
2017 MNSHIP ASSESSMENT

The Minnesota State Highway Investment Plan (MnSHIP) is a 20-year plan that guides future capital investments on the state's 12,000-mile highway system. It supports the guiding principles of the Minnesota GO Vision and links the Statewide Multimodal Transportation Plan (SMTP)'s objectives and strategies to improvements on the highway system. This assessment evaluates the planning process and the implementation of the 2018-2037 MnSHIP recommendations. It also identifies areas where the current update can be improved.

The MnSHIP project team conducted an internal assessment of four major items identified in the 2017 MnSHIP:

- Implementation of the investment direction
- Risks to implementing the capital investment priorities
- Implementation of strategies to stretch projected revenue
- Implementation of the work plan

The project team consulted MnDOT staff members involved in implementation of the 2017 MnSHIP to identify areas of progress.

IMPLEMENTATION OF 2017 MNSHIP INVESTMENT DIRECTION

The 20-year investment direction focuses on maintaining the existing state highway system while making limited mobility investments. This approach reflects both MnDOT and stakeholder input and meets key requirements and agency commitments. It also continues a shift for MnDOT from being a builder of the system to the maintainer and operator of the system. Nearly 70% of investment was identified for improvements to existing pavements, bridges, and other roadside infrastructure. Less than 12% of the investment was directed to mobility, bicycle, pedestrian, and new safety infrastructure. The remaining investment provided funding for small programs MnDOT is committed to delivering as well as investment to deliver projects such as right-of-way acquisition or project engineer and design services.

2017 AND 2018 LEGISLATIVE SESSIONS

Since the 20-year Minnesota State Highway Investment Plan was last updated in 2017, the Minnesota Legislature provided additional funding for state highway construction projects. In total, MnDOT received \$164 million in Trunk Highway funds from the transfer of existing revenue sources and an additional \$640 million through bond sales.

As part of implementing those investment strategies, many existing pavement projects were upgraded to long lasting pavement fixes. Pavement outcomes at the end of the 10-year Capital Highway Investment Plan show measurable improvement compared to previous projections. Given the improvement in projected pavement performance, MnDOT decided to shift \$50 million per year of pavement investment on the National Highway System towards investment in Twin Cities Mobility in fiscal years 2024, 2025 and 2026. In the 2018-2037 MnSHIP, Twin Cities Mobility investment was scheduled to end in 2023 as the investment direction shifted to a primary focus of maintaining the existing system.

In addition to the shift from National Highway System pavement investment, MnDOT is directing a portion of the new funding to continue investing in Twin Cities Mobility through the full 20 years of the plan. The estimated amount of additional investment in Twin Cities Mobility is projected to fluctuate between \$20-30 million per year.

2017/2018 CORRIDORS OF COMMERCE

During the 2017 and 2018 legislative sessions, MnDOT also received a total of \$850 million for the Corridors of Commerce program from Trunk Highway funds and bonding. The Corridors of Commerce program was created by the Minnesota Legislature in 2013 to provide additional highway capacity on segments where there are currently bottlenecks in the system, improve the movement of freight, and reduce barriers to commerce. The projects increased the amount of investment in Twin Cities Mobility and Regional and Community Improvement Priorities beyond investment identified in the original MnSHIP investment direction.

UPDATED INVESTMENT DIRECTION

In August 2018, MnDOT revised the 20-year funding projection in MnSHIP to account for these Legislative changes. Figure 1 shows the updated investment direction for the twenty years of the plan.

Figure 1: Comparison of Original and Revised 20-Year MnSHIP Investment Directions

Investment Categories	Original 20-Year MnSHIP Investment Direction	Percent	Expected MnSHIP Investment Direction Based on Legislative Impacts	Percent	Difference in Dollars	Difference in Percentage
Pavement Condition	\$10.31 B	49.4%	\$10.09 B	48.3%	-\$220 M	-1.1%
Bridge Condition	\$2.38 B	11.4%	\$2.30 B	11.0%	-\$80 M	-0.4%
Roadside Infrastructure	\$1.60 B	7.7%	\$1.71 B	8.2%	\$110 M	0.5%
Jurisdictional Transfer	\$90 M	0.4%	\$90 M	0.4%	\$0 M	0.0%
Facilities	\$80 M	0.4%	\$85 M	0.4%	\$5 M	0.0%
Traveler Safety	\$680 M	3.2%	\$740 M	3.5%	\$60 M	0.3%
Twin Cities Highway Mobility	\$230 M	1.1%	\$830 M	4.0%	\$600 M	2.8%
Greater Minnesota Highway Mobility	\$25 M	0.1%	\$25 M	0.1%	\$0 M	0.0%
Freight	\$610 M	2.9%	\$580 M	2.8%	-\$30 M	-0.2%
Bicycle Infrastructure	\$130 M	0.6%	\$120 M	0.6%	-\$10 M	-0.1%
Accessible Pedestrian Infrastructure	\$530 M	2.5%	\$500 M	2.4%	-\$30 M	-0.2%
Regional and Community Improvement Priorities	\$310 M	1.5%	\$330 M	1.6%	\$20 M	0.1%
Project Delivery	\$3.27 B	15.6%	\$3.06 B	14.7%	-\$210 M	-1.0%
Small Programs	\$620 M	3.0%	\$430 M	2.1%	-\$190 M	-0.9%
Total	\$21 B	100.0%	\$21 B	100.0%	\$25 M	0.0%

PROJECT SELECTION IN THE STIP AND CHIP

The 10-Year Capital Highway Investment Plan is updated annually to communicate MnDOT's proposed capital investments for the next ten years. It serves as an annual check-in during the MnSHIP update cycles. The annual CHIP also creates the opportunity to compare investments to the investment guidance established in MnSHIP, ensuring accountability. Figure 2 highlights actual and planned investment in previous CHIPS to the MnSHIP investment direction guidance.

Figure 2: Implementation of Investment Direction through previous and current STIPs and CHIPs

Investment Categories	Investment Direction Guidance (2018-2030)	Percent	Actual and Planned Investment (2018-2030)	Percent	Difference in Dollars	Difference in Percentage
Pavement Condition	\$5,855 M	45.7%	\$5,700 M	41.3%	-\$156 M	-4.4%
Bridge Condition	\$1,475 M	11.5%	\$1,634 M	11.8%	\$159 M	0.3%
Roadside Infrastructure	\$1,092 M	8.5%	\$1,159 M	8.4%	\$67 M	-0.1%
Jurisdictional Transfer	\$47 M	0.4%	\$49 M	0.4%	\$2 M	0.0%
Facilities	\$45 M	0.4%	\$66 M	0.5%	\$20 M	0.1%
Traveler Safety	\$486 M	3.8%	\$661 M	4.8%	\$174 M	1.0%
Twin Cities Highway Mobility	\$648 M	5.1%	\$769 M	5.6%	\$122 M	0.5%
Greater Minnesota Highway Mobility	\$35 M	0.3%	\$9 M	0.1%	-\$26 M	-0.2%
Freight	\$318 M	2.5%	\$293 M	2.1%	-\$25 M	-0.4%
Bicycle Infrastructure	\$92 M	0.7%	\$91 M	0.7%	-\$1 M	-0.1%
Accessible Pedestrian Infrastructure	\$303 M	2.4%	\$336 M	2.4%	\$33 M	0.1%
Regional and Community Improvement Priorities	\$251 M	2.0%	\$527 M	3.8%	\$276 M	1.9%
Project Delivery	\$1,920 M	15.0%	\$2,295 M	16.6%	\$375 M	1.7%
Small Programs	\$250 M	2.0%	\$208 M	1.5%	-\$42 M	-0.4%
Total	\$12,817 M	100.0%	\$13,797 M	100.0%	\$980 M	0.0%

There are some differences between the revised MnSHIP guidance and the planned investment in the CHIP. Some of the differences to note include:

- Corridors of Commerce projects selected in 2017 and 2018 are included in this CHIP investment totals but are not considered as a part of the MnSHIP investment direction. Overall investment over the next ten years is higher than planned investment due to their inclusion.
- Pavement Condition investment is \$156 million lower than guidance due to additional bridge project needs.
- Bridge Condition investment is \$159 million more than guidance. More NHS bridges will need rehabilitations or replacements than were anticipated in MnSHIP.
- Traveler Safety investments also saw an increase compared to guidance. A large portion of the Twin Ports Interchange project in Duluth includes many safety improvements as a part of the project.
- Twin Cities Mobility investment increased due to additional mobility projects funded through the Corridors of Commerce program.
- RCIP investment increased due to inclusion of the Corridors of Commerce projects in greater Minnesota and increased investment in the Local Partnership Program.
- Project Delivery investment is higher than guidance by \$375 million but remains around 16% of the overall program as was the goal in MnSHIP. Several recent large and complex projects have required more investment to deliver the projects.

RISK MANAGEMENT REVIEW

During the MnSHIP process, MnDOT identified 11 key risks related to implementing MnSHIP’s capital investment priorities. Figure 3 highlights these risks as well as the current and projected likelihood that the risk will occur. This review of the key investment risks identified if the predicted likelihood and severity of the risks have changed.

Figure 3: 2017 MnSHIP Key Investment Risks

KEY INVESTMENT RISK	MnSHIP (2017)	CURRENT (2021)	REASONING
Federal Performance Requirements	Low	Medium	Interstate pavements and NHS bridge conditions are projected to meet federal requirements through 2037.
Remaining Service Life	Medium	Medium	Limited investment in bridges and pavements may increase the use of reactive, short term fixes to avoid hazardous conditions especially on non-NHS pavements.
Operations Budget	Medium	Medium	Limited investment in bridges and pavements may increase use of operational budget for maintenance of pavements especially on the non-NHS.
Increased costs to users	Low	Low	Identified investment to maintain the condition of bridges should limit the risk of requiring weight limits on bridges.
Safety Infrastructure	Low	Low	Safety infrastructure maintained through investment in roadside infrastructure at current investment levels. MnDOT will continue to make new safety improvements on the system.
Multimodal Priorities	Medium	Medium	MnDOT commits to reaching substantial ADA compliance with existing pedestrian infrastructure; however, investment in new pedestrian and bicycle connections is limited.
Mobility	Low	Low	No investment in mobility after 2023, although the Transportation Economic Development program continues to fund small economic development projects. Congestion is likely to increase due to projected population growth.
Urban Reconstruction	Medium	Medium	Investment direction limits MnDOT's ability to address urban reconstruction needs.
Responsiveness	Medium	Medium	Economic development projects continue through investment in the Transportation Economic Development program. Other investment in local/regional priorities is very limited.
Climate Change	High	High	No investment identified to proactively address potential vulnerabilities to flooding.
Legislative Action	Medium	High	No investment in mobility after 2023. Legislature may re-direct resources to address mobility needs, which could negatively impact plan outcomes.

SYSTEM STEWARDSHIP RISKS

FEDERAL PERFORMANCE REQUIREMENTS – Failure to achieve Federal performance requirements on Interstate pavements and NHS bridges reduces flexibility to spend future revenue on other state priorities

- **Changed to a medium risk** – While Interstate pavements in poor condition remain low, more NHS bridges will need rehabilitations or replacements than were anticipated in MnSHIP. To compensate, MnDOT districts are using district managed funding to address bridges on the NHS in the CHIP. MnDOT has developed management plans for large and complex bridges to schedule repairs and maintenance to lengthen the time before a future major rehabilitation or replacement project is needed.
- Resource: FHWA State Performance Dashboard (Federal metrics) – <https://www.fhwa.dot.gov/tpm/reporting/state/state.cfm?state=Minnesota>

REMAINING SERVICE LIFE – The investment direction limits MnDOT’s ability to perform the right fix at the right time, which leads to a decreased useful lifespan of the asset and more expensive fixes later

- **Remains a medium risk**– As MnDOT plans future projects and estimates future performance outcomes, the costs to address pavements and bridges in poor condition limits the ability to make earlier minor repairs and preventive maintenance to keep pavements and bridges in good condition longer.
- Resource: MnDOT State Performance Dashboard (State metrics) – <https://performance.minnesotago.org/system-stewardship/condition>

OPERATIONS BUDGET – Maintenance costs rise, which places undue pressure on the operations budget and adds travel disruptions.

- **Remains a medium risk**– With limited capital investment for preventive maintenance and minor repairs, MnDOT’s operations and maintenance budgets continue to be stretched as more maintenance projects need to be added to keep the system operational and safe for users. More maintenance projects also have an impact on travelers as MnDOT may shut down roadways for repairs more frequently.

INCREASED COSTS TO USERS - Poor asset management ultimately leads to increased costs to users of the system and Minnesota’s economy by placing weight limitations on bridges.

- **Remains a low risk** – MnDOT districts are completing more lower-cost fixes on pavement and bridges to try to stretch available investment to be able to address more poor roads. However, this can result in more frequent and costly repairs in the future, which increases the cost to users of the system through closures, delays, and detours.

TRANSPORTATION SAFETY

SAFETY INFRASTRUCTURE - Critical traveler safety features begin to deteriorate, limiting their effectiveness.

- **Remains a low risk** – MnDOT continues to invest in new and existing safety infrastructure as a part of pavement projects.

CRITICAL CONNECTIONS

MULTIMODAL PRIORITIES - Reduced investment in critical connections limits MnDOT's ability to advance modal priorities.

- **Remains a medium risk** – MnDOT prioritized multimodal investment to address ADA compliance by 2037 and continues to plan projects to address known compliance issues. Some of the remaining issues have more complexity and will require more planning, coordination, and investment. MnDOT through the ADA Transition Plan update is developing strategies to better address these complex projects. With prioritization of ADA compliance, limited investment remains to provide more complete bicycle and pedestrian networks to meet communities' expectations.

MOBILITY – Limited investment impacts mobility of people and goods, which negatively impacts economic health.

- **Remains a low risk**– This risk was identified as rising to a high risk by the end of 2037. Since 2017 MnSHIP, MnDOT has provided more mobility investment through Corridors of Commerce projects and continuing Twin Cities Mobility investment beyond 2023.

URBAN RECONSTRUCTION – A focus on statewide performance measures and asset management results in lack of investment in urban reconstruction projects.

- **Remains medium risk**– Across nearly every MnDOT district, urban reconstruction projects is becoming a top risk. Urban reconstruction projects are complex and costly projects to deliver and MnDOT remains limited to investing in more projects with available capital funding.

RESPONSIVENESS – Limited investment reduces MnDOT's ability to support local economic development and quality of life opportunities.

- **Remains a medium risk**– MnDOT continues to solicit projects through the Transportation and Economic Development Program. Beyond that program, MnDOT continues to be limited in investing in quality of life improvements including multimodal, mobility, and complete streets improvements.

CLIMATE CHANGE – Inadequately addressing the effects of climate change and flooding leads to unplanned road closures and increased maintenance costs

- **Remains a high risk** – No investment was identified in the MnSHIP investment direction to proactively address flooding vulnerabilities or other effects of climate change. MnDOT is identifying potential flood vulnerabilities if additional funding becomes available in the future.

OPEN DECISION MAKING

LEGISLATIVE ACTION – Misalignment between MnSHIP investment direction and legislative priorities results in legislation that redirects financial resources and compromises plan outcomes.

- **Changed to a high risk** – Legislative action did adjust MnDOT priorities through bonding for Corridors of Commerce projects. This bonding, which is required to be paid back using state road construction funds, affected future available revenue and reduced the anticipated investment in pavement and other infrastructure improvements later in the MnSHIP planning period.

IMPLEMENTATION OF STRATEGIES TO STRETCH PROJECTED REVENUE

MnDOT identified a mix of internally and externally oriented strategies to stretch existing revenue to accomplish additional priorities beyond those identified in MnSHIP. In some cases, these strategies required further study prior to implementation and support from MnDOT’s transportation stakeholders. Whether these strategies are internal to MnDOT or rely on external decision-making, they can be a means for achieving more desirable outcomes on the state highway system.

INTERNAL STRATEGIES

Strategy	Implementation Activities
Adjust performance expectations	The Transportation Asset Management Plan development included a discussion on additional and/or more refined performance measures and targets for assets on the state highway system.
Continue to educate and train key MnDOT staff	MnDOT conducted two training opportunities for planning and district staff providing an overview of the MnSHIP revenue projections and investment direction and how that direction is translated into project selection guidance in the STIP and CHIP.
Pursue research and innovation	MnDOT annually issues RFPs for research into the transportation system through the local road research board. For example, MnDOT’s CAV-X office continues to explore and test cutting edge automation technology and how this new technology can best interact with the state highway system. The Office of Maintenance Research program launched the Rapid Deployment of Maintenance & Operations Innovations Program on January 1, 2021.
Continue to employ high return-on-investment strategies	MnDOT’s roadway design manual has been updated regularly, focusing on giving more design flexibility to better address local context and other impacts. This includes designing roadways to be less expensive by constructing narrower road surfaces among other strategies. Newer intersection designs like roundabouts and reduced conflict intersections (RCI) are also encouraged. These designs have high return on investment by improving safety outcomes while limiting congestion and achieve multiple investment benefits in a single project.
Evaluate the capital and operations revenue split	Working with AMPO, MnDOT developed an analysis to determine the impact to operations and maintenance costs from increasing or decreasing current capital investment in bridge and pavement.
Manage investments to achieve multiple objectives	While most projects are selected based on a pavement or bridge need, projects may address a substantial number of needs beyond the pavement or bridge need. These improvements are identified during the project scoping process which includes local coordination and public input.
Increase attention given to analyzing and accurately tracking investment and performance measures	MnDOT provides the districts and project managers information on how to track investments correctly through memos and guidance. Investment category guidance is updated yearly based off any new information or questions from the previous year’s guidance. MnDOT also holds yearly STIP and CHIP meetings to compare the draft STIP and CHIP to the MnSHIP investment direction and performance measures.

EXTERNAL STRATEGIES

Strategy	Implementation Activities
Continue evaluating the jurisdictional alignment of the state highway system	MnDOT includes a jurisdictional transfer category in their annual CHIP process which tracks money spent on transfers. Through the project planning process on non-NHS state highways, MnDOT discusses with local partners opportunities for jurisdictional realignment, if appropriate.
Coordinate with local units of government and other state agencies	Each district conducts stakeholder and public engagement with the STIP and CHIP. MnDOT also provides the list of programmed and planned state highway projects in the STIP and CHIP through MnDOT’s website and an interactive map. MnDOT began releasing a monthly statewide transportation planning newsletter through email to update stakeholders, partners, and the public about current planning activities. Through its State Aid office, MnDOT is working to develop cost estimates for county government’s roadway safety plans which will aid local partners to implement more cost-effective safety strategies more effectively on local and county road systems.
Advocate for flexible design standards and specifications	MnDOT actively plans and considers strategic reductions of travel lanes and roadway width where these interventions are deemed necessary or justifiable. MnDOT’s Complete Streets Policy mandates that all MnDOT projects must consider all modes of travel within a given project scope’s right-of-way. For example, MnDOT reconstructed Highway 65 through Albert Lea and removed a travel lane in each direction while adding a dedicated turn lane and on street bicycle facilities. This has improved safety and multi-modal access to the road while not compromising vehicle throughput.
Broaden the education of stakeholders and policymakers	MnDOT created Funding Minnesota Transportation, an interactive webpage on the Minnesota GO website. Users can see the different sources and amounts in a typical year for different transportation modes. MnDOT also updated the MnSHIP investment direction to reflect impacts from 2017 and 2018 Legislative Sessions including impacts of bonding on revenue projections.

WORK PLAN IMPLEMENTATION

NEW PLANNING ACTIVITIES

COMPLETED PHASE TWO OF THE TRANSPORTATION ASSET MANAGEMENT PLAN

MnDOT’s Transportation Asset Management Plan was completed in June 2019. The plan serves as an accountability and communication tool. It is a planning tool to help MnDOT further evaluate risks, develop mitigation strategies, analyze life cycle costs, establish asset condition performance measures and develop investment strategies. The plan includes all pavements and bridges on the state highway system as well as 10 other assets. (<https://www.dot.state.mn.us/assetmanagement/tamp.html>)

COMPLETED THE FREIGHT INVESTMENT PLAN

The Minnesota Statewide Freight System and Investment Plan was undertaken by MnDOT in partnership with public and private sector freight stakeholders. It was completed in January 2018. The plan describes Minnesota’s freight transportation system and its role in the state’s economy, current and emerging industry trends, current

and future issues and needs, and an investment plan for the Minnesota Highway Freight Program. The MHFP solicited for additional highway freight projects through 2025. (<https://www.dot.state.mn.us/planning/freightplan/index.html>)

COMPLETE THE STATEWIDE PEDESTRIAN SYSTEM PLAN

The Statewide Pedestrian System Plan will be completed in 2021. The plan is a detailed path for MnDOT to maximize its role in making walking safe, convenient, and desirable for all. It draws on interviews with MnDOT staff and conversations with community members throughout the state to establish project development and investment planning approaches to create better places to walk. (<https://www.minnesotawalks.org/>)

PROCESS IMPROVEMENTS

IMPROVE THE TRANSPARENCY AND CONSISTENCY OF MNDOT'S PROJECT SELECTION PROCESS

In 2017, the Minnesota Legislature directed MnDOT to develop a new transparent and objective project selection policy for construction projects on the state highway system. The project selection policy and scoring process was completed in 2018. The project selection website includes scores for projects included in the 10-year CHIP sorted by type and geographic area. It also includes scores of projects considered for funding but not selected.

ESTABLISH CRITERIA FOR PRIORITIZATION OF EXPANSION PROJECTS WITH ADDITIONAL FUNDING

As part of the project selection process described above, MnDOT created scoring criteria for mobility and capacity expansion projects including the Corridors of Commerce program. For Greater Minnesota, mobility locations were identified and scored as part of the Greater MN Mobility Study. Prioritization criteria included travel time reliability, crash rate, truck volume, and other factors.

ESTABLISH MOBILITY TARGETS

In coordination with MPO partners, MnDOT staff set 2 and 4-year targets for the federal highway reliability measures based on available data and recent trends in performance. These measures were established as part of MAP-21, the federal surface transportation bill. MnDOT's targets are available here: <https://www.fhwa.dot.gov/tpm/reporting/state/reliability.cfm?state=Minnesota>. In addition to the federal measures, MnDOT and Met Council are currently developing a mobility measure and target for Twin Cities highways to guide investment and identify need. That study will be complete mid-2021.

IMPROVE BICYCLE INVESTMENT REPORTING AND PROJECT SCOPING

Progress has been made in this area across multiple MnDOT offices. MnDOT has developed a non-motorized scoping recommendation for state highway projects through population centers to identify specific needs and opportunities for pedestrians and bicyclists.

MnDOT established a Complete Streets Project Evaluation committee to improve Complete Streets policy implementation and support MnDOT project managers with balancing and addressing the context-specific needs of all transportation users, including people biking. As part of the evaluation, staff analyzed Complete Streets Project Reports (CSPRs) for MnDOT projects. More CSPRs indicated that existing conditions met bike user needs for projects scheduled for construction in 2020-22 than for projects scheduled for construction in 2015-17, meaning that MnDOT project managers felt that more project sites already supported people biking and did not require additional improvements. However, project managers have also expressed a need for better resources to identify additional bicycle needs. Based on recommendations from the committee, Sustainability and Public

Health staff will coordinate an update to the Complete Streets policy, the development of new performance measures, and process improvements that will help improve bicycle investment reporting and project scoping.

QUANTIFY THE IMPACT CAPITAL INVESTMENTS HAVE ON MAINTENANCE AND OPERATIONS NEEDS AND EXPENDITURES

MnDOT has utilized data from its Transportation Asset Management System to create cost models for pavement reactive maintenance. The models show increasing costs per lane mile and increasing frequency of needed work as pavement conditions deteriorate. This analysis forecasts the future maintenance demand that MnDOT districts will face in response to various MnSHIP capital investment scenarios. A similar process was followed for bridge maintenance activities.

MnDOT has also developed a total cost of ownership model which can be used to estimate the additional life-cycle costs of adding infrastructure. A model for semi-urban freeway construction exists; additional models for alternative roadway configurations are needed.

REFINE AND EXPAND THE COMPONENTS THAT ARE INCORPORATED INTO THE BRIDGE TRACKING MODEL

MnDOT's bridge office is continually improving its Bridge Replacement and Improvement Management process. In the past few years, BRIM has been refined to include associated bridge elements such as approach work and bicycle/pedestrian elements. Culverts and railroad/pedestrian bridges are now included in BRIM. MnDOT also made it a priority to hire bridge scoping engineers statewide to better identify bridge needs far in advance

IMPLEMENT STANDARD INSPECTION PROTOCOLS FOR PEDESTRIAN IMPROVEMENTS

MnDOT launched the new collector app for sidewalks and curb ramps statewide in 2020 to collect data. Recollection of the baseline inventory was started in May 2020 and is about 50% complete statewide. Greater Minnesota is expected to be completed in summer of 2021.

BETTER INCLUSION OF ANCILLARY PAVEMENTS INTO TOTAL PAVEMENT NEEDS. THESE ASSETS, SUCH AS SIGNAGE AND LIGHTING AT REST AREAS AND WEIGH STATIONS TO BE INCLUDED IN TOTAL ROADSIDE INFRASTRUCTURE NEEDS

MnDOT hired a consultant from the University of Colorado – Boulder to conduct a condition assessment of ancillary roads. A deliverable, expected June 2021, will be a predictive modeling tool that uses machine learning algorithms. MnDOT will use this tool to predict pavement condition on all ancillary pavements statewide using high-resolution aerial imagery.

CONTINUE COORDINATION OF PLANNED PROJECTS WITH PARTNERS

MnDOT district staff coordinate with cities, counties, and tribes on state-led and locally led projects in their areas. The MnDOT districts are also part of Area Transportation Partnerships that collaboratively decide priorities for available federal transportation funding in their region.

QUANTIFY THE BENEFITS OF JURISDICTIONAL TRANSFER

MnDOT's Office of State Aid is continuing to facilitate state highway transfers according to the priorities established in the Jurisdictional Realignment study completed in 2014. In addition, MnDOT has made progress in identifying total cost of ownership for state highways in different contexts. This could be used in the future to quantify the benefits of jurisdictional transfer.