	Type	Hwy	Problem Type	Additional Information
S81	Manufacturers' Perspectives Study	Segment	US 14 from New Ulm to Sleepy Eye	Mobility	
S82	Manufacturers' Perspectives Study	Segment	US 14 at CR 27, east side of Sleepy Eye	Mobility	Would be nice to have a roundabout at this location.
S83	Manufacturers' Perspectives Study	Segment	MN 4 railroad bridge just N of US 14 in Sleepy Eye	Mobility	Clearance issues (avoid it with large farm implements).
S84	Manufacturers' Perspectives Study	Segment	WB US 14 at Riverfront Dr, Mankato	Mobility	Vehicles making U-turns make it difficult for trucks to turn.
S85	Manufacturers' Perspectives Study	Segment	US 14 near the Quarry east of New Ulm	Mobility	Would like bypass lanes here.
S86	Manufacturers' Perspectives Study	Segment	WB US 14 to SB 3rd Ave, Mankato	Mobility	Difficult to make left turn.
S87	Manufacturers' Perspectives Study	Segment	WB US 14 from Waseca CR 33 (50th St)	Safety	No acceleration lane; has caused accidents.
S88	Manufacturers' Perspectives Study	Segment	US 14 btwn Brown CR 37 and MN 15, east of New Ulm	Safety	Safety factor, crashes.
S89	Manufacturers' Perspectives Study	Segment	US 14 near Victory Dr, Mankato	Mobility	Trucks hold up traffic, causing bottlenecks.
S90	Manufacturers' Perspectives Study	Segment	US 14 at 3rd Ave, Mankato	Mobility	Ramps get backed up.
S91	Manufacturers' Perspectives Study	Segment	US 14/MN 68 in New Ulm	Mobility	Narrow passing lanes.
S92	Manufacturers' Perspectives Study	Segment	Lookout Dr over US 14, North Mankato	Mobility	Roundabout(s) not big enough.
S93	Manufacturers' Perspectives Study	Segment	US 14, New Ulm to Nicollet	Mobility	Lack of bypass and/or passing lanes.
S94	Manufacturers' Perspectives Study	Segment	US 14 at Smiths Mill (W Co Line Rd/CR 37)	Mobility	Not enough storage for farmer to stop in median.
S95	Manufacturers' Perspectives Study	Segment	US 14, W of New Ulm	Mobility	Slowing traffic.
S96	Manufacturers' Perspectives Study	Segment	MN 4, N and S of Sleepy Eye	Mobility	Slowing traffic.

ID	Source	Type	Hwy	Problem Type	Additional Information
S97	Manufacturers' Perspectives Study	Segment	US 14 EB between Riverfront Dr and Victory Dr, Mankato	Safety	Not enough time to move over from truck lane back to left lane.
S98	Manufacturers' Perspectives Study	Segment	US 14 EB to NB 3rd Ave, Mankato	Mobility	Left turn lane is a challenge.
S99	Manufacturers' Perspectives Study	Segment	US 14 at US 169	Mobility	N/A
S100	Manufacturers' Perspectives Study	Segment	US 14 at 3rd Ave, Mankato	Safety	N/A
S101	Manufacturers' Perspectives Study	Segment	MN 22 to US 14 WB	Safety	Do not like the dual lane merge.
S102	Manufacturers' Perspectives Study	Segment	US 169 at CR 69 (Hawley St), Mankato	Mobility	Back-ups in the morning and hard to make the left turn sometimes.
S103	Manufacturers' Perspectives Study	Segment	Hawley St at US 169 NB, Mankato	Safety	Acceleration lane too short; challenging to get on US 169.
S104	Manufacturers' Perspectives Study	Segment	US 169 J-turn in St. Peter	Safety	Distance too short; not enough room/time to cross lanes with heavy traffic.
S105	Manufacturers' Perspectives Study	Segment	US 169 NB from Cambria Plant near Le Sueur Rest Area	Safety	Lack of acceleration lane.
S106	Manufacturers' Perspectives Study	Segment	US 169 from N of Le Sueur to Twin Cities	Mobility	N/A
S107	Manufacturers' Perspectives Study	Segment	US 169 at Hawley St/CR 69, Mankato	Safety	In busy traffic, trucks have difficulty moving to left lane to accommodate merging traffic.
S108	Manufacturers' Perspectives Study	Segment	NB US 169 to WB US 169/MN 60	Safety	Short distance to merge into left lane to get to businesses on N side of Hwy.
S109	Manufacturers' Perspectives Study	Segment	In St. Peter	Mobility	Stoplights not efficient.
S110	Manufacturers' Perspectives Study	Segment	US 169 in Vernon Center	Mobility	Turn lane to get to elevator too narrow/not long enough.
S111	Manufacturers' Perspectives Study	Segment	US 169 S from Mankato	Mobility	N/A
S112	Manufacturers' Perspectives Study	Segment	US 169 near Riverside Country Club, north of Blue Earth	Safety	Wind causes roads to glaze.

ID	Source	Type	Hwy	Problem Type	Additional Information
S113	Manufacturers' Perspectives Study	Segment	US 169 at MN 109 (6th Ave SE) in Winnebago	Mobility	Turn radius and intersection not wide enough.
S114	Manufacturers' Perspectives Study	Segment	I-90 at curve near Beaver Creek	Safety	Snow trap.
S115	Manufacturers' Perspectives Study	Segment	MN 15 at I-90, Fairmont	Safety	Wind is always blowing.
S116	Manufacturers' Perspectives Study	Segment	I-90 at US 71 in Jackson	Mobility	Congestion at the current entrance to Jackson.
S117	Manufacturers' Perspectives Study	Segment	I-90 at MN 15, Fairmont	Safety	Acceleration lanes are too short for trucks to pick up adequate speed to blend with traffic on I-90.
S118	Manufacturers' Perspectives Study	Segment	I-90 at MN 264	Safety	Acceleration lanes are too short for trucks to pick up adequate speed to blend in with traffic.
S119	Manufacturers' Perspectives Study	Segment	I-90 at CR 23 E of Jackson	Mobility	Would be helpful if there was an exit from I-90 here.
S120	Manufacturers' Perspectives Study	Segment	MN 60 roundabouts in Worthington	Safety	Bad curb design apron slope - causes load shifts.
S121	Manufacturers' Perspectives Study	Segment	Oxford St at Humiston Ave (US 59) in Worthington	Safety	Not enough space with the square corner.
S122	Manufacturers' Perspectives Study	Segment	US 71 at CSAH 38 in Jackson	Mobility	Intersection is problematic.
S123	Manufacturers' Perspectives Study	Segment	US 71 at MN 60 in Windom	Mobility	Difficult to get across intersection.
S124	Manufacturers' Perspectives Study	Segment	US 75, Rock County	Condition	If the project that's in the 10-year plan is just mill & overlay, it will not last very long.
S125	Manufacturers' Perspectives Study	Segment	MN 4 at CSAH 21, N of Sleepy Eye	Safety	No acceleration lane for SB traffic.
S126	Manufacturers' Perspectives Study	Segment	MN 4 S of Dunnell	Mobility	Bridge too narrow.
S127	Manufacturers' Perspectives Study	Segment	MN 15, New Ulm to Hutchinson	Mobility	Lack of passing lanes.
S128	Manufacturers' Perspectives Study	Segment	MN 15 at CR 122 (100th St), N of Madelia	Safety	Snow and ice covered because of the wind.

ID	Source	Type	Hwy	Problem Type	Additional Information
S129	Manufacturers' Perspectives Study	Segment	MN 15 btwn Madelia and New Ulm	Mobility	Near impossible to pass on this stretch.
S130	Manufacturers' Perspectives Study	Segment	MN 19, E side of Winthrop	Mobility	Would keep trucks off highway.
S131	Manufacturers' Perspectives Study	Segment	MN 22 btwn Mankato and St. Peter	Mobility	Currently not enough room.
S132	Manufacturers' Perspectives Study	Segment	Riverfront Dr at MN 22, Mankato	Mobility	Difficult to make left turn from Riverfront to MN 22.
S133	Manufacturers' Perspectives Study	Segment	MN 22 at US 14, Mankato	Mobility	Roundabouts and traffic lights add time to routes (stopping at the lights on MN 22 is dangerous).
S134	Manufacturers' Perspectives Study	Segment	MN 15 at MN 30 S of Lewisville	Mobility	N/A
S135	Manufacturers' Perspectives Study	Segment	MN 60 btwn Elysian and Mankato	Safety	Drifting snow.
S136	Manufacturers' Perspectives Study	Segment	MN 60 curve near St. James	Safety	Refreeze/blow ice issues.
S137	Manufacturers' Perspectives Study	Segment	MN 60 curve near St. James	Safety	Refreeze/blow ice issues.
S138	Manufacturers' Perspectives Study	Segment	MN 60 btwn US 14 and Waterville	Mobility	N/A
S139	Manufacturers' Perspectives Study	Segment	MN 60 at 470th Ave SW of Windom	Safety	Difficult for truck to merge into traffic.
S140	Manufacturers' Perspectives Study	Segment	MN 60 at St. James Rest Area	Mobility	N/A
S141	Manufacturers' Perspectives Study	Segment	MN 60 at CR 1, Mountain Lake	Safety	N/A
S142	Manufacturers' Perspectives Study	Segment	MN 60 btwn Windom and Worthington	Condition	N/A
S143	Manufacturers' Perspectives Study	Segment	US 14 to MN 60	Safety	Turn lane is a safety concern.
S144	Manufacturers' Perspectives Study	Segment	MN 60 at MN 13 in Waterville	Safety	This intersection is busy - has safety concerns.

ID	Source	Type	Hwy	Problem Type	Additional Information
S145	Manufacturers' Perspectives Study	Segment	MN 60 at John Caldwell Dr, Windom	Mobility	N/A
S146	Manufacturers' Perspectives Study	Segment	MN 60 from Heron Lake to Worthington	Safety	Drifting issues.
S147	Manufacturers' Perspectives Study	Segment	MN 60/US 169 at MN 68, Mankato	Safety	Narrow turn lane--concerns were raised that it is not possible to stay between the white lines and make this turn without striking guardrail in a truck.
S148	Manufacturers' Perspectives Study	Segment	US 169 and MN 109 (1st Ave NW) in Blue Earth	Mobility	Turn radius and intersection not wide enough.
S149	Manufacturers' Perspectives Study	Segment	MN 111/MN 22 btwn Nicollet and Gaylord	Mobility	Slow traffic.
S150	Manufacturers' Perspectives Study	Segment	US 59 at Prairie Dr, Worthington	Mobility	Uncontrolled intersection - makes it hard to get in and out.
S151	Manufacturers' Perspectives Study	Segment	I-90 btwn Luverne and Worthington	Safety	Hard to keep ice off the roads.

Appendix B Data-Identified Issues and Needs

This appendix contains a list of location-specific issues and needs identified through analysis of data provided by MnDOT. The fields in the following figures are:

- **ID**: This code refers to the need/issue ID printed on maps in this Working Paper. IDs beginning with a "D" indicate issues and needs identified from data analysis.
- **Source**: the data source used to identify the need or issue.
- **Feature Type:** Intersection, or Highway Corridor
- **Issue Type**: This field corresponds to the primary need or issue associated with the location. Issues and needs were coded in three ways: safety, condition, or mobility.
- **Additional Information:** where available, additional details on why the corridor or intersection was identified as having a need or issue.

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D1	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 75; W Gabrielson Rd	Safety	More than 2 truck crashes at this location between 2018-2019
D2	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 75; W Main St	Safety	More than 2 truck crashes at this location between 2018-2019
D3	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 59; Milton Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D4	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 59; MNTH 60	Safety	More than 2 truck crashes at this location between 2018-2019
D5	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 59; County Highway 35	Safety	More than 2 truck crashes at this location between 2018-2019
D6	MnDOT Commercial Motor Vehicle Crashes	Intersection	I90 W; MNTH 60	Safety	More than 2 truck crashes at this location between 2018-2019
D7	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; 10th St	Safety	More than 2 truck crashes at this location between 2018-2019
D8	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; 10th St NW	Safety	More than 2 truck crashes at this location between 2018-2019
D9	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; 410th Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D10	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; MNTH 86	Safety	More than 2 truck crashes at this location between 2018-2019
D11	MnDOT Commercial Motor Vehicle Crashes	Intersection	I90 W; USTH 71	Safety	More than 2 truck crashes at this location between 2018-2019
D12	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 30; County Road 5	Safety	More than 2 truck crashes at this location between 2018-2019
D13	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 62; USTH 71	Safety	More than 2 truck crashes at this location between 2018-2019
D14	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; USTH 71	Safety	More than 2 truck crashes at this location between 2018-2019
D15	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; 500th Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D16	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; 2nd Ave	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D17	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; S Co Rd 1	Safety	More than 2 truck crashes at this location between 2018-2019
D18	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 15; Torgerson Dr	Safety	More than 2 truck crashes at this location between 2018-2019
D19	MnDOT Commercial Motor Vehicle Crashes	Intersection	Elm Ave W; State St N	Safety	More than 2 truck crashes at this location between 2018-2019
D20	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; MNTH 4	Safety	More than 2 truck crashes at this location between 2018-2019
D21	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; 20th St N	Safety	More than 2 truck crashes at this location between 2018-2019
D22	MnDOT Commercial Motor Vehicle Crashes	Intersection	N Broadway St; 20th St N	Safety	More than 2 truck crashes at this location between 2018-2019
D23	MnDOT Commercial Motor Vehicle Crashes	Intersection	12th St N; N Valley St	Safety	More than 2 truck crashes at this location between 2018-2019
D24	MnDOT Commercial Motor Vehicle Crashes	Intersection	N German St; 1st St N	Safety	More than 2 truck crashes at this location between 2018-2019
D25	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 15; Center St	Safety	More than 2 truck crashes at this location between 2018-2019
D26	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 15; 20th St S	Safety	More than 2 truck crashes at this location between 2018-2019
D27	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; 448th St	Safety	More than 2 truck crashes at this location between 2018-2019
D28	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; MNTH 15	Safety	More than 2 truck crashes at this location between 2018-2019
D29	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 13; MNTH 99	Safety	More than 2 truck crashes at this location between 2018-2019
D30	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 13; 320th St	Safety	More than 2 truck crashes at this location between 2018-2019
D31	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 169; Forest Prairie Rd	Safety	More than 2 truck crashes at this location between 2018-2019
D32	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 22; E Hill St	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D33	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 19; MNTH 22	Safety	More than 2 truck crashes at this location between 2018-2019
D34	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 22; 320th St	Safety	More than 2 truck crashes at this location between 2018-2019
D35	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 15; Fort Rd	Safety	More than 2 truck crashes at this location between 2018-2019
D36	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 111; Fort Rd	Safety	More than 2 truck crashes at this location between 2018-2019
D37	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; 4th St	Safety	More than 2 truck crashes at this location between 2018-2019
D38	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 111; MNTH 99	Safety	More than 2 truck crashes at this location between 2018-2019
D39	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; 502nd St	Safety	More than 2 truck crashes at this location between 2018-2019
D40	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 169; MNTH 22	Safety	More than 2 truck crashes at this location between 2018-2019
D41	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 22; Klein St	Safety	More than 2 truck crashes at this location between 2018-2019
D42	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; USTH 169	Safety	More than 2 truck crashes at this location between 2018-2019
D43	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 169; W Lind St	Safety	More than 2 truck crashes at this location between 2018-2019
D44	MnDOT Commercial Motor Vehicle Crashes	Intersection	3rd Ave; Lundin Blvd	Safety	More than 2 truck crashes at this location between 2018-2019
D45	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; 3rd Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D46	MnDOT Commercial Motor Vehicle Crashes	Intersection	3rd Ave; Lind St	Safety	More than 2 truck crashes at this location between 2018-2019
D47	MnDOT Commercial Motor Vehicle Crashes	Intersection	E Lafayette St; N 4th St	Safety	More than 2 truck crashes at this location between 2018-2019
D48	MnDOT Commercial Motor Vehicle Crashes	Intersection	N Riverfront Dr; E Plum St	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D49	MnDOT Commercial Motor Vehicle Crashes	Intersection	W Cherry St; S Riverfront Dr	Safety	More than 2 truck crashes at this location between 2018-2019
D50	MnDOT Commercial Motor Vehicle Crashes	Intersection	E Cherry St; S Front St	Safety	More than 2 truck crashes at this location between 2018-2019
D51	MnDOT Commercial Motor Vehicle Crashes	Intersection	E Cherry St; S Broad St	Safety	More than 2 truck crashes at this location between 2018-2019
D52	MnDOT Commercial Motor Vehicle Crashes	Intersection	W Pleasant St; Willard St	Safety	More than 2 truck crashes at this location between 2018-2019
D53	MnDOT Commercial Motor Vehicle Crashes	Intersection	James Ave; Lilly St	Safety	More than 2 truck crashes at this location between 2018-2019
D54	MnDOT Commercial Motor Vehicle Crashes	Intersection	Warren St; Stadium Rd	Safety	More than 2 truck crashes at this location between 2018-2019
D55	MnDOT Commercial Motor Vehicle Crashes	Intersection	N Victory Dr; Adams St	Safety	More than 2 truck crashes at this location between 2018-2019
D56	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; N Victory Dr	Safety	More than 2 truck crashes at this location between 2018-2019
D57	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; MNTH 22	Safety	More than 2 truck crashes at this location between 2018-2019
D58	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 22; Adams St	Safety	More than 2 truck crashes at this location between 2018-2019
D59	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 22; Madison Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D60	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; MNTH 60	Safety	More than 2 truck crashes at this location between 2018-2019
D61	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 14; 110th St	Safety	More than 2 truck crashes at this location between 2018-2019
D62	MnDOT Commercial Motor Vehicle Crashes	Intersection	MNTH 60; 330th St	Safety	More than 2 truck crashes at this location between 2018-2019
D63	MnDOT Commercial Motor Vehicle Crashes	Intersection	USTH 169; MNTH 99	Safety	More than 2 truck crashes at this location between 2018-2019
D64	MnDOT Commercial Motor Vehicle Crashes	Intersection	Poplar St; Sibley Pkwy	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D65	MnDOT Commercial Motor Vehicle Crashes	Segment	20th St N	Safety	Segment with high density crash rates
D66	MnDOT Commercial Motor Vehicle Crashes	Segment	Madison Ave	Safety	Segment with high density crash rates
D67	MnDOT Commercial Motor Vehicle Crashes	Segment	MNTH 22	Safety	Segment with high density crash rates
D68	MnDOT Commercial Motor Vehicle Crashes	Segment	MNTH 60	Safety	Segment with high density crash rates
D69	MnDOT Commercial Motor Vehicle Crashes	Segment	MNTH 60	Safety	Segment with high density crash rates
D70	MnDOT Commercial Motor Vehicle Crashes	Segment	Madison Ave	Safety	Segment with high density crash rates
D71	MnDOT Commercial Motor Vehicle Crashes	Segment	MNTH 60	Safety	Segment with high density crash rates
D72	MnDOT Commercial Motor Vehicle Crashes	Segment	Broadway St	Safety	Segment with high density crash rates
D73	MnDOT Commercial Motor Vehicle Crashes	Segment	Cherry St	Safety	Segment with high density crash rates
D74	MnDOT Commercial Motor Vehicle Crashes	Segment	MNTH 22	Safety	Segment with high density crash rates
D75	MnDOT Commercial Motor Vehicle Crashes	Segment	USTH 71	Safety	Segment with high density crash rates
D76	MnDOT Commercial Motor Vehicle Crashes	Segment	Forest Prairie Rd	Safety	Segment with high density crash rates
D77	MnDOT Commercial Motor Vehicle Crashes	Segment	MNTH 15	Safety	Segment with high density crash rates
D78	MnDOT Commercial Motor Vehicle Crashes	Segment	CSAH 1	Safety	Segment with high density crash rates
D79	MnDOT Commercial Motor Vehicle Crashes	Segment	20th St S	Safety	Segment with high density crash rates
D80	MnDOT Commercial Motor Vehicle Crashes	Segment	280th St W	Safety	Segment with high density crash rates

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D81	MnDOT Commercial Motor Vehicle Crashes	Segment	N Riverfront Dr	Safety	Segment with high density crash rates
D82	MnDOT Commercial Motor Vehicle Crashes	Segment	Belgrade Ave	Safety	Segment with high density crash rates
D83	MnDOT Commercial Motor Vehicle Crashes	Segment	Oxford St	Safety	Segment with high density crash rates
D84	MnDOT Commercial Motor Vehicle Crashes	Segment	N 2nd St	Safety	Segment with high density crash rates
D85	MnDOT Commercial Motor Vehicle Crashes	Segment	N Riverfront Dr	Safety	Segment with high density crash rates
D86	MnDOT Commercial Motor Vehicle Crashes	Segment	Center St	Safety	Segment with high density crash rates
D87	MnDOT Commercial Motor Vehicle Crashes	Segment	Center St	Safety	Segment with high density crash rates
D88	MnDOT Commercial Motor Vehicle Crashes	Segment	Humistan Ave	Safety	Segment with high density crash rates
D89	MnDOT Commercial Motor Vehicle Crashes	Segment	510 Ave	Safety	Segment with high density crash rates
D90	MnDOT Commercial Motor Vehicle Crashes	Segment	S 2nd St	Safety	Segment with high density crash rates
D91	MnDOT Commercial Motor Vehicle Crashes	Segment	Jefferson Ave	Safety	Segment with high density crash rates
D92	MnDOT Commercial Motor Vehicle Crashes	Segment	230th St	Safety	Segment with high density crash rates
D93	MnDOT Commercial Motor Vehicle Crashes	Segment	Power Dr	Safety	Segment with high density crash rates
D94	MnDOT Commercial Motor Vehicle Crashes	Segment	290th St	Safety	Segment with high density crash rates
D95	MnDOT Bridges	Point	US-169	Condition	Bridge clearance over road less than 14.6'
D96	MnDOT Bridges	Point	MN 93	Condition	Bridge clearance over road less than 14.6'
D97	MnDOT Bridges	Point	'0.1 MI S of Jct CSAH 4'	Condition	Bridge Condition < 50%
D98	MnDOT Bridges	Point	'0.5 MI S of Jct CSAH 4'	Condition	Bridge Condition < 50%

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D99	MnDOT Bridges	Point	'0.9 MI E of Jct CSAH 13'	Condition	Bridge Condition < 50%
D100	MnDOT Bridges	Point	'0.2 MI E of Jct CSAH 25'	Condition	Bridge Condition < 50%
D101	MnDOT Bridges	Point	'0.6 MI N of Jct TH 90'	Condition	Bridge Condition < 50%
D102	MnDOT Bridges	Point	'0.3 MI SW of Jct TH 13'	Condition	Bridge Condition < 50%
D103	MnDOT Bridges	Point	'1.6 MI W of Jct CSAH 4'	Condition	Bridge Condition < 50%
D104	MnDOT Bridges	Point	'0.1 MI S of Jct TH 5'	Condition	Bridge Condition < 50%
D105	MnDOT Bridges	Point	'0.1 MI S of Jct TH 4'	Condition	Bridge Condition < 50%
D106	MnDOT Bridges	Point	'0.3 MI S of Jct CSAH 32'	Condition	Bridge Condition < 50%
D107	MnDOT Bridges	Point	'2.8 MI W of Jct CR. 107'	Condition	Bridge Condition < 50%
D108	MnDOT Bridges	Point	'At the Jct TH 22'	Condition	Bridge Condition < 50%
D109	MnDOT Bridges	Point	'0.5 MI N of Jct CSAH 2'	Condition	Bridge Condition < 50%
D110	MnDOT Bridges	Point	'1.5 MI E of Jct CSAH 7'	Condition	Bridge Condition < 50%
D111	MnDOT Bridges	Point	'0.1 MI S of Jct CSAH 15'	Condition	Bridge Condition < 50%
D112	MnDOT Bridges	Point	'At W CO line'	Condition	Bridge Condition < 50%
D113	MnDOT Bridges	Point	'0.7 MI E of Jct CSAH 1'	Condition	Bridge Condition < 50%
D114	MnDOT Bridges	Point	'0.7 MI N of CSAH 3'	Condition	Bridge Condition < 50%
D115	Grade Crossing Risk Ratings	Intersection	CR 120	Safety	Grade crossing risk rating of 7 or 8
D116	Grade Crossing Risk Ratings	Intersection	CSAH 37	Safety	Grade crossing risk rating of 7 or 8
D117	Grade Crossing Risk Ratings	Intersection	FARM	Safety	Grade crossing risk rating of 7 or 8
D118	Grade Crossing Risk Ratings	Intersection	CSAH 10	Safety	Grade crossing risk rating of 7 or 8
D119	Grade Crossing Risk Ratings	Intersection	MUN 12	Safety	Grade crossing risk rating of 7 or 8
D120	Grade Crossing Risk Ratings	Intersection	MUN 38	Safety	Grade crossing risk rating of 7 or 8
D121	Grade Crossing Risk Ratings	Intersection	CSAH 3	Safety	Grade crossing risk rating of 7 or 8

ID	Source	Feature Type	Hwy	Issue Type	Additional Information
D122	Grade Crossing Risk Ratings	Intersection	CSAH 5	Safety	Grade crossing risk rating of 7 or 8
D123	Grade Crossing Risk Ratings	Intersection	CSAH 4	Safety	Grade crossing risk rating of 7 or 8
D124	Grade Crossing Risk Ratings	Intersection	CSAH 13	Safety	Grade crossing risk rating of 7 or 8

Appendix C Identified Projects

This appendix contains a list of the specific projects identified from MnDOT and County planning documents. The fields in the following figures are:

- **ID:** This code refers to the need/issue ID printed on maps in this Working Paper.
- **Program:** the funding program which listed the project
- **Project Number:** identifier assigned by planning agency
- **Route or Location:** the highway name or number corresponding to the project
- **Year**: first year of programmed work
- **Description**: when available, a description of the work to be performed.

Note: there are some differences in the attributes available for each project or investment plan, therefore, a simplified set of information for county projects is provided in a separate table from STIP and CHIP projects.

ID	Program	Project Number	Route or location	Year	Description
P1	STIP Pavement	6705-50	US 75	2025	Resurface Hwy 75 from Main St to Veterans Dr in Luverne; improve pedestrian crossings.
P2	STIP Pavement	5205-113	MN 22	2025	Resurface Hwy 22 from St Peter to Hwy 111.
P3	STIP Pavement	0714-40	MN 22	2024	Construct roundabout at Hwy 22 and Augusta Drive in Mankato.
P4	STIP Pavement	0714-35	MN 22	2024	Resurface Hwy 22 from Mankato to St. Peter; replace 1 bridge and repair 3 bridges.
P5	STIP Pavement	5203-110	US 14	2024	Adding fiber optic line for future cameras and vehicle counting equipment for incident management and future automotive technology on Hwy 14 from North Mankato to Nicollet.
P6	STIP Pavement	0804-119	US 14	2024	Construct roundabout at Jct of Hwy 14 and Highland Ave in New Ulm.
P7	STIP Pavement	4602-27	MN 4	2024	Resurface Hwy 4 from Martin Hwy 26 to Hwy 60; replace 1 bridge and repair 3 bridges.
P8	STIP Pavement	5211-66	US 169	2023	Improve intersection Jct of Hwy 169 and Hwy 22 in St Peter.
P9	STIP Pavement	2205-13	MN 22	2023	Resurface Hwy 22 from Hwy 29 in Wells to Hwy 30 in Mapleton; repair 5 bridges.
P10	STIP Pavement	4002-49	MN 13	2023	Reconstruct Hwy 13 in Montgomery from Milwaukee Ave to N Welco Dr with improvements to sidewalk, lighting and drainage; construct roundabout at Le Sueur Hwy 28 intersection north of Montgomery.
P11	STIP Pavement	8302-48	MN 4	2023	Resurface Hwy 4 from Armstrong Blvd in St James to Brown Hwy 18; replace 1 bridge.
P12	STIP Pavement	5380-158	I 90	2023	Install tire anomaly system at the Worthington weigh station.
P13	STIP Pavement	0712-113	US 169	2022	Resurface Hwy 169 from north of Winnebago to south limits of Vernon Center.
P14	STIP Pavement	3208-19	MN 86	2022	Reconstruct Hwy 86 in Lakefield from 9th Ave S to Funk Ave; improve sidewalks.
P15	STIP Pavement	8304-118	MN 60	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; lighting.
P16	STIP Pavement	6780-124	I 90	2022	Resurface from South Dakota State line to Beaver Creek.
P17	STIP Pavement	8304-118	MN 60	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P18	STIP Pavement	4004-134	MN 19	2022	Adjust roadway profile on Hwy 19 from Henderson to the railroad bridge.
P19	STIP Pavement	8305-32	MN 15	2022	Resurface Hwy 15 from Madelia to Watonwan/Brown County line; repair 2 bridges.
P20	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.

ID	Program	Project Number	Route or location	Year	Description
P21	STIP Pavement	0803-44	US 14	2022	Resurface Hwy 14 from Hwy 71 to Springfield; improve pedestrian crossings, lighting and signal improvements.
P22	STIP Pavement	0702-131	US 14	2022	Improve intersection safety at the intersection of Hwy 14 and CR 86 in Eagle Lake.
P23	STIP Pavement	6780-124	I 90	2022	Resurface from South Dakota State line to Beaver Creek.
P24	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P25	STIP Pavement	4609-17	MN 263	2022	Resurface road pave shoulders and replace guardrail Clark St in Ceylon to I-90.
P26	STIP Pavement	0801-35	MN 4	2023	Resurface Hwy 4 from Brown Hwy 18 to Ellsworth St in the City of Sleepy Eye; replace 2 bridges and repair 1 bridge.
P27	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P28	STIP Pavement	5202-60	US 14	2022	Rehabilitate New Ulm Spring roadside parking area on Hwy 14 near New Ulm.
P29	STIP Pavement	0714-40	MN 22	2024	Construct roundabout at Hwy 22 and Augusta Drive in Mankato.
P30	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P31	STIP Pavement	0708-47	MN 60	2025	Reconstruct Hwy 60 in Lake Crystal from CR 20 to LaClaire St; add curb and gutter; repair bridge.
P32	STIP Pavement	2207-118	US 169	2022	Resurface Hwy 169 from Elmore to Blue Earth; improve drainage and lighting.
P33	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P34	STIP Pavement	8304-118	MN 60	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P35	STIP Pavement	5209-81	US 169	2024	Reconstruct from Broadway Ave to Union St in St. Peter.
P36	STIP Pavement	8304-118	MN 60	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; improve lighting.
P37	STIP Pavement	7212-21	MN 93	2023	Reconstruct Hwy 93 from Hwy 169 to flood wall in Henderson; replace 1 bridge.
P38	STIP Pavement	5380-159	I 90	2023	Construct inspection pit and building at the Worthington weigh station.
P39	STIP Pavement	8303-48	MN 15	2023	Resurface Hwy 15 from Watonwan/Martin County line to south Jct Hwy 60/Hwy 15; repair 3 bridges; improve lighting.
P40	STIP Pavement	0702-131	US 14	2022	Improve intersection safety at the intersection of Hwy 14 and CR 86 in Eagle Lake.
P41	STIP Pavement	5202-58	US14	2022	US14, From 0.7 miles E of Hwy 15 to 0.6 miles E of 481st Ave, Reconstruct from two lane to four lane divided roadway, construct two new interchanges and

ID	Program	Project Number	Route or location	Year	Description
					replace bridges 96916, 97036 & 97101 (potential TIFIA of $36M & $6M unidentified).
P42	STIP Pavement	5209-80	US169	2022	**SPP**: US169, SB Lanes, 1 mile north of the N Jct TH 22 to Jct of CR 76, Replace Bridge 52001 & 8649 with new bridges 52017 & 52X09, replace culvert and resurface segment of old TH 169.
P43	STIP Pavement	4680-132	I90	2022	**SPP**: I90, From 0.6 miles E of TH 4 to TH 15, Mill and Overlay, Overlay and Lighting; EB lanes only.
P44	STIP Pavement	5209-80	US169	2022	**SPP**: US169, SB Lanes, 1 mile north of the N Jct TH 22 to Jct of CR 76, replace bridge 52001 & 8649 with new bridges 52017 & 52X09, replace culvert and resurface segment of old TH 169.
P45	STIP Pavement	5209-80	US169	2022	**SPP**: US169, SB lanes, 1 mile north of the N Jct TH 22 to Jct of CR 76, replace bridge 52001 & 8649 with new bridges 52017 & 52X09, replace culvert and resurface segment of old TH 169.
P46	STIP Pavement	4602-30	MN4	2022	**LPP** Along TH 4, From 0.1 miles south of 2nd Ave SW to Beech St in Trimont, construct ped/bike trail, sidewalk and ADA (ASSOC. 046-090-001).
P47	STIP Pavement	6605-38	MN 21	2022	Resurface from Hwy 99 to Hwy 13 (Moved from CHIP, money reallocated to 2022).
P48	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; lighting.
P49	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; lighting.
P50	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; lighting.
P51	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; lighting.
P52	STIP Pavement	8304-118	MN 15	2022	Resurface Hwy 60 W interchange to Hwy 60 E interchange near Madelia; lighting.
P53	STIP Pavement	8305-32	MN 15	2022	Resurface Hwy 15 from Madelia to Watonwan/Brown County line; repair 2 bridges.
P54	STIP Pavement	8305-32	MN 15	2022	Resurface Hwy 15 from Madelia to Watonwan/Brown County line; repair 2 bridges.
P55	STIP Pavement	0801-35	MN 4	2023	Resurface Hwy 4 from Brown Hwy 18 to Ellsworth St in the City of Sleepy Eye; replace 2 bridges and repair 1 bridge.
P56	STIP Pavement	0801-35	MN 4	2023	Resurface Hwy 4 from Brown Hwy 18 to Ellsworth St in the City of Sleepy Eye; replace 2 bridges and repair 1 bridge.

ID	Program	Project Number	Route or location	Year	Description
P57	STIP Pavement	0801-35	MN 4	2023	Resurface Hwy 4 from Brown Hwy 18 to Ellsworth St in the City of Sleepy Eye; replace 2 bridges and repair 1 bridge.
P58	STIP Pavement	8302-48	MN 4	2023	Resurface Hwy 4 from Armstrong Blvd in St James to Brown Hwy 18; replace 1 bridge.
P59	STIP Pavement	8303-48	MN 15	2023	Resurface Hwy 15 from Watonwan/Martin County line to south jct Hwy 60/Hwy 15; repair 3 bridges; improve lighting.
P60	STIP Pavement	8303-48	MN 15	2023	Resurface Hwy 15 from Watonwan/Martin County line to south jct Hwy 60/Hwy 15; repair 3 bridges; improve lighting.
P61	STIP Pavement	8303-48	MN 15	2023	Resurface Hwy 15 from Watonwan/Martin County line to south jct Hwy 60/Hwy 15; repair 3 bridges; improve lighting.
P62	STIP Pavement	2205-13	MN 22	2023	Resurface Hwy 22 from Hwy 29 in Wells to Hwy 30 in Mapleton; repair 5 bridges.
P63	STIP Pavement	2205-13	MN 22	2023	Resurface Hwy 22 from Hwy 29 in Wells to Hwy 30 in Mapleton; repair 5 bridges.
P64	STIP Pavement	2205-13	MN 22	2023	Resurface Hwy 22 from Hwy 29 in Wells to Hwy 30 in Mapleton; repair 5 bridges.
P65	STIP Pavement	2205-13	MN 22	2023	Resurface Hwy 22 from Hwy 29 in Wells to Hwy 30 in Mapleton; repair 5 bridges.
P66	STIP Pavement	2205-13	MN 22	2023	Resurface Hwy 22 from Hwy 29 in Wells to Hwy 30 in Mapleton; repair 5 bridges.
P67	STIP Pavement	7212-21	MN 93	2023	Reconstruct Hwy 93 from Hwy 169 to flood wall in Henderson; replace 1 bridge.
P68	STIP Pavement	4602-27	MN 4	2024	Resurface Hwy 4 from Martin Hwy 26 to Hwy 60; replace 1 bridge and repair 3 bridges.
P69	STIP Pavement	4602-27	MN 4	2024	Resurface Hwy 4 from Martin Hwy 26 to Hwy 60; replace 1 bridge and repair 3 bridges.
P70	STIP Pavement	4602-27	MN 4	2024	Resurface Hwy 4 from Martin Hwy 26 to Hwy 60; replace 1 bridge and repair 3 bridges.
P71	STIP Pavement	4602-27	MN 4	2024	Resurface Hwy 4 from Martin Hwy 26 to Hwy 60; replace 1 bridge and repair 3 bridges.
P72	STIP Pavement	0714-35	MN 22	2024	Resurface Hwy 22 from Mankato to St. Peter; replace 1 bridge and repair 3 bridges.
P73	STIP Pavement	0714-35	MN 22	2024	Resurface Hwy 22 from Mankato to St. Peter; replace 1 bridge and repair 3 bridges.
P74	STIP Pavement	0714-35	MN 22	2024	Resurface Hwy 22 from Mankato to St. Peter; replace 1 bridge and repair 3 bridges.

ID	Program	Project Number	Route or location	Year	Description
P75	STIP Pavement	0714-35	MN 22	2024	Resurface Hwy 22 from Mankato to St. Peter; replace 1 bridge and repair 3 bridges.
P76	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P77	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P78	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P79	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P80	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P81	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P82	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P83	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P84	STIP Pavement	5380-152	I 90	2025	Repair I-90 bridges in Nobles County.
P85	STIP Pavement	0708-47	MN 60	2025	Reconstruct Hwy 60 in Lake Crystal from CR 20 to LaClaire St; add curb and gutter; repair bridge.
P86	STIP Pavement	5212-35	US 169	2025	Rehabilitate Veterans Bridge.
P87	STIP Pavement	5212-35	US 169	2025	Rehabilitate Veterans Bridge.
P88	STIP Pavement	8302-48	MN4	2023	**AC** MN4, From Armstrong Boulevard in St. James to Brown CSAH 18, stabilized full depth reclaim, Mill & Overlay and replace BR 5076 (RP 040+00.562).
P89	STIP Pavement	5209-80	US169	2022	**SPP**: US169, SB Lanes, 1 mile north of the N Jct TH 22 to Jct of CR 76, replace bridge 52001 & 8649 with new bridges 52017 & 52X09, replace culvert and resurface segment of old TH 169.
P90	STIP Pavement	5209-80	US169	2022	**SPP**: US169, SB Lanes, 1 mile north of the N Jct TH 22 to Jct of CR 76, replace bridge 52001 & 8649 with new bridges 52017 & 52X09, replace culvert and resurface segment of old TH 169.
P91	STIP Pavement	7205-114	MN19	2022	MN 19, 08 miles east of Jct TH 15, over county ditch #42, replace bridge 91422 with new bridge 72X05 (east of Winthrop).
P92	STIP Pavement	0804-119	US14	2024	**SEC164** US 14, Intersection of TH 14 and North Highland Ave in New Ulm, construct roundabout (ASSOC. 148-070-001).
P93	STIP Pavement	4002-49S	MN13	2023	MN13, Jct of CSAH 28, Construct Roundabout, (Assoc to 4002-49 & 040-070-006).
P94	STIP Pavement	5202-58	US14	2022	US14, From 0.7 miles E of Hwy 15 to 0.6 miles E of 481st Ave, reconstruct from two lane to four lane divided roadway, construct two new interchanges and replace bridges 96916, 97036 & 97101 (potential TIFIA of $36M & $6M unidentified).

ID	Program	Project Number	Route or location	Year	Description
P95	STIP Pavement	5211-66	US169	2023	**GMMS**SPP**: US 169, Jct of TH 169 and TH 22 in St. Peter, intersection improvements - will be receiving PCRC with description and cost change.
P96	STIP Pavement	5202-60	US14	2022	US 14, 0.8 miles N of CSAH 37 near New Ulm, New Ulm Spring rehabilitation.
P97	STIP Pavement	5209-80	US169	2022	**SPP**: US169, SB Lanes, 1 mile north of the N Jct TH 22 to Jct of CR 76, replace bridge 52001 & 8649 with new bridges 52017 & 52X09, replace culvert and resurface segment of old TH 169.
P98	STIP Pavement	5202-58	US14	2022	US14, From 0.7 miles E of Hwy 15 to 0.6 miles E of 481st Ave, reconstruct from two lane to four lane divided roadway, construct two new interchanges and replace bridges 96916, 97036 & 97101 (potential TIFIA of $36M & $6M unidentified).
P99	STIP Pavement	0714-40	MN22	2024	**GMMS**: MN 22, intersection improvement at Augusta Dr in Mankato, construct roundabout (Assoc. 137-157-001).
P100	STIP Pavement	5202-58	US14	2022	US14, From 0.7 miles E of Hwy 15 to 0.6 miles E of 481st Ave, reconstruct from two lane to four lane divided roadway, construct two new interchanges and replace bridges 96916, 97036 & 97101 (potential TIFIA of $36M & $6M unidentified).
P101	CHIP Pavement	5310-1071283	MN 264	2031	Resurface from Round Lake to I-90.
P102	CHIP Pavement	1703-83	MN 60	2031	Reconstruct in Windom.
P103	CHIP Pavement	2203-115	MN 22	2031	Resurface from Iowa border to west Jct of CR 16.
P104	CHIP Pavement	8102-30	MN 13	2031	Resurface from Waseca to Waterville.
P105	CHIP Pavement	3280-1069643	I 90	2031	Resurface WB lanes from Hwy 4 to Hwy 86.
P106	CHIP Pavement	6706-1071303	MN 270	2030	Resurface from Hills to Hwy 75.
P107	CHIP Pavement	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P108	CHIP Pavement	0708-1071483	MN 60	2030	Resurface from Lake Crystal to Cray Corner/528th Avenue.
P109	CHIP Pavement	0705-26	MN 30	2030	Resurface from Hwy 15 to Hwy 169.
P110	CHIP Pavement	0704-1069603	MN 22	2030	Reconstruct from Hwy 83 to Bassett Dr.
P111	CHIP Pavement	0808-1038067	MN 257	2029	Resurface from Hanska to Hwy 15.
P112	CHIP Pavement	4009-114	MN 99	2029	Resurface from Le Center to Hwy 13.
P113	CHIP Pavement	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.
P114	CHIP Pavement	0802-47	MN 4	2029	Repair from Ellsworth St to 3rd Ave in Sleepy Eye.
P115	CHIP Pavement	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.

ID	Program	Project Number	Route or location	Year	Description
P116	CHIP Pavement	3280-1052560	I 90	2029	Resurface WB lanes from CR 5 in Jackson to CR 12 near Rushmore.
P117	CHIP Pavement	1703-82	MN 60	2028	Repair pavement on Mountain Lake bypass.
P118	CHIP Pavement	5205-115	MN 22	2028	Resurface from Hwy 169 to CR 20 in Saint Peter.
P119	CHIP Pavement	7206-117	MN 19	2028	Resurface from Gaylord to Hwy 169.
P120	CHIP Pavement	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P121	CHIP Pavement	7205-1070404	MN 19	2028	Resurface from Winthrop to Gaylord.
P122	CHIP Pavement	4001-48	MN 13	2028	Resurface from Waterville to Montgomery.
P123	CHIP Pavement	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P124	CHIP Pavement	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P125	CHIP Pavement	5380-154	I 90	2026	Resurface WB lanes from Adrian to Rushmore.
P126	CHIP Pavement	6705-47	US 75	2028	Resurface from Luverne to Trosky.
P127	CHIP Pavement	4603-52	MN 15	2031	Resurface from Iowa to Fairmont.
P128	CHIP Pavement	2204-26	MN 22	2026	Reconstruct Hwy 22 in Wells.
P129	CHIP Pavement	3205-36	US 71	2030	Resurface from Iowa border to CR 38 in Jackson.
P130	CHIP Pavement	4002-1071423	MN 13	2030	Resurface from Montgomery to New Prague.
P131	CHIP Pavement	0710-1038895	MN 68	2029	Resurface and replace multiple bridges from Hwy 15 to Hwy 60/169.
P132	CHIP Pavement	5304-41	US 59	2027	Reconstruct in Worthington.
P133	CHIP Pavement	0702-128	US 14	2027	Repair from CR 82 to 2 miles east of Eagle Lake.
P134	CHIP Pavement	4013-1071563	US 169	2030	Repair from north Jct Hwy 93 to rest area at Le Sueur.
P135	CHIP Pavement	2280-143	I 90	2026	Resurface from west of Hwy 169 to Hwy 22.
P136	CHIP Pavement	1703-82	MN 60	2028	Repair pavement on Mountain Lake bypass.
P101	CHIP Pavement	5310-1071283	MN 264	2031	Resurface from Round Lake to I-90.
P102	CHIP Pavement	1703-83	MN 60	2031	Reconstruct in Windom.
P103	CHIP Pavement	2203-115	MN 22	2031	Resurface from Iowa border to west Jct of CR 16.
P104	CHIP Pavement	8102-30	MN 13	2031	Resurface from Waseca to Waterville.
P105	CHIP Pavement	3280-1069643	I 90	2031	Resurface WB lanes from Hwy 4 to Hwy 86.
P106	CHIP Pavement	6706-1071303	MN 270	2030	Resurface from Hills to Hwy 75.
P107	CHIP Pavement	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P108	CHIP Pavement	0708-1071483	MN 60	2030	Resurface from Lake Crystal to Cray Corner/528th Avenue.
P109	CHIP Pavement	0705-26	MN 30	2030	Resurface from Hwy 15 to Hwy 169.

ID	Program	Project Number	Route or location	Year	Description
P110	CHIP Pavement	0704-1069603	MN 22	2030	Reconstruct from Hwy 83 to Bassett Dr.
P111	CHIP Pavement	0808-1038067	MN 257	2029	Resurface from Hanska to Hwy 15.
P112	CHIP Pavement	4009-114	MN 99	2029	Resurface from Le Center to Hwy 13.
P113	CHIP Pavement	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.
P114	CHIP Pavement	0802-47	MN 4	2029	Repair from Ellsworth St to 3rd Ave in Sleepy Eye.
P115	CHIP Pavement	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.
P116	CHIP Pavement	3280-1052560	I 90	2029	Resurface WB lanes from CR 5 in Jackson to CR 12 near Rushmore.
P117	CHIP Pavement	1703-82	MN 60	2028	Repair pavement on Mountain Lake bypass.
P118	CHIP Pavement	5205-115	MN 22	2028	Resurface from Hwy 169 to CR 20 in Saint Peter.
P119	CHIP Pavement	7206-117	MN 19	2028	Resurface from Gaylord to Hwy 169.
P120	CHIP Pavement	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P121	CHIP Pavement	7205-1070404	MN 19	2028	Resurface from Winthrop to Gaylord.
P122	CHIP Pavement	4001-48	MN 13	2028	Resurface from Waterville to Montgomery.
P123	CHIP Pavement	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P124	CHIP Pavement	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P125	CHIP Pavement	5380-154	I 90	2026	Resurface WB lanes from Adrian to Rushmore.
P126	CHIP Pavement	6705-47	US 75	2028	Resurface from Luverne to Trosky.
P127	CHIP Pavement	4603-52	MN 15	2031	Resurface from Iowa to Fairmont.
P128	CHIP Pavement	2204-26	MN 22	2026	Reconstruct Hwy 22 in Wells.
P129	CHIP Pavement	3205-36	US 71	2030	Resurface from Iowa border to CR 38 in Jackson.
P130	CHIP Pavement	4002-1071423	MN 13	2030	Resurface from Montgomery to New Prague.
P131	CHIP Pavement	0710-1038895	MN 68	2029	Resurface and replace multiple bridges from Hwy 15 to Hwy 60/169.
P132	CHIP Pavement	5304-41	US 59	2027	Reconstruct in Worthington.
P133	CHIP Pavement	0702-128	US 14	2027	Repair from CR 82 to 2 miles east of Eagle Lake.
P134	CHIP Pavement	4013-1071563	US 169	2030	Repair from north Jct Hwy 93 to rest area at Le Sueur.
P135	CHIP Pavement	2280-143	I 90	2026	Resurface from west of Hwy 169 to Hwy 22.
P136	CHIP Pavement	1703-82	MN 60	2028	Repair pavement on Mountain Lake bypass.
P137	CHIP Bridges	2280-143	I 90	2026	Resurface from west of Hwy 169 to Hwy 22.
P138	CHIP Bridges	2280-143	I 90	2026	Resurface from west of Hwy 169 to Hwy 22.

ID	Program	Project Number	Route or location	Year	Description
P139	CHIP Bridges	8308-115	MN 60	2027	Resurface WB lanes between St. James and Butterfield.
P140	CHIP Bridges	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P141	CHIP Bridges	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P142	CHIP Bridges	0713-81	US 169	2027	Resurface and repair bridges from Riverfront Drive to Lake Street.
P143	CHIP Bridges	4001-48	MN 13	2028	Resurface from Waterville to Montgomery.
P144	CHIP Bridges	4001-48	MN 13	2028	Resurface from Waterville to Montgomery.
P145	CHIP Bridges	1703-82	MN 60	2028	Repair pavement on Mountain Lake bypass.
P146	CHIP Bridges	1703-82	MN 60	2028	Repair pavement on Mountain Lake bypass.
P147	CHIP Bridges	6705-47	US 75	2028	Resurface from Luverne to Trosky.
P148	CHIP Bridges	6705-47	US 75	2028	Resurface from Luverne to Trosky.
P149	CHIP Bridges	6705-47	US 75	2028	Resurface from Luverne to Trosky.
P150	CHIP Bridges	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P151	CHIP Bridges	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P152	CHIP Bridges	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P153	CHIP Bridges	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P154	CHIP Bridges	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P155	CHIP Bridges	4004-126	MN 19	2029	Resurface from Hwy 169 to east Jct of Hwy 13.
P156	CHIP Bridges	2204-27	MN 22	2029	Resurface from west Jct of CR 16 to Wells.
P157	CHIP Bridges	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.
P158	CHIP Bridges	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.
P159	CHIP Bridges	3204-70	MN 60	2029	Resurface EB lanes from Worthington to Wilder and WB lanes from Heron Lake to Worthington.
P160	CHIP Bridges	0710-1038895	MN 68	2029	Resurface and replace multiple bridges from Hwy 15 to Hwy 60/169.
P161	CHIP Bridges	0710-1038895	MN 68	2029	Resurface and replace multiple bridges from Hwy 15 to Hwy 60/169.
P162	CHIP Bridges	0710-1038895	MN 68	2029	Resurface and replace multiple bridges from Hwy 15 to Hwy 60/169.
P163	CHIP Bridges	0710-1038895	MN 68	2029	Resurface and replace multiple bridges from Hwy 15 to Hwy 60/169.
P164	CHIP Bridges	4009-114	MN 99	2029	Resurface from Le Center to Hwy 13.
P165	CHIP Bridges	0705-26	MN 30	2030	Resurface from Hwy 15 to Hwy 169.
P166	CHIP Bridges	0705-26	MN 30	2030	Resurface from Hwy 15 to Hwy 169.

ID	Program	Project Number	Route or location	Year	Description
P167	CHIP Bridges	0705-26	MN 30	2030	Resurface from Hwy 15 to Hwy 169.
P168	CHIP Bridges	3205-36	US 71	2030	Resurface from Iowa border to CR 38 in Jackson.
P169	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P170	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P171	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P172	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P173	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P174	CHIP Bridges	6706-1071303	MN 270	2030	Resurface from Hills to Hwy 75.
P175	CHIP Bridges	8102-30	MN 13	2031	Resurface from Waseca to Waterville.
P176	CHIP Bridges	2203-115	MN 22	2031	Resurface from Iowa border to west Jct of CR 16.
P177	CHIP Bridges	2203-115	MN 22	2031	Resurface from Iowa border to west Jct of CR 16.
P178	CHIP Bridges	1703-83	MN 60	2031	Reconstruct in Windom.
P170	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P171	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P172	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P173	CHIP Bridges	6704-116	US 75	2030	Resurface from Iowa border to Luverne.
P174	CHIP Bridges	6706-1071303	MN 270	2030	Resurface from Hills to Hwy 75.
P175	CHIP Bridges	8102-30	MN 13	2031	Resurface from Waseca to Waterville.
P176	CHIP Bridges	2203-115	MN 22	2031	Resurface from Iowa border to west Jct of CR 16.
P177	CHIP Bridges	2203-115	MN 22	2031	Resurface from Iowa border to west Jct of CR 16.
P178	CHIP Bridges	1703-83	MN 60	2031	Reconstruct in Windom.

County Plans

ID	Program	Description
P179	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89560 - CR 21 Bridge Replacement
P180	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L6565 - Ann Twp Bridge Replacement

ID	Program	Description
P181	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L9498 - Westbrook Twp Bridge Replacement
P182	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	92766 - CSAH 11 Bridge Replacement
P183	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	93010 - CR 54 Bridge Replacement
P184	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89517 - CSAH 6 Bridge Replacement
P185	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L6527 - Westbrook Twp Bridge Replacement
P186	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L5623 - Westbrook Twp Bridge Replacement
P187	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	94125 - CR 56 Bridge Replacement
P188	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89521 - CSAH 7 Bridge Replacement
P189	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89520 - CSAH 7 Bridge Replacement
P190	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	17501 - CSAH 15 Bridge Replacement
P191	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L9425 - Mountain Lake Twp Bridge Replacement
P192	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L9626 - Mountain Lake Twp Bridge Replacement
P193	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	L6579 - Midway Twp Bridge Replacement
P194	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89504 - CSAH 3 Bridge Replacement
P195	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89563 - Carson Twp Bridge Replacement
P196	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	89540 - CSAH 11 Bridge Replacement
P197	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 60 Phol Road Roundabout Grade and Pave
P198	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 41 Over Le Sueur River #7274 Bridge Replacement Funds

ID	Program	Description
P199	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 57 TH 14 RAB's at Riverfront Dr. Grade and Pave
P200	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 13 US 169 to CSAH 1 Grade and Pave
P201	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge 2110
P202	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge 1705
P203	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge L5455
P204	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge L5414
P205	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge L5970
P206	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge 972
P207	Brown County Ten Year Road & Bridge Construction Program	Replace Bridge L1492
P208	Faribault County 5 Year Construction Plan	L9763
P209	Faribault County 5 Year Construction Plan	22503
P210	Faribault County 5 Year Construction Plan	9978
P211	Faribault County 5 Year Construction Plan	9984
P212	Faribault County 5 Year Construction Plan	L6404
P213	Faribault County 5 Year Construction Plan	22510
P214	Faribault County 5 Year Construction Plan	22509
P215	Faribault County 5 Year Construction Plan	22512
P216	Faribault County 5 Year Construction Plan	L8837
P217	Faribault County 5 Year Construction Plan	L9726
P218	Faribault County 5 Year Construction Plan	9967
P219	Faribault County 5 Year Construction Plan	92804
P220	Faribault County 5 Year Construction Plan	22552
P221	Faribault County 5 Year Construction Plan	9999
P222	Faribault County 5 Year Construction Plan	L9579
P223	Faribault County 5 Year Construction Plan	92369
P224	Faribault County 5 Year Construction Plan	L9725
P225	Faribault County 5 Year Construction Plan	L9441
P226	Faribault County 5 Year Construction Plan	22511
P227	Faribault County 5 Year Construction Plan	L5327
P228	Faribault County 5 Year Construction Plan	L6346
P229	Jackson County Road Map Five Year Plan Construction 2019-2024	89264 Bridge Project

ID	Program	Description
P230	Jackson County Road Map Five Year Plan Construction 2019-2024	L5227 Bridge Project
P231	Jackson County Road Map Five Year Plan Construction 2019-2024	5938 Bridge Project
P232	Jackson County Road Map Five Year Plan Construction 2019-2024	5937 Bridge Project
P233	Jackson County Road Map Five Year Plan Construction 2019-2024	L5200 Bridge Project
P234	Jackson County Road Map Five Year Plan Construction 2019-2024	89256 Bridge Project
P235	Jackson County Road Map Five Year Plan Construction 2019-2024	32518 Bridge Project
P236	Jackson County Road Map Five Year Plan Construction 2019-2024	L9448 Bridge Project
P237	Jackson County Road Map Five Year Plan Construction 2019-2024	89246 Bridge Project
P238	Jackson County Road Map Five Year Plan Construction 2019-2024	3988 Bridge Project
P239	Jackson County Road Map Five Year Plan Construction 2019-2024	89247
P240	Jackson County Road Map Five Year Plan Construction 2019-2024	89242
P241	Jackson County Road Map Five Year Plan Construction 2019-2024	88992 Bridge Project
P242	Jackson County Road Map Five Year Plan Construction 2019-2024	88992 Bridge Project
P243	Jackson County Road Map Five Year Plan Construction 2019-2024	5738 Bridge Project
P244	Jackson County Road Map Five Year Plan Construction 2019-2024	CMP Bridge Project
P245	Jackson County Road Map Five Year Plan Construction 2019-2024	88995 Bridge Project
P246	Jackson County Road Map Five Year Plan Construction 2019-2024	L5174 Bridge Project
P247	Jackson County Road Map Five Year Plan Construction 2019-2024	4196 Bridge Project
P248	Jackson County Road Map Five Year Plan Construction 2019-2024	776 Bridge Project
P249	Jackson County Road Map Five Year Plan Construction 2019-2024	89252 Bridge Project
P250	Jackson County Road Map Five Year Plan Construction 2019-2024	89003 Bridge Project
P251	Jackson County Road Map Five Year Plan Construction 2019-2024	89002 Bridge Project
P252	Jackson County Road Map Five Year Plan Construction 2019-2024	L5173 Bridge Project
P253	Rock County 5 Year Construction Plan 2021-2025	CSAH 4 / CSAH 17 Intersection Warning Signs
P254	Rock County 5 Year Construction Plan 2021-2025	Bridge L2035 Bridge Replacement
P255	Rock County 5 Year Construction Plan 2021-2025	Bridge L2043 Bridge Replacement
P256	Rock County 5 Year Construction Plan 2021-2025	Bridge L2097 Bridge Replacement
P257	Rock County 5 Year Construction Plan 2021-2025	Bridge 67501 Bridge Replacement
P258	Rock County 5 Year Construction Plan 2021-2025	Bridge 92429
P259	Rock County 5 Year Construction Plan 2021-2025	Bridge Replacement
P260	Rock County 5 Year Construction Plan 2021-2025	Bridge Replacement

ID	Program	Description
P261	Rock County 5 Year Construction Plan 2021-2025	Bridge L2129 Bridge Replacement
P262	Rock County 5 Year Construction Plan 2021-2025	Bridge 92583
P263	Rock County 5 Year Construction Plan 2021-2025	Bridge L2152 Bridge Replacement
P264	Rock County 5 Year Construction Plan 2021-2025	Bridge 92759 Bridge Replacement
P265	Rock County 5 Year Construction Plan 2021-2025	Bridge L2150
P266	Rock County 5 Year Construction Plan 2021-2025	Bridge 92762 Bridge Replacement
P267	Rock County 5 Year Construction Plan 2021-2025	Bridge Replacement
P268	Rock County 5 Year Construction Plan 2021-2025	Bridge L2256 Road in Lieu of Bridge
P269	Rock County 5 Year Construction Plan 2021-2025	Bridge 67504 Bridge Replacement
P270	Rock County 5 Year Construction Plan 2021-2025	Bridge 67505 Bridge Replacement
P271	Rock County 5 Year Construction Plan 2021-2025	Bridge 92762 Bridge Replacement
P272	Sibley County 5 Year Construction Plan 2021-2025.	Bridge No. 72jxx Construction
P273	Sibley County 5 Year Construction Plan 2021-2025.	Bridge No. 72xxx Construction
P274	Watonwan County 5 Year Construction Plan	Bridge 4009 Replacement
P275	Waseca County Proposed 2022 Construction	RR Xing Gates - CSAH 43 Janesville, Grading/Drainage
P276	Waseca County Proposed 2022 Construction	RR Xing Gates - CSAH 5 Waseca Grading/Drainage
P277	Waseca County Proposed 2022 Construction	Br 1148, CR 75
P278	Waseca County Proposed 2022 Construction	Br 7597, CSAH 5
P279	Waseca County Proposed 2022 Construction	L4117, Janesville Twp
P280	Le Sueur County 5 Year Plan 2022-2026	CSAH 52 - Replace Bridge # L8751
P281	Le Sueur County 5 Year Plan 2022-2026	CR 117 - Replace Bridge # 40506
P282	Le Sueur County 5 Year Plan 2022-2026	CSAH 28/TH 13 RAB (MnDOT Led)
P283	Le Sueur County 5 Year Plan 2022-2026	CSAH 21/TH 22 RAB (MnDOT Led)
P284	Brown County Ten Year Road & Bridge Construction Program	# 10 2" Overlay
P285	Brown County Ten Year Road & Bridge Construction Program	# 100 Regrade
P286	Brown County Ten Year Road & Bridge Construction Program	# 102 2" Overlay
P287	Brown County Ten Year Road & Bridge Construction Program	# 11 CIR & 3" Overlay
P288	Brown County Ten Year Road & Bridge Construction Program	# 11 Grade/Surface; #11 Shoulder Widen/Grade; # 11 Surface (Finish); # 11 CIR & 3" Overlay
P289	Brown County Ten Year Road & Bridge Construction Program	# 12 CIR & 3" Overlay
P290	Brown County Ten Year Road & Bridge Construction Program	# 13 Concrete Overlay
P291	Brown County Ten Year Road & Bridge Construction Program	# 13 New Alignment

ID	Program	Description
P292	Brown County Ten Year Road & Bridge Construction Program	# 17 Reconstruct
P293	Brown County Ten Year Road & Bridge Construction Program	# 2 3" Overlay
P294	Brown County Ten Year Road & Bridge Construction Program	# 2 CIR & 3" Overlay
P295	Brown County Ten Year Road & Bridge Construction Program	# 20 CIR & 3" Overlay
P296	Brown County Ten Year Road & Bridge Construction Program	# 20 FDR & 4" Overlay
P297	Brown County Ten Year Road & Bridge Construction Program	# 23 CIR & 3" Overlay
P298	Brown County Ten Year Road & Bridge Construction Program	# 24 2" Overlay
P299	Brown County Ten Year Road & Bridge Construction Program	# 24 CIR & 3" Overlay; # 24 Mill & Overlay
P300	Brown County Ten Year Road & Bridge Construction Program	# 25 CIR & 3" Overlay
P301	Brown County Ten Year Road & Bridge Construction Program	# 26 Mill & Overlay
P302	Brown County Ten Year Road & Bridge Construction Program	# 27 2" Overlay
P303	Brown County Ten Year Road & Bridge Construction Program	# 27 CIR & 3" Overlay
P304	Brown County Ten Year Road & Bridge Construction Program	# 3 CIR & 3" Overlay
P305	Brown County Ten Year Road & Bridge Construction Program	# 3 Reconstruct/Mill & OL
P306	Brown County Ten Year Road & Bridge Construction Program	# 31 Mill & Overlay
P307	Brown County Ten Year Road & Bridge Construction Program	# 33 Mill & Overlay
P308	Brown County Ten Year Road & Bridge Construction Program	# 34 Mill & Overlay
P309	Brown County Ten Year Road & Bridge Construction Program	# 34 Mill & Overlay
P310	Brown County Ten Year Road & Bridge Construction Program	# 35 Reconstruct; # 35 Surface (Finish)
P311	Brown County Ten Year Road & Bridge Construction Program	# 35 Sewer & Surface
P312	Brown County Ten Year Road & Bridge Construction Program	# 4 3" Overlay
P313	Brown County Ten Year Road & Bridge Construction Program	# 4 Mill & Overlay
P314	Brown County Ten Year Road & Bridge Construction Program	# 5 Shoulder Widen/Grade
P315	Brown County Ten Year Road & Bridge Construction Program	# 8 3" Overlay
P316	Brown County Ten Year Road & Bridge Construction Program	# 8 Shoulder Widen/Grade; # 8 2" Overlay
P317	Brown County Ten Year Road & Bridge Construction Program	# 9 CIR & 3" Overlay
P318	Brown County Ten Year Road & Bridge Construction Program	#19 Shoulder Widen/Grade; # 19 CIR & 3" Overlay
P319	Brown County Ten Year Road & Bridge Construction Program	#28 Shoulder Widen/Grade
P320	Brown County Ten Year Road & Bridge Construction Program	#29 Concrete Overlay
P321	Brown County Ten Year Road & Bridge Construction Program	#3 Shoulder Widen/Grade; # 3 CIR & 3" Overlay
P322	Sibley County 5 Year Construction Plan 2021-2025.	387th Ave (contact Fran B. 507-380-2956)

ID	Program	Description
P323	Nobles County Five Year Road Plan	Co. Rd. 54 Bituminous Surfacing
P324	Le Sueur County 5 Year Plan 2022-2026	CR 101 - From TH 22 to CSAH 19
P325	Watonwan County 5 Year Construction Plan	CR 107
P326	Le Sueur County 5 Year Plan 2022-2026	CR 136 - From TH 99 to south of Volney
P327	Sibley County 5 Year Construction Plan 2021-2025.	CR 172 Mill & 2" Bituminous Overlay
P328	Sibley County 5 Year Construction Plan 2021-2025.	CR 57 Seal Coat & Fog Seal
P329	Sibley County 5 Year Construction Plan 2021-2025.	CR 62 CIR or Thick 3" Bituminous Overlay; CR 62 Seal Coat & Fog Seal; CR 62 Seal Coat & Fog Seal
P330	Sibley County 5 Year Construction Plan 2021-2025.	CR 67 Seal Coat & Fog Seal
P331	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 1 - City of Good Thunder west city limits to Ewing St.
P332	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 1 Mill & Overlay
P333	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 1 2.5" Mill & Overlay
P334	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 1 CSAH 9 to CSAH 90 Grade and Pave
P335	Rock County 5 Year Construction Plan 2021-2025	CSAH 1 FDR / Bituminous Overlay
P336	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	CSAH 10 - FDR/Shoulder Widen
P337	Le Sueur County 5 Year Plan 2022-2026	CSAH 10 - From CSAH 3 to county line
P338	Watonwan County 5 Year Construction Plan	CSAH 10 Bituminous Resurfacing with Safety Improvements
P339	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 10 Blue Earth River to CSAH 1 Grade and Pave
P340	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 10 City of Vernon Center Urban Section Grade and Pave
P341	Watonwan County 5 Year Construction Plan	CSAH 10
P342	Le Sueur County 5 Year Plan 2022-2026	CSAH 11 - Le Center Mill/Overlay
P343	Le Sueur County 5 Year Plan 2022-2026	CSAH 11 - Le Center to CSAH 32
P344	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 11 1" Mill/CIR 3" Bituminous Overlay ; CSAH 11 Seal Coat & Fog Seal
P345	Rock County 5 Year Construction Plan 2021-2025	CSAH 11 FDR / 4" Class 5
P346	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 11 Seal Coat & Fog Seal
P347	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 11 TH 68 to CSAH 20 Grade and Pave; CSAH 11 TH 68 to CSAH 20 Pave
P348	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 11 west county line to CSAH 6 Grade and Pave
P349	Rock County 5 Year Construction Plan 2021-2025	CSAH 12 Mill / Overlay

ID	Program	Description
P350	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 12 1" Mill & 3" Bituminous Overlay ; CSAH 12 Seal Coat & Fog Seal
P351	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 12 CSAH 26 North County Line Grade and Pave; CSAH 12 CSAH 26 to North County Line Pave
P352	Martin County Minnesota 5 Year Construction Plan	CSAH 125
P353	Martin County Minnesota 5 Year Construction Plan	CSAH 12
P354	Watonwan County 5 Year Construction Plan	CSAH 12
P355	Watonwan County 5 Year Construction Plan	CSAH 12
P356	Le Sueur County 5 Year Plan 2022-2026	CSAH 13 - from CSAH 16 to TH 60
P357	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	CSAH 13 – River Road to Windom East City Limits
P358	Nicollet County Capital Improvements Plan 2019-2023	CSAH 13 6.5" Concrete Overlay w/Dowels, Paved Shoulders
P359	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 13 Seal Coat & Fog Seal
P360	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 13 US 169 to CSAH 1 Grade, Bridgen and Pave; CSAH 13 US 169 to CSAH 1 Pave
P362	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 14 TH 30 to CSAH 4 Pave
P363	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	CSAH 15 - CSAH 5 to CSAH 13 Resurface
P364	Le Sueur County 5 Year Plan 2022-2026	CSAH 15 - From CR 105 to CSAH 18
P365	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 15 CSAH 28 to Schalow Dr. in St. Clair Grade and Pave
P366	Rock County 5 Year Construction Plan 2021-2025	CSAH 15 FDR / 4" Class 5
P367	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 15 Microsurfacing, Seal Coat & Fog Seal
P368	Nicollet County Capital Improvements Plan 2019-2023	CSAH 15 Reconstruction; CSAH 15 Surfacing
P369	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 15 Seal Coat & Fog Seal
P370	Le Sueur County 5 Year Plan 2022-2026	CSAH 16 - From CSAH 15 to CSAH 13
P371	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 16 CSAH 90 to Le Sueur River Grade and Pave; CSAH 16 CSAH 90 to Le Sueur River Pave
P372	Rock County 5 Year Construction Plan 2021-2025	CSAH 16 FDR / 4" Class 5
P373	Nicollet County Capital Improvements Plan 2019-2024	CSAH 16 Reconstruction & Concrete Pavement
P374	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 16 Trail from CSAH 60 to Pleasant St. Grade and Pave
P375	Watonwan County 5 Year Construction Plan	CSAH 16
P376	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 17 2.5" Mill & Overlay

ID	Program	Description
P377	Watonwan County 5 Year Construction Plan	CSAH 17 Bituminous Resurfacing
P378	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 17 Seal Coat & Fog Seal
P379	Le Sueur County 5 Year Plan 2022-2026	CSAH 18 - From CSAH 21 to CSAH 15
P380	Rock County 5 Year Construction Plan 2021-2025	CSAH 18 Mill / Bituminous Overlay
P381	Waseca County Proposed 2022 Construction	CSAH 18 Reclaim & Pave
P382	Martin County Minnesota 5 Year Construction Plan	CSAH 18
P383	Martin County Minnesota 5 Year Construction Plan	CSAH 18
P384	Watonwan County 5 Year Construction Plan	CSAH 18
P385	Rock County 5 Year Construction Plan 2021-2025	CSAH 19 FDR / 4" Class 5
P386	Watonwan County 5 Year Construction Plan	CSAH 19
P387	Watonwan County 5 Year Construction Plan	CSAH 1
P388	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	CSAH 2 - CSAH 10 to TH 60 Resurface
P389	Rock County 5 Year Construction Plan 2021-2025	CSAH 2 Mill / Bituminous Overlay
P390	Waseca County Proposed 2022 Construction	CSAH 2 (Brown Ave) - 0.67 Miles Conc Pvmt Repair
P391	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 2 Microsurface, Seal Coat & Fog Seal
P392	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 2 Mill & 2.5" Bituminous Overlay ; CSAH 2 Microsurface, Seal Coat & Fog Seal
P393	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 20 SFDR W/ 5" Bituminous Overlay; CSAH 20 Seal Coat & Fog Seal
P394	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 21 Seal Coat & Fog Seal l; CSAH 21 Safe Routes to School Sidewalk Project
P395	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 22 Microsurfacing, Seal Coat & Fog Seal
P396	Martin County Minnesota 5 Year Construction Plan	CSAH 22
P397	Martin County Minnesota 5 Year Construction Plan	CSAH 22
P398	Watonwan County 5 Year Construction Plan	CSAH 22
P399	Watonwan County 5 Year Construction Plan	CSAH 23
P400	Watonwan County 5 Year Construction Plan	CSAH 24
P401	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 25 Microsurfacing, Seal Coat & Fog Seal
P402	Martin County Minnesota 5 Year Construction Plan	CSAH 25

ID	Program	Description
P403	Watonwan County 5 Year Construction Plan	CSAH 25
P404	Le Sueur County 5 Year Plan 2022-2026	CSAH 26 - TH 13 to Railroad (Montgomery)
P405	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 26 CSAH 57 to TH 22 Grade and Pave; CSAH 26 CSAH 57 to (CSAH 12 or TH 22) Pave
P406	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 26 Microsurfacing, Seal Coat & Fog Seal
P407	Martin County Minnesota 5 Year Construction Plan	CSAH 26
P408	Watonwan County 5 Year Construction Plan	CSAH 26
P409	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 27 MN 14 to CSAH 2 Grade and Pave
P410	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 27 Seal Coat & Fog Seal
P411	Le Sueur County 5 Year Plan 2022-2026	CSAH 3 - City of Kilkenny (Mill/Overlay)
P412	Le Sueur County 5 Year Plan 2022-2026	CSAH 3 - CSAH 29 to TH 19
P413	Le Sueur County 5 Year Plan 2022-2026	CSAH 3 - Kilkenny to TH 99
P414	Rock County 5 Year Construction Plan 2021-2025	CSAH 3 + CSAH 7 FDR / Bituminous Overlay
P415	Watonwan County 5 Year Construction Plan	CSAH 3 Bituminous Resurfacing and Safety Improvements
P416	Waseca County Proposed 2022 Construction	CSAH 3 Culverts - Line, Replace, Repair (2024 CPR)
P417	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 3 Microsurfacing, Seal Coat & Fog Seal
P418	Nobles County Five Year Road Plan	CSAH 3 Mill and Overlay
P419	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 32 Seal Coat & Fog Seal
P420	Nicollet County Capital Improvements Plan 2019-2025	CSAH 33 Mill & 3" Overlay
P421	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 34 2" Mill/3" Bituminous Overlay ; CSAH 34 Seal Coat & Fog Seal
P422	Rock County 5 Year Construction Plan 2021-2025	CSAH 34 Mill / Bituminous Overlay
P423	Nobles County Five Year Road Plan	CSAH 35 Mill and Overlay
P424	Nobles County Five Year Road Plan	CSAH 35 Reconstruction
P425	Le Sueur County 5 Year Plan 2022-2026	CSAH 36 - City of Le Sueur
P426	Rock County 5 Year Construction Plan 2021-2025	CSAH 36 Mill / Bituminous Overlay
P427	Nobles County Five Year Road Plan	CSAH 37 Reconstruction
P428	Martin County Minnesota 5 Year Construction Plan	CSAH 38
P429	Rock County 5 Year Construction Plan 2021-2025	CSAH 4 Mill / Bituminous Overlay / ED

ID	Program	Description
P430	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 4 Sidewalk / C&G; CSAH 4 Mill / Bituminous Overlay
P431	Waseca County Proposed 2022 Construction	CSAH 41 Paving
P432	Nicollet County Capital Improvements Plan 2019-2026	CSAH 43 Mill & 3" Overlay
P433	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 44 MN TH 60 Realign S. Intersection Grade and Pave
P434	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 44 TH 60 to TH 60 Grade and Pave
P435	Martin County Minnesota 5 Year Construction Plan	CSAH 44
P436	Martin County Minnesota 5 Year Construction Plan	CSAH 44
P437	Le Sueur County 5 Year Plan 2022-2026	CSAH 46 - City of Cleveland Mill/Overlay
P438	Watonwan County 5 Year Construction Plan	CSAH 4
P439	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 5 Intersection Reconstruction; CSAH 5 Seal Coat & Fog Seal
P440	Rock County 5 Year Construction Plan 2021-2025	CSAH 5 Mill / Bituminous Overlay
P441	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 5 North Riverfront Drive to US 14
P442	Nicollet County Capital Improvements Plan 2019-2027	CSAH 5 Reconstruction & Concrete Repavement
P443	Martin County Minnesota 5 Year Construction Plan	CSAH 50
P444	Watonwan County 5 Year Construction Plan	CSAH 52
P445	Martin County Minnesota 5 Year Construction Plan	CSAH 53
P446	Watonwan County 5 Year Construction Plan	CSAH 54 Concrete Resurfacing and Storm Sewer Improvements
P447	Watonwan County 5 Year Construction Plan	CSAH 56
P448	Le Sueur County 5 Year Plan 2022-2026	CSAH 57 - Mill/Overlay CSAH 56 to CSAH 26
P449	Watonwan County 5 Year Construction Plan	CSAH 5
P450	Le Sueur County 5 Year Plan 2022-2026	CSAH 6 - From CSAH 14 to TH 60
P451	Watonwan County 5 Year Construction Plan	CSAH 6 Bituminous Resurfacing and Safety Improvements
P452	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 6 CIR & 2.5" Bituminous Overlay
P453	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 6 Engineering Services; CSAH 6 Flood Project - Grading CSAH 5/6 Intersection; CSAH 6 Bituminous Surfacing; CSAH 6 Seal Coat & Fog Seal
P454	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 6 Flood Project - Grading CSAH 5/6 Intersection
P455	Rock County 5 Year Construction Plan 2021-2025	CSAH 6 Mill / Bituminous Overlay
P456	Martin County Minnesota 5 Year Construction Plan	CSAH 6
P457	Watonwan County 5 Year Construction Plan	CSAH 6

ID	Program	Description
P458	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	CSAH 7-FDR/ Shoulder Widen
P459	Nobles County Five Year Road Plan	CSAH 7 Mill and Overlay
P460	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 72 City of Vernon Center Urban Section Grade and Pave
P461	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 73 CSAH 1 to Sherman St in Good Thunder Grade and Pave
P462	Martin County Minnesota 5 Year Construction Plan	CSAH 7
P463	Watonwan County 5 Year Construction Plan	CSAH 7
P464	Watonwan County 5 Year Construction Plan	CSAH 7
P465	Watonwan County 5 Year Construction Plan	CSAH 7
P466	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 8 Mill/CIR & Bituminous Overlay ; CSAH 8 Seal Coat & Fog Seal
P467	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 8 MILL/CIR W/ 3.5" Bituminous Overlay; CSAH 8 Seal Coat & Fog Seal
P468	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 8 Regrade & Widening - Pending Funding; CSAH 8 Mill/CIR & Bituminous Overlay CSAH 8 Seal Coat & Fog Seal
P469	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 8 Seal Coat & Fog Seal
P470	Blue Earth County 2020-2024 Capital Improvement Plan	CSAH 82 CSAH 60 to south of Hoffman Rd Grade and Pave
P471	Martin County Minnesota 5 Year Construction Plan	CSAH 8
P472	Watonwan County 5 Year Construction Plan	CSAH 8
P473	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 9 CIR & 2.5" Bituminous Overlay
P474	Sibley County 5 Year Construction Plan 2021-2025.	CSAH 9 CIR & 3" Bituminous Overlay
P475	Rock County 5 Year Construction Plan 2021-2025	CSAH 9 FDR / Bituminous Paving
P476	Watonwan County 5 Year Construction Plan	CSAH 9
P477	Jackson County Road Map Five Year Plan Construction 2019-2024	Grading
P478	Jackson County Road Map Five Year Plan Construction 2019-2024	Microsurfacing
P479	Jackson County Road Map Five Year Plan Construction 2019-2024	Overlay
P480	Faribault County 5 Year Construction Plan	Resurface CSAH 16 From Commerce to WCL
P481	Faribault County 5 Year Construction Plan	Resurface CSAH 29 From TH22 to the NCL
P482	Faribault County 5 Year Construction Plan	Resurface from WCL to TH169
P483	Faribault County 5 Year Construction Plan	Resurface S13 From S-16 to 150th
P484	Faribault County 5 Year Construction Plan	Resurface S17 From SCL to I-90
P485	Faribault County 5 Year Construction Plan	Resurface S21 From S 16 to S 2

ID	Program	Description
P486	Faribault County 5 Year Construction Plan	Resurface S23 From S2 to S21
P487	Faribault County 5 Year Construction Plan	Resurface S28 from T22 to ECL
P488	Faribault County 5 Year Construction Plan	Resurface S30 from S31 to ECL
P489	Faribault County 5 Year Construction Plan	Resurface S31 from S16 to T109
P490	Faribault County 5 Year Construction Plan	Resurface S31 From S2 to S30
P491	Faribault County 5 Year Construction Plan	Resurface S9 From T169 to Cemetery
P492	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	Resurface Various Roadways
P493	Faribault County 5 Year Construction Plan	Resurface CSAH 1 from Huntley to CSAH 12
P494	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	Seal Coating
P495	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	Seal Coating
P496	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	Seal Coating
P497	Cottonwood County Minnesota 5 Year Plan for Highway Construction Projects	Seal Coating
P498	Jackson County Road Map Five Year Plan Construction 2019-2024	Seal Coating
P499	Jackson County Road Map Five Year Plan Construction 2019-2024	Seal Coating
P500	Faribault County 5 Year Construction Plan	Urban Reconstruct CSAH 58 (Kiester)
P501	Faribault County 5 Year Construction Plan	Urban Reconstruct CSAH 60 (Wells)
P502	Faribault County 5 Year Construction Plan	Urban Reconstruct S56 (Bricelyn)
P503	Faribault County 5 Year Construction Plan	Urban Reconstruct with ~ Resurface CSAH69 (Easton)

Appendix D Potential Gaps to Address

This appendix contains a list of the location-specific issues and needs that do not appear to be addressed by any currently-programmed projects. Similar to the lists provided in Appendix A and B, the fields in the following figures are:

- **ID:** This code refers to the need/issue ID printed on maps in this Working Paper. Those that begin with an "S" were stakeholder-identified, and those with a "D" were identified via data analysis.
- **Source:** the source used to identify the need or issue.
- **Type:** Intersection or Segment of highway.
- **Highway** Name or Number
- **Need/Issue Type:** this field corresponds to the primary need or issue associated with the location. Issues and needs were coded in one of three ways: safety, condition, or mobility.
- **Additional Information:** where available, additional details from the stakeholder were noted here

ID	Source	Type	Hwy	Type	Additional Information
D65	MnDOT CMV Crash Data	Segment	20th St N	Safety	Segments with high crash density
D66	MnDOT CMV Crash Data	Segment	Madison Ave	Safety	Segments with high crash density
D67	MnDOT CMV Crash Data	Segment	MNTH 22	Safety	Segments with high crash density
D68	MnDOT CMV Crash Data	Segment	MNTH 60	Safety	Segments with high crash density
D69	MnDOT CMV Crash Data	Segment	MNTH 60	Safety	Segments with high crash density
D70	MnDOT CMV Crash Data	Segment	Madison Ave	Safety	Segments with high crash density
D71	MnDOT CMV Crash Data	Segment	MNTH 60	Safety	Segments with high crash density
D72	MnDOT CMV Crash Data	Segment	Broadway St	Safety	Segments with high crash density
D73	MnDOT CMV Crash Data	Segment	Cherry St	Safety	Segments with high crash density
D74	MnDOT CMV Crash Data	Segment	MNTH 22	Safety	Segments with high crash density
D76	MnDOT CMV Crash Data	Segment	Forest Prairie Rd	Safety	Segments with high crash density
D77	MnDOT CMV Crash Data	Segment	MNTH 15	Safety	Segments with high crash density
D81	MnDOT CMV Crash Data	Segment	N Riverfront Dr	Safety	Segments with high crash density
D82	MnDOT CMV Crash Data	Segment	Belgrade Ave	Safety	Segments with high crash density
D84	MnDOT CMV Crash Data	Segment	N 2nd St	Safety	Segments with high crash density
D85	MnDOT CMV Crash Data	Segment	N Riverfront Dr	Safety	Segments with high crash density
D86	MnDOT CMV Crash Data	Segment	Center St	Safety	Segments with high crash density
D87	MnDOT CMV Crash Data	Segment	Center St	Safety	Segments with high crash density
D90	MnDOT CMV Crash Data	Segment	S 2nd St	Safety	Segments with high crash density
D93	MnDOT CMV Crash Data	Segment	Power Dr	Safety	Segments with high crash density
D116	Rail Crossing Data	Bridge/Intersection	631 AVE	Safety	Passive Rail Crossing with risk rating higher than 7
D117	Rail Crossing Data	Bridge/Intersection	589 AVE	Safety	Passive Rail Crossing with risk rating higher than 7
D118	Rail Crossing Data	Bridge/Intersection	CSAH 10	Safety	Passive Rail Crossing with risk rating higher than 7
D119	Rail Crossing Data	Bridge/Intersection	BURNS AVE S	Safety	Passive Rail Crossing with risk rating higher than 7
D120	Rail Crossing Data	Bridge/Intersection	Washington Ave N	Safety	Passive Rail Crossing with risk rating higher than 7
D122	Rail Crossing Data	Bridge/Intersection	County Road 5	Safety	Passive Rail Crossing with risk rating higher than 7
D123	Rail Crossing Data	Bridge/Intersection	70TH ST	Safety	Passive Rail Crossing with risk rating higher than 7
D124	Rail Crossing Data	Bridge/Intersection	430TH AVE	Safety	Passive Rail Crossing with risk rating higher than 7
D1	MnDOT CMV Crash Data	Bridge/Intersection	USTH 75; W Gabrielson Rd	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Type	Hwy	Type	Additional Information
D4	MnDOT CMV Crash Data	Bridge/Intersection	USTH 59; MNTH 60	Safety	More than 2 truck crashes at this location between 2018-2019
D5	MnDOT CMV Crash Data	Bridge/Intersection	USTH 59; County Highway 35	Safety	More than 2 truck crashes at this location between 2018-2019
D10	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 60; MNTH 86	Safety	More than 2 truck crashes at this location between 2018-2019
D15	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 60; 500th Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D18	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 15; Torgerson Dr	Safety	More than 2 truck crashes at this location between 2018-2019
D19	MnDOT CMV Crash Data	Bridge/Intersection	Elm Ave W; State St N	Safety	More than 2 truck crashes at this location between 2018-2019
D20	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; MNTH 4	Safety	More than 2 truck crashes at this location between 2018-2019
D23	MnDOT CMV Crash Data	Bridge/Intersection	12th St N; N Valley St	Safety	More than 2 truck crashes at this location between 2018-2019
D24	MnDOT CMV Crash Data	Bridge/Intersection	N German St; 1st St N	Safety	More than 2 truck crashes at this location between 2018-2019
D25	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 15; Center St	Safety	More than 2 truck crashes at this location between 2018-2019
D26	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 15; 20th St S	Safety	More than 2 truck crashes at this location between 2018-2019
D27	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; 448th St	Safety	More than 2 truck crashes at this location between 2018-2019
D28	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; MNTH 15	Safety	More than 2 truck crashes at this location between 2018-2019
D29	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 13; MNTH 99	Safety	More than 2 truck crashes at this location between 2018-2019
D30	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 13; 320th St	Safety	More than 2 truck crashes at this location between 2018-2019
D34	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 22; 320th St	Safety	More than 2 truck crashes at this location between 2018-2019
D37	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; 4th St	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Type	Hwy	Type	Additional Information
D38	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 111; MNTH 99	Safety	More than 2 truck crashes at this location between 2018-2019
D39	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; 502nd St	Safety	More than 2 truck crashes at this location between 2018-2019
D40	MnDOT CMV Crash Data	Bridge/Intersection	USTH 169; MNTH 22	Safety	More than 2 truck crashes at this location between 2018-2019
D44	MnDOT CMV Crash Data	Bridge/Intersection	3rd Ave; Lundin Blvd	Safety	More than 2 truck crashes at this location between 2018-2019
D45	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; 3rd Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D47	MnDOT CMV Crash Data	Bridge/Intersection	E Lafayette St; N 4th St	Safety	More than 2 truck crashes at this location between 2018-2019
D50	MnDOT CMV Crash Data	Bridge/Intersection	E Cherry St; S Front St	Safety	More than 2 truck crashes at this location between 2018-2019
D51	MnDOT CMV Crash Data	Bridge/Intersection	E Cherry St; S Broad St	Safety	More than 2 truck crashes at this location between 2018-2019
D52	MnDOT CMV Crash Data	Bridge/Intersection	W Pleasant St; Willard St	Safety	More than 2 truck crashes at this location between 2018-2019
D53	MnDOT CMV Crash Data	Bridge/Intersection	James Ave; Lilly St	Safety	More than 2 truck crashes at this location between 2018-2019
D54	MnDOT CMV Crash Data	Bridge/Intersection	Warren St; Stadium Rd	Safety	More than 2 truck crashes at this location between 2018-2019
D55	MnDOT CMV Crash Data	Bridge/Intersection	N Victory Dr; Adams St	Safety	More than 2 truck crashes at this location between 2018-2019
D58	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 22; Adams St	Safety	More than 2 truck crashes at this location between 2018-2019
D59	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 22; Madison Ave	Safety	More than 2 truck crashes at this location between 2018-2019
D60	MnDOT CMV Crash Data	Bridge/Intersection	USTH 14; MNTH 60	Safety	More than 2 truck crashes at this location between 2018-2019
D62	MnDOT CMV Crash Data	Bridge/Intersection	MNTH 60; 330th St	Safety	More than 2 truck crashes at this location between 2018-2019
D63	MnDOT CMV Crash Data	Bridge/Intersection	USTH 169; MNTH 99	Safety	More than 2 truck crashes at this location between 2018-2019

ID	Source	Type	Hwy	Type	Additional Information
D100	MnDOT Bridge Data	Bridge/Intersection	'0.2 MI E of Jct CSAH 25'	Condition	Bridge with condition rating under 50%
D101	MnDOT Bridge Data	Bridge/Intersection	'0.6 MI N of Jct TH 90'	Condition	Bridge with condition rating under 50%
D106	MnDOT Bridge Data	Bridge/Intersection	'0.3 MI S of Jct CSAH 32'	Condition	Bridge with condition rating under 50%
D107	MnDOT Bridge Data	Bridge/Intersection	'2.8 MI W of Jct CR. 107'	Condition	Bridge with condition rating under 50%
D110	MnDOT Bridge Data	Bridge/Intersection	'1.5 MI E of Jct CSAH 7'	Condition	Bridge with condition rating under 50%
D111	MnDOT Bridge Data	Bridge/Intersection	'0.1 MI S of Jct CSAH 15'	Condition	Bridge with condition rating under 50%
D112	MnDOT Bridge Data	Bridge/Intersection	' At W Co line'	Condition	Bridge with condition rating under 50%
D114	MnDOT Bridge Data	Bridge/Intersection	'0.7 MI N of CSAH 3'	Condition	Bridge with condition rating under 50%
D99	MnDOT Bridge Data	Bridge/Intersection	'0.9 MI E of Jct CSAH 13'	Condition	Bridge with condition rating under 50%
S70	Manufacturers' Perspectives Study	Segment	Highway 14 in Mankato	Safety	Truckers not familiar with the area have a hard time getting back into the left lane with short notice and doing so before the crest of the hill.
S77	Manufacturers' Perspectives Study	Segment	US 14 at Brown CR 10	Safety	No acceleration lanes and no bypass lane at CR 10
S78	Manufacturers' Perspectives Study	Segment	US 14 at Riverfront Dr, Mankato	Mobility	Busy intersection(s); tough to turn onto.
S80	Manufacturers' Perspectives Study	Segment	US 14 west of Waseca by Crystal Valley Coop, where road goes from NB to WB	Safety	Snow issues.
S81	Manufacturers' Perspectives Study	Segment	US 14 from New Ulm to Sleepy Eye	Mobility	Make 4-lane from New Ulm to Sleepy Eye.
S84	Manufacturers' Perspectives Study	Segment	WB US 14 at Riverfront Dr, Mankato	Mobility	Vehicles making upturns make it difficult for trucks to turn.
S87	Manufacturers' Perspectives Study	Segment	WB US 14 from Waseca CR 33 (50th St)	Safety	No acceleration lane; has caused accidents.
S89	Manufacturers' Perspectives Study	Segment	US 14 near Victory Dr, Mankato	Mobility	Trucks hold up traffic, causing bottlenecks.
S91	Manufacturers' Perspectives Study	Segment	US 14/MN 68 in New Ulm	Mobility	Narrow passing lanes.
S92	Manufacturers' Perspectives Study	Segment	Lookout Dr over US 14, North Mankato	Mobility	Roundabout(s) not big enough.

ID	Source	Type	Hwy	Type	Additional Information
S94	Manufacturers' Perspectives Study	Segment	US 14 at Smiths Mill (W Co Line Rd/CR 37)	Mobility	Not enough storage for farmer to stop in median.
S97	Manufacturers' Perspectives Study	Segment	US 14 EB between Riverfront Dr and Victory Dr, Mankato	Safety	Not enough time to move over from truck lane back to left lane.
S102	Manufacturers' Perspectives Study	Segment	US 169 at CR 69 (Hawley St), Mankato	Mobility	Back-ups in the morning and hard to make the left turn sometimes.
S103	Manufacturers' Perspectives Study	Segment	Hawley St at US 169 NB, Mankato	Safety	Acceleration lane too short; challenging to get on US 169.
S105	Manufacturers' Perspectives Study	Segment	US 169 NB from Cambria Plant near Le Sueur Rest Area	Safety	Lack of acceleration lane.
S106	Manufacturers' Perspectives Study	Segment	US 169 from N of Le Sueur to Twin Cities	Mobility	Eliminate stoplights btwn here and the Twin Cities.
S107	Manufacturers' Perspectives Study	Segment	US 169 at Hawley St/CR 69, Mankato	Safety	In busy traffic, trucks have difficulty moving to left lane to accommodate merging traffic.
S108	Manufacturers' Perspectives Study	Segment	NB US 169 to WB US 169/MN 60	Safety	Short distance to merge into left lane to get to businesses on N side of Hwy.
S111	Manufacturers' Perspectives Study	Segment	US 169 S from Mankato	Mobility	Make into 4-lane.
S112	Manufacturers' Perspectives Study	Segment	US 169 near Riverside Country Club, north of Blue Earth	Safety	Wind causes roads to glaze.
S113	Manufacturers' Perspectives Study	Segment	US 169 at MN 109 (6th Ave SE) in Winnebago	Mobility	Turn radius and intersection not wide enough.
S114	Manufacturers' Perspectives Study	Segment	I-90 at curve near Beaver Creek	Safety	Snow trap.
S115	Manufacturers' Perspectives Study	Segment	MN 15 at I-90, Fairmont	Safety	Wind is always blowing.
S117	Manufacturers' Perspectives Study	Segment	I-90 at MN 15, Fairmont	Safety	Acceleration lanes are too short for trucks to pick up adequate speed to blend with traffic on I-90.
S120	Manufacturers' Perspectives Study	Segment	MN 60 roundabouts in Worthington	Safety	Bad curb design apron slope - causes load shifts.
S125	Manufacturers' Perspectives Study	Segment	MN 4 at CSAH 21, N of Sleepy Eye	Safety	No acceleration lane for SB traffic.

ID	Source	Type	Hwy	Type	Additional Information
S126	Manufacturers' Perspectives Study	Segment	Bridge too narrow	Mobility	Bridge too narrow.
S127	Manufacturers' Perspectives Study	Segment	MN 15, New Ulm to Hutchinson	Mobility	Lack of passing lanes.
S136	Manufacturers' Perspectives Study	Segment	MN 60 curve near St. James	Safety	Refreeze/blow ice issues.
S137	Manufacturers' Perspectives Study	Segment	MN 60 curve near St. James	Safety	Refreeze/blow ice issues.
S140	Manufacturers' Perspectives Study	Segment	MN 60 at St. James Rest Area	Mobility	Add acceleration lanes.
S147	Manufacturers' Perspectives Study	Segment	MN 60/US 169 at MN 68, Mankato	Safety	Narrow turn lane--concerns were raised that it is not possible to stay between the white lines and make this turn without striking guardrail in a truck.
S148	Manufacturers' Perspectives Study	Segment	US 169 and MN 109 (1st Ave NW) in Blue Earth	Mobility	Turn radius and intersection not wide enough.
S149	Manufacturers' Perspectives Study	Segment	MN 111/MN 22 btwn Nicollet and Gaylord	Mobility	Slow traffic.
S150	Manufacturers' Perspectives Study	Segment	US 59 at Prairie Dr, Worthington	Mobility	Uncontrolled intersection - makes it hard to get in and out.
S64	Stakeholder Consultation	Segment	Brown County Highway 8	Condition	Needs to be resurfaced.
S66	Stakeholder Consultation	Segment	Riverfront Drive	Mobility	Freight transportation needs must be considered with Riverfront Drive project.
S68	Stakeholder Consultation	Segment	MN-109	Mobility	Increase load width limits on 109, it will reduce travel time because OSOW carriers currently have to use TH-22 to access I-90.
S46	Stakeholder Consultation	Bridge/Intersection	USTH 14	Safety	Acceleration lane would be beneficial for trucks to safety enter traffic.
S47	Stakeholder Consultation	Bridge/Intersection	USTH 14	Safety	Bypass lane needed to protect cars turning left off of 14.
S49	Stakeholder Consultation	Bridge/Intersection	USTH 169	Safety	Lots of pedestrian activity; hard to merge from CSAH 69 (Hawley Street) to eastbound Hwy 169 and the Riverfront Drive interchange.

ID	Source	Type	Hwy	Type	Additional Information
S50	Stakeholder Consultation	Bridge/Intersection	USTH 169	Safety	Riverfront Drive issues – difficult for EB to NB Riverfront Drive movements due to heavy conflicting WB to NB movements and yield condition.
S52	Stakeholder Consultation	Bridge/Intersection	MNTH 60	Safety	MN-60 has tough turn, with left turn blocking traffic, and railroad grade crossing.
S55	Stakeholder Consultation	Bridge/Intersection	N Riverfront Dr	Mobility	Localized congestion caused by railroad switching operations.
S63	Stakeholder Consultation	Bridge/Intersection	USTH 14	Mobility	Truck parking problem area - congestion with parked trucks.
S1	District 7 MetroQuest Survey Response	Bridge/Intersection	Poplar St	Mobility	N/A
S2	District 7 MetroQuest Survey Response	Bridge/Intersection	MNTH 22	Mobility	Rail to highway / road connections are one of the way to reduce wear and tear on highways. By expanding rail infrastructure and constructing rail to highway terminals / connections, we can build a more interconnected system which has some level of freight.
S3	District 7 MetroQuest Survey Response	Bridge/Intersection	N Victory Dr	Safety	Pedestrians attempting to cross MN 22 at this intersection from the business park to the east risk their lives crossing 6 lanes of traffic.
S4	District 7 MetroQuest Survey Response	Bridge/Intersection	S Minnesota Ave	Mobility	Highway 169 needs to be rerouted around St. Peter next to the river or around town to the west before it gets too expensive. Also in its current position during rush hour trucks are dangerous through town.
S9	District 7 MetroQuest Survey Response	Bridge/Intersection	Webster Ave	Mobility	N/A
S12	District 7 MetroQuest Survey Response	Bridge/Intersection	S Minnesota Ave	Safety	Lots of fast traffic running this red light lead to major traffic collisions.
S13	District 7 MetroQuest Survey Response	Bridge/Intersection	USTH 169	Condition	Very rough condition.
S16	District 7 MetroQuest Survey Response	Bridge/Intersection	478th St	Condition	Poor shape.
S17	District 7 MetroQuest Survey Response	Bridge/Intersection	491st Ave	Condition	Not safe driving a semi when it's bouncing all over the road!

ID	Source	Type	Hwy	Type	Additional Information
S18	District 7 MetroQuest Survey Response	Bridge/Intersection	USTH 71	Safety	Very dangerous for people to cross this busy area with three highways connecting together.
S19	District 7 MetroQuest Survey Response	Bridge/Intersection	MNTH 15	Mobility	Needs four lane expansion.
S21	District 7 MetroQuest Survey Response	Bridge/Intersection	USTH 14	Mobility	Congestion in Mankato, Hwy 14 and Hwy 169.
S22	District 7 MetroQuest Survey Response	Bridge/Intersection	Edgewater Rd	Condition	Many poor pavement conditions in general.
S24	District 7 MetroQuest Survey Response	Bridge/Intersection	60th St	Condition	N/A
S25	District 7 MetroQuest Survey Response	Bridge/Intersection	110th St	Safety	N/A
S26	District 7 MetroQuest Survey Response	Bridge/Intersection	Victory Dr	Safety	N/A
S32	District 7 MetroQuest Survey Response	Bridge/Intersection	MNTH 22	Condition	N/A
S33	District 7 MetroQuest Survey Response	Bridge/Intersection	130th St	Safety	N/A
S35	District 7 MetroQuest Survey Response	Bridge/Intersection	330th Ave	Mobility	N/A
S36	District 7 MetroQuest Survey Response	Bridge/Intersection	850th Ave	Mobility	N/A
S39	District 7 MetroQuest Survey Response	Bridge/Intersection	Golf Course Rd	Mobility	N/A
S40	District 7 MetroQuest Survey Response	Bridge/Intersection	CSAH 10	Condition	N/A
S41	District 7 MetroQuest Survey Response	Bridge/Intersection	Tiell Dr	Safety	Slow down through town.